

#01#

Artículos originales (todos) \*\*\* Original articles (all)

### GLIOMAS AND RELATED TUMORS

(Conceptos / Keywords: Gliomas; Glioblastoma multiforme; Oligodendroglioma; Astrocytoma, Ependymoma; Medulloblastoma; etc).

October / November 2013

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[1]

**TÍTULO / TITLE:** - Net Clinical Benefit Analysis of Radiation Therapy Oncology Group 0525: A Phase III Trial Comparing Conventional Adjuvant Temozolomide With Dose-Intensive Temozolomide in Patients With Newly Diagnosed Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 Nov 10;31(32):4076-84. doi: 10.1200/JCO.2013.49.6067. Epub 2013 Oct 7.

●● Enlace al texto completo (gratis o de pago) [1200/JCO.2013.49.6067](#)

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**RESUMEN / SUMMARY:** - PURPOSE: Radiation Therapy Oncology Group trial 0525 tested whether dose-intensifying temozolomide versus standard chemoradiotherapy

improves overall survival (OS) or progression-free survival (PFS) in newly diagnosed glioblastoma. Tests of neurocognitive function (NCF) and symptoms (using the MD Anderson Symptom Inventory-Brain Tumor module; MDASI-BT) and of quality of life (European Organisation for the Research and Treatment of Cancer Quality of Life Questionnaire [EORTC QLQ] -C30/BN20) examined the net clinical benefit (NCB) of therapy. PATIENTS AND METHODS: NCF tests (Hopkins Verbal Learning Test-Revised, Trail Making Test, and Controlled Oral Word Association), MDASI-BT, and EORTC QLQ-C30/BN20 were completed in a subset of patients. Multivariate Cox proportional hazard regression modeling determined the prognostic value of baseline and early change from baseline to cycle 1 for OS and PFS. Two-sample proportional test statistic was used to evaluate differences between treatments (dose-dense v standard-dose) on NCB measures from baseline to cycle 4 in stable patients. RESULTS: Overall, 182 patients participated in the study. Baseline NCF tests and the physical functioning quality of life scale were associated with OS and PFS. Baseline to cycle 1 in all NCB components were associated with OS and PFS. There was greater deterioration in the dose-dense arm from baseline to cycle 4 in the Global Health and Motor Function subscales (EORTC QLQ-C30/BN20) as well as in overall symptom burden, overall symptom interference, and activity-related symptom interference subscales (MDASI-BT). There were no between-arm differences in NCF. CONCLUSION: Longitudinal collection of NCB measures is feasible in cooperative group studies and provides an added dimension to standard outcome measures. Greater adverse symptom burden and functional interference, as well as decreased global health and motor function were observed in patients randomly assigned to the dose-dense arm. Baseline and early change in NCB measures were associated with decreased rates of survival.

[2]

**TÍTULO / TITLE:** - Dose-Dense Temozolomide for Newly Diagnosed Glioblastoma: A Randomized Phase III Clinical Trial.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 Nov 10;31(32):4085-91. doi: 10.1200/JCO.2013.49.6968. Epub 2013 Oct 7.

●● Enlace al texto completo (gratis o de pago) [1200/JCO.2013.49.6968](#)

**AUTORES / AUTHORS:** - Gilbert MR; Wang M; Aldape KD; Stupp R; Hegi ME; Jaeckle KA; Armstrong TS; Wefel JS; Won M; Blumenthal DT; Mahajan A; Schultz CJ; Erridge S; Baumert B; Hopkins KI; Tzuk-Shina T; Brown PD; Chakravarti A; Curran WJ Jr; Mehta MP

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Maastricht, the Netherlands; Kristen I. Hopkins, University Hospitals Bristol, Bristol, United Kingdom; Arnab Chakravarti, Arthur G. James Cancer Hospital/Ohio State University Comprehensive Cancer Center, Columbus, OH; Walter J. Curran Jr, Emory University Winship Cancer Center, Atlanta, GA; and Minesh P. Mehta, University of Maryland, Baltimore, MD.

**RESUMEN / SUMMARY:** - PURPOSE: Radiotherapy with concomitant and adjuvant temozolomide is the standard of care for newly diagnosed glioblastoma (GBM). O(6)-methylguanine-DNA methyltransferase (MGMT) methylation status may be an important determinant of treatment response. Dose-dense (DD) temozolomide results in prolonged depletion of MGMT in blood mononuclear cells and possibly in tumor. This trial tested whether DD temozolomide improves overall survival (OS) or progression-free survival (PFS) in patients with newly diagnosed GBM. PATIENTS AND METHODS: This phase III trial enrolled patients older than age 18 years with a Karnofsky performance score of  $\geq 60$  with adequate tissue. Stratification included clinical factors and tumor MGMT methylation status. Patients were randomly assigned to standard temozolomide (arm 1) or DD temozolomide (arm 2) for 6 to 12 cycles. The primary end point was OS. Secondary analyses evaluated the impact of MGMT status. RESULTS: A total of 833 patients were randomly assigned to either arm 1 or arm 2 (1,173 registered). No statistically significant difference was observed between arms for median OS (16.6 v 14.9 months, respectively; hazard ratio [HR], 1.03; P = .63) or median PFS (5.5 v 6.7 months; HR, 0.87; P = .06). Efficacy did not differ by methylation status. MGMT methylation was associated with improved OS (21.2 v 14 months; HR, 1.74; P < .001), PFS (8.7 v 5.7 months; HR, 1.63; P < .001), and response (P = .012). There was increased grade  $\geq 3$  toxicity in arm 2 (34% v 53%; P < .001), mostly lymphopenia and fatigue. CONCLUSION: This study did not demonstrate improved efficacy for DD temozolomide for newly diagnosed GBM, regardless of methylation status. However, it did confirm the prognostic significance of MGMT methylation. Feasibility of large-scale accrual, prospective tumor collection, and molecular stratification was demonstrated.

[3]

**TÍTULO / TITLE:** - Coordinate activation of Shh and PI3K signaling in PTEN-deficient glioblastoma: new therapeutic opportunities.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nat Med. 2013 Nov;19(11):1518-23. doi: 10.1038/nm.3328. Epub 2013 Sep 29.

●● [Enlace al texto completo \(gratis o de pago\) 1038/nm.3328](#)

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**RESUMEN / SUMMARY:** - In glioblastoma, phosphatidylinositol 3-kinase (PI3K) signaling is frequently activated by loss of the tumor suppressor phosphatase and tensin homolog (PTEN). However, it is not known whether inhibiting PI3K represents a selective and effective approach for treatment. We interrogated large databases and found that sonic hedgehog (SHH) signaling is activated in PTEN-deficient glioblastoma. We demonstrate that the SHH and PI3K pathways synergize to promote tumor growth and viability in human PTEN-deficient glioblastomas. A combination of PI3K and SHH signaling inhibitors not only suppressed the activation of both pathways but also abrogated S6 kinase (S6K) signaling. Accordingly, targeting both pathways simultaneously resulted in mitotic catastrophe and tumor apoptosis and markedly reduced the growth of PTEN-deficient glioblastomas in vitro and in vivo. The drugs tested here appear to be safe in humans; therefore, this combination may provide a new targeted treatment for glioblastoma.

[4]

**TÍTULO / TITLE:** - Angiogenesis in glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - N Engl J Med. 2013 Oct 17;369(16):1561-3. doi: 10.1056/NEJMcibr1309402.

●● Enlace al texto completo (gratis o de pago) [1056/NEJMcibr1309402](#)

**AUTORES / AUTHORS:** - Das S; Marsden PA

[5]

**TÍTULO / TITLE:** - Quality of Survival and Growth in Children and Young Adults in the PNET4 European Controlled Trial of Hyperfractionated Versus Conventional Radiation Therapy for Standard-Risk Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Radiat Oncol Biol Phys. 2013 Nov 13. pii: S0360-3016(13)03186-6. doi: 10.1016/j.ijrobp.2013.09.046.

●● Enlace al texto completo (gratis o de pago) [1016/j.ijrobp.2013.09.046](#)

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**RESUMEN / SUMMARY:** - **PURPOSE:** To compare quality of survival in “standard-risk” medulloblastoma after hyperfractionated radiation therapy of the central nervous system with that after standard radiation therapy, combined with a chemotherapy regimen common to both treatment arms, in the PNET4 randomised controlled trial. **METHODS AND MATERIALS:** Participants in the PNET4 trial and their parents/caregivers in 7 participating anonymized countries completed standardized questionnaires in their own language on executive function, health status, behavior, health-related quality of life, and medical, educational, employment, and social information. Pre- and postoperative neurologic status and serial heights and weights were also recorded. **RESULTS:** Data were provided by 151 of 244 eligible survivors

(62%) at a median age at assessment of 15.2 years and median interval from diagnosis of 5.8 years. Compared with standard radiation therapy, hyperfractionated radiation therapy was associated with lower (ie, better) z-scores for executive function in all participants (mean intergroup difference 0.48 SDs, 95% confidence interval 0.16-0.81, P=.004), but health status, behavioral difficulties, and health-related quality of life z-scores were similar in the 2 treatment arms. Data on hearing impairment were equivocal. Hyperfractionated radiation therapy was also associated with greater decrement in height z-scores (mean intergroup difference 0.43 SDs, 95% confidence interval 0.10-0.76, P=.011). CONCLUSIONS: Hyperfractionated radiation therapy was associated with better executive function and worse growth but without accompanying change in health status, behavior, or quality of life.

[6]

**TÍTULO / TITLE:** - Improved tumor oxygenation and survival in glioblastoma patients who show increased blood perfusion after cediranib and chemoradiation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 Nov 19;110(47):19059-64. doi: 10.1073/pnas.1318022110. Epub 2013 Nov 4.

●● Enlace al texto completo (gratis o de pago) [1073/pnas.1318022110](#)

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**RESUMEN / SUMMARY:** - Antiangiogenic therapy has shown clear activity and improved survival benefit for certain tumor types. However, an incomplete understanding of the mechanisms of action of antiangiogenic agents has hindered optimization and broader application of this new therapeutic modality. In particular, the impact of antiangiogenic therapy on tumor blood flow and oxygenation status (i.e., the role of vessel pruning versus normalization) remains controversial. This controversy has become critical as multiple phase III trials of anti-VEGF agents combined with cytotoxics failed to show overall survival benefit in newly diagnosed glioblastoma (nGBM) patients and several other cancers. Here, we shed light on mechanisms of nGBM response to cediranib, a pan-VEGF receptor tyrosine kinase inhibitor, using MRI techniques and blood biomarkers in prospective phase II clinical trials of cediranib with chemoradiation vs. chemoradiation alone in nGBM patients. We demonstrate that improved perfusion occurs only in a subset of patients in cediranib-containing regimens, and is associated with improved overall survival in these nGBM patients. Moreover, an increase in perfusion is associated with improved tumor oxygenation status as well as with pharmacodynamic biomarkers, such as changes in plasma placenta growth factor and sVEGFR2. Finally, treatment resistance was associated with elevated plasma IL-8 and sVEGFR1 posttherapy. In conclusion, tumor perfusion changes after antiangiogenic therapy may distinguish responders vs. nonresponders early in the course of this expensive and potentially toxic form of therapy, and these

results may provide new insight into the selection of glioblastoma patients most likely to benefit from anti-VEGF treatments.

[7]

**TÍTULO / TITLE:** - beta-Arrestin 1 and 2 and G Protein-Coupled Receptor Kinase 2 Expression in Pituitary Adenomas: Role in the Regulation of Response to Somatostatin Analogue Treatment in Patients With Acromegaly.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocrinology. 2013 Dec;154(12):4715-25. doi: 10.1210/en.2013-1672. Epub 2013 Oct 29.

●● [Enlace al texto completo \(gratis o de pago\) 1210/en.2013-1672](#)

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**RESUMEN / SUMMARY:** - Recent in vitro studies highlighted G protein-coupled receptor kinase (GRK)2 and beta-arrestins as important players in driving somatostatin receptor (SSTR) desensitization and trafficking. Our aim was to characterize GRK2 and beta-arrestins expression in different pituitary adenomas and to investigate their potential role in the response to somatostatin analog (SSA) treatment in GH-secreting adenomas (GHomas). We evaluated mRNA expression of multiple SSTRs, GRK2, beta-arrestin 1, and beta-arrestin 2 in 41 pituitary adenomas (31 GHomas, 6 nonfunctioning [NFPAs], and 4 prolactinomas [PRLomas]). Within the GHomas group, mRNA data were correlated with the in vivo response to an acute octreotide test and with the GH-lowering effect of SSA in cultured primary cells. beta-Arrestin 1 expression was low in all 3 adenoma histotypes. However, its expression was significantly lower in GHomas and PRLomas, compared with NFPAs ( $P < .01$ ). GRK2 expression was higher in PRLomas and NFPAs compared with GHomas ( $P < .05$ ). In the GHoma group, GRK2 expression was inversely correlated to beta-arrestin 1 ( $P < .05$ ) and positively correlated to beta-arrestin 2 ( $P < .0001$ ). SSA treatment did not affect GRK2 and beta-arrestin expression in GHomas or in cultured rat pituitary tumor GH3 cells. Noteworthy, beta-arrestin 1 was significantly lower ( $P < .05$ ) in tumors responsive to octreotide treatment in vitro, whereas GRK2 and SSTR subtype 2 were significantly higher ( $P < .05$ ). Likewise, beta-arrestin 1 levels were inversely correlated with the in vivo response to acute octreotide test ( $P = .001$ ), whereas GRK2 and SSTR subtype 2 expression were positively correlated ( $P < .05$ ). In conclusion, for the first time, we characterized GRK2, beta-arrestin 1, and beta-arrestin 2 expression in a representative number of pituitary adenomas. beta-Arrestin 1 and GRK2 seem to have a role in modulating GH secretion during SSA treatment.

[8]

**TÍTULO / TITLE:** - High Response Rates and Prolonged Survival in Patients With Corticotroph Pituitary Tumors and Refractory Cushing's Disease From Capecitabine and Temozolomide (CAPTEM): A Case Series.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Nov 12.

- Enlace al texto completo (gratis o de pago)

[1227/NEU.0000000000000251](#)

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**RESUMEN / SUMMARY:** - BACKGROUND AND IMPORTANCE:: Rarely, corticotrophic pituitary tumors take on an aggressive form characterized by rapid growth, invasion into local structures, compression of cranial nerves, and possible spread to distant sites. When conventional surgery, radiation therapy and hormones fail to control progression and symptoms, alternative therapies are needed. A novel chemotherapeutic regimen of capecitabine and temozolomide (CAPTEM), originally designed in our laboratory, demonstrated dramatic anti-neoplastic effects against corticotrophic pituitary tumors. CLINICAL PRESENTATION:: Here we present a case series of four patients with aggressive, ACTH-producing pituitary tumors who had previously depleted all surgical, radiation, and hormonal therapies, and were then treated with CAPTEM. Dramatic clinical improvements in neurological deficits and Cushing's symptoms were evident in all patients after treatment was initiated. Confirmed by radiographic imaging, two of four patients demonstrated complete regression of disease, one patient had a 75% regression, and the fourth patient has ongoing stable disease for over 4.5 years at the time of this writing. Immunohistochemical analysis of patient's tumor samples showed low O-methylguanyl methyltransferase (MGMT) expression and adequate levels of mismatch repair enzymes (MLH-1, MSH-2, MSH-6, and PMS-2), which are important for the in vivo efficacy of CAPTEM. CONCLUSION:: This is the first report of prolonged anti-tumor response and radiographic complete remissions to CAPTEM in patients with aggressive pituitary tumors who had exhausted all other therapies.

[9]

**TÍTULO / TITLE:** - The somatic genomic landscape of glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell. 2013 Oct 10;155(2):462-77. doi: 10.1016/j.cell.2013.09.034.

- Enlace al texto completo (gratis o de pago) [1016/j.cell.2013.09.034](#)

**AUTORES / AUTHORS:** - Brennan CW; Verhaak RG; McKenna A; Campos B; Nounshmehr H; Salama SR; Zheng S; Chakravarty D; Sanborn JZ; Berman SH; Beroukheim R; Bernard B; Wu CJ; Genovese G; Shmulevich I; Barnholtz-Sloan J; Zou L; Vegesna R; Shukla SA; Ciriello G; Yung WK; Zhang W; Sougnez C; Mikkelsen T; Aldape K; Bigner DD; Van Meir EG; Prados M; Sloan A; Black KL; Eschbacher J;

Finocchiaro G; Friedman W; Andrews DW; Guha A; Iacocca M; O'Neill BP; Foltz G; Myers J; Weisenberger DJ; Penny R; Kucherlapati R; Perou CM; Hayes DN; Gibbs R; Marra M; Mills GB; Lander E; Spellman P; Wilson R; Sander C; Weinstein J; Meyerson M; Gabriel S; Laird PW; Haussler D; Getz G; Chin L

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**RESUMEN / SUMMARY:** - We describe the landscape of somatic genomic alterations based on multidimensional and comprehensive characterization of more than 500 glioblastoma tumors (GBMs). We identify several novel mutated genes as well as complex rearrangements of signature receptors, including EGFR and PDGFRA. TERT promoter mutations are shown to correlate with elevated mRNA expression, supporting a role in telomerase reactivation. Correlative analyses confirm that the survival advantage of the proneural subtype is conferred by the G-CIMP phenotype, and MGMT DNA methylation may be a predictive biomarker for treatment response only in classical subtype GBM. Integrative analysis of genomic and proteomic profiles challenges the notion of therapeutic inhibition of a pathway as an alternative to inhibition of the target itself. These data will facilitate the discovery of therapeutic and diagnostic target candidates, the validation of research and clinical observations and the generation of unanticipated hypotheses that can advance our molecular understanding of this lethal cancer.

[10]

**TÍTULO / TITLE:** - Functional outcome measures for NF1-associated optic pathway glioma clinical trials.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurology. 2013 Nov 19;81(21 Suppl 1):S15-24. doi: 10.1212/01.wnl.0000435745.95155.b8.

●● [Enlace al texto completo \(gratuito o de pago\)](#)

[1212/01.wnl.0000435745.95155.b8](http://1212/01.wnl.0000435745.95155.b8)

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**RESUMEN / SUMMARY:** - OBJECTIVE: The goal of the Response Evaluation in Neurofibromatosis and Schwannomatosis Visual Outcomes Committee is to define the best functional outcome measures for future neurofibromatosis type 1 (NF1)-associated optic pathway glioma (OPG) clinical trials. METHODS: The committee considered the components of vision, other ophthalmologic parameters affected by OPG, potential biomarkers of visual function, and quality of life measures to arrive at consensus-based, evidence-driven recommendations for objective and measurable functional endpoints for OPG trials. RESULTS: Visual acuity (VA) assessments using consistent quantitative testing methods are recommended as the main functional outcome measure for NF1-OPG clinical trials. Teller acuity cards are recommended for use as the primary VA endpoint, and HOTV as a secondary endpoint once subjects are old enough to complete it. The optic disc should be assessed for pallor, as this appears to be a contributory variable that may affect the interpretation of VA change over time. Given the importance of capturing patient-reported outcomes in clinical trials, evaluating visual quality of life using the Children's Visual Function Questionnaire as a secondary endpoint is also proposed. CONCLUSIONS: The use of these key functional endpoints will be essential for evaluating the efficacy of future OPG clinical trials.

[11]

**TÍTULO / TITLE:** - Oligodendrocyte/type-2 astrocyte progenitor cells and glial-restricted precursor cells generate different tumor phenotypes in response to the identical oncogenes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci. 2013 Oct 16;33(42):16805-17. doi: 10.1523/JNEUROSCI.0546-13.2013.

●● Enlace al texto completo (gratis o de pago) [1523/JNEUROSCI.0546-13.2013](#)

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**RESUMEN / SUMMARY:** - Despite the great interest in identifying the cell-of-origin for different cancers, little knowledge exists regarding the extent to which the specific origin of a tumor contributes to its properties. To directly examine this question, we expressed identical oncogenes in two types of glial progenitor cells, glial-restricted precursor (GRP) cells and oligodendrocyte/type-2 astrocyte progenitor cells (O-2A/OPCs), and in astrocytes of the mouse CNS (either directly purified or generated

from GRP cells). In vitro, expression of identical oncogenes in these cells generated populations differing in expression of antigens thought to identify tumor initiating cells, generation of 3D aggregates when grown as adherent cultures, and sensitivity to the chemotherapeutic agent BCNU. In vivo, cells differed in their ability to form tumors, in malignancy and even in the type of host-derived cells infiltrating the tumor mass. Moreover, identical genetic modification of these different cells yielded benign infiltrative astrocytomas, malignant astrocytomas, or tumors with characteristics seen in oligodendrogliomas and small-cell astrocytomas, indicating a contribution of cell-of-origin to the characteristic properties expressed by these different tumors. Our studies also revealed unexpected relationships between the cell-of-origin, differentiation, and the order of oncogene acquisition at different developmental stages in enabling neoplastic growth. These studies thus provide multiple novel demonstrations of the importance of the cell-of-origin in respect to the properties of transformed cells derived from them. In addition, the approaches used enable analysis of the role of cell-of-origin in tumor biology in ways that are not accessible by other more widely used approaches.

[12]

**TÍTULO / TITLE:** - Intratumoral IL-12 combined with CTLA-4 blockade elicits T cell-mediated glioma rejection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Exp Med. 2013 Nov 25.

●● Enlace al texto completo (gratis o de pago) [1084/jem.20130678](#)

**AUTORES / AUTHORS:** - Vom Berg J; Vrohings M; Haller S; Haimovici A; Kulig P; Sledzinska A; Weller M; Becher B

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**RESUMEN / SUMMARY:** - Glioblastomas (GBs) are the most aggressive form of primary brain cancer and virtually incurable. Accumulation of regulatory T (T reg) cells in GBs is thought to contribute to the dampening of antitumor immunity. Using a syngeneic mouse model for GB, we tested whether local delivery of cytokines could render the immunosuppressive GB microenvironment conducive to an antitumor immune response. IL-12 but not IL-23 reversed GB-induced immunosuppression and led to tumor clearance. In contrast to models of skin or lung cancer, IL-12-mediated glioma rejection was T cell dependent and elicited potent immunological memory. To translate these findings into a clinically relevant setting, we allowed for GB progression before initiating therapy. Combined intratumoral IL-12 application with systemic blockade of the co-inhibitory receptor CTLA-4 on T cells led to tumor eradication even at advanced disease stages where monotherapy with either IL-12 or CTLA-4 blockade failed. The combination of IL-12 and CTLA-4 blockade acts predominantly on CD4+ cells, causing a drastic decrease in FoxP3+ T reg cells and an increase in effector T (T eff) cells. Our data provide compelling preclinical findings warranting swift translation into clinical trials in GB and represent a promising approach to increase response rates of CTLA-4 blockade in solid tumors.

[13]

**TÍTULO / TITLE:** - Treatment outcomes in glioblastoma patients aged 76 years or older: a multicenter retrospective cohort study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1291-3](#)

**AUTORES / AUTHORS:** - Uzuka T; Asano K; Sasajima T; Sakurada K; Kumabe T; Beppu T; Ichikawa M; Kitanaka C; Aoki H; Saito K; Ogasawara K; Tominaga T; Mizoi K; Ohkuma H; Fujii Y; Kayama T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Niigata Cancer Center Hospital, 2-15-3 Kawagishi-chou, Chuo-ku, Niigata, 951-8566, Japan, [uzuka@niigata-cc.jp](mailto:uzuka@niigata-cc.jp).

**RESUMEN / SUMMARY:** - Age is one of the most important prognostic factors in glioblastoma patients, but no standard treatment has been established for elderly patients with this condition. We therefore conducted a retrospective cohort study to evaluate treatment regimens and outcomes in elderly glioblastoma patients. The study population consisted of 79 glioblastoma patients aged  $\geq 76$  years (median age 78.0 years; 34 men and 45 women). The median preoperative Karnofsky performance status (KPS) score was 60. Surgical procedures were classified as biopsy (31 patients, 39.2 %),  $< 95$  % resection of the tumor (21 patients, 26.9 %), and  $\geq 95$  % resection of the tumor (26 patients, 33.3 %). Sixty-seven patients (81.0 %) received radiotherapy and 45 patients (57.0 %) received chemotherapy. The median overall progression-free survival time was 6.8 months, and the median overall survival time was 9.8 months. Patients aged  $\geq 78$  years were significantly less likely to receive radiotherapy ( $p = 0.004$ ). Patients with a postoperative KPS score of  $\geq 60$  were significantly more likely to receive maintenance chemotherapy ( $p = 0.008$ ). Multivariate analyses identified two independent prognostic factors: postoperative KPS score  $\geq 60$  (hazard ratio [HR] = 0.531, 95 % confidence interval [CI] 0.315-0.894,  $p = 0.017$ ) and temozolomide therapy (HR = 0.442, 95 % CI 0.25-0.784,  $p < 0.001$ ). The findings of this study suggest that postoperative KPS score is an important prognostic factor for glioblastoma patients aged  $\geq 76$  years, and that these patients may benefit from temozolomide therapy.

[14]

**TÍTULO / TITLE:** - A population of Nestin-expressing progenitors in the cerebellum exhibits increased tumorigenicity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nat Neurosci. 2013 Dec;16(12):1737-44. doi: 10.1038/nn.3553. Epub 2013 Oct 20.

●● Enlace al texto completo (gratis o de pago) [1038/nn.3553](#)

**AUTORES / AUTHORS:** - Li P; Du F; Yuelling LW; Lin T; Muradimova RE; Tricarico R; Wang J; Enikolopov G; Bellacosa A; Wechsler-Reya RJ; Yang ZJ

**INSTITUCIÓN / INSTITUTION:** - [1] Cancer Biology Program, Fox Chase Cancer Center, Temple University Health System, Philadelphia, Pennsylvania, USA. [2] Department of Clinical Biochemistry, Southwest Hospital, Third Military Medical University, Chongqing, China.

**RESUMEN / SUMMARY:** - It is generally believed that cerebellar granule neurons originate exclusively from granule neuron precursors (GNPs) in the external germinal layer (EGL). Here we identified a rare population of neuronal progenitors in mouse

developing cerebellum that expresses Nestin. Although Nestin is widely considered a marker for multipotent stem cells, these Nestin-expressing progenitors (NEPs) are committed to the granule neuron lineage. Unlike conventional GNPs, which reside in the outer EGL and proliferate extensively, NEPs reside in the deep part of the EGL and are quiescent. Expression profiling revealed that NEPs are distinct from GNPs and, in particular, express markedly reduced levels of genes associated with DNA repair. Consistent with this, upon aberrant activation of Sonic hedgehog (Shh) signaling, NEPs exhibited more severe genomic instability and gave rise to tumors more efficiently than GNPs. These studies revealed a previously unidentified progenitor for cerebellar granule neurons and a cell of origin for medulloblastoma.

[15]

**TÍTULO / TITLE:** - Treatment of newly diagnosed malignant glioma in the elderly people: new trials that impact therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Pract. 2013 Dec;67(12):1225-7. doi: 10.1111/ijcp.12258.

●● Enlace al texto completo (gratis o de pago) [1111/ijcp.12258](#)

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**RESUMEN / SUMMARY:** - Glioblastoma (GB), World Health Organization Grade 4 glioma, is the most common malignant primary brain tumour with an annual incidence of 12,943 cases in the United States . It is a tumour of the elderly people with a median age of onset of 64 years, although children and young adults are also affected. GB is associated with a poor prognosis; despite best treatment, most community-based patients will not survive 1 year . Cures are rare and overall survival rates at 2 and 5 years are 26-48% and 12%, respectively, in highly selected, contemporary, clinical trial eligible patients . For protocol eligible US patients, the median survival is 16-17 months, which is partly a reflection of improved supportive care, recognition of pseudoprogression, exclusion of patients undergoing biopsy only and availability of bevacizumab at recurrence . Initial treatment for patients with high performance [Karnofsky Performance Status (KPS) > 60 and age < 71 years) consists of maximal safe surgical resection followed by adjuvant focal, external beam radiotherapy (RT) with concurrent temozolomide (TMZ) chemotherapy and post-RT TMZ for 6 months . TMZ and carmustine (BCNU) biodegradable wafer (Gliadel) are the only adjuvant chemotherapies that have improved survival in randomised GB clinical trials . The current standard treatment is based upon a European Organization for Research and Treatment of Cancer (EORTC) and National Cancer Institute of Canada (NCIC) randomised, phase 3 trial of 573 patients with newly diagnosed GB (age 19-71 years and World Health Organization Performance Status <= 2) that compared RT alone [total dose 60 Gray (Gy)] to TMZ chemotherapy in combination with RT (total 60 Gy), followed by 6 months of post-RT TMZ .

[16]

**TÍTULO / TITLE:** - Factors associated with survival among patients with AIDS-related primary central nervous system lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - AIDS. 2013 Sep 26.

- Enlace al texto completo (gratis o de pago)

[1097/QAD.0000000000000030](#)

**AUTORES / AUTHORS:** - Uldrick TS; Pipkin S; Scheer S; Hessol NA

**INSTITUCIÓN / INSTITUTION:** - aHIV & AIDS Malignancy Branch, Center for Cancer Research, National Cancer Institute at the National Institutes of Health, Bethesda, Maryland bSan Francisco Department of Public Health cDepartments of Clinical Pharmacy & Medicine, University of California, San Francisco, California, USA.

**RESUMEN / SUMMARY:** - **OBJECTIVE::** AIDS-related primary central nervous system lymphoma (AR-PCNSL) has a poor prognosis. Improved understanding of specific patient, infectious, diagnostic, and treatment-related factors that affect overall survival (OS) are required to improve outcomes. **DESIGN::** Population-based registry linkage study. **METHODS::** Adult cases from the San Francisco AIDS registry (1990-2000) were matched with the California Cancer Registry (1985-2002) to ascertain AR-PCNSL data. Survival time was assessed through 31 December 2007. Risk factors and temporal trends for death were measured using two-sided Kaplan-Meier and Cox analyses. **RESULTS::** Two hundred and seven AR-PCNSL patients were identified: 68% were white, 20% Hispanic, 10% African-American, and 2% Asian. Nineteen percent of patients had central nervous system (CNS) opportunistic infections diagnosed prior to AR-PCNSL. Fifty seven percent of patients received radiation and/or chemotherapy and 12% used HAART prior to or within 30 days of AR-PCNSL diagnosis. One hundred and ninety-nine patients died (34 deaths/100 person-years). In adjusted analysis, prior CNS opportunistic infections diagnosis increased risk of death (hazard ratio 1.9, P = 0.0006) whereas radiation and/or chemotherapy decreased risk (hazard ratio 0.6, P < 0.0001). AR-PCNSL diagnosis 1999-2002 had a lower mortality risk (hazard ratio = 0.4, P = 0.02) compared to 1990-1995. African-Americans had an increased risk of death compared to whites or Asians (hazard ratio = 2.0, P = 0.007). **CONCLUSION::** OS among AR-PCNSL patients improved over time but remains poor, especially among African-Americans. Prospective evaluation of curative therapy in AR-PCNSL is urgently needed. Accurate diagnosis of CNS mass lesions in patients with AIDS is required and for those with AR-PCNSL, antiretroviral therapy with concomitant AR-PCNSL therapy, and antimicrobial supportive care may improve OS.

[17]

**TÍTULO / TITLE:** - Functional Role of CLIC1 Ion Channel in Glioblastoma-Derived Stem/Progenitor Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Natl Cancer Inst. 2013 Nov 6;105(21):1644-55. doi: 10.1093/jnci/djt278. Epub 2013 Oct 10.

- Enlace al texto completo (gratis o de pago) [1093/jnci/djt278](#)

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**INSTITUCIÓN / INSTITUTION:** - Affiliations of authors: Department of Experimental Oncology, European Institute of Oncology, Milan, Italy (MS, DO, CR, PB, LF, GP);

Department of Bioscience, University of Milan, Milan, Italy (NS, MA, MM); Department of Anesthesiology, Division of Molecular Medicine, University of California-Los Angeles, Los Angeles, CA (NS); Department of Neurosurgery, Neurocenter, University of Freiburg, Freiburg, Germany (MSC).

**RESUMEN / SUMMARY:** - BACKGROUND: Chloride channels are physiologically involved in cell division and motility. Chloride intracellular channel 1 (CLIC1) is overexpressed in a variety of human solid tumors compared with normal tissues, suggesting a potential involvement of CLIC1 in the regulation of tumorigenesis. This led us to investigate the role of CLIC1 in gliomagenesis. METHODS: We used the neurosphere system to isolate stem/progenitor cells from human glioblastomas (GBMs). CLIC1 targeting in GBM neurospheres was achieved by both lentiviral-mediated short-hairpin RNA transduction and CLIC1 antibody treatment, and its effect on stem-like properties was analyzed in vitro by proliferation and clonogenic assays and in vivo by orthotopic injection in immunocompromised mice. Channel activity was studied by perforated patch clamp technique. Differences in expression were analyzed by analysis of variance with Tamhane's multiple comparison test. Kaplan-Meier analyses and log-rank test were used to assess survival. All statistical tests were two-sided. RESULTS: CLIC1 was statistically significantly overexpressed in GBMs compared with normal brain tissues ( $P < .001$ ) with a better survival of patients with CLIC1 low-expressing tumors (CLIC1(low) vs CLIC1(high) survival:  $\chi^2 = 74.35$ ; degrees of freedom = 1; log-rank  $P < .001$ ). CLIC1 was variably expressed in patient-derived GBM neurospheres and was found enriched in the stem/progenitor compartment. CLIC1 silencing reduced proliferative ( $P < .01$ ), clonogenic ( $P < .01$ ), and tumorigenic capacity ( $P < .05$ ) of stem/progenitor cells. The reduction of CLIC1 chloride currents with a specific CLIC1 antibody mirrored the biological effects of CLIC1 silencing in GBM patient-derived neurospheres. CONCLUSIONS: Reduced gliomagenesis after CLIC1 targeting in tumoral stem/progenitor cells and the finding that CLIC1 expression is inversely associated with patient survival suggest CLIC1 as a potential target and prognostic biomarker.

[18]

**TÍTULO / TITLE:** - Bispectral index values and propofol concentrations at loss and return of consciousness in patients with frontal brain tumours and control patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Anaesth. 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago) [1093/bja/aet342](#)

**AUTORES / AUTHORS:** - Sahinovic MM; Beese U; Heeremans EH; Kalmar A; van Amsterdam K; Steenbakkens RJ; Kuiper H; Spanjersberg R; Groen RJ; Struys MM; Absalom AR

**INSTITUCIÓN / INSTITUTION:** - Department of Anesthesiology.

**RESUMEN / SUMMARY:** - BACKGROUND: The influence of frontal brain tumours on bispectral index (BIS) measurements and propofol requirements is unknown. The primary aim of our study was to determine whether BIS values recorded at loss and return of consciousness (LOC and ROC, respectively) differ between patients with unilateral frontal brain tumours and control patients. Secondary goals were to compare propofol requirements for LOC and to determine whether there were significant inter-hemispheric differences between BIS values in tumour and control patients.

**METHODS:** We enrolled 20 patients with a frontal brain tumour and 20 control patients. Bilateral BIS measurements were done during induction of propofol anaesthesia, during recovery of consciousness, and during a second induction of anaesthesia. The isolated-forearm test was used to determine the moments of LOC1, ROC, and LOC2. Arterial blood samples were obtained every 4 min for determination of measured propofol concentrations. **RESULTS:** The median BIS values recorded at LOC1, ROC, and LOC2 did not differ between the groups. There were no significant inter-hemispheric differences in BIS in tumour and control patients. The median [inter-quartile range (IQR)] total propofol doses at LOC1 were 82 (75-92) and 78 (68-91) mg in tumour and control patients, respectively. The median (IQR) measured plasma propofol concentrations at LOC1 were 12 (9-14) and 13 (11-15) microg ml<sup>-1</sup> in the tumour and control groups, respectively. **CONCLUSIONS:** The presence of a frontal brain tumour did not affect ipsilateral BIS values, and so need not influence the placement of unilateral BIS electrodes if BIS monitoring is used to titrate propofol anaesthesia.

[19]

**TÍTULO / TITLE:** - Underutilization of radiation therapy in patients with glioblastoma: Predictive factors and outcomes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer. 2013 Oct 2. doi: 10.1002/cncr.28398.

●● [Enlace al texto completo \(gratis o de pago\) 1002/cncr.28398](#)

**AUTORES / AUTHORS:** - Aizer AA; Ancukiewicz M; Nguyen PL; Shih HA; Loeffler JS; Oh KS

**INSTITUCIÓN / INSTITUTION:** - Harvard Radiation Oncology Program, Boston, Massachusetts.

**RESUMEN / SUMMARY:** - **BACKGROUND:** Randomized trials have demonstrated that radiation improves survival in patients with glioblastoma. The purpose of this study was to characterize the risk factors and impact of omission of radiation therapy in such patients. **METHODS:** The Surveillance, Epidemiology, and End Results (SEER) program was used to identify 22,777 patients diagnosed with glioblastoma between 1988 and 2007. Multivariable logistic regression was employed to identify predictors associated with omission of radiation. Cox regression was used to characterize the impact of omitting radiation on all-cause mortality. **RESULTS:** Among the entire cohort, 16,863 of 22,777 patients (74%) received radiation, whereas 5914 of 22,777 patients (26%) did not. Factors associated with omission of radiation included older age (OR = 1.048 per year increase, 95% CI = 1.046-1.051, P < .001), lower annual income (OR = 0.93 per \$10,000 increase, 95% CI = 0.90-0.96, P < .001), African American race (reference = white, OR = 1.19, 95% CI = 1.03-1.37, P = .02), Hispanic race (OR = 1.34, 95% CI = 1.19-1.50, P < .001), Asian American race (OR = 1.24, 95% CI = 1.04-1.48, P < .001), unmarried status (OR = 1.71, 95% CI = 1.60-1.83, P < .001), and subtotal resection/biopsy (OR = 1.82, 95% CI = 1.69-1.96, P < .001). The use of radiation was significantly associated with improved overall survival (2-year survival: 14.6% versus 4.2%, P < .001; adjusted HR = 2.09, 95% CI = 2.02-2.16, P < .001). When the population was restricted to patients < 50 years old, these findings remained largely unchanged. **CONCLUSIONS:** Radiation therapy is associated with survival benefit in patients with glioblastoma, and sociodemographic factors play a significant role in the

underutilization of radiation. The underlying causes for these disparities in care require further research. Cancer 2013. © 2013 American Cancer Society.

[20]

**TÍTULO / TITLE:** - Risk factors and long-term survival in adult patients with primary malignant spinal cord astrocytomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Sep 29.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1251-y](#)

**AUTORES / AUTHORS:** - Wong AP; Dahdaleh NS; Fessler RG; Melkonian SC; Lin Y; Smith ZA; Lam SK

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Northwestern University Feinberg School of Medicine, Chicago, IL, USA.

**RESUMEN / SUMMARY:** - Primary intramedullary spinal cord tumors are a rare entity, comprising 4-10 % of all spinal cord tumors. The current report presents data on intramedullary spinal cord anaplastic astrocytomas and glioblastomas in adults using the national surveillance, epidemiology, and end results database (1973-2008), and evaluates the impact of demographic and treatment factors on survival. Eighty nine adults were evaluated (mean age of 43 years); 49 % of patients had anaplastic astrocytoma and 51 % of patients had glioblastoma. 88 % of patients had surgical intervention and 85 % of patients had radiotherapy. In univariate analysis, male gender (HR = 0.50, CI: 0.29-0.86, P = 0.01), surgical treatment (HR = 0.37, CI: 0.15-0.93, P = 0.03), and tumor histology (HR = 1.83, CI: 1.06-3.18, P = 0.03) were significant predictors of survival. Results remained significant or marginally significant after multivariate adjustment analyses. Adjuvant radiotherapy and age at diagnosis did not have a significant influence on survival. Future prospective studies from collaborative institutions combining richer detail in perioperative treatment, radiotherapy dosing, chemotherapy treatment, neurologic examinations, functional outcomes, and quality of life measures would contribute to more concrete, evidence-based treatment protocols for adult patients with primary malignant spinal cord astrocytomas.

[21]

**TÍTULO / TITLE:** - Optimizing the radiation therapy dose prescription for pediatric medulloblastoma: Minimizing the life years lost attributable to failure to control the disease and late complication risk.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Oncol. 2013 Nov 25.

●● Enlace al texto completo (gratis o de pago) [3109/0284186X.2013.858824](#)

**AUTORES / AUTHORS:** - Brodin NP; Vogelius IR; Bjork-Eriksson T; Munck Af Rosenschold P; Maraldo MV; Aznar MC; Specht L; Bentzen SM

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Radiation Medicine Research Center, Rigshospitalet, Copenhagen, Denmark.

**RESUMEN / SUMMARY:** - Background. A mathematical framework is presented for simultaneously quantifying and evaluating the trade-off between tumor control and late complications for risk-based radiation therapy (RT) decision-support. To demonstrate this, we estimate life years lost (LYL) attributable to tumor recurrence, late cardiac

toxicity and secondary cancers for standard-risk pediatric medulloblastoma (MB) patients and compare the effect of dose re-distribution on a common scale. Methods. Total LYL were derived, based on the LYL attributable to radiation-induced late complications and the LYL from not controlling the primary disease. We compared the estimated LYL for three different treatments in 10 patients: 1) standard 3D conformal RT; 2) proton therapy; 3) risk-adaptive photon treatment lowering the dose to part of the craniospinal (CS) target volume situated close to critical risk organs. Results. Late toxicity is important, with 0.75 LYL (95% CI 0.60-7.2 years) for standard uniform 24 Gy CS irradiation. However, recurrence risk dominates the total LYL with 14.2 years (95% CI 13.4-16.6 years). Compared to standard treatment, a risk-adapted strategy prescribing 12 Gy to the spinal volume encompassing the 1<sup>st</sup>-10<sup>th</sup> thoracic vertebrae (Th1-Th10), and 36 Gy to the remaining CS volume, estimated a LYL reduction of 0.90 years (95% CI -0.18-2.41 years). Proton therapy with 36 Gy to the whole CS volume was associated with significantly fewer LYL compared to the risk-adapted photon strategies, with a mean LYL difference of 0.50 years (95% CI 0.25-2.60 years). Conclusions. Optimization of RT prescription strategies considering both late complications and the risk of recurrence, an all-cause mortality dose painting approach, was demonstrated. The risk-adapted techniques compared favorably to the standard, and although in this context, the gain is small compared to estimated uncertainty, this study demonstrates a framework for all-cause mortality risk estimation, rather than evaluates direct clinical applicability of risk-adapted strategies.

[22]

**TÍTULO / TITLE:** - Predictors of health-related quality of life in neurosurgical brain tumor patients: focus on patient-centered perspective.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Nov 20.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00701-013-1930-7](#)

**AUTORES / AUTHORS:** - Bunevicius A; Tamasauskas S; Deltuva V; Tamasauskas A; Radziunas A; Bunevicius R

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Clinical Research, Institute of Neurosciences, Lithuanian University of Health Sciences, Kaunas, Lithuania, [a.bunevicius@yahoo.com](mailto:a.bunevicius@yahoo.com).

**RESUMEN / SUMMARY:** - BACKGROUND: In brain tumor (BT) patients, the association between health-related quality of life (HRQoL) and psychological characteristics remains largely unknown. We evaluated the association of personality traits, clinical factors, psychological distress symptoms, and cognitive state with HRQoL in BT patients. METHODS: On admission for BT surgery, 200 patients (69 % women; age 55.8 +/- 14.5 years) were evaluated for HRQoL (SF-36 scale), Big-Five personality traits (Ten-Item Personality Inventory), psychological distress symptoms (Hospital Anxiety and Depression Scale or HADS), cognitive function (Mini-Mental State Examination or MMSE) and clinical characteristics, including functional status (Barthel index or BI). The most common BT diagnoses were meningioma (39 %) and high-grade glioma (18 %). RESULTS: Only factors significantly associated with SF-36 domains in univariable regression analyses were included in their respective multivariable models and predicted from 6 %-49 % of the total variance of SF-36 scores. Greater TIPI emotional stability score was independently associated with

greater SF-36 emotional well-being (beta = 0.23, p < 0.001) and general health (beta = 0.18, p = 0.01) scores, and greater TIPI consciousness score, with greater SF-36 emotional well-being score (beta = 0.13, p = 0.02). HADS-anxiety and HADS-depression scores were the strongest independent determinants of all, except physical functioning, SF-36 scores (beta-values range from 0.14 to 0.56; p values <= 0.03). BI score was the strongest independent determinant of SF-36 physical functioning score (beta = 0.36, p < 0.001). MMSE score was associated with all but emotional well-being and social functioning SF-36 scores. CONCLUSIONS: Consciousness and emotional stability should be considered important personality-related determinants of HRQoL in BT patients. Psychological distress, functional disability, and cognitive impairment are also important predictors of HRQoL.

[23]

**TÍTULO / TITLE:** - Cyclophilin B Supports Myc and Mutant p53 Dependent Survival of Glioblastoma Multiforme Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-](#)

[0771](#)

**AUTORES / AUTHORS:** - Choi JW; Schroeder MA; Sarkaria JN; Bram RJ

**INSTITUCIÓN / INSTITUTION:** - Immunology, Mayo Clinic.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is an aggressive, treatment-refractory type of brain tumor for which effective therapeutic targets remain important to identify. Here we report that cyclophilin B (CypB), a prolyl isomerase residing in the endoplasmic reticulum (ER), provides an essential survival signal in GBM cells. Analysis of gene expression databases revealed that CypB is upregulated in many cases of malignant glioma. We found that suppression of CypB reduced cell proliferation and survival in human GBM cells in vitro and in vivo. We also found that treatment with small molecule inhibitors of cyclophilins, including the approved drug cyclosporine, greatly reduced the viability of GBM cells. Mechanistically, depletion or pharmacologic inhibition of CypB caused hyperactivation of the oncogenic RAS-MAPK pathway, induction of cellular senescence signals, and death resulting from loss of MYC, mutant p53, Chk1 and JAK/STAT3 signaling. Elevated reactive oxygen species, ER expansion and abnormal unfolded protein responses in CypB-depleted GBM cells indicated that CypB alleviates oxidative and ER stresses and coordinates stress adaptation responses. Enhanced cell survival and sustained expression of multiple oncogenic proteins downstream of CypB may thus contribute to the poor outcome of GBM tumors. Our findings link chaperone-mediated protein folding in the ER to mechanisms underlying oncogenic transformation, and they make CypB an attractive and immediately targetable molecule for GBM therapy.

[24]

**TÍTULO / TITLE:** - Susceptibility-weighted MR imaging of radiation therapy-induced cerebral microbleeds in patients with glioma: a comparison between 3T and 7T.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroradiology. 2013 Nov 27.

●● Enlace al texto completo (gratis o de pago) [1007/s00234-013-1297-8](https://doi.org/10.1007/s00234-013-1297-8)

**AUTORES / AUTHORS:** - Bian W; Hess CP; Chang SM; Nelson SJ; Lupo JM

**INSTITUCIÓN / INSTITUTION:** - The UC Berkeley & UCSF Graduate Program in Bioengineering, University of California San Francisco, San Francisco, CA, USA.

**RESUMEN / SUMMARY:** - INTRODUCTION: Cerebral microbleeds have been observed in normal-appearing brain tissue of patients with glioma years after receiving radiation therapy. The contrast of these paramagnetic lesions varies with field strength due to differences in the effects of susceptibility. The purpose of this study was to compare 3T and 7T MRI as platforms for detecting cerebral microbleeds in patients treated with radiotherapy using susceptibility-weighted imaging (SWI). METHODS: SWI was performed with both 3T and 7T MR scanners on ten patients with glioma who had received prior radiotherapy. Imaging sequences were optimized to obtain data within a clinically acceptable scan time. Both T2\*-weighted magnitude images and SWI data were reconstructed, minimum intensity projection was implemented, and microbleeds were manually identified. The number of microbleeds was counted and compared among datasets. RESULTS: Significantly more microbleeds were identified on SWI than magnitude images at both 7T ( $p = 0.002$ ) and 3T ( $p = 0.023$ ). Seven-tesla SWI detected significantly more microbleeds than 3T SWI for seven out of ten patients who had tumors located remote from deep brain regions ( $p = 0.016$ ), but when the additional three patients with more inferior tumors were included, the difference was not significant. CONCLUSION: SWI is more sensitive for detecting microbleeds than magnitude images at both 3T and 7T. For areas without heightened susceptibility artifacts, 7T SWI is more sensitive to detecting radiation therapy-induced microbleeds than 3T SWI. Tumor location should be considered in conjunction with field strength when selecting the most appropriate strategy for imaging microbleeds.

[25]

**TÍTULO / TITLE:** - Phospholipase D2 mediates survival signaling through direct regulation of Akt in glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Biol Chem. 2013 Nov 20.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.M113.532978](https://doi.org/10.1074/jbc.M113.532978)

**AUTORES / AUTHORS:** - Bruntz RC; Taylor HE; Lindsley CW; Brown HA

**INSTITUCIÓN / INSTITUTION:** - Vanderbilt University, United States.

**RESUMEN / SUMMARY:** - The lack of innovative drug targets for glioblastoma multiforme (GBM) limits patient survival to approximately one year following diagnosis. The pro-survival kinase Akt provides an ideal target for the treatment of GBM as Akt signaling is frequently activated in this cancer type. However, the central role of Akt in physiological processes limits its potential as a therapeutic target. In this report we show that the lipid metabolizing enzyme phospholipase D (PLD) is a novel regulator of Akt in GBM. Studies using a combination of small molecule PLD inhibitors and siRNA knockdowns establish phosphatidic acid (PtdOH), the product of the PLD reaction, as an essential component for the membrane recruitment and activation of Akt. Inhibition of PLD enzymatic activity and subsequent Akt activation decreases GBM cell viability by specifically inhibiting autophagic flux. We propose a mechanism whereby phosphorylation of Beclin1 by Akt prevents binding of Rubicon, an interaction known to

inhibit autophagic flux. These findings provide a novel framework through which Akt inhibition can be achieved without directly targeting the kinase.

[26]

**TÍTULO / TITLE:** - Therapeutic targeting of constitutive PARP activation compromises stem cell phenotype and survival of glioblastoma-initiating cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Differ. 2013 Oct 11. doi: 10.1038/cdd.2013.136.

●● Enlace al texto completo (gratis o de pago) [1038/cdd.2013.136](#)

**AUTORES / AUTHORS:** - Venere M; Hamerlik P; Wu Q; Rasmussen RD; Song LA; Vasanji A; Tenley N; Flavahan WA; Hjelmeland AB; Bartek J; Rich JN

**INSTITUCIÓN / INSTITUTION:** - Department of Stem Cell Biology and Regenerative Medicine, Lerner Research Institute, Cleveland Clinic Foundation, 9500 Euclid Ave NE30 9500 Euclid Ave, Cleveland, OH 44195, USA.

**RESUMEN / SUMMARY:** - Glioblastoma-initiating cells (GICs) are self-renewing tumorigenic sub-populations, contributing to therapeutic resistance via decreased sensitivity to ionizing radiation (IR). GIC survival following IR is attributed to an augmented response to genotoxic stress. We now report that GICs are primed to handle additional stress due to basal activation of single-strand break repair (SSBR), the main DNA damage response pathway activated by reactive oxygen species (ROS), compared with non-GICs. ROS levels were higher in GICs and likely contributed to the oxidative base damage and single-strand DNA breaks found elevated in GICs. To tolerate constitutive DNA damage, GICs exhibited a reliance on the key SSBR mediator, poly-ADP-ribose polymerase (PARP), with decreased viability seen upon small molecule inhibition to PARP. PARP inhibition (PARPi) sensitized GICs to radiation and inhibited growth, self-renewal, and DNA damage repair. In vivo treatment with PARPi and radiotherapy attenuated radiation-induced enrichment of GICs and inhibited the central cancer stem cell phenotype of tumor initiation. These results indicate that elevated PARP activation within GICs permits exploitation of this dependence, potentially augmenting therapeutic efficacy of IR against GICs. In addition, our results support further development of clinical trials with PARPi and radiation in glioblastoma. Cell Death and Differentiation advance online publication, 11 October 2013; doi:10.1038/cdd.2013.136.

[27]

**TÍTULO / TITLE:** - Rituximab, methotrexate, procarbazine, and vincristine followed by consolidation reduced-dose whole-brain radiotherapy and cytarabine in newly diagnosed primary CNS lymphoma: final results and long-term outcome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 Nov 1;31(31):3971-9. doi: 10.1200/JCO.2013.50.4910. Epub 2013 Oct 7.

●● Enlace al texto completo (gratis o de pago) [1200/JCO.2013.50.4910](#)

**AUTORES / AUTHORS:** - Morris PG; Correa DD; Yahalom J; Raizer JJ; Schiff D; Grant B; Grimm S; Lai RK; Reiner AS; Panageas K; Karimi S; Curry R; Shah G; Abrey LE; Deangelis LM; Omuro A

**INSTITUCIÓN / INSTITUTION:** - Patrick G. Morris, Denise D. Correa, Joachim Yahalom, Anne S. Reiner, Kathy Panageas, Sasan Karimi, Richard Curry, Gaurav Shah, Lauren E. Abrey, Lisa M. DeAngelis, and Antonio Omuro, Memorial Sloan-Kettering Cancer Center; Rose K. Lai, Columbia University, New York, NY; Jeffrey J. Raizer and Sean Grimm, Northwestern University, Chicago, IL; David Schiff, University of Virginia, Charlottesville, VA; and Barbara Grant, University of Vermont, Burlington, VT.

**RESUMEN / SUMMARY:** - **PURPOSE:** A multicenter phase II study was conducted to assess the efficacy of rituximab, methotrexate, procarbazine, and vincristine (R-MPV) followed by consolidation reduced-dose whole-brain radiotherapy (rdWBRT) and cytarabine in primary CNS lymphoma. **PATIENTS AND METHODS:** Patients received induction chemotherapy with R-MPV (five to seven cycles); those achieving a complete response (CR) received rdWBRT (23.4 Gy), and otherwise, standard WBRT was offered (45 Gy). Consolidation cytarabine was given after the radiotherapy. The primary end point was 2-year progression-free survival (PFS) in patients receiving rdWBRT. Exploratory end points included prospective neuropsychological evaluation, analysis of magnetic resonance imaging (MRI) white matter changes using the Fazekas scale, and evaluation of the apparent diffusion coefficient (ADC) as a prognostic factor.

**RESULTS:** Fifty-two patients were enrolled, with median age of 60 years (range, 30 to 79 years) and median Karnofsky performance score of 70 (range, 50 to 100). Thirty-one patients (60%) achieved a CR after R-MPV and received rdWBRT. The 2-year PFS for this group was 77%; median PFS was 7.7 years. Median overall survival (OS) was not reached (median follow-up for survivors, 5.9 years); 3-year OS was 87%. The overall (N = 52) median PFS was 3.3 years, and median OS was 6.6 years. Cognitive assessment showed improvement in executive function (P < .01) and verbal memory (P < .05) after chemotherapy, and follow-up scores remained relatively stable across the various domains (n = 12). All examined MRIs (n = 28) displayed a Fazekas score of <= 3, and no patient developed scores of 4 to 5; differences in ADC values did not predict response (P = .15), PFS (P = .27), or OS (P = .33). **CONCLUSION:** R-MPV combined with consolidation rdWBRT and cytarabine is associated with high response rates, long-term disease control, and minimal neurotoxicity.

[28]

**TÍTULO / TITLE:** - Sleeping Beauty mutagenesis in a mouse medulloblastoma model defines networks that discriminate between human molecular subgroups.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 Nov 12;110(46):E4325-34. doi: 10.1073/pnas.1318639110. Epub 2013 Oct 28.

●● Enlace al texto completo (gratis o de pago) [1073/pnas.1318639110](https://doi.org/10.1073/pnas.1318639110)

**AUTORES / AUTHORS:** - Genovesi LA; Ng CG; Davis MJ; Remke M; Taylor MD; Adams DJ; Rust AG; Ward JM; Ban KH; Jenkins NA; Copeland NG; Wainwright BJ

**INSTITUCIÓN / INSTITUTION:** - Institute for Molecular Bioscience, The University of Queensland, St. Lucia, QLD 4072, Australia.

**RESUMEN / SUMMARY:** - The Sleeping Beauty (SB) transposon mutagenesis screen is a powerful tool to facilitate the discovery of cancer genes that drive tumorigenesis in mouse models. In this study, we sought to identify genes that functionally cooperate with sonic hedgehog signaling to initiate medulloblastoma (MB), a tumor of the cerebellum. By combining SB mutagenesis with Patched1 heterozygous mice

(Ptch1(lacZ/+)), we observed an increased frequency of MB and decreased tumor-free survival compared with Ptch1(lacZ/+) controls. From an analysis of 85 tumors, we identified 77 common insertion sites that map to 56 genes potentially driving increased tumorigenesis. The common insertion site genes identified in the mutagenesis screen were mapped to human orthologs, which were used to select probes and corresponding expression data from an independent set of previously described human MB samples, and surprisingly were capable of accurately clustering known molecular subgroups of MB, thereby defining common regulatory networks underlying all forms of MB irrespective of subgroup. We performed a network analysis to discover the likely mechanisms of action of subnetworks and used an in vivo model to confirm a role for a highly ranked candidate gene, Nfia, in promoting MB formation. Our analysis implicates candidate cancer genes in the deregulation of apoptosis and translational elongation, and reveals a strong signature of transcriptional regulation that will have broad impact on expression programs in MB. These networks provide functional insights into the complex biology of human MB and identify potential avenues for intervention common to all clinical subgroups.

[29]

**TÍTULO / TITLE:** - Preservation of cognitive function in primary CNS lymphoma survivors a median of 12 years after enhanced chemotherapy delivery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 Nov 1;31(31):4026-7. doi: 10.1200/JCO.2013.52.7747. Epub 2013 Oct 7.

●● Enlace al texto completo (gratis o de pago) [1200/JCO.2013.52.7747](#)

**AUTORES / AUTHORS:** - Doolittle ND; Dosa E; Fu R; Muldoon LL; Maron LM; Lubow MA; Tyson RM; Lacy CA; Kraemer DF; Butler RW; Neuwelt EA

**INSTITUCIÓN / INSTITUTION:** - Oregon Health and Science University, Portland, OR.

[30]

**TÍTULO / TITLE:** - Short-term survivors in glioblastomas with oligodendroglioma component: a clinical study of 186 Chinese patients from a single institution.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1311-3](#)

**AUTORES / AUTHORS:** - Jiang H; Ren X; Wang J; Zhang Z; Jia W; Lin S

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, 100050, China.

**RESUMEN / SUMMARY:** - This study was designed to display the molecular genetic features of short-term survivors in glioblastomas with oligodendroglioma component (GBMO). A total of 186 patients with histological diagnosis of primary gliomas, including 11 GBMO-STs (short-term survivors, survival  $\leq$ 12 months), 29 GBMO-LTS (relatively long-term survivors, survival  $>$ 12 months), 36 anaplastic oligoastrocytoma (AOA) and 110 glioblastoma multiforme (GBM), enrolled in the study. An evaluation form was developed and used to document molecular pathological, clinical and treatment-associated parameters between subgroups. Kaplan-Meier plots for survival showed that the median progression-free survival (PFS) and overall survival (OS) of

GBMO-STS were 5.0 and 10.0 months, respectively. Intergroup comparison revealed that the GBMO-STS harbored the most dismal prognosis than those with AOA, GBMO-LTS or GBM ( $P < 0.001$  for PFS,  $P < 0.001$  for OS, respectively). Cox regression analyses revealed that 1p/19q co-deletion and 19p polysomy were independent prognostic factors ( $P < 0.05$ ). Pearson's Chi square test demonstrated GBMO-STS exhibited lower 1p/19q co-deletion, IDH1 mutation rates than AOA or GBMO-LTS ( $P = 0.032$ ,  $P = 0.045$  for 1p/19q co-deletion;  $P = 0.034$ ,  $P = 0.005$  for IDH1 mutation, respectively) but higher chromosome 1q, 19p polysomy rates compared with AOA or GBM ( $P = 0.037$ ,  $P = 0.030$  for 1q polysomy;  $P = 0.017$ ,  $P = 0.011$  for 19p polysomy, respectively). Patients with glioblastomas with oligodendroglioma component concurrent with polysomy for chromosomes 1 and 19 always confers an unfavorable prognosis which needs our extra attention in clinic.

[31]

**TÍTULO / TITLE:** - Glioblastoma stem cells are regulated by interleukin-8 signaling in a tumoral perivascular niche.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. 2013 Dec 1;73(23):7079-89. doi: 10.1158/0008-5472.CAN-13-1355. Epub 2013 Oct 11.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-1355](#)

**AUTORES / AUTHORS:** - Infanger DW; Cho Y; Lopez BS; Mohanan S; Liu SC; Gursel D; Boockvar JA; Fischbach C

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Departments of Biomedical Engineering and Comparative Biomedical Sciences, Kavli Institute at Cornell for Nanoscale Science, Cornell University, Ithaca, New York; Department of Veterinary Medicine, Colorado State University, Fort Collins, Colorado; and Laboratory for Translational Stem Cell Research, Weill Cornell Brain Tumor Center, Department of Neurological Surgery, Weill Cornell Medical College, New York.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme contains a subpopulation of cancer stem-like cells (CSC) believed to underlie tumorigenesis and therapeutic resistance. Recent studies have localized CSCs in this disease adjacent to endothelial cells (EC) in what has been termed a perivascular niche, spurring investigation into the role of EC-CSC interactions in glioblastoma multiforme pathobiology. However, these studies have been limited by a lack of in vitro models of three-dimensional disease that can recapitulate the relevant conditions of the niche. In this study, we engineered a scaffold-based culture system enabling brain endothelial cells to form vascular networks. Using this system, we showed that vascular assembly induces CSC maintenance and growth in vitro and accelerates tumor growth in vivo through paracrine interleukin (IL)-8 signaling. Relative to conventional monolayers, endothelial cells cultured in this three-dimensional system not only secreted enhanced levels of IL-8 but also induced CSCs to upregulate the IL-8 cognate receptors CXCR1 and CXCR2, which collectively enhanced CSC migration, growth, and stemness properties. CXCR2 silencing in CSCs abolished the tumor-promoting effects of endothelial cells in vivo, confirming a critical role for this signaling pathway in GMB pathogenesis. Together, our results reveal synergistic interactions between endothelial cells and CSCs that promote the malignant properties of CSCs in an IL-8-dependent manner. Furthermore,

our findings underscore the relevance of tissue-engineered cell culture platforms to fully analyze signaling mechanisms in the tumor microenvironment. Cancer Res; 73(23); 7079-89. ©2013 AACR.

[32]

**TÍTULO / TITLE:** - Relative survival of patients with non-malignant central nervous system tumours: a descriptive study by the Austrian Brain Tumour Registry.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Cancer. 2013 Nov 19. doi: 10.1038/bjc.2013.714.

●● Enlace al texto completo (gratis o de pago) [1038/bjc.2013.714](#)

**AUTORES / AUTHORS:** - Woehrer A; Hackl M; Waldhor T; Weis S; Pichler J; Olschowski A; Buchroithner J; Maier H; Stockhammer G; Thome C; Haybaeck J; Payer F; von Campe G; Kiefer A; Wurtz F; Vince GH; Sedivy R; Oberndorfer S; Marhold F; Bordihn K; Stiglbauer W; Gruber-Mosenbacher U; Bauer R; Feichtinger J; Reiner-Concin A; Grisold W; Marosi C; Preusser M; Dieckmann K; Slavic I; Gatterbauer B; Widhalm G; Haberler C; Hainfellner JA

**INSTITUCIÓN / INSTITUTION:** - Institute of Neurology, Medical University of Vienna, Währinger Gürtel 18-20, A-1097 Vienna, Austria.

**RESUMEN / SUMMARY:** - Background: Unlike malignant primary central nervous system (CNS) tumours outcome data on non-malignant CNS tumours are scarce. For patients diagnosed from 1996 to 2002 5-year relative survival of only 85.0% has been reported. We investigated this rate in a contemporary patient cohort to update information on survival. Methods: We followed a cohort of 3983 cases within the Austrian Brain Tumour Registry. All patients were newly diagnosed from 2005 to 2010 with a histologically confirmed non-malignant CNS tumour. Vital status, cause of death, and population life tables were obtained by 31 December 2011 to calculate relative survival. Results: Overall 5-year relative survival was 96.1% (95% CI 95.1-97.1%), being significantly lower in tumours of borderline (90.2%, 87.2-92.7%) than benign behaviour (97.4%, 96.3-98.3%). Benign tumour survival ranged from 86.8 for neurofibroma to 99.7% for Schwannoma; for borderline tumours survival rates varied from 83.2 for haemangiopericytoma to 98.4% for myxopapillary ependymoma. Cause of death was directly attributed to the CNS tumour in 39.6%, followed by other cancer (20.4%) and cardiovascular disease (15.8%). Conclusion: The overall excess mortality in patients with non-malignant CNS tumours is 5.5%, indicating a significant improvement in survival over the last decade. Still, the remaining adverse impact on survival underpins the importance of systematic registration of these tumours. British Journal of Cancer advance online publication, 19 November 2013; doi:10.1038/bjc.2013.714 [www.bjcancer.com](http://www.bjcancer.com).

[33]

**TÍTULO / TITLE:** - Correlation of IDH1/2 mutation with clinicopathologic factors and prognosis in anaplastic gliomas: a report of 203 patients from China.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cancer Res Clin Oncol. 2013 Oct 23.

●● Enlace al texto completo (gratis o de pago) [1007/s00432-013-1519-9](#)

**AUTORES / AUTHORS:** - Zhang CB; Bao ZS; Wang HJ; Yan W; Liu YW; Li MY; Zhang W; Chen L; Jiang T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, 100050, China.

**RESUMEN / SUMMARY:** - **PURPOSE:** Isocitrate dehydrogenase (IDH) gene mutation is one of the most exciting new advances in these years. It has been reported that IDH gene frequently altered in grade II and grade III gliomas. We aimed to identify the mutation frequency of IDH genes in Chinese anaplastic glioma patients, the association of IDH gene mutation with other clinical and molecular pathological features and the prognostic value of it. **METHODS:** We performed polymerase chain reaction-based IDH gene mutation detection in 203 anaplastic glioma patients from China. **RESULTS:** A total of 108 and 3 patients harbored IDH1 and IDH2 gene mutation, respectively. And there was a higher proportion of MGMT promoter methylation, frontal lobe location, and better outcome and lower proportion of temporal location in IDH-mutated samples. There were hardly any significant association between protein expression level of well-known markers and IDH mutation. Anaplastic oligoastrocytoma and anaplastic astrocytoma patients with IDH gene mutation showed similar prognosis with anaplastic oligodendroglioma patients with wild-type IDH gene. **CONCLUSIONS:** IDH gene mutation is a good prognostic marker and a potential substratification factor for anaplastic glioma patients.

[34]

**TÍTULO / TITLE:** - Does Thirty-day Readmission Affect Long-term Outcome Among Glioblastoma Patients?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Oct 30.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1227/NEU.0000000000000243](#)

**AUTORES / AUTHORS:** - Nuno M; Ly D; Ortega A; Sarmiento JM; Mukherjee D; Black KL; Patil CG

**INSTITUCIÓN / INSTITUTION:** - Center for Neurosurgical Outcomes Research, Maxine Dunitz Neurosurgical Institute, Department of Neurosurgery, Cedars-Sinai Medical Center, Los Angeles, CA.

**RESUMEN / SUMMARY:** - **BACKGROUND::** Research on readmissions has mainly focused on the economic and resource burden it places upon hospitals. **OBJECTIVE::** To evaluate the effect of 30-day readmission on overall survival (OS) among newly diagnosed glioblastoma multiforme (GBM) patients. **METHODS::** A nationwide cohort of GBM patients diagnosed between 1991 and 2007 was studied using the Surveillance, Epidemiology and End Results (SEER) Medicare database. Multivariate models were used to determine factors associated with readmission and OS. Odds ratio (OR), hazard ratio (HR), 95% confidence interval (CI), and p-values were reported. Complete case and multiple imputation analyses were performed. **RESULTS::** Among the 2,774 newly diagnosed GBM patients undergoing surgery at 442 hospitals nationwide, 437(15.8%) were readmitted within 30 days of the index hospitalization. While 63% of readmitted patients returned to the index hospital where surgery was performed, a significant portion (37%) was readmitted to non-index hospitals. The median OS for readmitted patients (6.0 months) was significantly shorter

than for non-readmitted (7.6 months,  $p < .0001$ ). In a confounder adjusted imputed model, 30-day readmission increased the hazard of mortality by 30% (HR 1.3,  $p < .0001$ ). Neurological symptoms (30.2%), thromboembolic complications (19.7%), and infections (17.6%) were the leading reasons for readmission. CONCLUSION:: Prior studies that have reported only the readmissions back to index hospitals are likely underestimating the true 30-day readmission rate. GBM patients who were readmitted within 30-days had significantly shorter survival than non-readmitted patients. Future studies that attempt to decrease readmissions and evaluate the impact of reducing readmissions on patient outcomes are needed.

[35]

**TÍTULO / TITLE:** - Evolutionary etiology of high-grade astrocytomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 Oct 29;110(44):17933-8. doi: 10.1073/pnas.1317026110. Epub 2013 Oct 10.

●● [Enlace al texto completo \(gratis o de pago\) 1073/pnas.1317026110](#)

**AUTORES / AUTHORS:** - Song Y; Zhang Q; Kutlu B; Difilippantonio S; Bash R; Gilbert D; Yin C; O'Sullivan TN; Yang C; Kozlov S; Bullitt E; McCarthy KD; Kafri T; Louis DN; Miller CR; Hood L; Van Dyke T

**INSTITUCIÓN / INSTITUTION:** - Mouse Cancer Genetics Program, Center for Cancer Research, National Cancer Institute, Frederick, MD 21702.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM), the most common brain malignancy, remains fatal with no effective treatment. Analyses of common aberrations in GBM suggest major regulatory pathways associated with disease etiology. However, 90% of GBMs are diagnosed at an advanced stage (primary GBMs), providing no access to early disease stages for assessing disease progression events. As such, both understanding of disease mechanisms and the development of biomarkers and therapeutics for effective disease management are limited. Here, we describe an adult-inducible astrocyte-specific system in genetically engineered mice that queries causation in disease evolution of regulatory networks perturbed in human GBM. Events yielding disease, both engineered and spontaneous, indicate ordered grade-specific perturbations that yield high-grade astrocytomas (anaplastic astrocytomas and GBMs). Impaired retinoblastoma protein RB tumor suppression yields grade II histopathology. Additional activation of v-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog (KRAS) network drives progression to grade III disease, and further inactivation of phosphatase and tensin homolog (PTEN) yields GBM. Spontaneous missense mutation of tumor suppressor Trp53 arises subsequent to KRAS activation, but before grade III progression. The stochastic appearance of mutations identical to those observed in humans, particularly the same spectrum of p53 amino acid changes, supports the validity of engineered lesions and the ensuing interpretations of etiology. Absence of isocitrate dehydrogenase 1 (IDH1) mutation, asymptomatic low grade disease, and rapid emergence of GBM combined with a mesenchymal transcriptome signature reflect characteristics of primary GBM and provide insight into causal relationships.

[36]

**TÍTULO / TITLE:** - Multiplex mapping of chromatin accessibility and DNA methylation within targeted single molecules identifies epigenetic heterogeneity in neural stem cells and glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Genome Res. 2013 Oct 8.

- Enlace al texto completo (gratis o de pago) [1101/gr.161737.113](#)

**AUTORES / AUTHORS:** - Nablisi NH; Deleyrolle LP; Darst RP; Riva A; Reynolds BA; Kladde MP

**INSTITUCIÓN / INSTITUTION:** - University of Florida College of Medicine.

**RESUMEN / SUMMARY:** - Human tumors are comprised of heterogeneous cell populations that display diverse molecular and phenotypic features. To examine the extent to which epigenetic differences contribute to intratumoral cellular heterogeneity, we have developed a high-throughput method, termed MAPit-patch. The method uses multiplexed amplification of targeted sequences from sub-microgram quantities of genomic DNA followed by next generation bisulfite sequencing. This provides highly scalable and simultaneous mapping of chromatin accessibility and DNA methylation on single molecules at high resolution. Long sequencing reads from targeted regions maintains the structural integrity of epigenetic information and provides substantial depth of coverage, detecting for the first time minority subpopulations of epigenetic configurations formerly obscured by existing genome-wide and population-ensemble methodologies. Analyzing a cohort of 71 promoters of genes with exons commonly mutated in cancer, MAPit-patch uncovered several differentially accessible and methylated promoters that are associated with altered gene expression between neural stem cell (NSC) and glioblastoma (GBM) cell populations. In addition, considering each promoter individually, substantial epigenetic heterogeneity was observed across the sequenced molecules, indicating the presence of epigenetically distinct cellular subpopulations. At the divergent MLH1/EPM2AIP1 promoter, a locus with three well-defined, nucleosome-depleted regions (NDRs), a fraction of promoter copies with inaccessible chromatin was detected and enriched upon selection of temozolomide-tolerant GBM cells. These results illustrate the biological relevance of epigenetically distinct subpopulations that in part underlie the phenotypic heterogeneity of tumor cell populations. Furthermore, these findings show that alterations in chromatin accessibility without accompanying changes in DNA methylation may constitute a novel class of epigenetic biomarker.

[37]

**TÍTULO / TITLE:** - Mitogen-activated protein kinases in gliomas and correlation with patients' prognosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurol Scand. 2013 Sep 20. doi: 10.1111/ane.12175.

- Enlace al texto completo (gratis o de pago) [1111/ane.12175](#)

**AUTORES / AUTHORS:** - Zolota V; Sirinian C; Kefalopoulou Z; Panagiotopoulos V; Spinos P; Argyriou AA; Kalofonos HP

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Medical School, University Hospital of Patras, Patras, Greece.

**RESUMEN / SUMMARY:** - OBJECTIVE: We examined the activation of the mitogen-activated protein kinases (MAPKs) signaling pathway in a cohort of brain gliomas, by

taking advantage of a series of phosphorylation state-specific antibodies against phospho-p44/42(ERK1/2), phospho-p38, and phospho-JNK. Potential correlations between expression profiles of phospho-p44/42(ERK1/2), phospho-p38, and phospho-JNK and tumor grade, age, gender, overall survival, and Ki-67 status were also explored. METHODS: Immunohistochemistry was performed in formalin-fixed, paraffin-embedded tissues of 87 serial brain biopsies sequentially obtained for diagnostic purposes in a period of 9 years (2000-2008) from an equal number of patients with low- and high-grade gliomas. RESULTS: Higher expression of all proteins in high-grade gliomas was documented. The univariate analysis revealed that high phospho-p44/42(ERK1/2) and high phospho-JNK expressions were strongly associated with decreased overall survival. However, the multivariate Cox regression failed to consider those markers as independent prognostic factors. CONCLUSION: Activation of components of MAPK signaling pathway is associated with overall survival of patients with gliomas, thereby suggesting that the MAPK intermediates seem to play a critical role in the biologic behavior of gliomas. Further studies are needed to clarify whether these factors merit to be considered as potential therapeutic targets in future clinical trials.

[38]

**TÍTULO / TITLE:** - Central neurotoxicity of standard treatment in patients with newly-diagnosed high-grade glioma: a prospective longitudinal study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1310-4](#)

**AUTORES / AUTHORS:** - Froklage FE; Oosterbaan LJ; Sizoo EM; de Groot M; Bosma I; Sanchez E; Douw L; Heimans JJ; Reijneveld JC; Lagerwaard FJ; Buter J; Uitdehaag BM; Klein M; Postma TJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, SEIN-Epilepsy Institute in the Netherlands Foundation, Achterweg 5, 2103 SW, Heemstede, The Netherlands, [f.froklage@vumc.nl](mailto:f.froklage@vumc.nl).

**RESUMEN / SUMMARY:** - Following tumor resection, the majority of high-grade glioma (HGG) patients are treated with a combined modality regimen of radiotherapy and temozolomide. As a result of the tumor itself or as treatment-related neurotoxic side-effects, these patients may experience cognitive deficits. Additionally, radiological abnormalities expressed as white matter hyperintensities (WMH) and cerebral atrophy (CA) can develop. In this study, these functional and morphological parameters are evaluated, and their relation is investigated. After surgery, HGG patients underwent chemo-irradiation for six weeks, followed by six cycles of temozolomide. Assessments were performed before chemo-irradiation, post-concomitantly, after the third and sixth adjuvant cycle, and 3 and 7 months after treatment. Degree of WMH and CA was scored on MRI. Patients' neuropsychological performance was compared to healthy matched controls, yielding six cognitive domain z-scores. Development or progression of pre-existing WMH and CA during follow-up was observed in 36 and 45 % of the patients (n = 39) respectively. Cognitive functioning remained stable or improved in 70 % of the patients and deteriorated in 30 % of the patients (n = 33). Of the cognitive decliners, 80 % had tumor progression within 4 months thereafter. No clear association between cognitive functioning and WMH or CA was found. Central neurotoxic effects of

combined modality treatment in HGG patients expressed by radiological abnormalities are encountered in approximately 40 % of patients. However, functional impact as indexed by cognitive functioning was found to be limited. Furthermore, development or progression of pre-existing WMH and CA does not consistently result in functional impairment as measured by cognitive tests.

[39]

**TÍTULO / TITLE:** - Role of O-(2-18F-Fluoroethyl)-L-Tyrosine PET as a Diagnostic Tool for Detection of Malignant Progression in Patients with Low-Grade Glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Nucl Med. 2013 Dec;54(12):2046-54. doi: 10.2967/jnumed.113.123836. Epub 2013 Oct 24.

●● [Enlace al texto completo \(gratis o de pago\) 2967/jnumed.113.123836](#)

**AUTORES / AUTHORS:** - Galldiks N; Stoffels G; Ruge MI; Rapp M; Sabel M; Reifenberger G; Erdem Z; Shah NJ; Fink GR; Coenen HH; Langen KJ

**INSTITUCIÓN / INSTITUTION:** - Institute of Neuroscience and Medicine (INM-3,-4,-5), Forschungszentrum Julich, Julich, Germany.

**RESUMEN / SUMMARY:** - In patients with low-grade glioma (LGG) of World Health Organization (WHO) grade II, early detection of progression to WHO grade III or IV is of high clinical importance because the initiation of a specific treatment depends mainly on the WHO grade. In a significant number of patients with LGG, however, information on tumor activity and malignant progression cannot be obtained on the basis of clinical or conventional MR imaging findings only. We here investigated the potential of O-(2-(18)F-fluoroethyl)-l-tyrosine ((18)F-FET) PET to noninvasively detect malignant progression in patients with LGG. **METHODS:** Twenty-seven patients (mean age +/- SD, 44 +/- 15 y) with histologically proven LGG (WHO grade II) were investigated longitudinally twice using dynamic (18)F-FET PET and routine MR imaging. Initially, MR imaging and PET scans were performed, and diagnosis was confirmed on the basis of biopsy. Subsequently, PET scans were obtained when clinical findings or contrast-enhanced MR imaging suggested malignant progression. Maximum and mean tumor-to-brain ratios (20-40 min after injection) (TBR<sub>max</sub> and TBR<sub>mean</sub>, respectively) of (18)F-FET uptake as well as tracer uptake kinetics (i.e., time to peak [TTP] and patterns of the time-activity curves) were determined. The diagnostic accuracy of imaging parameters for the detection of malignant progression was evaluated by receiver-operating-characteristic analyses and by Fisher exact test for 2 x 2 contingency tables. **RESULTS:** In patients with histologically proven malignant progression toward WHO grade III or IV (n = 18), TBR<sub>max</sub> and TBR<sub>mean</sub> increased significantly, compared with baseline (TBR<sub>max</sub>, 3.8 +/- 1.0 vs. 2.4 +/- 1.0; TBR<sub>mean</sub>, 2.2 +/- 0.3 vs. 1.6 +/- 0.6; both P < 0.001), whereas TTP decreased significantly (median TTP, 35 vs. 23 min; P < 0.001). Furthermore, time-activity curve patterns changed significantly in 10 of 18 patients (P < 0.001). The combined analysis of (18)F-FET PET parameters (i.e., changes of TBR<sub>max</sub>, TTP, or time-activity curve pattern) yielded a significantly higher diagnostic accuracy for the detection of malignant progression than changes of contrast enhancement in MR imaging (accuracy, 81% vs. 63%; P = 0.003). **CONCLUSION:** Both tumor-to-brain ratio and kinetic parameters of (18)F-FET PET uptake provide valuable diagnostic information for the noninvasive

detection of malignant progression of LGG. Thus, repeated (18)F-FET PET may be helpful for further treatment decisions.

[40]

**TÍTULO / TITLE:** - Impulse control disorders in patients with dopamine agonist-treated prolactinomas and non-functioning pituitary adenomas: a case-control study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Endocrinol (Oxf). 2013 Nov 26. doi: 10.1111/cen.12375.

●● Enlace al texto completo (gratis o de pago) [1111/cen.12375](#)

**AUTORES / AUTHORS:** - Bancos I; Nannenga MR; Bostwick JM; Silber MH; Erickson D; Nippoldt TB

**INSTITUCIÓN / INSTITUTION:** - Division of Endocrinology, Department of Medicine, Mayo Clinic, Rochester, MN.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** We aimed to assess the prevalence of impulse control disorders (ICDs) in patients with prolactin-secreting adenomas treated with dopamine agonists (DAs), to identify associated factors, and compare it with a group of patients with non-functioning pituitary adenoma. **SUBJECTS, DESIGN AND MEASUREMENT:** In a postal survey, 77 patients from Group A (patients with prolactinomas and present or past use of DAs) and 70 patients from Group B (patients with non-functioning pituitary adenoma and no history of DA therapy) responded to a questionnaire on compulsive shopping, pathologic gambling, hypersexuality and punting. Associated clinical information was obtained through the survey and review of medical electronic records. **RESULTS:** The total ICD prevalence was 24.68% in Group A and 17.1% in Group B ( $p=0.31$ ). Group A had an increased rate of hypersexuality ( $p=0.03$ ). Subgroup analysis revealed that men in Group A had a significantly increased frequency of total ICDs when compared to men in Group B (27.7% versus 3.7%,  $p=0.01$ ). No differences in rates of total ICDs were found between women of Groups A and B (20% versus 25.6%,  $p=0.78$ ). No association with type, dose, or duration of treatment with DA was noted. **CONCLUSIONS:** Males with prolactinomas treated with DAs were 9.9 times more likely to develop an ICD than their counterparts with non-functioning pituitary adenomas. Until prospective studies on the relationship of DA use in prolactinoma patients and ICDs are available, the authors propose that prolactinoma patients be forewarned of possible ICD development with DA therapy. This article is protected by copyright. All rights reserved.

[41]

**TÍTULO / TITLE:** - N-Acetylaspartate (NAA) and N-acetylaspartylglutamate (NAAG) promote growth and inhibit differentiation of glioma stem-like cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Biol Chem. 2013 Nov 1;288(44):31916-7. doi: 10.1074/jbc.A113.487553.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.A113.487553](#)

**AUTORES / AUTHORS:** - Long PM; Moffett JR; Namboodiri AM; Viapiano MS; Lawler SE; Jaworski DM

[42]

**TÍTULO / TITLE:** - Microglial derived tumor necrosis factor-alpha drives Alzheimer's disease-related neuronal cell cycle events.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurobiol Dis. 2013 Oct 17;62C:273-285. doi: 10.1016/j.nbd.2013.10.007.

●● Enlace al texto completo (gratis o de pago) [1016/j.nbd.2013.10.007](#)

**AUTORES / AUTHORS:** - Bhaskar K; Maphis N; Xu G; Varvel NH; Kokiko-Cochran ON; Weick JP; Staugaitis SM; Cardona A; Ransohoff RM; Herrup K; Lamb BT

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Genetics and Microbiology, University of New Mexico, MSC08 4660, 1 University of New Mexico, Albuquerque, NM 87131, USA. Electronic address: [kbhaskar@salud.unm.edu](mailto:kbhaskar@salud.unm.edu).

**RESUMEN / SUMMARY:** - Massive neuronal loss is a key pathological hallmark of Alzheimer's disease (AD). However, the mechanisms are still unclear. Here we demonstrate that neuroinflammation, cell autonomous to microglia, is capable of inducing neuronal cell cycle events (CCEs), which are toxic for terminally differentiated neurons. First, oligomeric amyloid-beta peptide (Aβ)-mediated microglial activation induced neuronal CCEs via the tumor-necrosis factor-alpha (TNFα) and the c-Jun Kinase (JNK) signaling pathway. Second, adoptive transfer of CD11b+ microglia from AD transgenic mice (R1.40) induced neuronal cyclin D1 expression via TNFα signaling pathway. Third, genetic deficiency of TNFα in R1.40 mice (R1.40-Tnfα<sup>-/-</sup>) failed to induce neuronal CCEs. Finally, the mitotically active neurons spatially co-exist with F4/80+ activated microglia in the human AD brain and that a portion of these neurons are apoptotic. Together our data suggest a cell-autonomous role of microglia, and identify TNFα as the responsible cytokine, in promoting neuronal CCEs in the pathogenesis of AD.

[43]

**TÍTULO / TITLE:** - Protein-protein interaction network analysis and gene set enrichment analysis in epilepsy patients with brain cancer.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Nov 14. pii: S0967-5868(13)00490-6. doi: 10.1016/j.jocn.2013.06.026.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.06.026](#)

**AUTORES / AUTHORS:** - Kong B; Yang T; Chen L; Kuang YQ; Gu JW; Xia X; Cheng L; Zhang JH

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Chengdu Military General Hospital, 270 Rong Du Road, Chengdu 610083, Sichuan Province, China; Third Military Medical University, Chongqing, China.

**RESUMEN / SUMMARY:** - Many patients with brain cancer experience seizures or epilepsy and tumor-associated epilepsy (TAE) significantly decreases their quality of life. This study aimed to achieve a better understanding of the mechanisms of TAE. The differentially expressed genes (DEG) between epilepsy patients with or without brain tumor were firstly screened using the Linear Models for Microarray Data package using GSE4290 datasets from the USA National Center for Biotechnology Information Gene Expression Omnibus database. Then the protein-protein interaction (PPI) network, using data from the Human Protein Reference Database and the Biological

General Repository for Interaction Datasets, was constructed. For further analysis, the PPI network structure and clusters in this PPI network were identified by ClusterOne. Meanwhile, gene set enrichment analysis was performed to illuminate the biological pathways and processes which generally affect patients with TAE. A total of 5113 DEG were identified and a PPI network, which contained 114 DEG and 21 normal genes, was established. Proteins, which mainly belonged to the mini chromosome maintenance and collagen families, were discovered to be enriched in the three identified clusters in the PPI network. Finally, several biological pathways (including cell cycle, DNA replication and transforming growth factor beta1 signaling pathways) and processes (such as nucleocytoplasmic transport, nuclear transport and regulation of phosphorylation) were identified. Proteins in these three clusters may become new targets for TAE treatment. Our results provide some potential underlying biomarkers for understanding the pathogenesis of epilepsy in patients with brain tumor.

[44]

**TÍTULO / TITLE:** - CNS involvement in DLBCL.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Blood. 2013 Sep 12;122(11):1852.

**AUTORES / AUTHORS:** - Kashif M

[45]

**TÍTULO / TITLE:** - Outcome of prolactinoma after pregnancy and lactation: A study in 73 patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Endocrinol (Oxf). 2013 Nov 21. doi: 10.1111/cen.12370.

●● [Enlace al texto completo \(gratis o de pago\) 1111/cen.12370](#)

**AUTORES / AUTHORS:** - Domingue ME; Devuyst F; Alexopoulou O; Corvilain B; Maiter D

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology and Nutrition, Cliniques Saint-Luc, Université catholique de Louvain, Brussels, Belgium.

**RESUMEN / SUMMARY:** - CONTEXT: Prolactinoma is the most frequent pituitary tumor among women of child-bearing age. Only a few studies have addressed the outcome of prolactinoma after pregnancy. OBJECTIVE: To study remission, defined as prolactin normalisation without medical treatment, after pregnancy and lactation in women with prolactinoma. PATIENTS AND METHODS: A retrospective study conducted in 2 Belgian academic centres including 73 patients (52 micro- and 21 macroprolactinomas) with 104 pregnancies continuing beyond first trimester. Dopamine agonists were stopped in early pregnancy in all treated cases. Prolactin level and adenoma size at pituitary magnetic resonance imaging (MRI) were recorded before pregnancy and throughout follow-up. RESULTS: Thirty out of 73 women (41%) were in remission after a median follow-up of 22 months after delivery or cessation of lactation. Adenoma size at diagnosis was smaller in women in remission (5 vs. 8 mm). There was a non-significant higher rate of remission for microprolactinomas than for macroprolactinoma (46% vs. 26%). The first pituitary MRI after pregnancy and lactation showed no tumor and a decreased adenoma size in 23% and 39% of women, respectively. MRI normalisation was associated with remission. The number of pregnancies per woman

as well as breastfeeding and its duration did not influence remission rate.  
CONCLUSION: More than 40% of women with previous diagnosis of prolactinoma have normal PRL level without medical treatment for a median follow-up of 22 months after pregnancy and lactation. The likelihood of remission is associated with a smaller initial adenoma size and normalization of pituitary MRI after pregnancy. This article is protected by copyright. All rights reserved.

[46]

**TÍTULO / TITLE:** - Depletion of minichromosome maintenance protein 7 inhibits glioblastoma multiforme tumor growth in vivo.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncogene. 2013 Oct 28. doi: 10.1038/onc.2013.423.

●● [Enlace al texto completo \(gratis o de pago\) 1038/onc.2013.423](#)

**AUTORES / AUTHORS:** - Erkan EP; Strobel T; Lewandrowski G; Tannous B; Madlener S; Czech T; Saydam N; Saydam O

**INSTITUCIÓN / INSTITUTION:** - Molecular Neuro-Oncology Research Unit, Department of Pediatrics, Medical University of Vienna, Vienna, Austria.

**RESUMEN / SUMMARY:** - Minichromosome maintenance (MCM) proteins are key elements that function as a part of the pre-replication complex to initiate DNA replication in eukaryotes. Consistent with their roles in initiating DNA replication, overexpression of MCM family members has been observed in several malignancies. Through bioinformatic analysis of The Cancer Genome Atlas's data on glioblastoma multiforme (GBM), we found that the genomic region containing MCM7 gene was amplified in more than 80% of the present cases. To validate this finding and to identify the possible contribution of the remaining members of the MCM family to GBM progression, we used quantitative real-time PCR to analyze the gene expression profiles of all MCM family members in Grade IV (GBM) tissue samples and observed a significant upregulation in GBM samples compared with normal white matter tissues. In addition, we compared the observed gene expression profiles with those of Grade II and Grade III astrocytoma samples and determined that the observed upregulation was restricted and specific to Grade IV. MCM7 was the most upregulated gene in the gene set we analyzed, and therefore we wanted to identify the role of MCM7 in GBM progression. We determined that siRNA-mediated knockdown of MCM7 expression reduced GBM cell proliferation and also inhibited tumor growth in both xenograft and orthotopic mouse models of GBM. Taken together, our data suggest that MCM7 can be a potential prognostic marker and a novel therapeutic target in GBM therapy. Oncogene advance online publication, 28 October 2013; doi:10.1038/onc.2013.423.

[47]

**TÍTULO / TITLE:** - MyoD Is a Tumor Suppressor Gene in Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. 2013 Nov 15;73(22):6828-37. doi: 10.1158/0008-5472.CAN-13-0730-T. Epub 2013 Oct 3.

●● [Enlace al texto completo \(gratis o de pago\) 1158/0008-5472.CAN-13-0730-T](#)

**AUTORES / AUTHORS:** - Dey J; Dubuc AM; Pedro KD; Thirstrup D; Mecham B; Northcott PA; Wu X; Shih D; Tapscott SJ; Leblanc M; Taylor MD; Olson JM

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Molecular and Cellular Biology Program, University of Washington; Clinical Research Division, Human Biology Division, and Public Health Sciences Division, Fred Hutchinson Cancer Research Center; Presage Biosciences; Sage Bionetworks; Seattle Children's Hospital, Seattle, Washington; Arthur and Sonia Labatt Brain Tumor Research Center and Division of Neurosurgery, The Hospital for Sick Children, Toronto, Ontario, Canada.

**RESUMEN / SUMMARY:** - While medulloblastoma, a pediatric tumor of the cerebellum, is characterized by aberrations in developmental pathways, the majority of genetic determinants remain unknown. An unbiased Sleeping Beauty transposon screen revealed MyoD as a putative medulloblastoma tumor suppressor. This was unexpected, as MyoD is a muscle differentiation factor and not previously known to be expressed in cerebellum or medulloblastoma. In response to deletion of one allele of MyoD, two other Sonic hedgehog-driven mouse medulloblastoma models showed accelerated tumor formation and death, confirming MyoD as a tumor suppressor in these models. In normal cerebellum, MyoD was expressed in the proliferating granule neuron progenitors that are thought to be precursors to medulloblastoma. Similar to some other tumor suppressors that are induced in cancer, MyoD was expressed in proliferating medulloblastoma cells in three mouse models and in human medulloblastoma cases. This suggests that although expression of MyoD in a proliferating tumor is insufficient to prevent tumor progression, its expression in the cerebellum hinders medulloblastoma genesis. Cancer Res; 73(22); 6828-37. ©2013 AACR.

[48]

**TÍTULO / TITLE:** - Characterization of SNARE Proteins in Human Pituitary Adenomas: Targeted Secretion Inhibitors as a New Strategy for the Treatment of Acromegaly?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Endocrinol Metab. 2013 Oct 23.

●● [Enlace al texto completo \(gratis o de pago\) 1210/jc.2013-2602](#)

**AUTORES / AUTHORS:** - Garcia EA; Trivellin G; Aflorci ED; Powell M; Grieve J; Alusi G; Pobereskin L; Shariati B; Cudlip S; Roncaroli F; Mendoza N; Grossman AB; Harper EA; Korbonits M

**INSTITUCIÓN / INSTITUTION:** - Centre for Endocrinology (E.A.G., G.T., E.D.A., A.B.G., M.K.), William Harvey Research Institute, Department of Neurosurgery (I.S.) and Barts Cancer Institute (G.A.), Barts, and The London School of Medicine, London, United Kingdom; The National Hospital for Neurology and Neurosurgery (M.P., J.G.), University College London, London, United Kingdom; Department of Neurosurgery (L.P.), Derriford Hospital, Derriford, United Kingdom; Division of Brain Sciences (B.S., F.R., NM), "John Fulcher" Laboratory, Imperial College, London, United Kingdom; Department of Neurosurgery (S.C.), John Radcliffe Hospital, Oxford, United Kingdom; Oxford Centre for Diabetes (A.B.G.), Endocrinology, and Metabolism, University of Oxford, Oxford, United Kingdom; and Syntaxin Ltd (E.A.H.), Abingdon, United Kingdom.

**RESUMEN / SUMMARY:** - Context: Targeted secretion inhibitors (TSIs), a new class of recombinant biotherapeutic proteins engineered from botulinum toxin, represent a

novel approach for treating diseases with excess secretion. They inhibit hormone secretion from targeted cell types through cleavage of SNARE (soluble N-ethylmaleimide-sensitive factor-activating protein receptor) proteins. qGHRH-LHN/D is a TSI targeting pituitary somatotroph through binding to the GHRH-receptor and cleavage of the vesicle-associated membrane protein (VAMP) family of SNARE proteins. Objective: To study SNARE protein expression in pituitary adenomas and to inhibit GH secretion from somatotropinomas using qGHRH-LHN/D. Design: Human pituitary adenoma analysis for SNARE expression and response to qGHRH-LHN/D treatment. Setting: University hospital. Patients: Twenty-five acromegaly and 47 nonfunctioning pituitary adenoma patients. Outcome: Vesicle-SNARE (VAMP1-3), target-SNARE (syntaxin1, SNAP-23, and SNAP-25), and GHRH-R detection with RT-qPCR, immunocytochemistry, and immunoblotting. Assessment of TSI catalytic activity on VAMPs and release of GH from adenoma cells. Results: SNARE proteins were variably expressed in pituitary samples. In vitro evidence using recombinant GFP-VAMP2&3 or pituitary adenoma lysates suggested sufficient catalytic activity of qGHRH-LHN/D to degrade VAMPs, but was unable to inhibit GH secretion in somatotropinoma cell cultures. Conclusions: SNARE proteins are present in human pituitary somatotroph adenomas that can be targeted by TSIs to inhibit GH secretion. qGHRH-LHN/D was unable to inhibit GH secretion from human somatotroph adenoma cells. Further studies are required to understand how the SNARE proteins drive GH secretion in human somatotrophs to allow the development of novel TSIs with a potential therapeutic benefit.

[49]

**TÍTULO / TITLE:** - Comparison of Three Different MR Perfusion Techniques and MR Spectroscopy for Multiparametric Assessment in Distinguishing Recurrent High-Grade Gliomas from Stable Disease.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acad Radiol. 2013 Dec;20(12):1557-65. doi: 10.1016/j.acra.2013.09.003.

●● Enlace al texto completo (gratis o de pago) [1016/j.acra.2013.09.003](#)

**AUTORES / AUTHORS:** - Seeger A; Braun C; Skardelly M; Paulsen F; Schittenhelm J; Ernemann U; Bisdas S

**INSTITUCIÓN / INSTITUTION:** - Department of Neuroradiology, Eberhard Karls University, Hoppe-Seyler-Str. 3, D-72076 Tübingen, Germany.

**RESUMEN / SUMMARY:** - RATIONALE AND OBJECTIVES: Magnetic resonance (MR) perfusion techniques and MR spectroscopy (MRS) provide specific physiological information that may allow distinction between recurrent glioma and progression from stable disease. MATERIALS AND METHODS: Forty patients underwent conventional MR imaging, dynamic contrast-enhanced T1-weighted perfusion imaging, dynamic susceptibility contrast-enhanced perfusion imaging (DSC), and multivoxel MRS. Arterial spin labeling was available in 26 of these patients. Quantitative parameters were calculated in tumor recurrences and stable disease, which were retrospectively verified on clinical and radiological follow-up. Receiver operating characteristic curves for each parameter were generated for the differentiation between recurrent glioma and stable disease. A forward discriminant analysis was undertaken to assess the power of the conjunction of MR perfusion techniques and MRS. RESULTS: Of the 40 patients, 23

were determined to have recurrent gliomas. Differences in arterial spin labeling between the two groups were not statistically significant ( $P = .063$ ). Sensitivities and specificities for the detection of recurrent lesions in dynamic contrast-enhanced T1-weighted perfusion imaging and DSC were 61.9% and 80% transfer constant  $k(\text{trans})$ , 77.3% and 84.6% for cerebral blood flow, and 81% and 76.9% for cerebral blood volume, respectively. Among the parameters in MRS, the ratio of choline to normalized creatine showed the best diagnostic accuracy ( $P = .014$ ; sensitivity 70%, specificity 78.6%). When considering all perfusion modalities, diagnostic accuracy could be increased to 82.5%, adding MRS to the multiparametric approach resulted in a diagnostic accuracy of 90.0%. CONCLUSIONS: MR perfusion techniques and MRS are useful tools that enable improved differentiation between recurrent glioma and stable disease. Among the single parameters, DSC showed the best diagnostic performance. Multiparametric assessment substantially improved the ability to differentiate the two entities.

[50]

**TÍTULO / TITLE:** - Cost effectiveness of proton therapy compared with photon therapy in the management of pediatric medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer. 2013 Sep 16. doi: 10.1002/cncr.28322.

●● Enlace al texto completo (gratis o de pago) [1002/cncr.28322](#)

**AUTORES / AUTHORS:** - Mailhot Vega RB; Kim J; Bussiere M; Hattangadi J; Hollander A; Michalski J; Tarbell NJ; Yock T; Macdonald SM

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Washington University in St. Louis School of Medicine, St. Louis, Missouri.

**RESUMEN / SUMMARY:** - BACKGROUND: Proton therapy has been a hotly contested issue in both scientific publications and lay media. Proponents cite the modality's ability to spare healthy tissue, but critics claim the benefit gained from its use does not validate its cost compared with photon therapy. The objective of this study was to evaluate the cost effectiveness of proton therapy versus photon therapy in the management of pediatric medulloblastoma. METHODS: A cost-effective analysis was performed from the societal perspective using a Monte Carlo simulation model. A population of pediatric medulloblastoma survivors aged 18 years was studied who had received treatment at age 5 years and who were at risk of developing 10 adverse events, such as growth hormone deficiency, coronary artery disease, ototoxicity, secondary malignant neoplasm, and death. Costing data included the cost of investment and the costs of diagnosis and management of adverse health states from institutional and Medicare data. Longitudinal outcomes data and recent modeling studies informed risk parameters for the model. Incremental cost-effectiveness ratios were used to measure outcomes. RESULTS: Results from the base case demonstrated that proton therapy was associated with higher quality-adjusted life years and lower costs; therefore, it dominated photon therapy. In 1-way sensitivity analyses, proton therapy remained the more attractive strategy, either dominating photon therapy or having a very low cost per quality-adjusted life year gained. Probabilistic sensitivity analysis illustrated the domination of proton therapy over photon therapy in 96.4% of simulations. CONCLUSIONS: By using current risk estimates and data on required capital investments, the current study indicated that proton therapy is a cost-effective

strategy for the management of pediatric patients with medulloblastoma compared with standard of care photon therapy. Cancer 2013. © 2013 American Cancer Society.

[51]

**TÍTULO / TITLE:** - High prevalence of HCMV and viral load in tumor tissues and peripheral blood of glioblastoma multiforme patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Med Virol. 2013 Oct 30. doi: 10.1002/jmv.23820.

●● Enlace al texto completo (gratis o de pago) [1002/jmv.23820](#)

**AUTORES / AUTHORS:** - Dos Santos CJ; Stangherlin LM; Figueiredo EG; Correa C; Teixeira MJ; da Silva MC

**INSTITUCIÓN / INSTITUTION:** - Centro de Ciencias Naturais e Humanas, Universidade Federal do ABC (UFABC), Santo Andre, SP, Brazil.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme is the most prevalent and malignant tumor of the central nervous system. In the last few years, accumulating evidence has suggested an association between human cytomegalovirus (HCMV) infection and glioblastoma multiforme. In this study, tumor tissues and peripheral blood of patients with glioblastoma multiforme were examined for the presence of HCMV DNA. Twenty-two fresh surgical brain specimens and 20 peripheral blood samples were analyzed by real-time PCR (qPCR) and hemi-nested PCR (nPCR) for the presence of pp65 and (glycoprotein B) gB viral genomic regions, respectively. HCMV DNA was detected in the majority of the tumor samples analyzed (95% by qPCR and 91% by nPCR). About half of the patients with tumors positive for HCMV also had detectable viral DNA in their peripheral blood (47% by qPCR and 61% by nPCR). Genome copy numbers were determined and in the majority of the tumor samples cellular DNA outnumbers viral DNA (average of 1 infected cell in 33 cells). The gB genotypes were determined in HCMV-positive samples and gB2 was the most prevalent genotype in the tumor and blood samples. The results show a high prevalence of HCMV in glioblastoma multiforme samples reinforcing a possible association between HCMV infection and tumor development. J. Med. Virol. © 2013 Wiley Periodicals, Inc.

[52]

**TÍTULO / TITLE:** - PI3K Pathway Activation Provides a Novel Therapeutic Target for Pediatric Ependymoma and Is an Independent Marker of Progression-Free Survival.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 Dec 1;19(23):6450-60. doi: 10.1158/1078-0432.CCR-13-0222. Epub 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-0222](#)

**AUTORES / AUTHORS:** - Rogers HA; Mayne C; Chapman RJ; Kilday JP; Coyle B; Grundy RG

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliation: Children's Brain Tumour Research Centre, D Floor Medical School, Queen's Medical Centre, University of Nottingham, Nottingham, United Kingdom.

**RESUMEN / SUMMARY:** - PURPOSE: Currently, there are few effective adjuvant therapies for pediatric ependymoma outside confocal radiation, and prognosis remains

poor. The phosphoinositide 3-kinase (PI3K) pathway is one of the most commonly activated pathways in cancer. PI3Ks transduce signals from growth factors and cytokines, resulting in the phosphorylation and activation of AKT, which in turn induces changes in cell growth, proliferation, and apoptosis. EXPERIMENTAL DESIGN: PI3K pathway status was analyzed in ependymoma using gene expression data and immunohistochemical analysis of phosphorylated AKT (P-AKT). The effect of the PI3K pathway on cell proliferation was investigated by immunohistochemical analysis of cyclin D1 and Ki67, plus in vitro functional analysis. To identify a potential mechanism of PI3K pathway activation, PTEN protein expression and the mutation status of PI3K catalytic subunit alpha-isoform gene (PIK3CA) was investigated. RESULTS: Genes in the pathway displayed significantly higher expression in supratentorial than in posterior fossa and spinal ependymomas. P-AKT protein expression, indicating pathway activation, was seen in 72% of tumors (n = 169) and P-AKT expression was found to be an independent marker of a poorer progression-free survival. A significant association between PI3K pathway activation and cell proliferation was identified, suggesting that pathway activation was influencing this process. PTEN protein loss was not associated with P-AKT staining and no mutations were identified in PIK3CA. CONCLUSIONS: Our results suggest that the PI3K pathway could act as a biomarker, not only identifying patients with a worse prognosis but also those that could be treated with therapies targeted against the pathway, a strategy potentially effective in a high percentage of ependymoma patients. Clin Cancer Res; 19(23); 6450-60. ©2013 AACR.

[53]

**TÍTULO / TITLE:** - Safety and tolerability of intrathecal liposomal cytarabine as central nervous system prophylaxis in patients with acute lymphoblastic leukemia.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Leuk Lymphoma. 2013 Nov 25.

●● Enlace al texto completo (gratis o de pago) [3109/10428194.2013.853765](#)

**AUTORES / AUTHORS:** - Valentin A; Troppan K; Pfeilstocker M; Nosslinger T; Linkesch W; Neumeister P

**INSTITUCIÓN / INSTITUTION:** - Division of Hematology, Medical University Graz , Austria.

**RESUMEN / SUMMARY:** - Central nervous system recurrence in acute lymphoblastic leukemia (ALL) occurs in up to 15% of patients and is frequently associated with poor outcome. The purpose of our study was to evaluate the efficacy and safety of a slow-release liposomal formulation of cytarabine for intrathecal (IT) meningeal prophylaxis in patients suffering from ALL. Forty patients aged 20-77 years (median 36) were preventively treated with a total of 96 (range 1-6) single doses containing 50 mg of liposomal cytarabine on a compassionate use basis. After a median observation period of 23 months (range 2-118) only two patients experienced a combined medullary-leptomeningeal disease recurrence after primary diagnosis. Except for headache grade 2 in two patients, no specific toxicity attributable to IT liposomal cytarabine application was noted. Long-term neurological side effects were not observed. IT liposomal cytarabine therapy with concomitant dexamethasone appears to be feasible and well tolerated.

[54]

**TÍTULO / TITLE:** - Overexpression of pituitary tumor transforming gene (PTTG) is associated with tumor progression and poor prognosis in patients with esophageal squamous cell carcinoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Histochem. 2013 Oct 28. pii: S0065-1281(13)00191-8. doi: 10.1016/j.acthis.2013.09.011.

●● Enlace al texto completo (gratis o de pago) [1016/j.acthis.2013.09.011](#)

**AUTORES / AUTHORS:** - Zhang J; Yang Y; Chen L; Zheng D; Ma J

**INSTITUCIÓN / INSTITUTION:** - Department of Thoracic Surgery, The Third Affiliated Hospital of Harbin Medical University, Harbin 150081, People's Republic of China.

**RESUMEN / SUMMARY:** - Pituitary tumor transforming gene (PTTG) is a newly identified proto-oncogene that has been shown to be aberrantly overexpressed in a subset of human cancers. The aim of the present study was to examine PTTG expression in patients with esophageal squamous cell cancer (ESCC) and explore its clinical significance. PTTG protein expression was analyzed in 108 archived, paraffin-embedded primary ESCC specimens by immunohistochemistry and correlated with clinicopathological parameters and patients' outcome. Overexpression of PTTG was observed in 38.0% (41/108) of primary ESCC tissues and significantly correlated with differentiation, TNM stage, lymph node metastasis, and depth of invasion ( $P < 0.05$ ). Kaplan-Meier curves showed that ESCC patients with tumors expressing high levels of PTTG had substantially shorter overall survival compared with patients expressing low levels of PTTG ( $P = 0.022$ , log-rank test). Cox multivariate regression analysis revealed that overexpression of PTTG was an independent prognostic factor in overall survival for ESCC patients (hazard ratio was 2.35,  $P = 0.009$ ). Overall, our data suggest that overexpression of PTTG may contribute to the malignant progression of ESCC and serve as a novel prognostic indicator for patients with ESCC.

[55]

**TÍTULO / TITLE:** - Heme oxygenase-1 expression in human gliomas and its correlation with poor prognosis in patients with astrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Nov 15.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1373-z](#)

**AUTORES / AUTHORS:** - Gandini NA; Fermento ME; Salomon DG; Obiol DJ; Andres NC; Zenklusen JC; Arevalo J; Blasco J; Lopez Romero A; Facchinetti MM; Curino AC

**INSTITUCIÓN / INSTITUTION:** - Laboratorio de Biología del Cáncer, Instituto de Investigaciones Bioquímicas Bahía Blanca (INIBIBB-CONICET), Camino La Carrindanga Km 7, 8000, Bahía Blanca, Argentina.

**RESUMEN / SUMMARY:** - In human glioma tumors, heme oxygenase-1 (HO-1) has been shown to be upregulated both when compared with normal brain tissues and also during oligodendroglioma progression. The cell types that express HO-1 have been shown to be mainly macrophages/microglia and T cells. However, many other reports also demonstrated that cell lines derived from glioma tumors and astrocytes express HO-1 after the occurrence of a wide variety of cell injuries and stressors. In addition, the significance of HO-1 upregulation in glioma had not, so far, been addressed. We therefore aimed at investigating the expression and significance of HO-

1 in human glial tumors. For this purpose, we performed a wide screening of HO-1 expression in gliomas by using tissue microarrays containing astrocytomas, oligodendrogliomas, mixed tumors, and normal brain tissues. We subsequently correlated protein expression with patient clinicopathological data. We found differences in HO-1 positivity rates between non-malignant brain (22 %) and gliomas (54 %,  $p = 0.01$ ). HO-1 was expressed by tumor cells and showed cytoplasmic localization, although 19 % of tumor samples also depicted nuclear staining. Importantly, a significant decrease in the overall survival time of grade II and III astrocytoma patients with HO-1 expression was observed. This result was validated at the mRNA level in a cohort of 105 samples. However, no association of HO-1 nuclear localization with patient survival was detected. In vitro experiments aimed at investigating the role of HO-1 in glioma progression showed that HO-1 modulates glioma cell proliferation, but has no effects on cellular migration. In conclusion, our results corroborate the higher frequency of HO-1 protein expression in gliomas than in normal brain, demonstrate that HO-1 is expressed by glial malignant cells, and show an association of HO-1 expression with patients' shorter survival time.

[56]

**TÍTULO / TITLE:** - Combined aberrant expression of Bmi1 and EZH2 is predictive of poor prognosis in glioma patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Sci. 2013 Dec 15;335(1-2):191-6. doi: 10.1016/j.jns.2013.09.030. Epub 2013 Sep 29.

●● Enlace al texto completo (gratis o de pago) [1016/j.jns.2013.09.030](#)

**AUTORES / AUTHORS:** - Wu Z; Wang Q; Wang L; Li G; Liu H; Fan F; Li Z; Li Y; Tu Y

**INSTITUCIÓN / INSTITUTION:** - Department of Anatomy, Histology and Embryology and K.K. Leung Brain Research Centre, Fourth Military Medical University, Xi'an City 710032, China.

**RESUMEN / SUMMARY:** - BACKGROUND AND OBJECTIVES: Bmi1 and EZH2 are involved in tumorigenesis of gliomas. However, clinicopathologic significance of their expression in gliomas is unknown; especially, the prognostic value of combined expression of Bmi1 and EZH2 has not been explored. METHODS: Bmi1 and EZH2 expression in human gliomas and nonneoplastic brain tissues was measured by immunohistochemistry. RESULTS: Both Bmi1 and EZH2 expressions in glioma tissues were significantly higher than those in corresponding nonneoplastic brain tissues (both  $P < 0.001$ ). Additionally, the upregulations of Bmi1 and EZH2 proteins were both significantly associated with advanced WHO grades (both  $P < 0.001$ ) and low KPS ( $P = 0.008$  and  $0.01$ , respectively). Moreover, the overall survival of patients with high Bmi1 protein expression ( $P = 0.006$ ) or high EZH2 protein expression ( $P = 0.01$ ) was obviously lower than those with low expressions. More interestingly, glioma patients with combined overexpression of Bmi1 and EZH2 proteins had the shortest overall survival ( $P < 0.001$ ). Furthermore, multivariate analysis showed that Bmi1n expression ( $P = 0.02$ ), EZH2 expression ( $P = 0.03$ ), and combined expression of Bmi1 and EZH2 ( $P = 0.008$ ), were all independent prognostic factors for overall survival in glioma patients. CONCLUSIONS: Our data suggest for the first time that the combination of Bmi1 and EZH2 overexpression may be a highly sensitive marker for the prognosis in glioma patients.

[57]

**TÍTULO / TITLE:** - Radiation-induced Gliomas in 2 Pediatric Patients With Neurofibromatosis Type 1: Case Study and Summary of the Literature.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Hematol Oncol. 2013 Oct 16.

- Enlace al texto completo (gratis o de pago)

[1097/MPH.0000000000000006](#)

**AUTORES / AUTHORS:** - Madden JR; Rush SZ; Stence N; Foreman NK; Liu AK

**INSTITUCIÓN / INSTITUTION:** - Departments of \*Neuro-Oncology daggerRadiology, Children's Hospital Colorado, Aurora double daggerDepartment of Radiation Oncology, University of Colorado, Denver, CO.

**RESUMEN / SUMMARY:** - Neurofibromatosis type 1 (NF1) is a genetic disorder that predisposes patients to the formation of sporadic tumors and also increases the risk of radiation-induced malignancies. The most commonly described radiation-induced tumor in NF1 patients is a malignant peripheral nerve sheath tumor. We present 2 children with NF1 who received radiation therapy and subsequently developed high-grade gliomas. We then review the current literature on radiation-induced tumors in NF1 patients. Although radiation may be the most appropriate therapy in specific situations for children with NF1, the secondary tumor risk should be carefully considered.

[58]

**TÍTULO / TITLE:** - A DNA Methylation Prognostic Signature of Glioblastoma: Identification of NPTX2-PTEN-NF-kappaB Nexus.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. 2013 Nov 15;73(22):6563-73. doi: 10.1158/0008-5472.CAN-13-0298. Epub 2013 Sep 27.

- Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-](#)

[0298](#)

**AUTORES / AUTHORS:** - Shukla S; Pia Patric IR; Thinagararjan S; Srinivasan S; Mondal B; Hegde AS; Chandramouli BA; Santosh V; Arivazhagan A; Somasundaram K

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Department of Microbiology and Cell Biology, Indian Institute of Science; Sri SatyaSai Institute of Higher Medical Sciences; Departments of Neurosurgery and Neuropathology, National Institute of Mental Health and Neuro Sciences, Bangalore, India.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most common, malignant adult primary tumor with dismal patient survival, yet the molecular determinants of patient survival are poorly characterized. Global methylation profile of GBM samples (our cohort; n = 44) using high-resolution methylation microarrays was carried out. Cox regression analysis identified a 9-gene methylation signature that predicted survival in GBM patients. A risk-score derived from methylation signature predicted survival in univariate analysis in our and The Cancer Genome Atlas (TCGA) cohort. Multivariate analysis identified methylation risk score as an independent survival predictor in TCGA cohort. Methylation risk score stratified the patients into low-risk and high-risk groups with significant survival difference. Network analysis revealed an activated NF-kappaB

pathway association with high-risk group. NF-kappaB inhibition reversed glioma chemoresistance, and RNA interference studies identified interleukin-6 and intercellular adhesion molecule-1 as key NF-kappaB targets in imparting chemoresistance. Promoter hypermethylation of neuronal pentraxin II (NPTX2), a risky methylated gene, was confirmed by bisulfite sequencing in GBMs. GBMs and glioma cell lines had low levels of NPTX2 transcripts, which could be reversed upon methylation inhibitor treatment. NPTX2 overexpression induced apoptosis, inhibited proliferation and anchorage-independent growth, and rendered glioma cells chemosensitive. Furthermore, NPTX2 repressed NF-kappaB activity by inhibiting AKT through a p53-PTEN-dependent pathway, thus explaining the hypermethylation and downregulation of NPTX2 in NF-kappaB-activated high-risk GBMs. Taken together, a 9-gene methylation signature was identified as an independent GBM prognosticator and could be used for GBM risk stratification. Prosurvival NF-kappaB pathway activation characterized high-risk patients with poor prognosis, indicating it to be a therapeutic target. *Cancer Res*; 73(22); 6563-73. ©2013 AACR.

[59]

**TÍTULO / TITLE:** - The case of a patient affected by primary gliosarcoma and neuroendocrine pancreatic cancer with prolonged survival.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Tumori*. 2013 May-Jun;99(3):117e-9e. doi: 10.1700/1334.14818.

●● Enlace al texto completo (gratis o de pago) [1700/1334.14818](#)

**AUTORES / AUTHORS:** - Trignani M; Taraborrelli M; Ausili Cefaro G

**RESUMEN / SUMMARY:** - Primary gliosarcoma (PGS) is a rare neoplasm with a poor prognosis. It is considered as a variant of glioblastoma multiforme (GBM) and as a grade IV neoplasm. There is little evidence on the optimal therapy for this disease: treatment of PGS includes surgery, radiotherapy and chemotherapy, and often the same treatment used for GBM is employed for PGS. Several studies have demonstrated that somatostatin receptors are overexpressed in gliomas; somatostatin analogues could therefore also be employed in this mixed form but to date the experience reported in the literature is unclear and there are no studies about the use of these agents in PGS. We present the case of a patient affected by both PGS and neuroendocrine pancreatic cancer. The case is interesting for the prolonged survival and for the stabilization of disease obtained during therapy with somatostatin analogues.

[60]

**TÍTULO / TITLE:** - Can F-FDOPA PET/CT predict survival in patients with suspected recurrent glioma? A prospective study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Eur J Radiol*. 2013 Sep 17. pii: S0720-048X(13)00483-X. doi: 10.1016/j.ejrad.2013.09.004.

●● Enlace al texto completo (gratis o de pago) [1016/j.ejrad.2013.09.004](#)

**AUTORES / AUTHORS:** - Karunanithi S; Sharma P; Kumar A; Gupta DK; Khangembam BC; Ballal S; Kumar R; Kumar R; Bal C

**INSTITUCIÓN / INSTITUTION:** - Department of Nuclear Medicine, All India Institute of Medical Sciences, New Delhi, India. Electronic address: [drsellam84@yahoo.co.in](mailto:drsellam84@yahoo.co.in).

**RESUMEN / SUMMARY:** - Purpose of the present study was to evaluate the role of 18F-FDOPA PET/CT for predicting survival in patients with suspected recurrent glioma. METHODS: A total of 33 previously treated, histopathologically proven glioma patients with clinical and contrast enhanced MRI findings suspicious for recurrence were enrolled in this prospective study. All patients underwent 18F-FDOPA PET/CT. Ratios of tumor uptake to normal tissue uptake were generated by dividing the tumor SUVmax with SUVmax of the contralateral normal brain tissue (T/N), normal striatum (T/S), normal white matter (T/W) and normal cerebellum (T/C). Patients were followed up clinically and by repeated imaging. Data was censored, if the patient died of disease or at the end of the study. Survival analysis was performed for the distributions of each variable and by multivariate analysis. RESULTS: 18F-FDOPA PET/CT was positive for recurrence in 25 patients and negative in 8. Death occurred in nineteen patients. Median follow up period was 20.2 months. Median survival in this study was 39.2 months. In univariate analysis significant association of survival was noted with results of 18F-FDOPA PET/CT (P=0.007) and 18F-FDOPA PET/CT quantitative parameters namely SUVmax (P=0.001), T/S (P=0.005), T/W (P=0.0004), T/N (P=0.001) and T/C (P=0.003) were found to be significant. On multivariate analysis, only MRI size of the recurrent tumor (P=0.002) and T/N ratio of 18F-FDOPA PET/CT (P=0.005) were found to be independent predictors of survival. CONCLUSION: T/N ratio on 18F-FDOPA PET/CT is an independent predictor of survival in patients with suspected recurrent glioma, along with size of recurrent tumor on MRI.

[61]

**TÍTULO / TITLE:** - Double suicide gene therapy using human neural stem cells against glioblastoma: double safety measures.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 11.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1264-6](#)

**AUTORES / AUTHORS:** - Lee JY; Lee DH; Kim HA; Choi SA; Lee HJ; Park CK; Phi JH; Wang KC; Kim SU; Kim SK

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Neurosurgery, Pediatric Clinical Neuroscience Center, Seoul National University Children's Hospital, Seoul National University College of Medicine, 101 Daehak-ro, Jongno-gu, Seoul, 110-744, Republic of Korea.

**RESUMEN / SUMMARY:** - With recent advancements in stem cell-based gene therapy, concerns about safety have grown. Stem cell-based gene therapies may pose the risk of immunological problems and oncogenesis. We investigated the feasibility of treating glioblastomas with neural stem cells [(NSCs), HB1.F3 cells] expressing double prodrug enzymes [cytosine deaminase (CD) and tyrosine kinase (TK)] to eliminate the NSCs following treatment for safety purposes. First, the in vitro and in vivo therapeutic efficacies of NSCs engineered with double prodrug enzymes (HB1.F3-CD.TK cells) were compared to cells expressing a single prodrug enzyme (HB1.F3-CD). Second, the degree of safety achieved by NSC elimination was compared with an in vitro viability assay of the NSCs after treatment with the double prodrugs. We further compared the differences in in vivo proliferation of control, single prodrug enzyme and double

prodrug enzyme expressing NSCs. HB1.F3-CD.TK cells showed a better or comparable treatment outcome than HB1.F3-CD cells in vitro and in vivo. For safety, HB1.F3-CD.TK cells showed the least viability in vitro after treatment with prodrugs compared to HB1.F3 and HB1.F3-CD cells. Additionally, the in vivo proliferation among the injected NSCs found in the tumor was the smallest for HB1.F3-CD.TK cells. Double-prodrug enzyme-directed gene therapy shows good therapeutic efficacy as well as efficient eradication of the NSCs to ensure safety for clinical applications of stem cell-based gene therapies.

[62]

**TÍTULO / TITLE:** - Mapping the patterns of care, the receipt of palliative care and the site of death for patients with malignant glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Sep 28.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1263-7](#)

**AUTORES / AUTHORS:** - Sundararajan V; Bohensky MA; Moore G; Brand CA; Lethborg C; Gold M; Murphy MA; Collins A; Philip J

**INSTITUCIÓN / INSTITUTION:** - Department of Medicine, Southern Clinical School, Monash University, Melbourne, VIC, Australia.

**RESUMEN / SUMMARY:** - High-grade malignant glioma patients face a poor prognosis, preceded by rapid functional and neuro-behavioural changes, making multidisciplinary care incorporating supportive and palliative care important. This study aimed to quantify the association between symptoms, receipt of supportive and palliative care and site of death. We undertook a retrospective cohort study between 2003 and 2009 of incident malignant glioma cases who survived for at least 120 days between their first hospitalisation and their death (n = 678) in Victoria, Australia, using linked hospital, emergency department and death data. The median age of patients was 62 years, 40 % were female, and the median survival was 11 months. Twenty-six percent of patients died outside of hospital, 49 % in a palliative care bed/hospice setting and 25 % in an acute hospital bed. Patients having 1 or more symptoms were more than five times as likely to receive palliative care. Patients who receive palliative care are 1.7 times more likely to die outside of hospital. In conclusion malignant glioma patients with a high burden of symptoms are more likely to receive palliative care and, in turn, patients who receive palliative care are more likely to die at home.

[63]

**TÍTULO / TITLE:** - Dopamine receptor D2S gene transfer improves the sensitivity of GH3 rat pituitary adenoma cells to bromocriptine.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cell Endocrinol. 2014 Jan 25;382(1):377-84. doi: 10.1016/j.mce.2013.10.021. Epub 2013 Oct 30.

●● Enlace al texto completo (gratis o de pago) [1016/j.mce.2013.10.021](#)

**AUTORES / AUTHORS:** - Li Q; Su Z; Liu J; Cai L; Lu J; Lin S; Xiong Z; Li W; Zheng W; Wu J; Zhuge Q; Wu Z

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, First Affiliated Hospital of Wenzhou Medical University, Wenzhou 325000, China; Department of Neurosurgery, Ningbo No. 2 Hospital, Ningbo 315000, China.

**RESUMEN / SUMMARY:** - Bromocriptine, a dopamine agonist (DA), has been used in the treatment of prolactinomas. Recent studies have indicated that dopamine 2 receptor short isoform (D2S) may play an important role in suppressing PRL synthesis and prolactinoma cell growth under DA treatment. In the current study, we investigated the role of D2S in the therapeutic action of bromocriptine in GH3 using both in vitro and in vivo approaches. Infection of adenovirus-D2S increased D2S expression in GH3 cells ( $P < 0.05$ ). D2S expression significantly decreased the GH3 cell viability subjected to bromocriptine treatment in vitro ( $P < 0.05$ ). In nude mice, adenovirus-D2S transfection sensitized GH3 xenograft to bromocriptine treatment evidenced by the significant inhibition of D2S expressed tumor growth as compared with vector control. Furthermore, decrease of Bcl-2 expression, increase of Bax, and active Caspase-3 were found in D2S expressed GH3 xenograft subjected to bromocriptine treatment. In summary, our study indicates that D2S expression plays a critical role in the therapeutic action of bromocriptine in pituitary adenomas and that adenovirus-mediated D2S gene transfer combined with bromocriptine may provide a novel treatment for DA-resistant prolactinomas.

[64]

**TÍTULO / TITLE:** - Tonic Activation of Bax Primes Neural Progenitors for Rapid Apoptosis through a Mechanism Preserved in Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci. 2013 Nov 13;33(46):18098-108. doi: 10.1523/JNEUROSCI.2602-13.2013.

- [Enlace al texto completo \(gratis o de pago\) 1523/JNEUROSCI.2602-13.2013](#)

**AUTORES / AUTHORS:** - Crowther AJ; Gama V; Bevilacqua A; Chang SX; Yuan H; Deshmukh M; Gershon TR

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurology, Radiation Oncology, and Radiology, Neuroscience Center, Lineberger Comprehensive Cancer Center, and Department of Cell Biology and Physiology, University of North Carolina School of Medicine, Chapel Hill, North Carolina 27599.

**RESUMEN / SUMMARY:** - Commitment to survival or apoptosis within expanding progenitor populations poses distinct risks and benefits to the organism. We investigated whether specialized mechanisms regulate apoptosis in mouse neural progenitors and in the progenitor-derived brain tumor medulloblastoma. Here, we identified constitutive activation of proapoptotic Bax, maintained in check by Bcl-xL, as a mechanism for rapid cell death, common to postnatal neural progenitors and medulloblastoma. We found that tonic activation of Bax in cerebellar progenitors, along with sensitivity to DNA damage, was linked to differentiation state. In cerebellar progenitors, active Bax localized to mitochondria, where it was bound to Bcl-xL. Disruption of Bax:Bcl-xL binding by BH3-mimetic ABT 737 caused rapid apoptosis of cerebellar progenitors and primary murine medulloblastoma cells. Conditional deletion of Mcl-1, in contrast, did not cause death of cerebellar progenitors. Our findings identify a mechanism for the sensitivity of brain progenitors to typical anticancer therapies and

reveal that this mechanism persists in medulloblastoma, a malignant brain tumor markedly sensitive to radiation and chemotherapy.

[65]

**TÍTULO / TITLE:** - Inhibition of monocarboxylate transporter-4 depletes stem-like glioblastoma cells and inhibits HIF transcriptional response in a lactate-independent manner.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncogene. 2013 Sep 30. doi: 10.1038/onc.2013.390.

●● [Enlace al texto completo \(gratis o de pago\) 1038/onc.2013.390](#)

**AUTORES / AUTHORS:** - Lim KS; Lim KJ; Price AC; Orr BA; Eberhart CG; Bar EE

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD, USA.

**RESUMEN / SUMMARY:** - Hypoxic regions are frequent in glioblastoma (GBM), the most common type of malignant adult brain tumor, and increased levels of tumor hypoxia have been associated with worse clinical outcomes. To unmask genes important in hypoxia, we treated GBM neurospheres in hypoxia and identified monocarboxylate transporter-4 (MCT4) as one of the most upregulated genes. To investigate the clinical importance of MCT4 in GBM, we examined clinical outcomes and found that MCT4 overexpression is associated with shorter patient survival. Consistent with this, MCT4 upregulation correlated with the aggressive mesenchymal subset of GBM, and MCT4 downregulation correlated with the less aggressive G-CIMP (Glioma CpG Methylator Phenotype) subset of GBM. Immunohistochemical analysis of tissue microarrays confirmed that MCT4 protein levels were increased in high-grade as compared with lower-grade astrocytomas, further suggesting that MCT4 is a clinically relevant target. To test the requirement for MCT4 in vitro, we transduced neurospheres with lentiviruses encoding short-hairpin RNAs (shRNAs) against MCT4, resulting in growth inhibition of 50-80% under hypoxia in two lines. MCT4 knockdown was associated with a decreased percentage of cells expressing the stem-cell marker CD133 and increased apoptotic fraction. We also found that flow-sorted CD133-positive cells had almost sixfold higher MCT4 levels than CD133-negative cells, suggesting that the stem-like population might have a greater requirement for MCT4. Most importantly, MCT4 silencing also slowed GBM intracranial xenograft growth in vivo. Interestingly, whereas MCT4 is a well-characterized lactate exporter, we found that both intracellular and extracellular lactate levels did not change following MCT4 silencing, suggesting a novel lactate export-independent mechanism for growth inhibition in GBMs. To identify this potential mechanism, we performed microarray analysis on control and shMCT4-expressing neurospheres and found a dramatic reduction in the expression of multiple Hypoxia-Inducible Factor (HIF)-regulated genes following MCT4 knockdown. The overall reduction in HIF transcriptional response was further validated using a hypoxia response element (HRE)-dependent green-fluorescent protein (GFP) reporter line. Oncogene advance online publication, 30 September 2013; doi:10.1038/onc.2013.390.

[66]

**TÍTULO / TITLE:** - Pituitary Gland: Do Anticancer Drugs Sit in the Turkish Saddle?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 Nov 12.

●● Enlace al texto completo (gratis o de pago) [1200/JCO.2013.51.2632](#)

**AUTORES / AUTHORS:** - van der Veldt AA; Smit EF; Lammertsma AA

**INSTITUCIÓN / INSTITUTION:** - VU University Medical Center, Amsterdam, the Netherlands.

[67]

**TÍTULO / TITLE:** - Brain tumor specifies intermediate progenitor cell identity by attenuating beta-catenin/Armadillo activity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Development. 2013 Nov 20.

●● Enlace al texto completo (gratis o de pago) [1242/dev.099382](#)

**AUTORES / AUTHORS:** - Komori H; Xiao Q; McCartney BM; Lee CY

**RESUMEN / SUMMARY:** - During asymmetric stem cell division, both the daughter stem cell and the presumptive intermediate progenitor cell inherit cytoplasm from their parental stem cell. Thus, proper specification of intermediate progenitor cell identity requires an efficient mechanism to rapidly extinguish the activity of self-renewal factors, but the mechanisms remain unknown in most stem cell lineages. During asymmetric division of a type II neural stem cell (neuroblast) in the Drosophila larval brain, the Brain tumor (Brat) protein segregates unequally into the immature intermediate neural progenitor (INP), where it specifies INP identity by attenuating the function of the self-renewal factor Klumpfuss (Klu), but the mechanisms are not understood. Here, we report that Brat specifies INP identity through its N-terminal B-boxes via a novel mechanism that is independent of asymmetric protein segregation. Brat-mediated specification of INP identity is critically dependent on the function of the Wnt destruction complex, which attenuates the activity of beta-catenin/Armadillo (Arm) in immature INPs. Aberrantly increasing Arm activity in immature INPs further exacerbates the defects in the specification of INP identity and enhances the supernumerary neuroblast mutant phenotype in brat mutant brains. By contrast, reducing Arm activity in immature INPs suppresses supernumerary neuroblast formation in brat mutant brains. Finally, reducing Arm activity also strongly suppresses supernumerary neuroblasts induced by overexpression of klu. Thus, the Brat-dependent mechanism extinguishes the function of the self-renewal factor Klu in the presumptive intermediate progenitor cell by attenuating Arm activity, balancing stem cell maintenance and progenitor cell specification.

[68]

**TÍTULO / TITLE:** - Proteasome inhibition with bortezomib induces cell death in GBM stem-like cells and temozolomide-resistant glioma cell lines, but stimulates GBM stem-like cells' VEGF production and angiogenesis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Dec;119(6):1415-23. doi: 10.3171/2013.7.JNS1323. Epub 2013 Oct 4.

●● Enlace al texto completo (gratis o de pago) [3171/2013.7.JNS1323](#)

**AUTORES / AUTHORS:** - Bota DA; Alexandru D; Keir ST; Bigner D; Vredenburgh J; Friedman HS

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurology and.

**RESUMEN / SUMMARY:** - Object Recurrent malignant gliomas have inherent resistance to traditional chemotherapy. Novel therapies target specific molecular mechanisms involved in abnormal signaling and resistance to apoptosis. The proteasome is a key regulator of multiple cellular functions, and its inhibition in malignant astrocytic lines causes cell growth arrest and apoptotic cell death. The proteasome inhibitor bortezomib was reported to have very good in vitro activity against malignant glioma cell lines, with modest activity in animal models as well as in clinical trials as a single agent. In this paper, the authors describe the multiple effects of bortezomib in both in vitro and in vivo glioma models and offer a novel explanation for its seeming lack of activity. Methods Glioma stem-like cells (GSCs) were obtained from resected glioblastomas (GBMs) at surgery and expanded in culture. Stable glioma cell lines (U21 and D54) as well as temozolomide (TMZ)-resistant glioma cells derived from U251 and D54-MG were also cultured. GSCs from 2 different tumors, as well as D54 and U251 cells, were treated with bortezomib, and the effect of the drug was measured using an XTT cell viability assay. The activity of bortezomib was then determined in D54-MG and/or U251 cells using apoptosis analysis as well as caspase-3 activity and proteasome activity measurements. Human glioma xenograft models were created in nude mice by subcutaneous injection. Bevacizumab was administered via intraperitoneal injection at a dose of 5 mg/kg daily. Bortezomib was administered by intraperitoneal injection 1 hour after bevacizumab administration in doses of at a dose of 0.35 mg/kg on days 1, 4, 8, and 11 every 21 days. Tumors were measured twice weekly. Results Bortezomib induced caspase-3 activation and apoptotic cell death in stable glioma cell lines and in glioma stem-like cells (GSCs) derived from malignant tumor specimens Furthermore, TMZ-resistant glioma cell lines retained susceptibility to the proteasome inhibition. The bortezomib activity was directly proportional with the cells' baseline proteasome activity. The proteasome inhibition stimulated both hypoxia-inducible factor (HIF)-1alpha and vascular endothelial growth factor (VEGF) production in malignant GSCs. As such, the VEGF produced by GSCs stimulated endothelial cell growth, an effect that could be prevented by the addition of bevacizumab (VEGF antibody) to the media. Similarly, administration of bortezomib and bevacizumab to athymic mice carrying subcutaneous malignant glioma xenografts resulted in greater tumor inhibition and greater improvement in survival than administration of either drug alone. These data indicate that simultaneous proteasome inhibition and VEGF blockade offer increased benefit as a strategy for malignant glioma therapy. Conclusions The results of this study indicate that combination therapies based on bortezomib and bevacizumab might offer an increased benefit when the two agents are used in combination. These drugs have a complementary mechanism of action and therefore can be used together to treat TMZ-resistant malignant gliomas.

[69]

**TÍTULO / TITLE:** - Primary intracranial ectopic craniopharyngioma in a patient with probable Gardner's syndrome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 22.

- Enlace al texto completo (gratis o de pago) [3171/2013.10.JNS131401](#)

**AUTORES / AUTHORS:** - Kim MS; Kim YS; Lee HK; Lee GJ; Choi CY; Lee CH

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurosurgery.

**RESUMEN / SUMMARY:** - The authors describe a patient with an adamantinomatous craniopharyngioma (CPG) arising in the cerebellopontine angle (CPA), who also had probable Gardner's syndrome. This 31-year-old man presented with headache and dizziness. Brain CT and MRI showed a 5 x 4-cm lesion with multiple small calcifications in the left CPA. The patient underwent suboccipital craniotomy with tumor removal. Histopathological findings indicated an adamantinomatous CPG. This patient also showed characteristics of Gardner's syndrome. Although this syndrome is associated with intracranial neoplasms, it is unclear whether patients with both Gardner's syndrome and CPG are part of the heterogeneity of Gardner's syndrome.

[70]

**TÍTULO / TITLE:** - Targeted induction of apoptosis in glioblastoma multiforme cells by an MRP3-specific TRAIL fusion protein in vitro.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Nov 26.

- Enlace al texto completo (gratis o de pago) [1007/s13277-013-1155-7](#)

**AUTORES / AUTHORS:** - Wang LH; Ni CW; Lin YZ; Yin L; Jiang CB; Lv CT; Le Y; Lang Y; Zhao CY; Yang K; Jiao BH; Yin J

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry and Molecular Biology, Second Military Medical University, Xiangyin Road No. 800, Shanghai, 200433, China.

**RESUMEN / SUMMARY:** - Single-chain Fv fragments (scFvs) consist of the variable heavy-chain (VH) and variable light-chain (VL) domains, which are the smallest immunoglobulin fragments containing the whole antigen-binding site. Human soluble tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) proves to acquire a potent pro-apoptotic activity only after selective binding to a predefined tumor cell surface antigen and has no off-target effects towards normal cells. Glioblastoma multiforme (GBM) is the most frequent and aggressive type of brain tumor and overexpresses human multidrug resistance protein 3 (MRP3). In this study, we designed a novel fusion protein, termed scFvM58-sTRAIL, in which the MRP3-specific scFv antibody M58 was genetically fused to the N-terminus of human soluble TRAIL (sTRAIL). The recombinant scFvM58-sTRAIL fusion protein, expressed in Escherichia coli, was purified by chromatography and tested for cytotoxicity. scFvM58-sTRAIL showed a significant apoptosis-inducing activity towards MRP3-positive GBM cells in vitro. The pro-apoptotic activity of scFvM58-sTRAIL towards GBM cells was strongly inhibited in the presence of the parental scFvM58 antibody, suggesting that cytotoxic activity is MRP3-restricted. In a control experiment with MRP3-negative Jurkat cells, scFvM58-sTRAIL did not induce apparent apoptosis. In addition, through target antigen-restricted binding, scFvM58-sTRAIL was capable of activating not only TRAIL-R1 but also TRAIL-R2. In conclusion, our results suggest that fusion protein scFvM58-sTRAIL with specificity for MRP3 is a highly selective therapeutic agent and may provide an alternative therapy for human GBM.

[71]

**TÍTULO / TITLE:** - Sporadic meningioangiomas: imaging findings with histopathologic correlations in seven patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroradiology. 2013 Dec;55(12):1439-46. doi: 10.1007/s00234-013-1292-0. Epub 2013 Oct 24.

●● Enlace al texto completo (gratis o de pago) [1007/s00234-013-1292-0](#)

**AUTORES / AUTHORS:** - Jeon TY; Kim JH; Suh YL; Ahn S; Yoo SY; Eo H

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology and Center for Imaging Science, Samsung Medical Center, Sungkyunkwan University School of Medicine, 50, Ilwon-dong, Gangnam-gu, Seoul, 135-710, Korea.

**RESUMEN / SUMMARY:** - INTRODUCTION: Meningioangiomas (MA) is a rare benign cerebral lesion. We aimed to evaluate the CT and MR features of sporadic MA, with a focus on the correlation between imaging and histopathologic findings. METHODS: CT (n = 7) and MR (n = 8) images of eight patients (6 men and 2 women; mean age, 12.8 years; range, 4-22 years) with pathologically proven MA were retrospectively reviewed. After dividing the MA lesions according to their distribution into cortical and subcortical white matter components, the morphologic characteristics were analyzed and correlated with histopathologic findings in seven patients. RESULTS: CT and MR images showed cortical (n = 4, 50 %) and subcortical white matter (n = 7, 88 %) components of MA. All four cortical components revealed hyperattenuation on CT scan and T1 isointensity/T2 hypointensity on MR images, whereas subcortical white matter components showed hypoattenuation on CT scan and T1 hypointensity/T2 hyperintensity on MR images. Two cortical components (25 %) demonstrated enhancement and one subcortical white matter component demonstrated cystic change. Seven cases were available for imaging-histopathologic correlation. In all seven cases, the cortex was involved by MA and six patients (86 %) showed subcortical white matter involvement by MA. There were excellent correlations between the imaging and histopathologic findings in subcortical white matter components, and the accuracy was 100 % (seven of seven); whereas there were poor correlations in cortical components, and the accuracy was 43 % (three of seven). CONCLUSIONS: The cerebral cortex and subcortical white matter were concomitantly involved by MA. Subcortical white matter components of MA were more apparent than cortical components on CT and MR imaging.

[72]

**TÍTULO / TITLE:** - Combined aberrant expression of microRNA-214 and UBC9 is an independent unfavorable prognostic factor for patients with gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Med Oncol. 2014 Jan;31(1):767. doi: 10.1007/s12032-013-0767-5. Epub 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1007/s12032-013-0767-5](#)

**AUTORES / AUTHORS:** - Wang S; Jiao B; Geng S; Ma S; Liang Z; Lu S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Second Hospital of Hebei Medical University, No. 215, Hepingxi Road, Shijiazhuang City, 050000, Hebei Province, China.

**RESUMEN / SUMMARY:** - microRNA-214 (miR-214) plays an important role in tumor cell proliferation, migration and invasion, as well as tumor angiogenesis. Ubiquitin-

conjugating enzyme 9 (UBC9) is implicated in regulating several critical cancer-related pathways. Recent study has demonstrated that miR-214 reduction may facilitate UBC9 expression and may be involved in the regulation of glioma cell proliferation. The aim of this study was to clarify the clinical significance of miR-214 and UBC9 in human glioma, which has not been fully elucidated. Quantitative real-time polymerase chain reaction analysis was used to characterize the expression patterns of miR-214 and UBC9 mRNA in 108 glioma and 20 normal brain tissues. The associations of miR-214 and UBC9 mRNA expressions with clinicopathological factors and prognosis of glioma patients were also statistically analyzed. Compared with normal brain tissues, the expression levels of miR-214 and UBC9 mRNA in glioma tissues were significantly downregulated and upregulated, respectively (both  $P < 0.001$ ). There was a negative correlation between miR-214 and UBC9 mRNA expression in glioma tissues ( $r = -0.61$ ,  $P = 0.01$ ). Additionally, the combined miR-214 downregulation and UBC9 upregulation (miR-214-low/UBC9-high) was significantly associated with advanced pathological grade ( $P = 0.008$ ). Moreover, Kaplan-Meier survival and Cox regression analyses showed that the glioma patients with miR-214-low/UBC9-high expression had poorest overall survival ( $P < 0.001$ ) and conjoined expression of miR-214-low/UBC9-high was an independent prognostic indicator of glioma ( $P = 0.01$ ). Furthermore, subgroup analyses showed that miR-214-low/UBC9-high expression was significantly associated with poor overall survival in glioma patients with high pathological grades (for grade III-IV:  $P < 0.001$ ). This prospective study offers the convincing evidence for the first time that miR-214 and its target gene UBC9 may contribute to the development and the clinical outcome of glioma, and are valuable prognostic factors for glioma patients. A combined detection of miR-214/UBC9 expression may benefit us in predicting the prognosis of patients with advanced gliomas.

[73]

**TÍTULO / TITLE:** - Development, Characterization, and Reversal of Acquired Resistance to the MEK1 Inhibitor Selumetinib (AZD6244) in an In Vivo Model of Childhood Astrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 Nov 22.

●● [Enlace al texto completo \(gratis o de pago\) 1158/1078-0432.CCR-13-0842](#)

**AUTORES / AUTHORS:** - Bid HK; Kibler A; Phelps DA; Manap S; Xiao L; Lin J; Capper D; Oswald D; Geier B; Dewire M; Smith PD; Kurmasheva RT; Mo X; Fernandez S; Houghton PJ

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Center for Childhood Cancer & Blood Diseases, Nationwide Children's Hospital; Center for Biostatistics, The Ohio State University, Columbus, Ohio; Institut of Pathology, Department Neuropathology, Ruprecht-Karls University and Clinical Cooperation Unit Neuropathology, German Cancer Research Center (DKFZ), Heidelberg, Germany; and Astrazeneca Ltd., Oncology iMed, Macclesfield, United Kingdom.

**RESUMEN / SUMMARY:** - PURPOSE: The BT-40 low-grade childhood astrocytoma xenograft model expresses mutated BRAFV600E and is highly sensitive to the MEK inhibitor selumetinib (AZD6244). In this study, we developed and characterized selumetinib resistance and explored approaches to circumventing the mechanisms of

acquired resistance. EXPERIMENTAL DESIGN: BT-40 xenografts were selected in vivo for selumetinib resistance. Resistant tumors were obtained and characterized, as were tumors that reverted to sensitivity. Characterization included expression profiling, assessment of MEK signature and compensatory pathways, MEK inhibition, BRAF expression, and cytokine levels. Combination treatment of BT-40/AZD-resistant tumors with the MEK inhibitor and a STAT3 inhibitor (LLL12) was assessed. RESULTS: Resistance was unstable, tumors reverting to selumetinib sensitivity when passaged in untreated mice, and MEK was equally inhibited in sensitive and resistant tumors by selumetinib. Drug resistance was associated with an enhanced MEK signature and increased interleukin (IL)-6 and IL-8 expression. Selumetinib treatment induced phosphorylation of STAT3 (Y705) only in resistant xenografts, and similar results were observed in BRAFV600E astrocytic cell lines intrinsically resistant to selumetinib. Treatment of BT-40-resistant tumors with selumetinib or LLL12 had no significant effect, whereas combined treatment induced complete regressions of BT-40/AZD-resistant xenografts. CONCLUSIONS: Resistance to selumetinib selected in vivo in BT-40 tumor xenografts was unstable. In resistant tumors, selumetinib activated STAT3, and combined treatment with selumetinib and LLL12 induced complete responses in resistant BT-40 tumors. These results suggest dual targeting BRAF (V600E) signaling and STAT3 signaling may be effective in selumetinib-resistant tumors or may retard or prevent onset of resistance. Clin Cancer Res; 1-14. ©2013 AACR.

[74]

**TÍTULO / TITLE:** - Impact of subclinical hemorrhage on the pituitary gland in patients with pituitary adenomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Endocrinol (Oxf). 2013 Oct 11. doi: 10.1111/cen.12349.

●● [Enlace al texto completo \(gratis o de pago\) 1111/cen.12349](#)

**AUTORES / AUTHORS:** - Kinoshita Y; Tominaga A; Usui S; Arita K; Sugiyama K; Kurisu K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, 734-8551, Japan.

**RESUMEN / SUMMARY:** - OBJECTIVE: Advanced magnetic resonance imaging (MRI) and optical instruments for surgery frequently demonstrate subclinical hemorrhage in pituitary adenomas; however, the effects of subclinical hemorrhage on pituitary glands remain unclear. We sought to clarify the pituitary function in patients with subclinical pituitary adenoma hemorrhage (SPAH). DESIGN/PATIENTS: Between January 2006 and December 2012, we retrospectively reviewed 328 consecutive patients who underwent surgery for pituitary adenoma. SPAH was defined as an intratumoral hemorrhage based on both 3 tesla MRI and operative findings, with no clinical symptoms of acute pituitary adenoma apoplexy. The pituitary dysfunction assessed using pre- and post-operative provocative tests was investigated in patients categorized into three groups: non-apoplectic adenoma, adenoma with SPAH and adenoma with clinical apoplexy. MEASUREMENTS: The main outcome measure was the incidence of pituitary dysfunction. RESULTS: The overall incidence of non-apoplectic adenomas, adenomas with SPAH and adenomas with clinical apoplexy were 82.3%, 14.3% and 3.4%. Clinical pituitary apoplexy frequently occurred in male patients with large non-functioning adenomas, causing pituitary dysfunction.

Contrastingly, the incidence of SPAH was significantly higher in the prolactinoma patients ( $P = 0.0260$ ), including those with relatively small adenomas ( $P = 0.0007$ ). No medications, such as dopamine-agonists or somatostatin-analogues, were observed to affect the occurrence of SPAH. No deterioration of the pituitary function was observed in the SPAH patients in comparison with the non-apoplectic adenoma patients, and the size of the hematoma occupying the pituitary adenoma did not exhibit any relationships with deterioration of the pituitary function. Furthermore, SPAH caused no deterioration of the pituitary function after a surgery based on the postoperative provocation tests. CONCLUSIONS: SPAH does not cause any added dysfunction in pituitary glands. Signs of hemorrhage in pituitary adenomas do not necessitate immediate tumor decompression surgery, if there are no symptoms of acute hemorrhage. This article is protected by copyright. All rights reserved.

[75]

**TÍTULO / TITLE:** - Low-Dose Cisplatin-Etoposide Regimen for Patients with Optic Pathway Glioma: A Report of Four Cases and Literature Review.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuropediatrics. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago) [1055/s-0033-1360482](#)

**AUTORES / AUTHORS:** - Cardellicchio S; Bacci G; Farina S; Genitori L; Massimino M; de Martino M; Caputo R; Sardi I

**INSTITUCIÓN / INSTITUTION:** - Neuro-oncology Unit, Department of Pediatrics, Meyer Children's Hospital, Florence, Italy.

**RESUMEN / SUMMARY:** - Optic pathway gliomas (OPGs) account for 5% of all childhood brain tumors. For years it has been discussed which was the best method of examining tumor progression when the magnetic resonance imaging (MRI) scan does not change. The role of chemotherapy in their treatment still remains controversial. We treated four consecutive patients affected by progressive OPG with lower cumulative doses of cisplatin/etoposide. The extension of disease was assessed by brain MRI scan. A complete ophthalmologic examination was performed. Ototoxicity was monitored. Our OPG patients had reduced visual acuity (VA) and/or visual field (VF) regardless of the MRI evaluation. All patients showed rapid visual recovery with improvement both in VA and in VF. At the time of writing, after a median follow-up of 34 months, all patients were alive and free from disease progression. Our results confirm the effectiveness and the low-toxicity profile of the cisplatin/etoposide regimen for treatment of children affected by OPG. We suggest that VA and VF can be considered as the most accurate parameters for defining the start of chemotherapy and tumor response.

[76]

**TÍTULO / TITLE:** - Succinate-to-Fumarate Ratio as a New Metabolic Marker to Detect the Presence of SDHB/D-related Paraganglioma: Initial Experimental and Ex Vivo Findings.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocrinology. 2013 Nov 4.

●● Enlace al texto completo (gratis o de pago) [1210/en.2013-1549](#)

**AUTORES / AUTHORS:** - Lendvai N; Pawlosky R; Bullova P; Eisenhofer G; Patocs A; Veech RL; Pacak K

**INSTITUCIÓN / INSTITUTION:** - Program in Reproductive and Adult Endocrinology (N.L., P.B., K.P.), Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, Maryland 20892; Second Department of Medicine (N.L.), Semmelweis University, Budapest, Hungary; Section on Metabolic Control Analysis (R.P., R.L.V.), National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health, Rockville, Maryland 20852; Department of Molecular Medicine (P.B.), Institute of Virology, Slovak Academy of Sciences, Bratislava, Slovak Republic; Institute of Clinical Chemistry and Laboratory Medicine (G.E.), University Hospital Carl Gustav Carus at the TU Dresden, Dresden, Germany; Department of Medicine Internal (G.E.), University Hospital Carl Gustav Carus at the TU Dresden, Dresden, Germany; Molecular Medicine Research Group (A.P.), Hungarian Academy of Sciences and Semmelweis University, Budapest, Hungary; and Department of Laboratory Medicine Institute (A.P.), Central Isotope Laboratory, Semmelweis University, Budapest, Hungary.

**RESUMEN / SUMMARY:** - Pheochromocytomas (PHEOs) and paragangliomas (PGLs; extra-adrenal tumors) are rare neuroendocrine chromaffin cell tumors with a hereditary background in about 30-35%. Those caused by succinate dehydrogenase subunit B (SDHB) germline mutations are associated with a high metastatic potential and ultimately higher patient mortality. Succinate dehydrogenase converts succinate to fumarate, uniquely linking the Krebs cycle and oxidative phosphorylation. SDH mutations result in the accumulation of succinate associated with various metabolic disturbances and the shift to aerobic glycolysis in tumor tissue. In the present study, we measured succinate and fumarate levels in mouse pheochromocytoma cells and mouse tumor tissue (MTT) and in 10 apparently sporadic, 10 SDHB-, 5 SDHD-, and 2 neurofibromatosis 1-related PHEOs/PGLs and plasma samples using mass spectrometry. We found that the succinate-to-fumarate ratio was significantly higher in the SDHB- and SDHD-related PGLs than in apparently sporadic and neurofibromatosis 1-related PHEOs/PGLs ( $P = .0376$ ). To further support our data, we silenced SDHB expression in mouse pheochromocytoma cells and MTT cells and evaluated the succinate and fumarate levels. Compared with control samples, SDHB-silenced MTT cells also showed an increase in the succinate-to-fumarate ratio (MTT cells: 2.45 vs 7.53), similar to the findings in SDHB-related PGLs. The present findings for the first time demonstrate a significantly increased succinate-to-fumarate ratio in SDHB/D-related PGLs and thus suggest this ratio may be used as a new metabolic marker for the detection of SDHB/D-related PHEOs/PGLs.

[77]

**TÍTULO / TITLE:** - Silencing of Hsp27 and Hsp72 in glioma cells as a tool for programmed cell death induction upon temozolomide and quercetin treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Toxicol Appl Pharmacol. 2013 Oct 12. pii: S0041-008X(13)00434-1. doi: 10.1016/j.taap.2013.10.003.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.taap.2013.10.003](#)

**AUTORES / AUTHORS:** - Jakubowicz-Gil J; Langner E; Badziul D; Wertel I; Rzeski W

**INSTITUCIÓN / INSTITUTION:** - Department of Comparative Anatomy and Anthropology, Maria Curie-Skłodowska University, Akademicka 19, 20-033 Lublin, Poland. Electronic address: [jjgil@poczta.umcs.lublin.pl](mailto:jjgil@poczta.umcs.lublin.pl).

**RESUMEN / SUMMARY:** - The aim of the present study was to investigate whether silencing of Hsp27 or Hsp72 expression in glioblastoma multiforme T98G and anaplastic astrocytoma MOGGCCM cells increases their sensitivity to programmed cell death induction upon temozolomide and/or quercetin treatment. Transfection with specific siRNA was performed for the Hsp gene silencing. As revealed by microscopic observation and flow cytometry, the inhibition of Hsp expression was correlated with severe apoptosis induction upon the drug treatment studied. No signs of autophagy were detected. This was correlated with a decreased mitochondrial membrane potential, increased level of cytochrome c in the cytoplasm, and activation of caspase 3 and caspase 9. All these results suggest that the apoptotic signal was mediated by an internal pathway. Additionally, in a large percentage of cells treated with temozolomide, with or without quercetin, granules within the ER system were found, which was accompanied by an increased level of caspase 12 expression. This might be correlated with ER stress. Quercetin and temozolomide also changed the shape of nuclei from circular to “croissant like” in both transfected cell lines. Our results indicate that blocking of Hsp27 and Hsp72 expression makes T98G cells and MOGGCCM cells extremely vulnerable to apoptosis induction upon temozolomide and quercetin treatment and that programmed cell death is initiated by an internal signal.

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[78]

**TÍTULO / TITLE:** - Combination treatment for glioblastoma cells with tumor necrosis factor-related apoptosis-inducing ligand and oncolytic adenovirus delta-24.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Invest. 2013 Nov;31(9):630-8. doi: 10.3109/07357907.2013.849724.

●● Enlace al texto completo (gratis o de pago) [3109/07357907.2013.849724](#)

**AUTORES / AUTHORS:** - Tsamis KI; Alexiou GA; Vartholomatos E; Kyritsis AP

**INSTITUCIÓN / INSTITUTION:** - Neurosurgical Institute, Medical School, University of Ioannina, Ioannina, Greece.

**RESUMEN / SUMMARY:** - Tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) exhibits cancer-selective killing activity representing a promising anticancer therapeutic strategy. Adenovirus Delta-24 is another interested anticancer agent selectively killing cells with a defective p16/Rb/E2F pathway. However, many types of cancer, including gliomas, could develop resistance to Delta-24 or TRAIL-induced apoptosis. In this study, we investigated whether TRAIL, in combination with adenovirus Delta-24, could result in an enhanced antiglioma effect in vitro in a panel of glioblastoma cell lines (U87MG, U251MG, D54, and T98G). The treatment of glioblastoma cell lines with TRAIL and Delta-24 adenovirus in combination showed markedly enhanced effect, compared to each agent alone.

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[79]

**TÍTULO / TITLE:** - A phase I study of nelfinavir concurrent with temozolomide and radiotherapy in patients with glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 6.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1303-3](#)

**AUTORES / AUTHORS:** - Alonso-Basanta M; Fang P; Maity A; Hahn SM; Lustig RA; Dorsey JF

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Smilow Center for Translational Research 8-135, Perelman School of Medicine, University of Pennsylvania, 3400 Civic Center Blvd, Bldg 421, Philadelphia, PA, 19104, USA.

**RESUMEN / SUMMARY:** - We conducted a phase I trial to examine the maximally tolerated dose (MTD) of the oral protease inhibitor nelfinavir (NFV) in combination with temozolomide and concurrent radiotherapy in patients with glioblastoma and to gather preliminary data for response. The study was conducted in patients with newly diagnosed glioblastoma after surgical resection. Patients were treated with standard radiotherapy (6,000 cGy to the gross tumor volume), temozolomide (75 mg/m<sup>2</sup> daily) together with daily oral NFV starting 7-10 days prior to chemoradiotherapy continuing for the duration of chemoradiation for 6 weeks. Temozolomide (150-200 mg/m<sup>2</sup>) was resumed 4 weeks after completion of chemoradiotherapy. Two dose levels of NFV were investigated: 625 mg twice daily (bid) and 1,250 mg bid in a cohort escalation design. A total of 21 patients were enrolled. At the maximum tolerated dose, 18 subjects were enrolled to further evaluate toxicity and for preliminary estimate of efficacy for further phase II study. No dose-limiting toxicity was noted at 625 mg bid. At 1,250 mg bid, 3 dose-limiting episodes of hepatotoxicity were noted and one dose-limiting episode of diarrhea. The MTD for this study was 1,250 mg bid. NFV (1,250 mg bid) concurrent with temozolomide and radiotherapy is tolerated in most patients with glioblastoma. At the 1,250 mg bid dose level, patients should be monitored for hepatotoxicity and GI side effects.

[80]

**TÍTULO / TITLE:** - The prognostic value of Foxp3+ tumor-infiltrating lymphocytes in patients with glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1314-0](#)

**AUTORES / AUTHORS:** - Yue Q; Zhang X; Ye HX; Wang Y; Du ZG; Yao Y; Mao Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Huashan Hospital, Fudan University, No. 12 Mid Wulumuqi Road, Shanghai, 200040, People's Republic of China.

**RESUMEN / SUMMARY:** - Forkhead box protein 3 (Foxp3) is known as a specific marker for regulatory T cells which contribute to immunosuppression in tumor microenvironment. However, existing studies regarding clinical significance of Foxp3+ tumor-infiltrating lymphocytes (TILs) in glioblastoma (GBM) remained discrepant. In this study, we aimed to explore whether this subtype of TILs correlated with prognosis in patients with GBM. Foxp3+ TILs as well as CD8+ ones were detected by immunohistochemistry on paraffin-embedded tumor samples from 62 patients. Staining for p53, MGMT and Ki-67 were also performed. The correlation of TIL subtypes with clinicopathologic features were analyzed. Progression-free survival (PFS) and overall survival (OS) were estimated by Kaplan-Meier method and compared using log-rank

test. Independent prognostic factors for PFS and OS were determined through univariate and multivariate analysis. Significant correlation was found between Foxp3 and CD8 expression ( $P = 0.003$ ), but not between TIL subtypes and clinicopathologic characteristics. Patients with higher density of Foxp3+ TILs showed relatively shorter PFS ( $P < 0.001$ ) and OS ( $P = 0.003$ ) whereas patients with higher density of CD8+ TILs obtained no significant differences in survival. Survival analysis based on molecular classifications further clarified these predictive values. Univariate and multivariate analysis revealed that frequency of Foxp3+ TILs was probably associated with both PFS ( $P = 0.002$ ) and OS ( $P = 0.003$ ). In conclusion, the results suggest that Foxp3 positive infiltrates could provide an independent predictive factor in GBM.

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[81]

**TÍTULO / TITLE:** - Presentation, pathology, and treatment outcome of brain tumors in 172 consecutive children at CURE Children's Hospital of Uganda. The predominance of the visible diagnosis and the uncertainties of epidemiology in sub-Saharan Africa.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Oct 17.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2297-z](#)

**AUTORES / AUTHORS:** - Stagno V; Mugamba J; Ssenyonga P; Kaaya BN; Warf BC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Università degli Studi di Napoli "Federico II", Naples, Italy.

**RESUMEN / SUMMARY:** - OBJECT: This study reviews the first operative series of pediatric brain tumors from Uganda, the largest series from Sub-Saharan Africa, and explores the challenges to progress in pediatric neuro-oncology in the region. METHODS: This is a retrospective operative series of brain tumors in 172 children at Cure Children's Hospital of Uganda over 10 years. Demographics, clinical presentation, lesion location, histopathology, operative management, and outcome were investigated. Survival was assessed using Kaplan-Meier method. Log-rank test and p value with Bonferroni correction were used to determine significance of survival differences. RESULTS: There were 103 males (59.9 %) and 69 females (40.1 %; mean age at diagnosis 6.5 years with 29 % < 2 years). The most common histologic types were pilocytic astrocytoma (23.2 %), ependymoma (16.3 %), craniopharyngioma (9.9 %), choroid plexus papilloma (9.3 %), and medulloblastoma (8.1 %). Supratentorial tumors (62.2 %) were more common. Symptomatic hydrocephalus predominated at presentation (66.9 %). In 71 (41.3 %), the presentation was macrocephaly or a visible mass. Estimated 5-year survival was 60 %. CONCLUSIONS: The majority of pediatric brain tumors in the region likely go unrecognized. Most that do come to attention have a "visible diagnosis." Unlike operative series from developed countries, information about the incidence, prevalence, and overall burden of disease for different tumor types cannot be deduced from the various operative series reported from limited resource countries because of the selection bias that is unique to this context. Delayed presentation and poor access to adjuvant therapies were important contributors to the high mortality. The epidemiology of pediatric brain tumors in sub-Saharan Africa is obscure.

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[82]

**TÍTULO / TITLE:** - Bevacizumab (BVZ)-associated toxicities in children with recurrent central nervous system tumors treated with BVZ and irinotecan (CPT-11): A Pediatric Brain Tumor Consortium Study (PBTC-022).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer. 2013 Dec 1;119(23):4180-7. doi: 10.1002/cncr.28343. Epub 2013 Sep 19.

●● Enlace al texto completo (gratis o de pago) [1002/cncr.28343](#)

**AUTORES / AUTHORS:** - Fangusaro J; Gururangan S; Poussaint TY; McLendon RE; Onar-Thomas A; Warren KE; Wu S; Packer RJ; Banerjee A; Gilbertson RJ; Jakacki R; Gajjar A; Goldman S; Pollack IF; Friedman HS; Boyett JM; Kun LE; Fouladi M

**INSTITUCIÓN / INSTITUTION:** - Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois.

**RESUMEN / SUMMARY:** - BACKGROUND: The incidence and spectrum of acute toxicities related to the use of bevacizumab (BVZ)-containing regimens in children are largely unknown. This report describes the adverse events in a recently completed large phase 2 trial of BVZ plus irinotecan (CPT-11) in children with recurrent central nervous system tumors. METHODS: Pediatric Brain Tumor Consortium trial-022 evaluated the efficacy and toxicity of BVZ (10 mg/kg administered intravenously) as a single agent for 2 doses given 2 weeks apart and then combined with CPT-11 every 2 weeks (1 course = 4 weeks) in children with recurrent central nervous system tumors. Children were treated until they experienced progressive disease, unacceptable toxicity or completed up to a maximum of 2 years of therapy. Toxicities were graded according to the National Cancer Institute Common Terminology Criteria for Adverse Events, version 3.0. Patients who received at least 1 dose of BVZ were included for toxicity assessment. RESULTS: Between October 2006 and June 2010, 92 patients evaluable for toxicity were enrolled and received 687 treatment courses. The most common toxicities attributable to BVZ included grade I-III hypertension (38% of patients), grade I-III fatigue (30%), grade I-II epistaxis (24%), and grade I-IV proteinuria (22%). Twenty-two patients (24%) stopped therapy due to toxicity. CONCLUSIONS: The combination of BVZ and CPT-11 was fairly well-tolerated, and most severe BVZ-related toxicities were rare, self-limiting, and manageable. Cancer 2013;119:4180-4187. ©2013 American Cancer Society.

[83]

**TÍTULO / TITLE:** - Interaction of allergy history and antibodies to specific varicella-zoster virus proteins on glioma risk.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Cancer. 2013 Oct 11. doi: 10.1002/ijc.28535.

●● Enlace al texto completo (gratis o de pago) [1002/ijc.28535](#)

**AUTORES / AUTHORS:** - Lee ST; Bracci P; Zhou M; Rice T; Wiencke J; Wrensch M; Wiemels J

**INSTITUCIÓN / INSTITUTION:** - Department of Epidemiology and Biostatistics, University of California San Francisco, San Francisco, CA; Department of Laboratory Medicine & Genetics, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea.

**RESUMEN / SUMMARY:** - Glioma is the most common cancer of the central nervous system but with few confirmed risk factors. It has been inversely associated with

chicken pox, shingles and seroreactivity to varicella virus (VZV), as well as to allergies and allergy-associated IgE. The role of antibody reactivity against individual VZV antigens has not been assessed. Ten VZV-related proteins, selected for high immunogenicity or known function, were synthesized and used as targets for antibody measurements in the sera of 143 glioma cases and 131 healthy controls selected from the San Francisco Bay Area Adult Glioma Study. Glioma cases exhibited significantly reduced seroreactivity compared to controls for six antigens, including proteins IE63 [odds ratio (OR) = 0.26, 95% confidence interval (CI): 0.12-0.58, comparing lowest quartile to highest) and the VZV-unique protein ORF2p (OR = 0.44, 95% CI: 0.21-0.96, lowest quartile to highest). When stratifying the study population into those with low and high self-reported allergy history, VZV protein seroreactivity was only associated inversely with glioma among individuals self-reporting more than two allergies. The data provide insight into both allergy and VZV effects on glioma: strong anti-VZV reactions in highly allergic individuals are associated with reduced occurrence of glioma. This result suggests a role for specificity in the anti-VZV immunity in brain tumor suppression for both individual VZV antigens and in the fine-tuning of the immune response by allergy. Anti-VZV reactions may also be a biomarker of effective CNS immunosurveillance owing to the tropism of the virus.

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[84]

**TÍTULO / TITLE:** - Subependymal Giant Cell Astrocytomas in Patients With Tuberous Sclerosis Complex:: Considerations for Surgical or Pharmacotherapeutic Intervention.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Child Neurol. 2013 Oct 7.

●● Enlace al texto completo (gratis o de pago) [1177/0883073813501870](http://1177/0883073813501870)

**AUTORES / AUTHORS:** - Wheless JW; Klimo P Jr

**INSTITUCIÓN / INSTITUTION:** - 1Department of Pediatric Neurology, Neuroscience Institute and Tuberous Sclerosis Clinic, Le Bonheur Children's Hospital, University of Tennessee Health Science Center, Memphis, TN, USA.

**RESUMEN / SUMMARY:** - Tuberous sclerosis complex is a genetic disorder caused by mutations in either the TSC1 or TSC2 gene that can result in the growth of hamartomas in multiple organ systems. Subependymal giant cell astrocytomas are slow-growing brain tumors associated primarily with tuberous sclerosis complex. They are usually located in the ventricles, often near the foramen of Monro, where they can cause an obstruction if they grow too large, leading to increased intracranial pressure. Surgery to remove a tumor has been the mainstay of treatment but can be associated with postoperative morbidity and mortality. Not all tumors and/or patients are suitable for surgery. The recent development of mammalian target of rapamycin inhibitors that target the pathway affected by TSC1/TSC2 mutations offers a novel pharmacotherapeutic option for these patients. We review the timing and use of surgery versus pharmacotherapy for the treatment of subependymal giant cell astrocytoma in patients with tuberous sclerosis complex.

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[85]

**TÍTULO / TITLE:** - Preliminary study of whole-brain CT perfusion imaging in patients with intracranial tumours adjacent to large blood vessels.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Radiol. 2013 Oct 21. pii: S0009-9260(13)00426-1. doi: 10.1016/j.crad.2013.08.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.crad.2013.08.010](#)

**AUTORES / AUTHORS:** - Chen T; Guo D; Fang Z; Zhong W; Zhao J; Jiang Y

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, the Second Affiliated Hospital of Chongqing Medical University, Yuzhong District, Chongqing, China.

**RESUMEN / SUMMARY:** - AIM: To explore the value of whole-brain computed tomography perfusion (WBCTP) imaging in patients with intracranial tumours adjacent to large blood vessels. MATERIALS AND METHODS: WBCTP with 320-row CT was performed in 35 patients with clinically and pathologically diagnosed intracranial tumours adjacent to large blood vessels. Three-dimensional CT perfusion (3D-CTP) parameter maps of cerebral blood flow (CBF), cerebral blood volume (CBV), mean transit time (MTT), time to peak (TTP), and dynamic CT angiography (4D-CTA) images were obtained simultaneously. Three-dimensional CT angiography (3D-CTA) images, including volume rendering (VR), minimum intensity projection (MIP), and fusion images of the tumour with CTA, were reconstructed using post-processing techniques. The image quality, CTP and CTA characteristics were analysed. RESULTS: All WBCTP images could be evaluated without artefacts. Abnormal perfusion areas were identified on 3D-CTP maps. Significant differences in CBF and CBV were detected between meningioma (n = 18) and glioma (n = 16; p < 0.05). The blood supplying and draining veins of the tumour could be observed on CTA in 30 cases. The surrounding large arteries were compressed and dislocated by tumours in 18 cases and were wrapped up in six cases. Compression and mild deformation of the venous sinuses were visualized in 10 cases, and in four cases, the superior sagittal sinus was invaded and the vessel lumen was partially blocked. CONCLUSION: Comprehensive evaluation of intracranial tumours adjacent to large blood vessels could be achieved with the WBCTP technique. This technique has great value for the diagnosis of intracranial tumours and for evaluation of the relationship of intracranial tumours to surrounding large blood vessels.

[86]

**TÍTULO / TITLE:** - High-Grade Glioma Radiation Therapy Target Volumes and Patterns of Failure Obtained From Magnetic Resonance Imaging and (18)F-FDOPA Positron Emission Tomography Delineations From Multiple Observers.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Radiat Oncol Biol Phys. 2013 Dec 1;87(5):1100-6. doi: 10.1016/j.ijrobp.2013.09.008. Epub 2013 Oct 22.

●● Enlace al texto completo (gratis o de pago) [1016/j.ijrobp.2013.09.008](#)

**AUTORES / AUTHORS:** - Kosztyla R; Chan EK; Hsu F; Wilson D; Ma R; Cheung A; Zhang S; Moiseenko V; Benard F; Nichol A

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Physics, British Columbia Cancer Agency, Vancouver, British Columbia, Canada. Electronic address: [rkosztyla@bccancer.bc.ca](mailto:rkosztyla@bccancer.bc.ca).

**RESUMEN / SUMMARY:** - PURPOSE: The objective of this study was to compare recurrent tumor locations after radiation therapy with pretreatment delineations of high-grade gliomas from magnetic resonance imaging (MRI) and 3,4-dihydroxy-6-

[(18)F]fluoro-L-phenylalanine ((18)F-FDOPA) positron emission tomography (PET) using contours delineated by multiple observers. METHODS AND MATERIALS: Nineteen patients with newly diagnosed high-grade gliomas underwent computed tomography (CT), gadolinium contrast-enhanced MRI, and (18)F-FDOPA PET/CT. The image sets (CT, MRI, and PET/CT) were registered, and 5 observers contoured gross tumor volumes (GTVs) using MRI and PET. Consensus contours were obtained by simultaneous truth and performance level estimation (STAPLE). Interobserver variability was quantified by the percentage of volume overlap. Recurrent tumor locations after radiation therapy were contoured by each observer using CT or MRI. Consensus recurrence contours were obtained with STAPLE. RESULTS: The mean interobserver volume overlap for PET GTVs (42% +/- 22%) and MRI GTVs (41% +/- 22%) was not significantly different (P=.67). The mean consensus volume was significantly larger for PET GTVs (58.6 +/- 52.4 cm(3)) than for MRI GTVs (30.8 +/- 26.0 cm(3), P=.003). More than 95% of the consensus recurrence volume was within the 95% isodose surface for 11 of 12 (92%) cases with recurrent tumor imaging. Ten (91%) of these cases extended beyond the PET GTV, and 9 (82%) were contained within a 2-cm margin on the MRI GTV. One recurrence (8%) was located outside the 95% isodose surface. CONCLUSIONS: High-grade glioma contours obtained with (18)F-FDOPA PET had similar interobserver agreement to volumes obtained with MRI. Although PET-based consensus target volumes were larger than MRI-based volumes, treatment planning using PET-based volumes may not have yielded better treatment outcomes, given that all but 1 recurrence extended beyond the PET GTV and most were contained by a 2-cm margin on the MRI GTV.

[87]

**TÍTULO / TITLE:** - Disulfiram is a direct and potent inhibitor of human O6-methylguanine-DNA methyltransferase (MGMT) in brain tumor cells and mouse brain and markedly increases the alkylating DNA damage.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Carcinogenesis. 2013 Nov 5.

- [Enlace al texto completo \(gratis o de pago\) 1093/carcin/bgt366](#)

**AUTORES / AUTHORS:** - Paranjpe A; Zhang R; Ali-Osman F; Bobustuc GC; Srivenugopal KS

**INSTITUCIÓN / INSTITUTION:** - Departments of Biomedical Sciences, Texas Tech University Health Sciences Center, Amarillo, TX 79106.

**RESUMEN / SUMMARY:** - The alcohol aversion drug disulfiram (DSF) reacts and conjugates with the protein-bound nucleophilic cysteines and is known to elicit anticancer effects alone or improve the efficacy of many cancer drugs. We investigated the effects of disulfiram on human MGMT, a DNA repair protein and chemotherapy target that removes the mutagenic O6-alkyl groups from guanines, and thus confers resistance to alkylating agents in brain tumors. We used DSF, copper-chelated DSF (CuDSF) or CuCl<sub>2</sub>-DSF combination and found that all treatments inhibited the MGMT activity in two brain tumor cell lines in a rapid and dose-dependent manner. The drug treatments resulted in the loss of MGMT protein from tumor cells through the ubiquitin-proteasome pathway. Evidence showed that Cys145, a reactive cysteine, critical for DNA repair was the sole site of DSF modification in the MGMT protein. DSF was a weaker inhibitor of MGMT, compared to the established O6-benzylguanine,

nevertheless, the 24-36 h suppression of MGMT activity in cell cultures vastly increased the alkylation-induced DNA interstrand crosslinking, G2/M cell cycle blockade, cytotoxicity and the levels of apoptotic markers. Normal mice treated with DSF showed significantly attenuated levels of MGMT activity and protein in the liver and brain tissues. In nude mice bearing T98 glioblastoma xenografts, there was a preferential inhibition of tumor MGMT. Our studies demonstrate a strong and direct inhibition of MGMT by disulfiram and support the repurposing of this brain penetrating drug for glioma therapy. The findings also imply an increased risk for alkylation damage in alcoholic patients taking disulfiram.

[88]

**TÍTULO / TITLE:** - Personal history of diabetes, genetic susceptibility to diabetes, and risk of brain glioma: a pooled analysis of observational studies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Epidemiol Biomarkers Prev. 2013 Nov 12.

●● Enlace al texto completo (gratis o de pago) [1158/1055-9965.EPI-13-0913](#)

**AUTORES / AUTHORS:** - Kitahara CM; Linet M; Brenner AV; Wang SS; Melin B; Wang Z; Inskip PD; Beane Freeman L; Braganza MZ; Carreon T; Feychting M; Gaziano JM; Peters U; Purdue MP; Ruder A; Sesso HD; Shu XO; Waters M; White E; Zheng W; Hoover RN; Fraumeni JF Jr; Chatterjee N; Yeager M; Chanock SJ; Hartge P; Rajaraman P

**INSTITUCIÓN / INSTITUTION:** - Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health.

**RESUMEN / SUMMARY:** - Background: Brain glioma is a relatively rare and fatal malignancy in adulthood with few known risk factors. Some observational studies have reported inverse associations between diabetes and subsequent glioma risk, but possible mechanisms are unclear. Methods: We conducted a pooled analysis of original data from five nested case-control studies and two case-control studies from the U.S. and China that included 962 glioma cases and 2,195 controls. We examined self-reported diabetes history in relation to glioma risk, as well as effect modification by seven glioma risk-associated single-nucleotide polymorphisms (SNPs). We also examined the associations between 13 diabetes risk-associated SNPs, identified from genome-wide association studies, and glioma risk. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated using multivariable-adjusted logistic regression models. Results: We observed a 42% reduced risk of glioma for individuals with a history of diabetes (OR=0.58, 95% CI: 0.40-0.84). The association did not differ by sex, study design, or after restricting to glioblastoma, the most common histological sub-type. We did not observe any significant per-allele trends among the 13 diabetes-related SNPs examined in relation to glioma risk. Conclusion: These results support an inverse association between diabetes history and glioma risk. The role of genetic susceptibility to diabetes cannot be excluded, and should be pursued in future studies together with other factors that might be responsible for the diabetes-glioma association. Impact: These data suggest the need for studies that can evaluate, separately, the association between type 1 and type 2 diabetes and subsequent risk of adult glioma.

[89]

**TÍTULO / TITLE:** - PTEN Loss Mitigates the Response of Medulloblastoma to Hedgehog Pathway Inhibition.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. 2013 Dec 1;73(23):7034-42. doi: 10.1158/0008-5472.CAN-13-1222. Epub 2013 Oct 23.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-1222](#)

**AUTORES / AUTHORS:** - Metcalfe C; Alicke B; Crow A; Lamoureux M; Dijkgraaf GJ; Peale F; Gould SE; de Sauvage FJ

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliation: Genentech Inc., South San Francisco, California.

**RESUMEN / SUMMARY:** - Medulloblastoma is a cancer of the cerebellum, for which there is currently no approved targeted therapy. Recent transcriptomics approaches have demonstrated that medulloblastoma is composed of molecularly distinct subgroups, one of which is characterized by activation of the Hedgehog pathway, which in mouse models is sufficient to drive medulloblastoma development. There is thus considerable interest in targeting the Hedgehog pathway for therapeutic benefit in medulloblastoma, particularly given the recent approval of the Hedgehog pathway inhibitor vismodegib for metastatic and locally advanced basal cell carcinoma. Like other molecularly targeted therapies, however, there have been reports of acquired resistance to vismodegib, driven by secondary Hedgehog pathway mutations and potentially by activation of the phosphatidylinositol 3-kinase (PI3K) pathway. Given that acquired resistance to vismodegib may occur as a result of inappropriate PI3K pathway activation, we asked if loss of the PI3K pathway regulator, phosphatase and tensin homologue (Pten), which has been reported to occur in patients within the Hedgehog subgroup, would constitute a mechanism of innate resistance to vismodegib in Hedgehog-driven medulloblastoma. We find that Hedgehog pathway inhibition successfully restrains growth of Pten-deficient medulloblastoma in this mouse model, but does not drive tumor regression, as it does in Pten-wild-type medulloblastoma. Combined inhibition of the Hedgehog and PI3K pathways may lead to superior antitumor activity in PTEN-deficient medulloblastoma in the clinic. Cancer Res; 73(23); 7034-42. ©2013 AACR.

[90]

**TÍTULO / TITLE:** - Combined targeting of PDK1 and EGFR triggers regression of glioblastoma by reversing the Warburg effect.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. 2013 Oct 22.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-1868](#)

**AUTORES / AUTHORS:** - Velpula KK; Bhasin A; Asuthkar S; Tsung AJ

**INSTITUCIÓN / INSTITUTION:** - Cancer Biology and Pharmacology, University of Illinois College of Medicine.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most aggressive primary brain tumor in adults. Overexpression of the EGF receptor (EGFR) is recognized as a widespread oncogenic signature in GBM, but the complexity of its

contributions are not fully understood, nor the most effective ways to leverage anti-EGFR therapy in this setting. Hypoxia is known to drive the aggressive character of GBM by promoting aerobic glycolysis rather than pyruvate oxidation carried out in mitochondria (OXPHOS), a phenomenon termed the Warburg effect which is a general feature of oncogenesis. In this study, we report that hypoxia drives expression of the pyruvate dehydrogenase kinase PDK1 and EGFR along with the hypoxia-inducing factor HIF-1alpha in human GBM cells. PDK1 is a HIF-1-regulated gene and our findings indicated that hypoxia-induced PDK1 expression may promote EGFR activation, initiating a feed-forward loop that can sustain malignant progression. RNAi-mediated attenuation of PDK1 and EGFR lowered PDK1-EGFR activation and decreased HIF-1alpha expression, shifting the Warburg phenotype to OXPHOS and inhibiting GBM growth and proliferation. In clinical specimens of GBM, we found that immunohistochemical expression of PDK1, EGFR, and HIF-1alpha were elevated in GBM specimens when compared to normal brain tissues. Collectively, our studies establish PDK1 as a key driver and candidate therapeutic target in GBM.

[91]

**TÍTULO / TITLE:** - Silencing of the miR-17~92 Cluster Family Inhibits Medulloblastoma Progression.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. 2013 Dec 1;73(23):7068-78. doi: 10.1158/0008-5472.CAN-13-0927. Epub 2013 Oct 21.

●● [Enlace al texto completo \(gratis o de pago\) 1158/0008-5472.CAN-13-](#)

[0927](#)

**AUTORES / AUTHORS:** - Murphy BL; Obad S; Bihannic L; Ayrault O; Zindy F; Kauppinen S; Roussel MF

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Department of Tumor Cell Biology, St. Jude Children's Research Hospital, Memphis, Tennessee; Santaris Pharma, Horsholm; and Department of Haematology, Aalborg University Hospital, Copenhagen, Denmark.

**RESUMEN / SUMMARY:** - Medulloblastoma, originating in the cerebellum, is the most common malignant brain tumor in children. Medulloblastoma consists of four major groups where constitutive activation of the Sonic Hedgehog (SHH) signaling pathway is a hallmark of one group. Mouse and human SHH medulloblastomas exhibit increased expression of microRNAs encoded by the miR-17 approximately 92 and miR-106b approximately 25 clusters compared with granule progenitors and postmitotic granule neurons. Here, we assessed the therapeutic potential of 8-mer seed-targeting locked nucleic acid (LNA)-modified anti-miR oligonucleotides, termed tiny LNAs, that inhibit microRNA seed families expressed by miR-17 approximately 92 and miR-106b approximately 25 in two mouse models of SHH medulloblastomas. We found that tumor cells (medulloblastoma cells) passively took up 8-mer LNA-anti-miRs and specifically inhibited targeted microRNA seed-sharing family members. Inhibition of miR-17 and miR-19a seed families by anti-miR-17 and anti-miR-19, respectively, resulted in diminished tumor cell proliferation in vitro. Treatment of mice with systemic delivery of anti-miR-17 and anti-miR-19 reduced tumor growth in flank and brain allografts in vivo and prolonged the survival of mice with intracranial transplants, suggesting that inhibition of the miR-17 approximately 92 cluster family by 8-mer LNA-

anti-miRs might be considered for the treatment of SHH medulloblastomas. Cancer Res; 73(23); 7068-78. ©2013 AACR.

[92]

**TÍTULO / TITLE:** - Germline mutations and genotype-phenotype correlations in patients with apparently sporadic pheochromocytoma/paraganglioma in Korea.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Genet. 2013 Oct 17. doi: 10.1111/cge.12304.

●● Enlace al texto completo (gratis o de pago) [1111/cge.12304](#)

**AUTORES / AUTHORS:** - Kim J; Seong MW; Lee K; Choi H; Ku E; Bae J; Park S; Choi S; Kim S; Shin C; Kim S

**INSTITUCIÓN / INSTITUTION:** - Department of Internal medicine.

**RESUMEN / SUMMARY:** - The aim of our study was to assess the frequency of germline mutations and develop the genetic testing strategy in patients with apparently sporadic pheochromocytoma/paraganglioma (PPGL) in Korea. We included 53 patients diagnosed with non-syndromic PPGL without a family history of PPGLs in three referral centers from 2004 to 2011. Succinate dehydrogenase complex B (SDHB), SDHD, Von Hippel-Lindau (VHL), and rearranged during transfection (RET) genes were examined by direct sequencing and multiple ligation-dependent probe amplification. The study patients were composed of 26 men and 27 women, and mean age was 50.1 +/- 13.5 years. The frequency of germline mutations was 13.2% (7/53): RET (n = 2), VHL (n = 1), SDHB (n = 2), and SDHD (n = 2). Six of seven mutation carriers were diagnosed before the age of 50. One of two patients harboring an SDHB mutation had malignant PPGLs. One patient with multifocal head and neck paraganglioma (PGL) and pheochromocytoma (PHEO) carried a SDHD mutation. The carriers of germline mutations in patients with apparently sporadic PPGL were 13.2% in our study. We recommend genetic testing in patients below 50 years and SDHD genetic testing in patients with multifocal PPGLs. In malignant PPGLs, SDHB genetic testing may be performed.

[93]

**TÍTULO / TITLE:** - Leptin enhances the invasive ability of glioma stem-like cells depending on leptin receptor expression.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Res. 2013 Oct 23. pii: S0006-8993(13)01418-2. doi: 10.1016/j.brainres.2013.10.027.

●● Enlace al texto completo (gratis o de pago) [1016/j.brainres.2013.10.027](#)

**AUTORES / AUTHORS:** - Han G; Zhao W; Wang L; Yue Z; Zhao R; Li Y; Zhou X; Hu X; Liu J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Changhai Hospital, Second Military Medical University, Shanghai 200433, China.

**RESUMEN / SUMMARY:** - Glioma stem-like cells have been demonstrated to have highly invasive activity, which is the major cause of glioma recurrence after therapy. Leptin plays a role in glioma invasion, however, whether and how leptin contributes to the biological properties of glioma stem-like cells, such as invasion, remains to be explored. In the current study, we aimed to explore the role of leptin during glioma

stem-like cells invasion as well as the signaling pathway. We found that glioma stem-like cells exhibited high invasive potential, especially in the presence of leptin, Ob-R coexpressed with CD133 in glioma stem-like cells was showed to be responsible for leptin mediated invasion of glioma stem-like cells. Our results indicated that leptin served as a key intermediary linking the accumulation of excess adipokine to the invasion of glioma stem-like cells, which may be a novel therapeutic target for suppressing tumor invasion and recurrence.

[94]

**TÍTULO / TITLE:** - Identifying brain tumours in children and young adults.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMJ. 2013 Oct 9;347:f5844. doi: 10.1136/bmj.f5844.

**AUTORES / AUTHORS:** - Wilne SH; Dineen RA; Dommert RM; Chu TP; Walker DA

**INSTITUCIÓN / INSTITUTION:** - Department of Paediatric Oncology, Nottingham University Hospitals NHS Trust, Queens Medical Centre, Nottingham NG7 2UH, UK.

[95]

**TÍTULO / TITLE:** - Impact of therapeutic regimen and clinical presentation on overall survival in CNS lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Sep 28.

•• [Enlace al texto completo \(gratis o de pago\) 1007/s00701-013-1878-7](#)

**AUTORES / AUTHORS:** - Kellogg RG; Straus DC; Karmali R; Munoz LF; Byrne RW

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Rush University Medical Center, 1725 W. Harrison St., Suite 855, Chicago, IL, 60612, USA,  
[Robert\\_Kellogg@Rush.edu](mailto:Robert_Kellogg@Rush.edu).

**RESUMEN / SUMMARY:** - BACKGROUND: The authors present a retrospective analysis of 45 patients who underwent treatment of CNS lymphoma (both primary and secondary) at a single institution between 2005 and 2012. METHODS: This study involves 21 female and 24 male patients with a mean age of 59.2 years. All medical records and pathology reports were reviewed for each patient. Univariate and multivariate analyses of overall survival were performed. RESULTS: Presentation with altered mental status was a significant risk factor for worse overall survival. An HIV infection, deep lesion location, and age over 60 did not impact survival. A survival benefit was demonstrated with the use of systemic therapy, specifically rituximab, and radiation. The CNS Lymphoma Score was derived from this cohort, which proved a powerful predictive tool for overall survival. The surgical complication rate in this series was 17.8 %. CONCLUSIONS: This study highlights the prognostic importance of presenting mental status on outcomes in CNS lymphoma and demonstrates a summative benefit of rituximab and whole brain radiation therapy. Considering these factors together provides an easily applicable and meaningful stratification for this patient population. The surgical complication rate in this patient population is not negligible. The high percentage of wound-related surgical complications suggests the need for a waiting period between surgery and initiation of chemotherapy to allow for wound healing.

[96]

**TÍTULO / TITLE:** - Prevalence and risk factors of cataract after chemotherapy with or without central nervous system irradiation for childhood acute lymphoblastic leukaemia: an LEA study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Haematol. 2013 Oct 14. doi: 10.1111/bjh.12598.

●● Enlace al texto completo (gratis o de pago) [1111/bjh.12598](#)

**AUTORES / AUTHORS:** - Alloin AL; Barlogis V; Auquier P; Contet A; Poiree M; Demeocq F; Herrmann I; Villes V; Bertrand Y; Plantaz D; Kanold J; Chastagner P; Chambost H; Sirvent N; Michel G

**INSTITUCIÓN / INSTITUTION:** - Department of Paediatric Haematology-Oncology, APHM, La Timone Hospital, Aix-Marseille University, Marseille, France.

**RESUMEN / SUMMARY:** - Corticosteroid and central nervous system (CNS) irradiation can induce cataract in childhood lymphoblastic leukaemia survivors. Few prospective studies with systematic ophthalmological evaluation have been published. Cataract was prospectively assessed by serial slit lamp tests in 517 patients. All had acute lymphoblastic leukaemia, all had been treated by chemotherapy with or without CNS irradiation, and none had received haematopoietic stem cell transplantation. Median ages at last evaluation and follow-up duration from leukaemia diagnosis were 16.8 and 10.9 years, respectively. Cataract was observed in 21/517 patients (4.1%). Cumulative incidence was 4.5 +/- 1.2% at 15 years and reached 26 +/- 8.1% at 25 years. CNS irradiation was the only risk factor: prevalence was 11.1% in patients who had received irradiation and 2.8% in those who did not. We did not detect any steroid dose effect: cumulative dose was 5133 and 5190 mg/m<sup>2</sup> in patients with and without cataract, respectively. Cataract occurrence did not significantly impact quality of life. We conclude that, in the range of steroid dose reported here, the cataract risk proves very low 15 years after treatment without CNS irradiation but an even more prolonged follow-up is required because of potential very late occurrence.

[97]

**TÍTULO / TITLE:** - Association of BCL2-938C>A genetic polymorphism with glioma risk in Chinese Han population.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Nov 28.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1299-5](#)

**AUTORES / AUTHORS:** - Li W; Qian C; Wang L; Teng H; Zhang L

**INSTITUCIÓN / INSTITUTION:** - Department of Geriatric Neurology, Nanjing Medical University Affiliated to Nanjing Brain Hospital, Nanjing, Jiangsu, 210029, People's Republic of China.

**RESUMEN / SUMMARY:** - Glioma is the most common type of primary brain malignancy in adults. The anti-apoptotic protein B-cell lymphoma 2 (BCL2) has been implicated in the pathogenesis of glioma. This study aimed to evaluate the potential association between BCL2-938C>A genetic polymorphism and glioma susceptibility. This case-control study was conducted in Chinese Han populations consisting of 248 glioma cases and 252 cancer-free controls. The BCL2-938C>A genetic polymorphism was detected by the polymerase chain reaction-restriction fragment length polymorphism

(PCR-RFLP) and verified using DNA sequencing methods. Our data suggested that the genotype/allele of BCL2-938C>A polymorphism were statistically associated with the increased risk of glioma where the risk of glioma for genotype AA or allele A is significantly higher than wild genotype CC (odds ratio (OR) = 2.23, 95 % confidence interval (CI) 1.21-4.10, p = 0.009) or allele C (OR = 1.39, 95 % CI 1.06-1.82, p = 0.016), respectively. In addition, the BCL2-938AA genotype was significantly more common in patients with glioblastoma and in patients with grade IV glioma. Our findings indicate that the BCL2-938C>A polymorphism is associated with the susceptibility to glioma in Chinese Han populations and might be used as molecular markers for evaluating glioma risk.

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[98]

**TÍTULO / TITLE:** - Airway management and perioperative concerns in acromegaly patients undergoing endoscopic transsphenoidal surgery for pituitary tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Otolaryngol Head Neck Surg. 2013 Dec;149(6):840-4. doi: 10.1177/0194599813507236. Epub 2013 Oct 3.

●● Enlace al texto completo (gratis o de pago) [1177/0194599813507236](#)

**AUTORES / AUTHORS:** - Friedel ME; Johnston DR; Singhal S; Khalili KA; Farrell CJ; Evans JJ; Nyquist GG; Rosen MR

**INSTITUCIÓN / INSTITUTION:** - Departments of Otolaryngology-Head and Neck Surgery, Thomas Jefferson University, Philadelphia, Pennsylvania, USA.

**RESUMEN / SUMMARY:** - Objectives Patients with acromegaly present unique challenges to cranial base surgery and anesthesia teams in the perioperative period, especially with regard to airway management. Abnormal airway anatomy may result from soft tissue hypertrophy and bony alterations. Additional perioperative challenges relate to the management of medical comorbidities. We aim to review perioperative airway concerns in acromegalic patients for the skull base surgeon in order to reduce preventable perioperative complications. Study Design Case series with chart review. Setting Tertiary care academic institution. Subjects Thirty-two acromegaly patients undergoing endoscopic transsphenoidal pituitary surgery. Results Videoscopic direct laryngoscopy intubation was required in 7 of 32 patients (21.9%) and fiberoptic intubation in 4 of 32 patients (12.5%). Overall failure rate for first intubation technique used was 12.5% (4/32). Cardiovascular comorbidities (hypertension and conduction abnormalities predominated) were present in 16 of 32 patients (50%), and obstructive sleep apnea, or other respiratory conditions, existed in 12 of 32 patients (37.5%). Conclusions Acromegaly patients present a particular challenge to the endoscopic skull base surgeon. Despite preoperative anesthesia and otolaryngology evaluation, many of these patients will experience an unanticipated airway challenge during intubation. Preoperative preparation and perioperative awareness of anatomic and physiologic abnormalities of acromegalic patients is essential for successful endoscopic surgery in this unique population.

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[99]

**TÍTULO / TITLE:** - Anti-EGFR therapy combined with neuromedin B receptor blockade induces the death of DAOY medulloblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Dec;29(12):2145-50. doi: 10.1007/s00381-013-2290-6. Epub 2013 Oct 3.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2290-6](#)

**AUTORES / AUTHORS:** - Jaeger M; Nor C; de Farias CB; Abujamra AL; Schwartzmann G; Brunetto AL; Roesler R

**INSTITUCIÓN / INSTITUTION:** - Cancer Research Laboratory, University Hospital Research Center (CPE-HCPA), Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil.

**RESUMEN / SUMMARY:** - PURPOSE: Medulloblastoma is the most common malignant childhood brain tumor for which the development of new molecularly targeted therapies is needed. Novel therapeutic targets under investigation include growth factor receptors. Here, we show that the combined inhibition of the epidermal growth factor receptor (EGFR) and neuromedin B receptor (NMBR, BB1) results in increased cell death in human medulloblastoma cell lines. METHODS: DAOY and D283 human medulloblastoma cells were treated with human recombinant neuromedin B (NMB, an NMBR agonist), the NMBR antagonist BIM-23127, the anti-EGFR monoclonal antibody cetuximab, or BIM-23127 combined with cetuximab. Cell death was examined with trypan blue cell counting. RESULTS: Both cell lines expressed mRNA for EGFR, NMB, and NMBR detected by reverse transcriptase polymerase chain reaction. Cetuximab at 10 µg/ml significantly reduced the number of DAOY cells, but did not affect D283 cells. NMB and BIM-23127 did not change cell number when used alone. However, cetuximab, at a dose that did not have an effect by itself, was able to reduce the number of DAOY cells when combined with BIM-23127. CONCLUSION: These results provide preliminary evidence that NMBR blockade can potentiate the antitumor effect of anti-EGFR therapy in medulloblastoma.

[100]

**TÍTULO / TITLE:** - The role of CT body scans in the investigation of patients with newly diagnosed brain tumours.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Neurosurg. 2013 Oct 10.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.847169](#)

**AUTORES / AUTHORS:** - Bailey M; Qureshi A; Kamaly-Asl I

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Greater Manchester Neuroscience Centre, Salford, UK.

**RESUMEN / SUMMARY:** - Objective. In the UK approximately 4000 patients are diagnosed with brain tumours each year. Many patients undergo CT scans of the chest, abdomen and pelvis as part of the investigation of such tumours. We aimed to determine the value of CT body scans in patients with newly diagnosed brain tumours. Methods. We retrospectively reviewed the minutes of our neuro-oncology multidisciplinary team (MDT) meetings over a 12-month period to identify patients with a new radiological diagnosis of a brain tumour. Patients were divided into groups based on radiological diagnosis. Histology results were obtained for patients who underwent surgery. Results of CT body scans were obtained. Results. A total of 261 patients were identified. Sixty percent had radiological primary brain tumours and 40% had secondary brain tumours. Concordance between radiological and histological

diagnoses was high (97% for radiological primary brain tumours, and 83% for radiological secondary brain tumours). CT body scans demonstrated primary lesions in 90% of radiological secondary brain tumours. Thirty-four percent of patients with a radiological diagnosis of primary brain tumour underwent CT body scans. The majority of these scans were normal (78%). Conclusion. The ability of a specialist neuro-oncology MDT to correctly identify primary and secondary brain tumours on initial imaging is high. If the radiological diagnosis is of a secondary brain tumour, then CT body scans are essential. If the radiological diagnosis is of a primary brain tumour, then CT scans of the body are likely to add little to patient management.

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[101]

**TÍTULO / TITLE:** - Measuring health-related quality of life in high-grade glioma patients at the end of life using a proxy-reported retrospective questionnaire.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 29.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1289-x](#)

**AUTORES / AUTHORS:** - Sizoo EM; Dirven L; Reijneveld JC; Postma TJ; Heimans JJ; Deliens L; Pasman HR; Taphoorn MJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, VU University Medical Center, PO Box 7057, 1007 MB, Amsterdam, The Netherlands.

**RESUMEN / SUMMARY:** - To develop, validate, and report on the use of a retrospective proxy-reported questionnaire measuring health-related quality of life (HRQoL) in the end-of-life (EOL) phase of high-grade glioma (HGG) patients. Items relevant for the defined construct were selected using existing questionnaires, topics identified as important in literature, and expert opinion (experienced neuro-oncologists and EOL experts). Psychometric properties, content validity and internal consistency, were determined and the questionnaire was subsequently adapted. Proxy-reported HRQoL data of HGG patients in the EOL, including changes over time, were analyzed. Twenty-nine items were selected covering seven domains; physical comfort, physical and cognitive functioning, psychological, social and spiritual well-being, and overall quality of life. Relatives of 83 deceased HGG patients completed the questionnaire. Content validity was assessed to be adequate. Internal consistency in the domains varied from reasonable to good. Two items were excluded due to poor psychometric properties. Symptom burden increased ( $p < 0.01$ ), except for nausea ( $p = 0.058$ ), as death approached. Cognitive, physical and psychological functioning deteriorated over time (all  $p < 0.01$ ). Acceptance of disease seemed to increase slightly towards death, but this was not significant ( $p = 0.058$ ). Participating in social activities and family life was rated as poor ( $\leq 50$ ), whereas received support from their social environment and dying with dignity were rated as good ( $> 50$ ). Overall quality of life was rated as poor, mean (SD) of 29 (26). Measuring HRQoL at the EOL of HGG patients with a retrospective, proxy-reported questionnaire was feasible, yielding a validated instrument. HRQoL was reported as poor and deteriorated as death approached.

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[102]

**TÍTULO / TITLE:** - Circadian pathway genes in relation to glioma risk and outcome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Causes Control. 2013 Oct 18.

●● Enlace al texto completo (gratis o de pago) [1007/s10552-013-0305-y](https://doi.org/10.1007/s10552-013-0305-y)

**AUTORES / AUTHORS:** - Madden MH; Anic GM; Thompson RC; Nabors LB; Olson JJ; Browning JE; Monteiro AN; Egan KM

**INSTITUCIÓN / INSTITUTION:** - Department of Cancer Epidemiology, H. Lee Moffitt Cancer Center and Research Institute, 12902 Magnolia Drive, Tampa, FL, 33612, USA.

**RESUMEN / SUMMARY:** - **PURPOSE:** There is growing evidence that circadian disruption may alter risk and aggressiveness of cancer. We evaluated common genetic variants in the circadian gene pathway for associations with glioma risk and patient outcome in a US clinic-based case-control study. **METHODS:** Subjects were genotyped for 17 candidate single nucleotide polymorphisms in ARNTL, CRY1, CRY2, CSNK1E, KLHL30, NPAS2, PER1, PER3, CLOCK, and MYRIP. Unconditional logistic regression was used to estimate age and gender-adjusted odds ratios (OR) and 95 % confidence intervals (CI) for glioma risk under three inheritance models (additive, dominant, and recessive). Proportional hazards regression was used to estimate hazard ratios for glioma-related death among 441 patients with high-grade tumors. Survival associations were validated using The Cancer Genome Atlas (TCGA) dataset. **RESULTS:** A variant in PER1 (rs2289591) was significantly associated with overall glioma risk (per variant allele OR 0.80; 95 % CI 0.66-0.97; p trend = 0.027). The variant allele for CLOCK rs11133391 under a recessive model increased risk of oligodendroglioma (OR 2.41; 95 % CI 1.31-4.42; p = 0.005), though not other glioma subtypes (p for heterogeneity = 0.0033). The association remained significant after false discovery rate adjustment (p = 0.008). Differential associations by gender were observed for MYRIP rs6599077 and CSNK1E rs1534891 though differences were not significant after adjustment for multiple testing. No consistent mortality associations were identified. Several of the examined genes exhibited differential expression in glioblastoma multiforme versus normal brain in TCGA data (MYRIP, ARNTL, CRY1, KLHL30, PER1, CLOCK, and PER3), and expression of NPAS2 was significantly associated with a poor patient outcome in TCGA patients. **CONCLUSION:** This exploratory analysis provides some evidence supporting a role for circadian genes in the onset of glioma and possibly the outcome of glioma.

[103]

**TÍTULO / TITLE:** - Knockdown of LGR5 suppresses the proliferation of glioma cells in vitro and in vivo.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Rep. 2014 Jan;31(1):41-9. doi: 10.3892/or.2013.2826. Epub 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2826](https://doi.org/10.3892/or.2013.2826)

**AUTORES / AUTHORS:** - Wang D; Zhou J; Fan C; Jiao F; Liu B; Sun P; Miao J; Zhang Q

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Peking University People's Hospital, Beijing 100044, P.R. China.

**RESUMEN / SUMMARY:** - Leucine-rich repeat containing G protein-coupled receptor 5 (LGR5), one of the target genes of the Wnt signaling pathway, has recently been identified as a marker for brain cancer stem-like cells. However, the role of LGR5 in

glioma is poorly understood. The aim of the present study was to investigate the relationship between LGR5 expression and pathological grade in glioma, and the impact of LGR5 on the proliferation of glioma cells in vitro and in vivo. Firstly, LGR5 expression was immunohistochemically evaluated in 54 resected gliomas of different pathologic grades, and its association with Ki-67 was evaluated. Subsequently, using western blotting and qRT-PCR, the expression of LGR5 was assessed in three glioma cell lines U87, U118 and U251. Moreover, the effects of LGR5 knockdown by siRNA on glioma cell proliferation, cell cycle, clone formation and tumorsphere formation in vitro and gliomagenesis in vivo were assessed. The results revealed that i) LGR5 was positively expressed in all glioma specimens and its expression increased with pathologic grade and Ki-67 expression; ii) LGR5 was highly expressed in three glioma cell lines and its expression was reduced significantly by siRNA; and iii) RNAi-mediated downregulation of endogenous LGR5 in U87 cells resulted in the suppression of cell proliferation, arrest of the cell cycle, and reduction in clone and tumorsphere formation in vitro. In addition, LGR5 depletion significantly inhibited tumor orthotopic xenograft growth in nude mice. These findings indicate that LGR5 plays a major role in gliomagenesis by promoting neoplastic cell proliferation, suggesting LGR5 as a molecular marker for pathology and a novel therapeutic target for malignant glioma.

[104]

**TÍTULO / TITLE:** - Adult, embryonic and fetal hemoglobin are expressed in human glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Oncol. 2013 Nov 22. doi: 10.3892/ijo.2013.2186.

●● [Enlace al texto completo \(gratis o de pago\) 3892/ijo.2013.2186](#)

**AUTORES / AUTHORS:** - Emara M; Turner AR; Allalunis-Turner J

**INSTITUCIÓN / INSTITUTION:** - Department of Oncology, University of Alberta and Alberta Health Services, Cross Cancer Institute, Edmonton, AB T6G 1Z2, Canada.

**RESUMEN / SUMMARY:** - Hemoglobin is a hemoprotein, produced mainly in erythrocytes circulating in the blood. However, non-erythroid hemoglobins have been previously reported in other cell types including human and rodent neurons of embryonic and adult brain, but not astrocytes and oligodendrocytes. Human glioblastoma multiforme (GBM) is the most aggressive tumor among gliomas. However, despite extensive basic and clinical research studies on GBM cells, little is known about glial defence mechanisms that allow these cells to survive and resist various types of treatment. We have shown previously that the newest members of vertebrate globin family, neuroglobin (Ngb) and cytoglobin (Cyg), are expressed in human GBM cells. In this study, we sought to determine whether hemoglobin is also expressed in GBM cells. Conventional RT-PCR, DNA sequencing, western blot analysis, mass spectrometry and fluorescence microscopy were used to investigate globin expression in GBM cell lines (M006x, M059J, M059K, M010b, U87R and U87T) that have unique characteristics in terms of tumor invasion and response to radiotherapy and hypoxia. The data showed that alpha, beta, gamma, delta, zeta and epsilon globins are expressed in all tested GBM cell lines. To our knowledge, we are the first to report expression of fetal, embryonic and adult hemoglobin in GBM cells under normal physiological conditions that may suggest an undefined function of those expressed hemoglobins. Together with our previous reports on globins (Ngb and Cyg)

expression in GBM cells, the expression of different hemoglobins may constitute a part of series of active defence mechanisms supporting these cells to resist various types of treatments including chemotherapy and radiotherapy.

[105]

**TÍTULO / TITLE:** - The role of tumor progression locus 2 protein kinase in glial inflammatory response.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurochem. 2013 Nov 5. doi: 10.1111/jnc.12522.

●● [Enlace al texto completo \(gratis o de pago\) 1111/jnc.12522](#)

**AUTORES / AUTHORS:** - Hirschhorn J; Mohanty S; Bhat NR

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, Medical University of South Carolina, Charleston, South Carolina, USA.

**RESUMEN / SUMMARY:** - Tumor progression locus 2 (Tpl2)/cancer Osaka thyroid kinase is a newer member of MAP3K family that is now known for its essential role in tumor necrosis factor- $\alpha$  (TNF $\alpha$ ) expression in macrophages, but its pro-inflammatory signaling, if any, in glia is unknown. When cultures of murine microglia and astrocytes were exposed to lipopolysaccharide, there was a rapid activation (i.e., phosphorylation) of Tpl2 in parallel to the activation of down-stream effector MAPKs, that is, extracellular signal regulated kinase (ERK), p38 MAPK and C-Jun N-terminal kinase (JNK). Pre-incubation of the cultures with a Tpl2 inhibitor selectively suppressed the activation of the primary down-stream target, that is, ERK relative to p38 MAPK and JNK. That Tpl2 activation was functionally involved in glial inflammatory response was indicated by a reduced release of the cytokines, i.e. TNF $\alpha$  and the expression of inducible nitric oxide synthase in the presence of the kinase inhibitor. Furthermore, over-expression of a wild-type Tpl2 construct in C-6 glia resulted in an enhanced transcriptional activation of inducible nitric oxide synthase, while transfection with a dominant negative form of Tpl-2 had the opposite effect. The findings assign an important pro-inflammatory signaling function for Tpl2 pathway in glial cells. MAP kinase cascades including ERK, JNK, and p38 are involved in glial expression of inflammatory mediators. Recent studies identify TPL2, a newer member of MAP3K, as the major upstream activator of ERK in immune cells although essentially nothing is known about this kinase in glial cells. The studies presented define an important proinflammatory function of TPL2 pathway in these cells.

[106]

**TÍTULO / TITLE:** - Treatment paradigms for pituitary adenomas: defining the roles of radiosurgery and radiation therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 12.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1262-8](#)

**AUTORES / AUTHORS:** - Ding D; Starke RM; Sheehan JP

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of Virginia, P.O. Box 800212, Charlottesville, VA, 22908, USA.

**RESUMEN / SUMMARY:** - Pituitary adenomas represent one of the most common types of intracranial tumors. While their macroscopic appearance and anatomical location are

relatively homogeneous, pituitary tumors have the potential to generate a wide variety of clinical sequelae. Treatment options for pituitary tumors include medical therapy, microscopic or endoscopic surgical resection, radiosurgery, radiation therapy, or observation depending on the biochemical profile and clinical status of the patient. Radiosurgery and external beam radiation therapy (EBRT) are most commonly as adjunctive treatments following incomplete surgical resection leaving residual tumor, tumor recurrence, or failure of medical therapy. We present a comprehensive literature review of the radiosurgery series for pituitary tumors including nonfunctioning adenomas, ACTH- and GH-secreting adenomas, and prolactinomas. While post-radiosurgery radiographic tumor control for nonfunctioning adenomas is excellent, typically around 90 %, the rates of biochemical remission for functioning adenomas are lower than the tumor control rates. The highest endocrine remission rates are achieved patients with Cushing's disease and the lowest in those with prolactinomas. Although EBRT has been largely supplanted by radiosurgery for the vast majority of pituitary adenomas cases, there remains a role for EBRT in select cases involving large tumor volumes in close proximity to critical neural structures. By far the most common complication after radiosurgery or EBRT is delayed hypopituitarism followed by cranial neuropathies. The effect of suppressive medications on radiosurgery outcomes remains controversial. Due to the rare but well-documented occurrence of late recurrence following endocrine remission, long-term and rigorous clinical and radiographic follow-up is necessary for all pituitary adenoma patients treated with radiosurgery or EBRT.

[107]

**TÍTULO / TITLE:** - A metabolic shift favouring sphingosine 1-phosphate at the expense of ceramide controls glioblastoma angiogenesis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Biol Chem. 2013 Nov 21.

●● [Enlace al texto completo \(gratis o de pago\) 1074/jbc.M113.494740](#)

**AUTORES / AUTHORS:** - Abuhusain HJ; Matin A; Qiao Q; Shen H; Kain N; Day BW; Stringer BW; Daniels B; Laaksonen MA; Teo C; McDonald KL; Don AS

**INSTITUCIÓN / INSTITUTION:** - University of New South Wales, Australia;

**RESUMEN / SUMMARY:** - Studies in cell culture and mouse models of cancer have indicated that the soluble sphingolipid metabolite sphingosine 1-phosphate (S1P) promotes cancer cell proliferation, survival, invasiveness, and tumour angiogenesis. In contrast its metabolic precursor ceramide is pro-differentiative and pro-apoptotic. To determine whether sphingolipid balance plays a significant role in glioma malignancy, we undertook a comprehensive analysis of sphingolipid metabolites in human glioma and normal grey matter (NGM) tissue specimens. We demonstrate, for the first time, a systematic shift in sphingolipid metabolism favouring S1P over ceramide, which increases with increasing cancer grade. S1P content was on average 9-fold higher in glioblastoma (GBM) tissues compared to NGM; whilst the most abundant form of ceramide in the brain, C18 ceramide, was on average 5-fold lower. Increased S1P content in the tumours was significantly correlated with increased Sphingosine Kinase 1 (SPHK1) and decreased Sphingosine Phosphate Phosphatase 2 (SGPP2) expression. Inhibition of S1P production by cultured GBM cells, using a highly potent and selective SPHK1 inhibitor, blocked angiogenesis in co-cultured endothelial cells

without affecting VEGF secretion. Our findings validate the hypothesis that altered ceramide/S1P balance is an important feature of human cancers and support the development of SPHK1 inhibitors as anti-angiogenic agents for cancer therapy.

[108]

**TÍTULO / TITLE:** - Self-perception of cognitive function among patients with active acromegaly, controlled acromegaly, and non-functional pituitary adenoma: a pilot study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocrine. 2013 Nov 27.

●● Enlace al texto completo (gratis o de pago) [1007/s12020-013-0106-9](#)

**AUTORES / AUTHORS:** - Yedinak CG; Fleseriu M

**INSTITUCIÓN / INSTITUTION:** - OHSU Northwest Pituitary Center, Oregon Health & Science University, 3181 SW Sam Jackson Park Rd BTE472, Portland, OR, USA, [yedinakc@ohsu.edu](mailto:yedinakc@ohsu.edu).

**RESUMEN / SUMMARY:** - Pituitary adenomas (PAs) represent 15 % of all brain tumors. One-sixth of these are reported to cause acromegaly via excess growth hormone secretion. These tumors have been associated with multiple comorbidities, including neuropsychiatric and cognitive dysfunction. We aimed to assess patient perception of cognitive deficits and the relationship of cognitive changes to active acromegaly (AA) versus controlled acromegaly (CA) versus non-functional PAs (NFPA). A modified FACT-Cog survey was used, which focused on the prevalence and severity of perceived dysfunction in five areas of cognitive function: ability to learn, concentration/distractibility, mental agility, memory and recall, and verbal recall. Patient perception of current health and health change over the previous 12 months was also assessed. The overall perceived prevalence and severity of cognitive dysfunction were the highest among NFPA groups, particularly in the areas of mental agility, verbal recall, and memory/recall. Patients with AA reported greater prevalence and severity of dysfunction with respect to concentration/distractibility and ability to learn. Patients with AA reported the best overall current health, though patients with CA reported the greatest improvement in health over the previous year. These findings may indicate that PAs can affect cognitive function regardless of whether excess growth hormone is present. Acromegaly and NFPA patients perceive specific areas of cognitive dysfunction that may require further evaluation and treatment. Further research may be useful regarding patient quality of life, patient functionality during normal daily activities, and perceived dysfunction despite biological disease control.

[109]

**TÍTULO / TITLE:** - Glial cell line-derived neurotrophic factor-secreting human neural progenitors show long-term survival, maturation into astrocytes, and no tumor formation following transplantation into the spinal cord of immunocompromised rats.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroreport. 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago)

[1097/WNR.000000000000092](#)

**AUTORES / AUTHORS:** - Gowing G; Shelley B; Staggenborg K; Hurley A; Avalos P; Victoroff J; Latter J; Garcia L; Svendsen CN

**INSTITUCIÓN / INSTITUTION:** - Cedars-Sinai Medical Center, Regenerative Medicine Institute, Los Angeles, California, USA.

**RESUMEN / SUMMARY:** - Human neural progenitor cells (hNPCs) derived from the fetal cortex can be expanded in vitro and genetically modified through lentiviral transduction to secrete growth factors shown to have a neurotrophic effect in animal models of neurological disease. hNPCs survive and mature following transplantation into the central nervous system of large and small animals including the rat model of amyotrophic lateral sclerosis. Here we report that hNPCs engineered to express glial cell line-derived neurotrophic factor (GDNF) survive long-term (7.5 months) following transplantation into the spinal cord of athymic nude rats and continue to secrete GDNF. Cell proliferation declined while the number of astrocytes increased, suggesting final maturation of the cells over time in vivo. Together these data show that GDNF-producing hNPCs may be useful as a source of cells for long-term delivery of both astrocytes and GDNF to the damaged central nervous system. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 3.0 License, where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially. <http://creativecommons.org/licenses/by-nc-nd/3.0>.

[110]

**TÍTULO / TITLE:** - Pre- and post-operative dizziness and postural instability in temporal arachnoid cyst patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurol Scand. 2013 Oct 1. doi: 10.1111/ane.12190.

●● [Enlace al texto completo \(gratis o de pago\) 1111/ane.12190](#)

**AUTORES / AUTHORS:** - Tunes C; Flones I; Helland C; Wilhelmsen K; Goplen F; Wester KG

**INSTITUCIÓN / INSTITUTION:** - Department of Surgical Sciences, University of Bergen, Bergen, Norway.

**RESUMEN / SUMMARY:** - OBJECTIVES: Arachnoid cysts (AC) are benign, congenital malformations of the leptomeninges, with a predilection for the temporal fossa. In our clinical experience, patients with temporal AC often complain of dizziness and imbalance. However, these symptoms and the effect of surgery on them have not been studied before. MATERIALS AND METHODS: Dizziness and imbalance in patients with temporal AC were quantified before and after surgical cyst decompression, using the Dizziness Handicap Inventory (DHI), Vertigo Symptom Scale - Short-Form (VSS-SF) and computerized dynamic posturography (CDP). The study includes 16 patients with temporal AC and 15 control subjects undergoing surgery for benign lesions of the larynx (n = 10) or the parotid glands (n = 5). All participants answered the DHI and VSS-SF and underwent CDP the day before and 3-6 months after surgery. The patients with AC also graded their dizziness through the use of a visual analogue scale (VAS). RESULTS: Preoperatively, cyst patients scored higher than controls on subjective symptoms (DHI, VSS-SF A and VSS-SF V), but not on postural sway (CDP). Symptom scores decreased after surgery; the cyst patients improved significantly in the subjective tests (DHI, VAS and VSS-SF), while CDP

scores did not. In the controls, symptom and CDP scores were unchanged after surgery. CONCLUSIONS: Patients with temporal AC have a significant preoperative impairment and post-operative improvement in their subjective dizziness, but not in postural sway as measured by CDP.

[111]

**TÍTULO / TITLE:** - The role of protein kinase CK2 in glioblastoma development.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 Dec 1;19(23):6335-7. doi: 10.1158/1078-0432.CCR-13-2478. Epub 2013 Oct 28.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-2478](#)

**AUTORES / AUTHORS:** - Ji H; Lu Z

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Brain Tumor Center and Department of Neuro-Oncology; Department of Molecular and Cellular Oncology, The University of Texas MD Anderson Cancer Center; and The University of Texas Graduate School of Biomedical Sciences at Houston, Houston, Texas.

**RESUMEN / SUMMARY:** - Glioblastoma is the most prevalent and malignant primary brain tumor in adults, and its response to current therapies is limited. Protein kinase CK2 is overexpressed in glioblastoma and regulates glioblastoma cell survival, proliferation, and migration and brain tumorigenesis. Targeting CK2 for glioblastoma treatment may benefit patients with glioblastoma. Clin Cancer Res; 19(23); 6335-7. ©2013 AACR.

[112]

**TÍTULO / TITLE:** - Nationwide survey of the nature and risk factors of complications in embolization of meningiomas and other intracranial tumors: Japanese Registry of NeuroEndovascular Therapy 2 (JR-NET2).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroradiology. 2013 Nov 16.

●● Enlace al texto completo (gratis o de pago) [1007/s00234-013-1300-4](#)

**AUTORES / AUTHORS:** - Hishikawa T; Sugiu K; Hiramatsu M; Haruma J; Tokunaga K; Date I; Sakai N

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, 2-5-1 Shikata-cho, Kita-ku, Okayama City, Okayama, 700-8558, Japan, [t-hishi@md.okayama-u.ac.jp](mailto:hishi@md.okayama-u.ac.jp).

**RESUMEN / SUMMARY:** - INTRODUCTION: Embolization of intracranial tumor is widely performed in Japan, mainly before neurosurgical resection. A retrospective, multicenter, observational study in Japan was conducted to clarify the nature, frequency, and risk factors of complications in intracranial tumor embolization. METHODS: Patients were derived from the Japanese Registry of NeuroEndovascular Therapy 2 (JR-NET2). A total of 20,854 patients were enrolled in JR-NET2, of which 1,018 patients (4.88 %) with intracranial tumors underwent embolization. The primary end point was the proportion of patients with a modified Rankin scale (mRS) score of 0-2 (independency) at 30 days. The secondary end point was the occurrence of

complications related to the procedures. The risk factors of the occurrence of complications were studied. RESULTS: The proportion of patients with mRS scores  $\leq 2$  at 30 days after procedure was 91.3 %. Complications occurred in 15 of the 1,012 patients (1.48 %). Multivariate analysis showed that embolization for tumors other than meningioma (OR, 4.626; 95 % CI, 1.347-14.59;  $p = 0.0105$ ) was significantly associated with the development of complications. CONCLUSION: The frequency of complications after intracranial tumor embolization was relatively low in this large Japanese cohort. Embolization for tumors other than meningioma was the only significant risk factor for the occurrence of complications.

[113]

**TÍTULO / TITLE:** - MicroRNA-106b-5p boosts glioma tumorigenesis by targeting multiple tumor suppressor genes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncogene. 2013 Oct 28. doi: 10.1038/onc.2013.428.

•• Enlace al texto completo (gratis o de pago) [1038/onc.2013.428](#)

**AUTORES / AUTHORS:** - Liu F; Gong J; Huang W; Wang Z; Wang M; Yang J; Wu C; Wu Z; Han B

**INSTITUCIÓN / INSTITUTION:** - Department of neurosurgery, Changzhou NO.2 People's Hospital, Changzhou, Jiangsu, China.

**RESUMEN / SUMMARY:** - Aberrant expression of microRNAs (miRNAs) has been implicated in cancer initiation and progression. However, little is known about the potential role of miRNAs in glioma tumorigenesis. In this study, we found that miRNA-106b-5p was significantly upregulated in glioma tumor samples and cell lines compared with normal brain tissues, and its expression level correlated with the pathological grading. Overexpression of miR-106b-5p in glioma tumor cells significantly promoted cell proliferation, although inhibited cell apoptosis in vitro and in vivo. In contrast, knockdown of miR-106b-5p significantly inhibited cell proliferation, although enhanced cell apoptosis. Mechanistic study revealed that two target genes, retinoblastoma-like 1 (RBL1) and RBL2, were involved in miR-106b-5p's regulation of cell proliferation and one target gene, caspase-8 (CASP8), mediated miR-106b-5p's regulation of apoptosis. We also investigated the function of the three targets in glioma tumorigenesis by RNA interference manipulation and demonstrated that knockdown of these target genes led to cell proliferation enhancement or cell apoptosis inhibition in vitro. More interestingly, the expression levels of these targets were significantly downregulated in glioma samples and knockdown of these targets in glioma cells inhibited the xenograft tumor formation in vivo. Moreover, we verified the regulation function of miR-106b-5p and its targets on cell proliferation and apoptosis of the primary cultured astrocytes isolated from glioma tumor samples and healthy controls. Collectively, our findings show the critical roles of miR-106b-5p and its targets, RBL1, RBL2 and CASP8, in glioma tumorigenesis and provide potential candidates for malignant glioma therapy. Oncogene advance online publication, 28 October 2013; doi:10.1038/onc.2013.428.

[114]

**TÍTULO / TITLE:** - Over expression of PPP2R2C inhibits human glioma cells growth through the suppression of mTOR pathway.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - FEBS Lett. 2013 Dec 11;587(24):3892-7. doi: 10.1016/j.febslet.2013.09.029. Epub 2013 Oct 11.

●● Enlace al texto completo (gratis o de pago) [1016/j.febslet.2013.09.029](#)

**AUTORES / AUTHORS:** - Fan YL; Chen L; Wang J; Yao Q; Wan JQ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Renji Hospital, School of Medicine, Shanghai Jiaotong University, Shanghai 200127, China.

**RESUMEN / SUMMARY:** - PPP2R2C encodes a gamma isoform of the subunit B55 subfamily, which is a regulatory subunit of Protein phosphatase type 2A (PP2A). Our study shows that PPP2R2C is downregulated in glioma cells and human brain cancer patient samples. Overexpression of PPP2R2C inhibited cancer cell proliferation both in vitro and in vivo through the suppression of the activity of S6K in the mTOR pathway. Moreover, exogenous expression of PPP2R2C promoted the formation of a complex with the PP2A-C subunit to further enhance the binding of PP2A-C with S6K. Our results suggest that PPP2R2C is a potential tumor suppressor gene in human brain cancers. This study will provide novel insight into the development of therapeutic strategies in the treatment of human brain tumors.

[115]

**TÍTULO / TITLE:** - Temozolomide and irradiation combined treatment-induced Nrf2 activation increases chemoradiation sensitivity in human glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Sep 28.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1260-x](#)

**AUTORES / AUTHORS:** - Cong ZX; Wang HD; Zhou Y; Wang JW; Pan H; Zhang DD; Zhang L; Zhu L

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Jinling Hospital, School of Medicine, Nanjing University, 305 East Zhongshan Road, Nanjing, 210002, Jiangsu, China.

**RESUMEN / SUMMARY:** - Resistance to chemoradiotherapy is a major obstacle to successful treatment of glioblastoma. Recently, the role of NF-E2-related factor 2 (Nrf2) in enhancing chemoradiation sensitivity has been reported in several types of cancers. Here, we investigated whether temozolomide (TMZ) and irradiation (IR) combined treatment induced Nrf2 activation in human glioblastoma cells. And we further performed a preliminary study about the effect of Nrf2 on chemoradiation sensitivity. Immunohistochemical staining for Nrf2 in paired clinical specimens showed that TMZ and IR combined treatment increased the expression and nuclear localization of Nrf2 in human glioblastoma tissues. Moreover, we found nuclear Nrf2 expression in the glioblastoma tissues obtained from the patients undergoing TMZ and IR combined treatment was associated with the time to tumor recurrence. In vitro, we further verified these findings. First, we detected increased nuclear localization of Nrf2 following treatment with TMZ+IR in human glioblastoma cell lines. Second, we demonstrated TMZ+IR increased the levels of Nrf2 protein in both nuclear and cytoplasmic fractions of U251 cells and induced Nrf2 target genes expression. Finally, downregulating Nrf2 expression increased TMZ+IR-induced cell death in the U251 cells. These findings

suggest TMZ+IR combined treatment induces Nrf2 activation in human glioblastoma cells. The activation of Nrf2 may be associate with enhancing chemoradiation sensitivity in human glioblastoma cell. Blocking Nrf2 activation may be a promising method enhancing chemoradiation sensitivity of glioblastoma cells.

[116]

**TÍTULO / TITLE:** - Pituitary ACTH-secreting adenoma in Addison's disease: A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Oct 24. pii: S0303-8467(13)00395-8. doi: 10.1016/j.clineuro.2013.09.040.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.09.040](#)

**AUTORES / AUTHORS:** - Fan S; Jiang Y; Yao Y; Wang R; Xing B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China; Department of Neurology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China; Key Laboratory of Endocrinology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China.

[117]

**TÍTULO / TITLE:** - Clinical outcome of surgically treated low-grade gliomas: A retrospective analysis of a single institute.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Oct 25. pii: S0303-8467(13)00418-6. doi: 10.1016/j.clineuro.2013.10.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.10.010](#)

**AUTORES / AUTHORS:** - Turkoglu E; Gurer B; Sanli AM; Dolgun H; Gurses L; Oral NA; Donmez T; Sekerci Z

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery Clinic, Ministry of Health, Diskapi Yildirim Beyazit Education and Research Hospital, 06100 Ankara, Turkey. Electronic address: [drmet122@yahoo.com](mailto:drmet122@yahoo.com).

**RESUMEN / SUMMARY:** - OBJECTIVE: Low grade gliomas (LGGs) are slow-growing primary brain tumors with heterogeneous clinical behaviors. The aim of our study is to review the treatment outcome of 63 patients with LGGs focusing on surgical outcome and the current therapeutic strategy. METHODS: We retrospectively enrolled 63 patients surgically treated for LGGs. The gross total resection (GTR) was performed in 35 patients (60.3%), subtotal resection (STR) was performed in 19 patients (31.7%) and partial resection (PR) or biopsy was performed in 9 patients (14.3%). We analyzed their progression-free survival (PFS), overall survival (OS), and malignant transformation with regard to age, gender, Karnofsky performance score (KPS), clinical presentation, tumor location, radiologic pattern, contrast enhancement, extent of removal, pathologic subtype, chemotherapy (CT) and radiotherapy (RT) treatment. RESULTS: Among all LGGs, the 3-year OS rate was 80% and the 5-year OS was 76%. The 3-year PFS rate was 83.6% and the 5-year PFS was 25%. The non-eloquent

area location showed a longer PFS than the eloquent area location ( $p=0.05$ ). Oligodendroglial pathology showed a longer PFS compared to oligoastrocytomas and astrocytomas ( $p=0.02$ ). Patients older than 60 years had poorer OS than younger patients ( $p<0.05$ ). Female gender had a shorter OS than male gender ( $p<0.05$ ), and a KPS of 90 or 100 had a longer OS than a KPS of 80 ( $p<0.05$ ). Oligodendroglial pathology statistically correlated with a longer OS ( $p<0.05$ ). CONCLUSION: The findings from our study, which were confirmed by uni- and multivariate analyses, demonstrated that radical tumor resection was associated with better long-term outcomes and tumor progression for patients with LGG.

[118]

**TÍTULO / TITLE:** - Natural killer cells in intracranial neoplasms: presence and therapeutic efficacy against brain tumours.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1265-5](#)

**AUTORES / AUTHORS:** - Kmiecik J; Zimmer J; Chekenya M

**INSTITUCIÓN / INSTITUTION:** - Department of Biomedicine, University of Bergen, Jonas Lies vei 91, 5009, Bergen, Norway.

**RESUMEN / SUMMARY:** - Natural killer (NK) cells are lymphocytes that play an important role in anti-tumour immunity. Their potential against brain cancer has been demonstrated in vitro and in vivo, both as a direct anti-tumour agent and in experimental therapies stimulating endogenous NK cell cytotoxicity. However, the clinical translation of these promising results requires detailed knowledge about the immune status of brain tumour patients, with focus on the NK cell population. In this report, we provide an overview of the studies investigating NK cell infiltration into the tumour, emphasizing the need of revision of the methodologies and further research in this field. We also discuss the potential of using autologous or allogeneic NK cells as effector cells in cellular therapy against brain cancer and developing immunotherapies stimulating endogenous NK cell-mediated anti-tumour response, such as blocking inhibitory killer immunoglobulin-like receptors. Combination of NK cell adoptive transfer with targeted therapies, such as anti-EGFR therapeutic antibody (CetuximAb) could also be a potent strategy.

[119]

**TÍTULO / TITLE:** - Nox4 redox regulation of PTP1B contributes to the proliferation and migration of glioblastoma cells by modulating tyrosine phosphorylation of coronin-1C.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Free Radic Biol Med. 2013 Nov 13. pii: S0891-5849(13)01494-9. doi: 10.1016/j.freeradbiomed.2013.11.005.

●● Enlace al texto completo (gratis o de pago)

[1016/j.freeradbiomed.2013.11.005](#)

**AUTORES / AUTHORS:** - Mondol AS; Tonks NK; Kamata T

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Biology and Biochemistry, Shinshu University Graduate School of Medicine, 3-1-1 Asahi, Matsumoto, Nagano, Japan 390-8621.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme is a common primary brain tumor in adults and one of the most devastating human cancers. Reactive oxygen species (ROS) generated by NADPH oxidase (Nox) 4 have recently been a focus of attention in the study of glioblastomas, but the molecular mechanisms underlying the actions of Nox4 remain elusive. In this study, we demonstrated that silencing of Nox4 expression by Nox4-targeted siRNA suppressed cell growth and motility of glioblastoma U87 cells, indicating the involvement of Nox4. Furthermore, Nox4-derived ROS oxidized and inactivated protein tyrosine phosphatase (PTP):1B: PTP1B in its active form downregulates cell proliferation and migration. By affinity purification with the substrate-trapping mutant of PTP1B, tyrosine-phosphorylated coronin-1C was identified as a substrate of PTP1B. Its tyrosine phosphorylation level was suppressed by Nox4 inhibition, suggesting that tyrosine phosphorylation of coronin-1C is regulated by the Nox4-PTP1B pathway. Finally, ablation of coronin-1C attenuated the proliferative and migratory activity of the cells. Collectively, these findings reveal that Nox4-mediated redox regulation of PTP1B serves as a modulator, in part through coronin-1C, of the growth and migration of glioblastoma cells, and provide new insight into the mechanistic aspect of glioblastoma malignancy.

[120]

**TÍTULO / TITLE:** - Using the Molecular Classification of Glioblastoma to Inform Personalized Treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pathol. 2013 Oct 1. doi: 10.1002/path.4282.

●● Enlace al texto completo (gratis o de pago) [1002/path.4282](#)

**AUTORES / AUTHORS:** - Olar A; Aldape KD

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, University of Texas MD Anderson Cancer Center, Houston, TX.

**RESUMEN / SUMMARY:** - Glioblastoma is the most common and most aggressive diffuse glioma, associated with short survival and uniformly fatal outcome irrespective of treatment. It is characterized by morphologic, genetic, and gene-expression heterogeneity. The current standard of treatment is maximal surgical resection, followed by radiation, with concurrent and adjuvant chemotherapy. Due to the heterogeneity most tumors develop resistance to treatment and shortly recur. Following recurrence glioblastoma is quickly fatal in the majority of cases. Recent genetic molecular advances have contributed to a better understanding of glioblastoma pathophysiology and disease stratification. In this paper we review the basic glioblastoma pathophysiology with emphasis on clinically relevant genetic molecular alterations and potential targets for further drug development.

[121]

**TÍTULO / TITLE:** - Characterization of distinct immunophenotypes across pediatric brain tumor types.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Immunol. 2013 Nov 1;191(9):4880-8. doi: 10.4049/jimmunol.1301966. Epub 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [4049/jimmunol.1301966](#)

**AUTORES / AUTHORS:** - Griesinger AM; Birks DK; Donson AM; Amani V; Hoffman LM; Waziri A; Wang M; Handler MH; Foreman NK

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, University of Colorado Denver, Aurora, CO 80045;

**RESUMEN / SUMMARY:** - Despite increasing evidence that antitumor immune control exists in the pediatric brain, these findings have yet to be exploited successfully in the clinic. A barrier to development of immunotherapeutic strategies in pediatric brain tumors is that the immunophenotype of these tumors' microenvironment has not been defined. To address this, the current study used multicolor FACS of disaggregated tumor to systematically characterize the frequency and phenotype of infiltrating immune cells in the most common pediatric brain tumor types. The initial study cohort consisted of 7 pilocytic astrocytoma (PA), 19 ependymoma (EPN), 5 glioblastoma (GBM), 6 medulloblastoma (MED), and 5 nontumor brain (NT) control samples obtained from epilepsy surgery. Immune cell types analyzed included both myeloid and T cell lineages and respective markers of activated or suppressed functional phenotypes. Immune parameters that distinguished each of the tumor types were identified. PA and EPN demonstrated significantly higher infiltrating myeloid and lymphoid cells compared with GBM, MED, or NT. Additionally, PA and EPN conveyed a comparatively activated/classically activated myeloid cell-skewed functional phenotype denoted in particular by HLA-DR and CD64 expression. In contrast, GBM and MED contained progressively fewer infiltrating leukocytes and more muted functional phenotypes similar to that of NT. These findings were recapitulated using whole tumor expression of corresponding immune marker genes in a large gene expression microarray cohort of pediatric brain tumors. The results of this cross-tumor comparative analysis demonstrate that different pediatric brain tumor types exhibit distinct immunophenotypes, implying that specific immunotherapeutic approaches may be most effective for each tumor type.

[122]

**TÍTULO / TITLE:** - Phase I study of vismodegib in children with recurrent or refractory medulloblastoma: a pediatric brain tumor consortium study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 Nov 15;19(22):6305-12. doi: 10.1158/1078-0432.CCR-13-1425. Epub 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-1425](#)

**AUTORES / AUTHORS:** - Gajjar A; Stewart CF; Ellison DW; Kaste S; Kun LE; Packer RJ; Goldman S; Chintagumpala M; Wallace D; Takebe N; Boyett JM; Gilbertson RJ; Curran T

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Departments of Oncology, Pharmaceutical Sciences, Pathology, Radiological Sciences, Biostatistics, and Developmental Neurobiology, St Jude Children's Research Hospital, Memphis, Tennessee; Center for Neuroscience Research, Children's National Medical Center, Washington, DC; Division of Hematology-Oncology, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois; Department of Pediatrics, Texas Children's Hospital, Houston, Texas; Investigational Drug Branch, Cancer Therapy Evaluation Program, National Cancer Institute, Bethesda, Maryland; and Department of Pathology

and Laboratory Medicine, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania.

**RESUMEN / SUMMARY:** - PURPOSE: To investigate the safety, dose-limiting toxicities, and pharmacokinetics of the smoothed inhibitor vismodegib in children with refractory or relapsed medulloblastoma. Experimental design: Initially, vismodegib was administered daily at 85 mg/m<sup>2</sup> and escalated to 170 mg/m<sup>2</sup>. The study was then revised to investigate a flat-dosing schedule of 150 mg for patients with small body surface area (BSA, 0.67-1.32 m<sup>2</sup>) or 300 mg for those who were larger (BSA, 1.33-2.20 m<sup>2</sup>). Pharmacokinetics were performed during the first course of therapy, and the right knees of all patients were imaged to monitor bone toxicity. Immunohistochemical analysis was done to identify patients with Sonic Hedgehog (SHH)-subtype medulloblastoma. RESULTS: Thirteen eligible patients were enrolled in the initial study: 6 received 85 mg/m<sup>2</sup> vismodegib, and 7 received 170 mg/m<sup>2</sup>. Twenty eligible patients were enrolled in the flat-dosing part of the study: 10 at each dosage level. Three dose-limiting toxicities were observed, but no drug-related bone toxicity was documented. The median (range) vismodegib penetration in the cerebrospinal fluid (CSF) was 0.53 (0.26-0.78), when expressed as a ratio of the concentration of vismodegib in the CSF to that of the unbound drug in plasma. Antitumor activity was seen in 1 of 3 patients with SHH-subtype disease whose tumors were evaluable, and in none of the patients in the other subgroups. CONCLUSIONS: Vismodegib was well tolerated in children with recurrent or refractory medulloblastoma; only two dose-limiting toxicities were observed with flat dosing. The recommended phase II study dose is 150 or 300 mg, depending on the patient's BSA. Clin Cancer Res; 19(22); 6305-12. ©2013 AACR.

[123]

**TÍTULO / TITLE:** - Analysis of a bleeding mechanism in patients with the sylvian arachnoid cyst using a finite element model.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2301-7](#)

**AUTORES / AUTHORS:** - Lee CH; Han IS; Lee JY; Phi JH; Kim SK; Kim YE; Wang KC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Seoul National University Bundang Hospital, 300 Gumi-dong, Bundang-gu, Seongnam, Gyeonggi-do, 463-707, Republic of Korea.

**RESUMEN / SUMMARY:** - OBJECTIVE: The sylvian arachnoid cyst (AC) is a common benign disease; however, it sometimes leads to subdural or intracystic hemorrhage without major trauma. The reason of easy bleeding of the AC is not fully understood. The purpose of this study was to investigate the bleeding mechanism of the sylvian AC in biomechanical aspect and suggest treatment guidelines. METHODS: A finite element (FE) model of normal male adult head/brain was developed and validated by comparison with cadaveric experimental studies. Based on the normal FE model, two sylvian AC models with different sizes (mean size, 55.5 cm<sup>3</sup>; large size, 75.2 cm<sup>3</sup>) were developed. To simulate the interface between the dura mater and the arachnoid membrane, spot-weld constraints were assigned. The vulnerability of vein rupture was forecasted with calculated shear force at the spot-weld elements (SFSW). Simulation was performed for four different loading directions. RESULTS: The newly developed

normal FE models showed reliable biomechanical responses comparable with the cadaveric experiments. The sylvian AC model showed significantly increased SFSW compared with normal model. As AC size increased, higher shear force was generated at the spot-weld element of outer wall of sylvian AC regardless of impact directions. CONCLUSION: Outer wall of sylvian AC receives higher shear force comparing with normal brain, which is a possible cause of vulnerability to bleeding. Although the size-reducing surgery may decrease bleeding risk of sylvian AC, clinicians need to consider the rare incidence of AC bleeding and unsatisfactory volume reduction in many cases of fenestration.

[124]

**TÍTULO / TITLE:** - Secondary central nervous system involvement in 599 patients with diffuse large B-cell lymphoma: are there any changes in the rituximab era?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Hematol. 2013 Nov 14.

•• Enlace al texto completo (gratis o de pago) [1007/s12185-013-1458-x](#)

**AUTORES / AUTHORS:** - Deng L; Song Y; Zhu J; Zheng W; Wang X; Xie Y; Lin N; Tu M; Ping L; Ying Z; Liu W; Zhang C

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Carcinogenesis and Translational Research (Ministry of Education), Lymphoma Unit, Peking University Cancer Hospital and Institute, Beijing, 100142, China.

**RESUMEN / SUMMARY:** - The introduction of rituximab has improved the overall prognosis of diffuse large B-cell lymphoma (DLBCL). However, the impact of rituximab on central nervous system (CNS) involvement in DLBCL remains a matter of debate. Patients with DLBCL and no CNS involvement at initial diagnosis were eligible for this analysis. Patients must have received treatment either with CHOP (cyclophosphamide, doxorubicin, vincristine and prednisone) or CHOP plus rituximab (R-CHOP). We analyzed the incidence, clinical features and outcomes of CNS involvement that developed during or after completion of therapy. A cohort of 599 patients was eligible for this analysis. With a median follow-up of 26 and 21 months, respectively, 19 of 294 (6.5 %) in the CHOP group and 13 of 305 (4.3 %) in the R-CHOP group developed CNS involvement. Rituximab did not significantly reduce the risk of CNS involvement either in the univariate ( $P = 0.354$ ) or in the multivariate analysis (RR 0.632, 95 % CI 0.301-1.327,  $P = 0.225$ ). No patient developed CNS disease after 19 months in the R-CHOP group whereas four patients (21.1 %) in the CHOP group developed CNS disease 2 years after initial diagnosis (range 34-83 months). Systemic disease prior to or coincident with CNS occurrence was more common in the CHOP group than in the R-CHOP group (73.7 versus 38.5 %,  $P = 0.046$ ). Isolated CNS events were more common in the R-CHOP group than those in the CHOP group (53.8 versus 10.5 %,  $P = 0.015$ ). This study indicates that isolated CNS events are more common in DLBCL patients treated with R-CHOP than those treated with CHOP alone. Our data also suggest that the time and pattern of CNS events and systemic disease status differ with the addition of rituximab. Better methods for earlier detection and prophylaxis of CNS involvement are needed in the rituximab era.

[125]

**TÍTULO / TITLE:** - MiR-125b acts as an oncogene in glioblastoma cells and inhibits cell apoptosis through p53 and p38MAPK-independent pathways.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Cancer. 2013 Nov 26;109(11):2853-63. doi: 10.1038/bjc.2013.672. Epub 2013 Oct 29.

●● Enlace al texto completo (gratis o de pago) [1038/bjc.2013.672](#)

**AUTORES / AUTHORS:** - Wu N; Lin X; Zhao X; Zheng L; Xiao L; Liu J; Ge L; Cao S

**INSTITUCIÓN / INSTITUTION:** - Institute of Oceanology, Chinese Academy of Sciences, Qingdao 266071, China.

**RESUMEN / SUMMARY:** - Background: We have recently identified miR-125b upregulation in glioblastoma (GMB). The aim of this study is to determine the correlation between miR-125b expression and malignant grades of glioma and the genes targeted by miR-125b. Methods: Real-time PCR was employed to measure the expression level of miR-125b. Cell viability was evaluated by cell growth and colony formation in soft-agar assays. Cell apoptosis was determined by Hoechst 33342 staining and AnnexinV-FITC assay. The Luciferase assay was used to confirm the actual binding sites of p38MAPK mRNA. Western blot was used to detect the gene expression level. Results: The expression level of miR-125b is positively correlated with the malignant grade of glioma. Ectopic expression of miR-125b promotes the proliferation of GMB cells. Knockdown of endogenous miR-125b inhibits cell proliferation and promotes cell apoptosis. Further studies reveal that p53 is regulated by miR-125b. However, downregulation of the endogenous miR-125b also results in p53-independent apoptotic pathway leading to apoptosis in p53 mutated U251 cells and p53 knockdown U87 cells. Moreover, p38MAPK is also regulated by miR-125b and downregulation of miR-125b activates the p38MAPK-induced mitochondria apoptotic pathway. Conclusion: High-level expression of miR-125b is associated with poor outcomes of GMB. MiR-125b may have an oncogenic role in GMB cells by promoting cell proliferation and inhibiting apoptosis.

[126]

**TÍTULO / TITLE:** - Patients' anxiety around incidental brain tumors: a qualitative study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Nov 24.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1935-2](#)

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**RESUMEN / SUMMARY:** - BACKGROUND: Incidental findings are common on MRI. Our study examined how patients are told about their incidental finding as well as anxiety until the neurosurgical consultation and afterward. METHODS: Qualitative research methodology was used. Thirty-two participants were interviewed using open-ended questions. Answers were transcribed and analyzed for themes. RESULTS: The level of patient satisfaction for the initial breaking of the news averaged 4.1 (range 1-5). Four themes were identified: (1) emotional stress over incidental findings are partially dependent on how the news was communicated; (2) breaking worrisome news is best done in person, but telephone communication can sometimes be

acceptable; (3) patients are divided about how much information they wish to get about incidental findings before going for an MRI; (4) waiting for the neurosurgical consultation is a stressful time without adequate support. CONCLUSIONS: When dealing with an unexpected MRI finding, patients are anxious about the situation. Our study exposes ways the experience could be made more comfortable for patients right from the start, from being told the news in a calm and sympathetic manner, to providing support for patients while they wait for a meeting with a neurosurgeon, to expediting the neurosurgical consultation.

[127]

**TÍTULO / TITLE:** - Childhood Brain Tumor Survivors at Risk for Impaired Health-related Quality of Life.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Hematol Oncol. 2013 Nov;35(8):603-9. doi: 10.1097/MPH.0b013e31829b7ec6.

●● Enlace al texto completo (gratis o de pago)

[1097/MPH.0b013e31829b7ec6](#)

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**INSTITUCIÓN / INSTITUTION:** - Departments of \*Psychosocial daggerPediatric Oncology, Emma Children's Hospital, Academic Medical Center (AMC), University of Amsterdam double daggerDepartment of Developmental Psychology, VU University, Amsterdam, The Netherlands.

**RESUMEN / SUMMARY:** - This study aimed to assess health-related quality of life (HRQOL)-mean scores and percentages at risk for impaired HRQOL in childhood brain tumor survivors (CBTS) and to explore differences between CBTS treated with surgery only (SO) versus CBTS treated with surgery and adjuvant therapy (SA). HRQOL was evaluated in 34 CBTS (mean age=14.7 y; mean time since the end of treatment=6.4 y) with the KIDSCREEN. Being at risk for impaired HRQOL was defined as a T-score  $\geq 1$  SD below the norm population mean. The total and the SA group, but not the SO group, had significantly lower mean scores than the Dutch norm population in the domains of "physical well-being," "psychological well-being," and "peers and social support." High percentages (35% to 53%) of both the SO and the SA groups appeared to be at risk for impaired HRQOL in the domains of "physical well-being," "moods and emotions," "peers and social support," and "bullying," compared to 16% in the norm population. In conclusion, although HRQOL in some domains appeared similar to the norm population, a considerable number of CBTS-reported impaired HRQOL in several other domains. It is recommended to systematically monitor HRQOL in CBTS regardless of the therapy applied.

[128]

**TÍTULO / TITLE:** - Long-term Survival (>13 Years) in a Child With Recurrent Diffuse Pontine Gliosarcoma: A Case Report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Hematol Oncol. 2013 Oct 23.

- Enlace al texto completo (gratis o de pago)

[1097/MPH.0000000000000020](https://doi.org/10.1097/MPH.0000000000000020)

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**INSTITUCIÓN / INSTITUTION:** - Burzynski Clinic, Houston, TX.

**RESUMEN / SUMMARY:** - Pediatric gliosarcoma (GS) is a rare variant of glioblastoma multiforme. The authors describe the case of an unusual pontine location of GS in a 9-year-old boy who was initially diagnosed with low-grade astrocytoma (LGA) that was successfully controlled for 4 years. Subsequently, his brain tumor transformed into a GS. Prior treatment of his LGA included subtotal tumor resection 3 times, standard radiation therapy, and Gamma Knife procedure twice. His LGA was also treated with a standard chemotherapy regimen of carboplatin and vincristine, and his GS with subtotal resection, high-dose cyclophosphamide, and thiotepa with stem cell rescue and temozolomide. Unfortunately, he developed disseminated disease with multiple lesions and leptomeningeal involvement including a tumor occupying 80% of the pons. Upon presentation at our clinic, he had rapidly progressing disease. He received treatment with antineoplastons (ANP) A10 and AS2-1 for 6 years and 10 months under special exception to our phase II protocol BT-22. During his treatment with ANP his tumor stabilized, then decreased, and, ultimately, did not show any metabolic activity. The patient's response was evaluated by magnetic resonance imaging and positron emission tomography scans. His pathology diagnosis was confirmed by external neuropathologists, and his response to the treatment was determined by central radiology review. He experienced the following treatment-related, reversible toxicities with ANP: fatigue, xerostomia and urinary frequency (grade 1), diarrhea, incontinence and urine color change (grade 2), and grade 4 hypernatremia. His condition continued to improve after treatment with ANP and, currently, he complains only of residual neurological deficit from his previous surgery. He achieved a complete response, and his overall and progression-free survival is in excess of 13 years. This report indicates that it is possible to obtain long-term survival of a child with a highly aggressive recurrent GS with diffuse pontine involvement with a currently available investigational treatment. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 3.0 License, where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially.

<http://creativecommons.org/licenses/by-nc-nd/3.0>.

[129]

**TÍTULO / TITLE:** - Comparison between routine and improved decompressive craniectomy on patients with malignant cerebral artery infarction without traumatic brain injury.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 Nov;24(6):2085-8. doi: 10.1097/SCS.0b013e3182a2435a.

- Enlace al texto completo (gratis o de pago)

[1097/SCS.0b013e3182a2435a](https://doi.org/10.1097/SCS.0b013e3182a2435a)

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**RESUMEN / SUMMARY:** - BACKGROUND: Malignant cerebral artery infarction is one kind of ischemic stroke with high mortality. The aim of this study was to analyze comparatively the preoperative and postoperative clinical data as well as the prognostic factors in these patients who underwent improved decompressive craniectomy or routine decompressive craniectomy. METHODS: A total of 131 patients with malignant cerebral artery infarction were included during the period from January 2000 to December 2012. The patients were divided into 2 groups: the improved decompressive craniectomy group (n = 85) and the routine decompressive craniectomy group (control group) (n = 46). We reviewed the detailed information of the patients; moreover, a comparative analysis of the 2 groups based on age ( $\leq 60$  or  $> 60$  y) was performed. RESULTS: The improved decompressive craniectomy group had a significant decrease ( $P < 0.05$ ) in mortality without clinical functional improvement. The patients who were treated through routine decompressive craniectomy had a higher incidence of hydrocephalus and pulmonary infection ( $P = 0.011$  and  $0.003$ ). Moreover, younger patients usually took less resident time in the hospital than did the patients in the elderly group ( $P = 0.047$  vs  $P < 0.05$ ). Statistical results indicated that the younger patients took a better recovery than did the elderly patients. There was a significant difference between the groups A and B both in the Barthel index and the modified Rankine scale for 3 or 6 months after discharge ( $P < 0.05$ ). CONCLUSIONS: In comparison with the routine decompressive craniectomy, the improved decompressive craniectomy can reduce the mortality rate and improve the neurologic outcome. However, it increases the incidence of encephalocele and pulmonary infection, which may cause secondary vital injury to patients after surgery. In addition, younger patients can gain a better further functional recovery by undergoing improved decompressive craniectomy.

[130]

**TÍTULO / TITLE:** - High Incidence Of Activating Tert Promoter Mutations In Meningiomas Undergoing Malignant Progression.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Pathol. 2013 Nov 22. doi: 10.1111/bpa.12110.

●● Enlace al texto completo (gratis o de pago) [1111/bpa.12110](#)

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**RESUMEN / SUMMARY:** - Meningiomas are common central nervous system tumors. WHO defines three grades, predictive of the risk of recurrence. These tumors can relapse frequently and sometimes undergo malignant transformation. Maintenance of telomere length is a key process in malignant progression and mutations in TERT promoter have recently been identified in various cancer type. We sequenced the TERT promoter in 85 meningiomas from 73 patients. We found a high incidence of TERT promoter mutations in patients with meningiomas undergoing malignant

histological progression (28%, n=5/18 patients). In this subset of patients with histological progression, TERT promoter mutations were found in both the lowest and highest-grade tumors, and both in NF2 mutated and non-mutated samples. In contrast, one mutation was identified in 35 meningiomas without recurrence or progression, belonging to various histological grades. This sample was an aggressive meningioma in a patient who died shortly after surgery. Interestingly, tumors showing relapse without histological progression were not mutated for TERT promoter (n=20). Finally, TERT promoter mutations were associated with a marked increase in TERT expression. Thus, TERT promoter mutations are pivotal genetic alterations involved in malignant progression of meningiomas and could be used as a biomarker to identify meningiomas at risk of malignant transformation.

[131]

**TÍTULO / TITLE:** - Fatty acid binding protein 7 as a marker of glioma stem cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pathol Int. 2013 Nov;63(11):546-53. doi: 10.1111/pin.12109.

●● Enlace al texto completo (gratis o de pago) [1111/pin.12109](#)

**AUTORES / AUTHORS:** - Morihito Y; Yasumoto Y; Vaidyan LK; Sadahiro H; Uchida T; Inamura A; Sharifi K; Ideguchi M; Nomura S; Tokuda N; Kashiwabara S; Ishii A; Ikeda E; Owada Y; Suzuki M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Yamaguchi University Graduate School of Medicine, Ube, Japan.

**RESUMEN / SUMMARY:** - Glioblastomas are the most aggressive brain tumors. Glioblastoma stem cells (GSCs) are thought to be responsible for the recurrence, chemoresistance, and poor prognosis of glioblastoma. Fatty acid binding protein 7 (FABP7), which is a cellular chaperone for a variety of omega-3 fatty acids, is a known marker for neural stem cells. In this study, using a newly developed anti-FABP7 antibody and patient-derived GSC lines, we evaluated the expression of FABP7 in GSCs. Using immunocytochemistry, Western blotting, and qPCR analyses, FABP7 was found to be highly enriched in GSCs and its localization was found in cytosol and nuclei. FABP7 expression was significantly downregulated in differentiated GSCs induced by the addition of serum. In the glioma surgical specimens, FABP7 was highly expressed in the majority of glioblastoma. Double immunostaining for FABP7 and Sox2 showed that FABP7(+) Sox2(+) tumor cells were significantly increased in glioblastoma (grade IV) compared with diffuse astrocytoma (grade II) and anaplastic astrocytoma (grade III). Our data introduces FABP7 as a marker for GSCs and further highlights its possible significance for glioma diagnosis and treatment.

[132]

**TÍTULO / TITLE:** - Cinnamon polyphenols regulate S100beta, sirtuins, and neuroactive proteins in rat C6 glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nutrition. 2013 Nov 12. pii: S0899-9007(13)00333-X. doi: 10.1016/j.nut.2013.07.001.

●● Enlace al texto completo (gratis o de pago) [1016/j.nut.2013.07.001](#)

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**RESUMEN / SUMMARY:** - **OBJECTIVE:** Increasing evidence suggests that cinnamon has many health benefits when used in herbal medicine and as a dietary ingredient. The aim of this study was to investigate the effects of an aqueous extract of cinnamon, high in type A polyphenols, on molecular targets in rat C6 glioma cells that underlie their protective effects. **METHODS:** C6 rat glioma cells were seeded in 35-mm culture dishes or six-well plates, then were incubated with cinnamon polyphenols at doses of 10 and 20 µg/mL for 24 h. The targeting protein expression, secretion, and phosphorylation were evaluated by immunoprecipitation/immunoblotting and immunofluorescence imaging. **RESULTS:** Cinnamon polyphenols significantly enhanced secretion of S100beta, a Ca<sup>2+</sup>-binding protein, and increased intracellular S100beta expression after 24 h of incubation, in rat C6 glioma cells. Cinnamon polyphenols also enhanced protein levels of sirtuin 1, 2, and 3, deacetylases important in cell survival, and the tumor suppressor protein, p53, and inhibited the inflammatory factors, tumor necrosis factor alpha, and phospho-p65, a subunit of nuclear factor-kappa-beta. Cinnamon polyphenols also up-regulated levels of phospho-p38, extracellular signal-regulated protein and mitogen-activated protein kinase-activated protein kinases that may be important for prosurvival functions. **CONCLUSION:** Our results indicate that the effects of cinnamon polyphenols on upregulating prosurvival proteins, activating mitogen-activated protein kinase pathways, and decreasing proinflammatory cytokines may contribute to their neuroprotective effects.

[133]

**TÍTULO / TITLE:** - Silencing of GLS and overexpression of GLS2 genes cooperate in decreasing the proliferation and viability of glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Oct 6.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s13277-013-1247-4](#)

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**RESUMEN / SUMMARY:** - Glutamine (Gln) metabolism, initiated by its degradation by glutaminases (GA), is elevated in neoplastic cells and tissues. In malignant glioma-derived tumors, GA isoforms, KGA and GAC, coded by the GLS gene, are overexpressed, whereas the GLS2-coded GAB and LGA isoforms, are hardly detectable in there. Our previous study revealed that transfection of T98G glioblastoma cells with GAB reduced cell proliferation and migration, by a yet unknown mechanism not related to Gln degradation. The question arose how simultaneous overexpression of GAB and inhibition of KGA would affect glioblastoma cell growth. Here, we used siRNA to silence the expression of GLS in T98G cells which were or were not stably transfected with GAB (TGAB cells). In both T98G and TGAB cell lines, silencing of GLS with siRNAs targeted

at different sequences decreased cell viability and proliferation in a different, sequence-dependent degree, and the observed decreases were in either cell line highly correlated with increase of intracellular Gln ( $r > 0.9$ ), a parameter manifesting decreased Gln degradation. The results show that combination of negative modulation of GA isoforms arising from GLS gene with the introduction of the GLS2 gene product, GAB, may in the future provide a useful means to curb glioblastoma growth in situ. At the same time, the results underscore the critical role of Gln degradation mediated by KGA in the manifestations of aggressive glial tumor phenotype.

[134]

**TÍTULO / TITLE:** - MiR-26a enhances the radiosensitivity of glioblastoma multiforme cells through targeting of ataxia-telangiectasia mutated.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Exp Cell Res. 2013 Nov 5. pii: S0014-4827(13)00470-9. doi: 10.1016/j.yexcr.2013.10.020.

●● Enlace al texto completo (gratis o de pago) [1016/j.yexcr.2013.10.020](#)

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**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Ren Ji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai 200127, China.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is notoriously resistant to radiation, and consequently, new radiosensitizers are urgently needed. MicroRNAs are a class of endogenous gene modulators with emerging roles in DNA repair. We found that overexpression of miR-26a can enhance radiosensitivity and reduce the DNA repair ability of U87 cells. However, knockdown miR-26a in U87 cells could act the converse manner. Mechanistically, this effect is mediated by direct targeting of miR-26a to the 3'UTR of ATM, which leads to reduced ATM levels and consequent inhibition of the homologous recombination repair pathway. These results suggest that miR-26a may act as a new radiosensitizer of GBM.

[135]

**TÍTULO / TITLE:** - MicroRNA-29b modulates Japanese encephalitis virus-induced microglia activation by targeting tumor necrosis factor alpha-induced protein 3.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurochem. 2013 Nov 16. doi: 10.1111/jnc.12609.

●● Enlace al texto completo (gratis o de pago) [1111/jnc.12609](#)

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**INSTITUCIÓN / INSTITUTION:** - National Brain Research Centre, Manesar, Haryana, India.

**RESUMEN / SUMMARY:** - Japanese encephalitis virus (JEV), a single-stranded RNA (ssRNA) virus, is the leading cause of encephalitis in Asia. Microglial activation is one of the key events in JEV-induced neuroinflammation. Although the various microRNAs (miRNAs) has been shown to regulate microglia activation during pathological conditions including neuroviral infections, till date, the involvement of miRNAs in JEV infection has not been evaluated. Hence, we sought to evaluate the possible role of miRNAs in mediating JEV-induced microglia activation. Initial screening revealed significant up-regulation of miR-29b in JEV-infected mouse microglial cell line (BV-2)

and primary microglial cells. Furthermore, using bioinformatics tools, we identified tumor necrosis factor alpha-induced protein 3, a negative regulator of nuclear factor-kappa B signaling as a potential target of miR-29b. Interestingly, in vitro knockdown of miR-29b resulted in significant over-expression of tumor necrosis factor alpha-induced protein 3, and subsequent decrease in nuclear translocation of pNF-kappaB. JEV infection in BV-2 cell line elevated inducible nitric oxide synthase, cyclooxygenase-2, and pro-inflammatory cytokine expression levels, which diminished after miR-29b knockdown. Collectively, our study demonstrates involvement of miR-29b in regulating JEV-induced microglial activation. miR-29b regulates Japanese Encephalitis Virus (JEV)-induced microglia activation via inhibition of the anti-inflammatory protein TNFAIP3, which results in sustained activation of NF-kB. Sustained NF-kB activation further results in augmented secretion of pro-inflammatory cytokines and induction of inflammatory mediators (iNOS and Cox-2).

[136]

**TÍTULO / TITLE:** - Pediatric Brainstem Gangliogliomas Show BRAF Mutation in a High Percentage of Cases.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Pathol. 2013 Nov 18. doi: 10.1111/bpa.12103.

●● [Enlace al texto completo \(gratis o de pago\) 1111/bpa.12103](#)

**AUTORES / AUTHORS:** - Donson AM; Kleinschmidt-Demasters BK; Aisner DL; Bemis LT; Birks DK; Mulcahy Levy JM; Smith AA; Handler MH; Foreman NK; Rush SZ

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Children's Hospital Colorado, 13123 E 16<sup>th</sup> Avenue, Aurora, CO 80045.

**RESUMEN / SUMMARY:** - Brainstem gangliogliomas (GGs) often cannot be resected, have a much poorer prognosis than those located in more common supratentorial sites, and may benefit from novel therapeutic approaches. Therapeutically-targetable BRAF c.1799T>A (p.V600E) (BRAFFV600E) mutations are harbored in roughly 50% of collective GGs taken from all anatomical sites. Large numbers of pediatric brainstem GGs, however, have not been specifically assessed and anatomic- and age-restricted assessment of genetic and biological factors are becoming increasingly important. Pediatric brainstem GGs (n=13), non-brainstem GGs (n=11), and brainstem pilocytic astrocytomas (PAs) (n=8) were screened by standard Sanger DNA sequencing of BRAF exon 15. Five of 13 (38%) pediatric GG harbored a definitive BRAFFV600E mutation, with 2 others exhibiting an equivocal result by this method. BRAFFV600E was also seen in 5/11 (45%) non-brainstem GGs and 1/8 (13%) brainstem PAs. VE1 immunostaining for BRAFFV600E showed concordance with sequencing in 9/9 brainstem GGs including the two cases equivocal by Sanger. The equivocal brainstem GGs were subsequently shown to harbor BRAFFV600E using a novel, more sensitive, RNA-sequencing approach, yielding a final BRAFFV600E mutation frequency of 54% (7/13) in brainstem GGs. BRAFFV600E-targeted therapeutics should be a consideration for the high percentage of pediatric brainstem GGs refractory to conventional therapies.

[137]

**TÍTULO / TITLE:** - Pretreatment ADC Histogram Analysis Is a Predictive Imaging Biomarker for Bevacizumab Treatment but Not Chemotherapy in Recurrent Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - AJNR Am J Neuroradiol. 2013 Oct 17.

- Enlace al texto completo (gratis o de pago) [3174/ajnr.A3748](#)

**AUTORES / AUTHORS:** - Ellingson BM; Sahebjam S; Kim HJ; Pope WB; Harris RJ; Woodworth DC; Lai A; Nghiemphu PL; Mason WP; Cloughesy TF

**INSTITUCIÓN / INSTITUTION:** - Departments of Radiological Sciences, Biomedical Physics, Bioengineering, and Neurology, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, California; and Department of Medicine, Princess Margaret Hospital, University of Toronto, Toronto, Ontario, Canada.

**RESUMEN / SUMMARY:** - BACKGROUND AND PURPOSE:Pre-treatment ADC characteristics have been shown to predict response to bevacizumab in recurrent glioblastoma multiforme. However, no studies have examined whether ADC characteristics are specific to this particular treatment. The purpose of the current study was to determine whether ADC histogram analysis is a bevacizumab-specific or treatment-independent biomarker of treatment response in recurrent glioblastoma multiforme.MATERIALS AND METHODS:Eighty-nine bevacizumab-treated and 43 chemotherapy-treated recurrent glioblastoma multiformes never exposed to bevacizumab were included in this study. In all patients, ADC values in contrast-enhancing ROIs from MR imaging examinations performed at the time of recurrence, immediately before commencement of treatment for recurrence, were extracted and the resulting histogram was fitted to a mixed model with a double Gaussian distribution. Mean ADC in the lower Gaussian curve was used as the primary biomarker of interest. The Cox proportional hazards model and log-rank tests were used for survival analysis.RESULTS:Cox multivariate regression analysis accounting for the interaction between bevacizumab- and non-bevacizumab-treated patients suggested that the ability of the lower Gaussian curve to predict survival is dependent on treatment (progression-free survival, P = .045; overall survival, P = .003). Patients with bevacizumab-treated recurrent glioblastoma multiforme with a pretreatment lower Gaussian curve > 1.2  $\mu\text{m}^2/\text{ms}$  had a significantly longer progression-free survival and overall survival compared with bevacizumab-treated patients with a lower Gaussian curve < 1.2  $\mu\text{m}^2/\text{ms}$ . No differences in progression-free survival or overall survival were observed in the chemotherapy-treated cohort. Bevacizumab-treated patients with a mean lower Gaussian curve > 1.2  $\mu\text{m}^2/\text{ms}$  had a significantly longer progression-free survival and overall survival compared with chemotherapy-treated patients.CONCLUSIONS:The mean lower Gaussian curve from ADC histogram analysis is a predictive imaging biomarker for bevacizumab-treated, not chemotherapy-treated, recurrent glioblastoma multiforme. Patients with recurrent glioblastoma multiforme with a mean lower Gaussian curve > 1.2  $\mu\text{m}^2/\text{ms}$  have a survival advantage when treated with bevacizumab.

[138]

**TÍTULO / TITLE:** - No link between breast cancer and meningioma: results from a large monoinstitutional retrospective analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Epidemiol Biomarkers Prev. 2013 Oct 28.

●● Enlace al texto completo (gratis o de pago) [1158/1055-9965.EPI-13-1041](https://doi.org/10.1158/1055-9965.EPI-13-1041)

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**INSTITUCIÓN / INSTITUTION:** - Division of Early Drug Development, European Institute of Oncology.

**RESUMEN / SUMMARY:** - Background: The etiology of meningioma is largely unknown although breast cancer has been suggested to play a role. Methods: A monoinstitutional, retrospective analysis was performed at European Institute of Oncology on 12,330 patients with breast cancer. The cumulative incidence of meningioma was estimated using the Kaplan-Meier method and the log-rank test was used to assess differences between groups. Results: In total, 33 patients with meningioma were identified from a study population of 12,330, with a 10-year cumulative incidence of meningioma of 0.37%. We did not find a significantly increased risk of meningioma among patients with breast cancer or an association between the hormonal receptor status and the risk of meningioma ( $p=0.65$ ). Conclusions: Our results do not support a role of breast cancer or endocrine treatments in meningioma development. Impact: this analysis adds new information on a debated topic.

[139]

**TÍTULO / TITLE:** - Heme oxygenase-1 protects regulatory T cells from hypoxia-induced cellular stress in an experimental mouse brain tumor model.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuroimmunol. 2013 Nov 8. pii: S0165-5728(13)00307-X. doi: 10.1016/j.jneuroim.2013.10.012.

●● Enlace al texto completo (gratis o de pago) [1016/j.jneuroim.2013.10.012](https://doi.org/10.1016/j.jneuroim.2013.10.012)

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**INSTITUCIÓN / INSTITUTION:** - The Brain Tumor Center, The University of Chicago, Chicago, IL, USA.

**RESUMEN / SUMMARY:** - Two characteristic features of malignant gliomas (MG) are the presence of hypoxia and accumulation of regulatory T cells (Tregs). Heme-oxygenase-1 (HO1) is a cytoprotective enzyme expressed in high level by Tregs in glioma. In this study, we show that higher HO1 expression in Tregs is associated with increased survival under hypoxic conditions and that HO1 inhibitor, tin protoporphyrin (SnPP), abrogates the survival benefits. Moreover, SnPP preferentially eliminates Tregs and treatment with SnPP of tumor bearing mice significantly increases survival (23 to 31 days ( $p<0.05$ )). Thus HO1 inhibition provides another alternative way of therapeutically targeting Tregs in MG.

[140]

**TÍTULO / TITLE:** - Chemoradiation for anaplastic oligodendrogliomas: clinical outcomes and prognostic value of molecular markers.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 26.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1288-y](https://doi.org/10.1007/s11060-013-1288-y)

**AUTORES / AUTHORS:** - Minniti G; Arcella A; Scaringi C; Lanzetta G; Di Stefano D; Scarpino S; Pace A; Giangaspero F; Osti MF; Enrici RM

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Sant'Andrea Hospital, University Sapienza, Via di Grottarossa 1035, 00189, Rome, Italy, [gminniti@ospedalesantandrea.it](mailto:gminniti@ospedalesantandrea.it).

**RESUMEN / SUMMARY:** - Combination of procarbazine, lomustine and vincristine (PCV) with radiation therapy (RT) has been associated with longer survival in patients with anaplastic oligodendroglioma (AO) and anaplastic oligoastrocytoma (AOA), especially in those with chromosome 1p/19q codeletion. We report a multicenter retrospective study of 84 consecutive adult patients with AO and AOA treated with RT plus concomitant and adjuvant temozolomide (TMZ) between February 2004 and January 2011. Correlations between chromosome 1p/19q codeletion, isocitrate dehydrogenase1 (IDH1) mutation, and O-6-methylguanine-DNA methyltransferase (MGMT) promoter methylation with survival outcomes have been analyzed. For all 84 patients the median overall survival (OS) and progression-free survival rates were 55.6 and 45.2 months, respectively. Grade 3 or 4 hematological toxicity occurred in 17 % of patients. Chromosome 1p/19q codeletion was detected in 57 %, IDH1 mutation in 63 %, and MGMT promoter methylation in 74 % of evaluable patients. In multivariate analysis the presence of chromosome 1p/19q codeletion was associated with significant survival benefit (median OS 34 months in noncodeleted tumors and not reached in codeleted tumors; HR 0.16, 95 % CI 0.03-0.45; P = 0.005). IDH1 mutation was also of prognostic significance for longer survival (P = 0.001; HR 0.20, 95 % 0.06-0.41), whereas MGMT promoter methylation was only of borderline significance. The study indicates that RT with concomitant and adjuvant TMZ is a relatively safe treatment associated with longer survival in patients with 1p/19q codeleted and IDH1 mutated tumors. Results from ongoing randomized studies will be essential to clarify if RT plus TMZ may provide survival as good as or better than RT combined with PCV for patients with AO and AOA.

[141]

**TÍTULO / TITLE:** - The Translocator Protein Radioligand 18F-DPA-714 Monitors Antitumor Effect of Erufosine in a Rat 9L Intracranial Glioma Model.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Nucl Med. 2013 Dec;54(12):2125-31. doi: 10.2967/jnumed.112.118794. Epub 2013 Nov 8.

●● Enlace al texto completo (gratis o de pago) [2967/jnumed.112.118794](https://doi.org/10.2967/jnumed.112.118794)

**AUTORES / AUTHORS:** - Awde AR; Boisgard R; Theze B; Dubois A; Zheng J; Dolle F; Jacobs AH; Tavitian B; Winkeler A

**INSTITUCIÓN / INSTITUTION:** - CEA-DSV-I2BM-SHFJ, Orsay, France.

**RESUMEN / SUMMARY:** - On the one hand, the translocator protein (TSPO) radioligand N,N-diethyl-2-(2-(4-(2-(18F-fluoroethoxy)phenyl)-5,7-dimethylpyrazolo[1,5-a]pyridin-3-yl)acetamide ((18F)-DPA-714) has been suggested to serve as an alternative radiotracer to image human glioma, and on the other hand the alkylphosphocholine erufosine (ErPC3) has been reported to induce apoptosis in otherwise highly apoptosis-resistant glioma cell lines. The induction of apoptosis by ErPC3 requires TSPO, a mitochondrial membrane protein highly expressed in malignant gliomas. In

this preclinical study, we monitored the effect of ErPC3 treatment in vivo using (18)F-DPA-714 PET. METHODS: In vitro studies investigated the antitumor effect of ErPC3 in 9L rat gliosarcoma cells. In vivo, glioma-bearing rats were imaged with (18)F-DPA-714 for the time of treatment. RESULTS: A significant decrease in 9L cell proliferation and viability and a significant increase in apoptosis and caspase-3 activation were demonstrated on ErPC3 treatment in cell culture. In the rat model, ErPC3 administration resulted in significant changes in (18)F-DPA-714 tumor uptake over the course of the treatment. Immunohistochemistry revealed reduced tumor volume and increased cell death in ErPC3-treated animals accompanied by infiltration of the tumor core by CD11b-positive microglia/macrophages and glial fibrillary acidic protein-positive astrocytes. CONCLUSION: Our findings demonstrate a potent antitumor effect of ErPC3 in vitro, in vivo, and ex vivo. PET imaging of TSPO expression using (18)F-DPA-714 allows effective monitoring and quantification of disease progression and response to ErPC3 therapy in intracranial 9L gliomas.

[142]

**TÍTULO / TITLE:** - Prolactinoma ErbB receptor expression and targeted therapy for aggressive tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocrine. 2013 Nov 28.

●● Enlace al texto completo (gratis o de pago) [1007/s12020-013-0093-x](#)

**AUTORES / AUTHORS:** - Cooper O; Mamelak A; Bannykh S; Carmichael J; Bonert V; Lim S; Cook-Wiens G; Ben-Shlomo A

**INSTITUCIÓN / INSTITUTION:** - Pituitary Center, Cedars-Sinai Medical Center, 8700 Beverly Blvd., B-131, Los Angeles, CA, 90048, USA, [coopero@cshs.org](mailto:coopero@cshs.org).

**RESUMEN / SUMMARY:** - As ErbB signaling is a determinant of prolactin synthesis, role of ErbB receptors was tested for prolactinoma outcomes and therapy. The objective of this study was to characterize ErbB receptor expression in prolactinomas and then perform a pilot study treating resistant prolactinomas with a targeted tyrosine kinase inhibitor (TKI). Retrospective analysis of prolactinomas and pilot study for dopamine agonist resistant prolactinomas in tertiary referral center. We performed immunofluorescent staining of a tissue array of 29 resected prolactinoma tissues for EGFR, ErbB2, ErbB3, and ErbB4 correlated with clinical features. Two patients with aggressive resistant prolactinomas enrolled and completed trial. They received lapatinib 1,250 mg daily for 6 months with tumor and hormone assessments. Main outcome measures were positive tumor staining of respective ErbB receptors, therapeutic reduction of prolactin levels and tumor shrinkage. Treated PRL levels and tumor volumes were suppressed in both subjects treated with TKI. EGFR expression was positive in 82 % of adenomas, ErbB2 in 92 %, ErbB3 in 25 %, and ErbB4 in 71 %, with ErbB2 score > EGFR > ErbB4 > ErbB3. Higher ErbB3 expression was associated with optic chiasm compression (p = 0.03), suprasellar extension (p = 0.04), and carotid artery encasement (p = 0.01). Higher DA response rates were observed in tumors with higher ErbB3 expression. Prolactinoma expression of specific ErbB receptors is associated with tumor invasion, symptoms, and response to dopamine agonists. Targeting ErbB receptors may be effective therapy in patients with resistant prolactinomas.

[143]

**TÍTULO / TITLE:** - Malignant astrocytoma in elderly patients: where do we stand?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Neurol. 2013 Dec;26(6):693-700. doi: 10.1097/WCO.000000000000037.

●● Enlace al texto completo (gratis o de pago)

[1097/WCO.000000000000037](#)

**AUTORES / AUTHORS:** - Tabatabai G; Stupp R; Wick W; Weller M

**INSTITUCIÓN / INSTITUTION:** - aDepartment of Neurology bDepartment of Medical Oncology, University Hospital Zurich, Zurich, Switzerland cDepartment of Neurooncology, National Center for Tumor Disease and Neurology Clinic, University Hospital Heidelberg, German Cancer Consortium (DKTK), German Cancer Research Center (DKFZ), Heidelberg, Germany.

**RESUMEN / SUMMARY:** - **PURPOSE OF REVIEW:** Age is inversely correlated with clinical outcome and a strong prognostic factor for the course of most primary brain tumors including malignant astrocytoma, i.e. anaplastic astrocytoma and glioblastoma. We here review available clinical outcome data and discuss future directions of clinical research. **RECENT FINDINGS:** The standard of care in patients with malignant astrocytoma above the range of 65-70 years was considered radiotherapy, preferentially using a hypofractionated regimen (15 x 2.66 Gy). Two phase III clinical trials, the NOA-08 and Nordic trials, demonstrated that temozolomide (TMZ) therapy alone was not inferior to radiotherapy alone, and methylation of the O-methylguanine-DNA-methyltransferase (MGMT) gene promoter was predictive with a methylated MGMT promoter indicating a benefit from TMZ chemotherapy. Ongoing clinical trials in this patient population include the National Cancer Institute of Canada/European Organisation for Research and Treatment of Cancer intergroup trial, investigating the combination of hypofractionated radiotherapy and TMZ chemotherapy, and the Swiss ARTE trial, investigating the combination of bevacizumab and hypofractionated radiotherapy. Recent translational studies indicate that prognostically favorable factors in malignant astrocytoma from younger patients are virtually absent in the elderly. **SUMMARY:** Current standard of care for elderly patients with malignant astrocytoma involves a treatment strategy based on the MGMT gene promoter methylation status. The role of combined radiotherapy and TMZ chemotherapy and a potential role for the addition of anti-VEGF therapy to radiotherapy are currently addressed in ongoing trials. The lack of favorable prognostic factors in tumor tissue might in part explain the poorer clinical outcome of elderly patients.

[144]

**TÍTULO / TITLE:** - In vivo detection of citrate in brain tumors by H magnetic resonance spectroscopy at 3T.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Magn Reson Med. 2013 Oct 1. doi: 10.1002/mrm.24946.

●● Enlace al texto completo (gratis o de pago) [1002/mrm.24946](#)

**AUTORES / AUTHORS:** - Choi C; Ganji SK; Madan A; Hulsey KM; An Z; Zhang S; Pinho MC; Deberardinis RJ; Bachoo RM; Maher EA

**INSTITUCIÓN / INSTITUTION:** - Advanced Imaging Research Center, University of Texas Southwestern Medical Center, Dallas, Texas, USA; Department of Radiology, University of Texas Southwestern Medical Center, Dallas, Texas, USA; Harold C. Simmons Cancer Center, University of Texas Southwestern Medical Center, Dallas, Texas, USA.

**RESUMEN / SUMMARY:** - **PURPOSE:** To test whether citrate is elevated in adult patients with gliomas using <sup>1</sup>H magnetic resonance spectroscopy (MRS) at 3T in vivo. **METHODS:** Thirty-four adult patients were enrolled in the study, including six subjects with glioblastomas, eight subjects with astrocytomas (World Health Organization grade 3, n = 5; grade 2, n = 3), and 20 subjects with oligodendrogliomas (grade 3, n = 5; grade 2, n = 15). Five healthy volunteers were studied for baseline citrate data. Single-voxel localized spectra were collected with point-resolved spectroscopy (PRESS) echo times of 35 and 97 ms and were analyzed with LCModel software using numerically calculated basis spectra that included the effects of the PRESS radiofrequency and gradient pulses. **RESULTS:** Citrate was not measurable by MRS in healthy brain but was detected in tumor patients at both echo times. The citrate concentration was estimated to be as high as 1.8 mM with reference to water at 42 M, with Cramer-Rao lower bounds (CRLB) as low as 5%. The mean citrate level was 0.7 +/- 0.4 mM (mean +/- SD, n = 32) with a median CRLB of approximately 12%. No correlation was identified between citrate concentration and tumor grade or histological type. **CONCLUSION:** Citrate was increased in the majority of gliomas in adult patients. The elevated citrate in our data indicates an altered metabolic state of tumor relative to healthy brain. Magn Reson Med, 2013. © 2013 Wiley Periodicals, Inc.

[145]

**TÍTULO / TITLE:** - The importance of testing colour vision in identifying brain tumours in children.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMJ. 2013 Nov 6;347:f6600. doi: 10.1136/bmj.f6600.

**AUTORES / AUTHORS:** - Georgalas I; Pagoulatos D; Rouvas A; Koutsandrea C

**INSTITUCIÓN / INSTITUTION:** - Department of Ophthalmology, University of Athens, Athens, Greece.

[146]

**TÍTULO / TITLE:** - Innovative fluorescent magnetic albumin microbead-assisted cell labeling and intracellular imaging of glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biosens Bioelectron. 2013 Nov 1;54C:55-63. doi: 10.1016/j.bios.2013.10.041.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.bios.2013.10.041](#)

**AUTORES / AUTHORS:** - Wang X; Wei F; Yan S; Zhang H; Tan X; Zhang L; Zhou G; Cui L; Li C; Wang L; Li Y

**INSTITUCIÓN / INSTITUTION:** - College of Bioengineering, Henan University of Technology, Zhengzhou, Henan 450001, PR China. Electronic address: [wangxq0108@gmail.com](mailto:wangxq0108@gmail.com).

**RESUMEN / SUMMARY:** - Superparamagnetic nanoparticle-based polymer microbeads utilized as carriers are attractive materials widely applied in the biomedical field. However, the deficiency of toxicity, biocompatibility, and biodegradability for polymer materials often limits the application of these microbeads. In the present study, magnetic albumin microbeads (MAMbs), i.e., human serum albumin-coated gamma-Fe<sub>2</sub>O<sub>3</sub> nanoparticles, are synthesized to label human U251 glioblastoma multiforme cells. The effects of MAMbs on the biological behavior of U251 glioblastoma cells, including their proliferation, cell viability, cytoskeletal structure, cell cycle, and apoptosis rate, are investigated. Moreover, fluorescein isothiocyanate (FITC)-MAMbs are fabricated by reaction with fluorescent dye FITC used for intracellular imaging of U251 glioblastoma cells. MAMbs possess undetectable cytotoxicity and excellent biocompatibility with U251 glioblastoma cells, as demonstrated by the biological behavior and morphology of U251 cells exposed to MAMbs. Furthermore, the constructed fluorescent MAMbs allow effective intracellular imaging, as illustrated by fluorescence microscopic analysis. The fabricated fluorescent MAMbs have promising perspectives in biomedical research, especially in cell-targeted labeling and intracellular fluorescence magnetic dual-mode imaging in cancer-targeted diagnosis and therapy.

[147]

**TÍTULO / TITLE:** - Platelet-derived growth factor BB mediates the glioma-induced migration of bone marrow-derived mesenchymal stem cells by promoting the expression of vascular cell adhesion molecule-1 through the PI3K, P38 MAPK and NF-kappaB pathways.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Dec;30(6):2755-64. doi: 10.3892/or.2013.2780. Epub 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2780](#)

**AUTORES / AUTHORS:** - Hu Y; Cheng P; Ma JC; Xue YX; Liu YH

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Shengjing Hospital of China Medical University, Shenyang, Liaoning 110004, P.R. China.

**RESUMEN / SUMMARY:** - Platelet-derived growth factor BB (PDGFBB) has been shown to activate the migration of bone marrow-derived mesenchymal stem cells (BM-MSCs), and to contribute to mediating the tropism of BM-MSCs towards gliomas. However, the exact mechanism of this migratory behavior remains to be elucidated. The present study investigated the role of vascular cell adhesion molecule-1 (VCAM-1) in the PDGFBB-induced migration of BM-MSCs, the effect of PDGFBB on VCAM-1 expression of BM-MSCs and related signaling pathways involved in this process. Rat BM-MSCs were isolated and cultured by their characteristics of adherence to plastics. The concentrations of PDGFBB in the conditioned medium of C6 and U87 cells were measured using the ELISA method. In vitro migration assays using a VCAM-1 blocking antibody were performed to evaluate the role of VCAM-1 in PDGFBB-induced migration of BM-MSCs. The effect of rat recombinant PDGFBB on VCAM-1 expression of BM-MSCs was studied by RT-PCR and western blotting. LY294002, SB203580, PD98059, SP600125 and BAY11-7082 were used to explore the role of PI3K, p38 MAPK, MEK, JNK and NF-kappaB in the related intracellular signal transduction of PDGFBB stimulation on VCAM-1 expression of BM-MSCs. The data demonstrated that

the neutralization of VCAM-1 inhibited the migration of BM-MSCs induced by PDGFBB. Additionally, PDGFBB stimulation increased VCAM-1 expression of BM-MSCs, which could be inhibited by LY294002, SB203580 and BAY11-7082. It is reasonable to conclude that PDGFBB significantly enhanced the expression of VCAM-1 in BM-MSCs, which facilitated the migration of BM-MSCs towards PDGFBB. PI3K, p38 MAPK and NF-kappaB were involved in the signal transduction of this process.

[148]

**TÍTULO / TITLE:** - Clinical and Magnetic Resonance Imaging (MRI) Distinctions Between Tumefactive Demyelination and Brain Tumors in Children.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Child Neurol. 2013 Oct 3.

●● Enlace al texto completo (gratis o de pago) [1177/0883073813500713](#)

**AUTORES / AUTHORS:** - Yiu EM; Laughlin S; Verhey LH; Banwell BL

**INSTITUCIÓN / INSTITUTION:** - 1Children's Neuroscience Centre, Royal Children's Hospital Melbourne, Parkville, Australia.

**RESUMEN / SUMMARY:** - Tumefactive demyelinating lesions can be difficult to distinguish from tumors. Clinical and magnetic resonance imaging features of children with tumefactive demyelination and supratentorial brain tumors were compared. Patients were identified through a 23-site national demyelinating disease study, and from a single-site neuroradiology database. For inclusion, lesions met at least 1 of 3 criteria: maximal cross-sectional diameter >20 mm, local or global cerebral mass effect, or presence of perilesional edema. Thirty-one children with tumefactive demyelination (5 with solitary lesions) were identified: 27 of 189 (14.3%) from the demyelinating disease study and 4 from the database. Thirty-three children with tumors were identified. Children with tumefactive demyelination were more likely to have an abnormal neurologic examination and polyfocal neurologic deficits compared to children with tumors. Tumefactive demyelination was distinguished from tumor by the presence of multiple lesions, absence of cortical involvement, and decrease in lesion size or detection of new lesions on serial imaging.

[149]

**TÍTULO / TITLE:** - Comprehensive analysis of the functional microRNA-mRNA regulatory network identifies miRNA signatures associated with glioma malignant progression.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nucleic Acids Res. 2013 Nov 4.

●● Enlace al texto completo (gratis o de pago) [1093/nar/gkt1054](#)

**AUTORES / AUTHORS:** - Li Y; Xu J; Chen H; Bai J; Li S; Zhao Z; Shao T; Jiang T; Ren H; Kang C; Li X

**INSTITUCIÓN / INSTITUTION:** - College of Bioinformatics Science and Technology, Harbin Medical University, Harbin 150080, China, Department of Neurosurgery, Tiantan Hospital, Capital Medical University, Beijing 100050, China, College of Fundamental Medical Sciences, Harbin Medical University, Harbin 150080, China and Department of Neurosurgery, Tianjin Medical University General Hospital, Laboratory of Neuro-Oncology, Tianjin Neurological Institute, Laboratory of Neurotrauma, Variation

and Regeneration, Ministry of Education and Tianjin Municipal Government, Tianjin 300052, China.

**RESUMEN / SUMMARY:** - Glioma is the most common and fatal primary brain tumour with poor prognosis; however, the functional roles of miRNAs in glioma malignant progression are insufficiently understood. Here, we used an integrated approach to identify miRNA functional targets during glioma malignant progression by combining the paired expression profiles of miRNAs and mRNAs across 160 Chinese glioma patients, and further constructed the functional miRNA-mRNA regulatory network. As a result, most tumour-suppressive miRNAs in glioma progression were newly discovered, whose functions were widely involved in gliomagenesis. Moreover, three miRNA signatures, with different combinations of hub miRNAs (regulations  $\geq 30$ ) were constructed, which could independently predict the survival of patients with all gliomas, high-grade glioma and glioblastoma. Our network-based method increased the ability to identify the prognostic biomarkers, when compared with the traditional method and random conditions. Hsa-miR-524-5p and hsa-miR-628-5p, shared by these three signatures, acted as protective factors and their expression decreased gradually during glioma progression. Functional analysis of these miRNA signatures highlighted their critical roles in cell cycle and cell proliferation in glioblastoma malignant progression, especially hsa-miR-524-5p and hsa-miR-628-5p exhibited dominant regulatory activities. Therefore, network-based biomarkers are expected to be more effective and provide deep insights into the molecular mechanism of glioma malignant progression.

[150]

**TÍTULO / TITLE:** - Cerebral mass in HIV infection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMJ. 2013 Oct 24;347:f6314. doi: 10.1136/bmj.f6314.

**AUTORES / AUTHORS:** - Taha H; Das S

**INSTITUCIÓN / INSTITUTION:** - Coventry and Warwickshire Partnership NHS Trust, Coventry CV1 4FS, UK.

[151]

**TÍTULO / TITLE:** - Cerebral mass in HIV infection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMJ. 2013 Nov 8;347:f6702. doi: 10.1136/bmj.f6702.

[152]

**TÍTULO / TITLE:** - Identification of Key Signaling Molecules Involved in the Activation of the Swelling-Activated Chloride Current in Human Glioblastoma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Membr Biol. 2013 Nov 16.

●● Enlace al texto completo (gratis o de pago) [1007/s00232-013-9609-9](http://1007/s00232-013-9609-9)

**AUTORES / AUTHORS:** - Catacuzzeno L; Michelucci A; Sforza L; Aiello F; Sciacaluga M; Fioretti B; Castigli E; Franciolini F

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**RESUMEN / SUMMARY:** - The swelling-activated chloride current (I<sub>Cl,Vol</sub>) is abundantly expressed in glioblastoma (GBM) cells, where it controls cell volume and invasive migration. The transduction pathway mediating I<sub>Cl,Vol</sub> activation in GBM cells is, however, poorly understood. By means of pharmacological and electrophysiological approaches, on GL-15 human GBM cells we found that I<sub>Cl,Vol</sub> activation by hypotonic swelling required the activity of a U73122-sensitive phospholipase C (PLC). I<sub>Cl,Vol</sub> activation could also be induced by the membrane-permeable diacylglycerol (DAG) analog OAG. In contrast, neither calcium (Ca<sup>2+</sup>) chelation by BAPTA-AM nor changes in PKC activity were able to affect I<sub>Cl,Vol</sub> activation by hypotonic swelling. We further found that R59022, an inhibitor of diacylglycerol kinase (DGK), reverted I<sub>Cl,Vol</sub> activation, suggesting the involvement of phosphatidic acid. In addition, I<sub>Cl,Vol</sub> activation required the activity of a EHT1864-sensitive Rac1 small GTPase and the resulting actin polymerization, as I<sub>Cl,Vol</sub> activation was prevented by cytochalasin B. We finally show that I<sub>Cl,Vol</sub> can be activated by the promigratory fetal calf serum in a PLC- and DGK-dependent manner. This observation is potentially relevant because blood serum can likely come in contact with glioblastoma cells in vivo as a result of the tumor-related partial breakdown of the blood-brain barrier. Given the relevance of I<sub>Cl,Vol</sub> in GBM cell volume regulation and invasiveness, the several key signaling molecules found in this study to be involved in the activation of the I<sub>Cl,Vol</sub> may represent potential therapeutic targets against this lethal cancer.

[153]

**TÍTULO / TITLE:** - C-Myc negatively controls the tumor suppressor PTEN by upregulating miR-26a in glioblastoma multiforme cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biochem Biophys Res Commun. 2013 Nov 8;441(1):186-90. doi: 10.1016/j.bbrc.2013.10.034. Epub 2013 Oct 15.

●● Enlace al texto completo (gratis o de pago) [1016/j.bbrc.2013.10.034](#)

**AUTORES / AUTHORS:** - Guo P; Nie Q; Lan J; Ge J; Qiu Y; Mao Q

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Ren Ji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai 200127, China.

**RESUMEN / SUMMARY:** - The c-Myc oncogene is amplified in many tumor types. It is an important regulator of cell proliferation and has been linked to altered miRNA expression, suggesting that c-Myc-regulated miRNAs might contribute to tumor progression. Although miR-26a has been reported to be upregulated in glioblastoma multiforme (GBM), the mechanism has not been established. We have shown that ectopic expression of miR-26a influenced cell proliferation by targeting PTEN, a tumor suppressor gene that is inactivated in many common malignancies, including GBM. Our findings suggest that c-Myc modulates genes associated with oncogenesis in GBM through deregulation of miRNAs via the c-Myc-miR-26a-PTEN signaling pathway. This may be of clinical relevance.

[154]

**TÍTULO / TITLE:** - Structural and expression differences between the vasculature of pilocytic astrocytomas and glioblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuropathol Exp Neurol. 2013 Dec;72(12):1171-81. doi: 10.1097/NEN.000000000000015.

●● Enlace al texto completo (gratis o de pago)

[1097/NEN.000000000000015](https://doi.org/10.1097/NEN.000000000000015)

**AUTORES / AUTHORS:** - Mustafa D; Swagemakers S; French P; Luider TM; van der Spek P; Kremer A; Kros JM

**INSTITUCIÓN / INSTITUTION:** - From the Departments of Pathology (DM, JMK), Bioinformatics (SS, PvdS, AK), and Neurology (PF, TML), Erasmus Medical Center, Rotterdam, The Netherlands.

**RESUMEN / SUMMARY:** - The identification of differences in vascular architecture and utilization of angiogenic pathways is a first step for identifying specific targets for tailored antiangiogenic therapies of brain tumor patients. Here, we compared the proliferating vasculature of 2 glioma subtypes with entirely different biologic behaviors and molecular background at the immunophenotype and gene expression levels. Proliferating vessels in 13 pilocytic astrocytomas and 8 glioblastomas were compared for differences in the composition of the vascular walls using confocal microscopy for markers of endothelial cells and pericytes/mural cells. Endothelial, pericytic, and mural cells had normal-appearing arrangements in the vessels in pilocytic astrocytomas, whereas those in glioblastomas appeared to be more disorganized. In addition, differences in expression of angiogenesis-related genes were sought in the tumor specimens using RNA expression arrays. There were 114 out of 2,894 differentially expressed angiogenesis-related genes between these 2 glioma subtypes indicating differences in the utilization of various pathways. These results point to the need for detailed information on mechanisms of neoangiogenesis in tumor subtypes to facilitate the development of specific antiangiogenic strategies.

[155]

**TÍTULO / TITLE:** - Effect of glial cell line-derived neurotrophic factor on behavior and key members of the brain serotonin system in mouse strains genetically predisposed to behavioral disorders.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Res. 2013 Dec;91(12):1628-38. doi: 10.1002/jnr.23286. Epub 2013 Sep 16.

●● Enlace al texto completo (gratis o de pago) [1002/jnr.23286](https://doi.org/10.1002/jnr.23286)

**AUTORES / AUTHORS:** - Naumenko VS; Bazovkina DV; Semenova AA; Tsybko AS; Il'chibaeva TV; Kondaurova EM; Popova NK

**INSTITUCIÓN / INSTITUTION:** - Department of Behavioral Neurogenomics, Institute of Cytology and Genetics, Siberian Division of the Russian Academy of Science, Novosibirsk, Russia.

**RESUMEN / SUMMARY:** - The effect of glial cell line-derived neurotrophic factor (GDNF) on behavior and on the serotonin (5-HT) system of a mouse strain predisposed to depressive-like behavior, ASC/lcg (Antidepressant Sensitive Cataleptics), in comparison with the parental "nondepressive" CBA/Lac mice was studied. Within 7 days after acute administration, GDNF (800 ng, i.c.v.) decreased cataleptic immobility but increased depressive-like behavioral traits in both investigated mouse strains and produced anxiolytic effects in ASC mice. The expression of the gene encoding the key enzyme for 5-HT biosynthesis in the brain, tryptophan

hydroxylase-2 (Tph-2), and 5-HT1A receptor gene in the midbrain as well as 5-HT2A receptor gene in the frontal cortex were increased in GDNF-treated ASC mice. At the same time, GDNF decreased 5-HT1A and 5-HT2A receptor gene expression in the hippocampus of ASC mice. GDNF failed to change Tph2, 5-HT1A, or 5-HT2A receptor mRNA levels in CBA mice as well as 5-HT transporter gene expression and 5-HT1A and 5-HT2A receptor functional activity in both investigated mouse strains. The results show 1) a GDNF-induced increase in the expression of key genes of the brain 5-HT system, Tph2, 5-HT1A, and 5-HT2A receptors, and 2) significant genotype-dependent differences in the 5-HT system response to GDNF treatment. The data suggest that genetically defined cross-talk between neurotrophic factors and the brain 5-HT system underlies the variability in behavioral response to GDNF. © 2013 Wiley Periodicals, Inc.

[156]

**TÍTULO / TITLE:** - Adult symptomatic and growing arachnoid cyst successfully treated by ventriculocystostomy: A new insight on adult arachnoid cyst history.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurochirurgie. 2013 Nov 5. pii: S0028-3770(13)00095-7. doi: 10.1016/j.neuchi.2013.09.001.

●● Enlace al texto completo (gratis o de pago) [1016/j.neuchi.2013.09.001](#)

**AUTORES / AUTHORS:** - Graillon T; Metellus P; Adetchessi T; Dufour H; Fuentes S

**INSTITUCIÓN / INSTITUTION:** - Aix-Marseille universite, 13284 Marseille, France; Service de neurochirurgie, hopital la Timone Adulte, AP-HM, rue Saint-Pierre, 13385 Marseille cedex 5, France. Electronic address: [Thomas.Graillon@ap-hm.fr](mailto:Thomas.Graillon@ap-hm.fr).

**RESUMEN / SUMMARY:** - BACKGROUND: Adult arachnoid cysts are known to be stable and asymptomatic but their history remains undefined. CASE DESCRIPTION: The authors report the case of an 81-year-old woman with progressive hemiplegia and aphasia. CT scan revealed a voluminous left frontotemporal arachnoid cyst with a major mass effect on the midline and contralateral blocked hydrocephalus. Endoscopic ventriculocystostomy was performed with a spectacular neurological improvement. DISCUSSION AND CONCLUSIONS: Symptomatic adult arachnoid cysts are extremely rare. To our knowledge, no similar clinical case of a growing arachnoid cyst in elderly patients has yet been reported in the literature. The mechanisms of cyst enlargement and decompensation still remain undefined and debated. The possibility of adult arachnoid cyst growth has to be considered in clinical practice. Endoscopic ventriculocystostomy is as effective as in paediatric cases.

[157]

**TÍTULO / TITLE:** - Cidofovir: a novel antitumor agent for glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 Dec 1;19(23):6473-83. doi: 10.1158/1078-0432.CCR-13-1121. Epub 2013 Oct 29.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-](#)

[1121](#)

**AUTORES / AUTHORS:** - Hadaczek P; Ozawa T; Soroceanu L; Yoshida Y; Matlaf L; Singer E; Fiallos E; James CD; Cobbs CS

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: California Pacific Medical Center Research Institute; and Department of Neurological Surgery, Helen Diller Cancer Center, University of California, San Francisco, California, Swedish Neuroscience Institute, Seattle, WA.

**RESUMEN / SUMMARY:** - PURPOSE: Cidofovir (CDV) is an U.S. Food and Drug Administration (FDA)-approved nucleoside antiviral agent used to treat severe human cytomegalovirus (HCMV) infection. Until now, no clear therapeutic effects of CDV have been reported outside of the setting of viral infection, including a potential role for CDV as an antineoplastic agent for the treatment of brain tumors. EXPERIMENTAL DESIGN: We investigated the cytotoxicity of CDV against the glioblastoma cells, U87MG and primary SF7796, both in vitro and in vivo, using an intracranial xenograft model. Standard techniques for cell culturing, immunohistochemistry, Western blotting, and real-time PCR were employed. The survival of athymic mice (n = 8-10 per group) bearing glioblastoma tumors, treated with CDV alone or in combination with radiation, was analyzed by the Kaplan-Meier method and evaluated with a two-sided log-rank test. RESULTS: CDV possesses potent antineoplastic activity against HCMV-infected glioblastoma cells. This activity is associated with the inhibition of HCMV gene expression and with activation of cellular apoptosis. Surprisingly, we also determined that CDV induces glioblastoma cell death in the absence of HCMV infection. CDV is incorporated into tumor cell DNA, which promotes double-stranded DNA breaks and induces apoptosis. In the setting of ionizing radiotherapy, the standard of care for glioblastoma in humans, CDV augments radiation-induced DNA damage and, further, promotes tumor cell death. Combination therapy with CDV and radiotherapy significantly extended the survival of mice bearing intracranial glioblastoma tumors. CONCLUSION: We have identified a novel antiglioma property of the FDA-approved drug CDV, which heightens the cytotoxic effect of radiotherapy, the standard of care therapy for glioblastoma. Clin Cancer Res; 19(23); 6473-83. ©2013 AACR.

[158]

**TÍTULO / TITLE:** - Long-term evaluation of radiation-induced optic neuropathy after single-fraction stereotactic radiosurgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Radiat Oncol Biol Phys. 2013 Nov 1;87(3):524-7. doi: 10.1016/j.ijrobp.2013.06.2047.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.ijrobp.2013.06.2047](#)

**AUTORES / AUTHORS:** - Leavitt JA; Stafford SL; Link MJ; Pollock BE

**INSTITUCIÓN / INSTITUTION:** - Department of Ophthalmology, Mayo Clinic and Foundation, Rochester, Minnesota. Electronic address: [leavitt.jacqueline@mayo.edu](mailto:leavitt.jacqueline@mayo.edu).

**RESUMEN / SUMMARY:** - PURPOSE: To determine the long-term risk of radiation-induced optic neuropathy (RION) in patients having single-fraction stereotactic radiosurgery (SRS) for benign skull base tumors. METHODS AND MATERIALS: Retrospective review of 222 patients having Gamma Knife radiosurgery for benign tumors adjacent to the anterior visual pathway (AVP) between 1991 and 1999. Excluded were patients with prior or concurrent external beam radiation therapy or SRS. One hundred twenty-nine patients (58%) had undergone previous surgery. Tumor types included confirmed World Health Organization grade 1 or presumed cavernous sinus meningioma (n=143), pituitary adenoma (n=72), and

craniopharyngioma (n=7). The maximum dose to the AVP was  $\leq 8.0$  Gy (n=126), 8.1-10.0 Gy (n=39), 10.1-12.0 Gy (n=47), and  $>12$  Gy (n=10). RESULTS: The mean clinical and imaging follow-up periods were 83 and 123 months, respectively. One patient (0.5%) who received a maximum radiation dose of 12.8 Gy to the AVP developed unilateral blindness 18 months after SRS. The chance of RION according to the maximum radiation dose received by the AVP was 0 (95% confidence interval [CI] 0-3.6%), 0 (95% CI 0-10.7%), 0 (95% CI 0-9.0%), and 10% (95% CI 0-43.0%) for patients receiving  $\leq 8$  Gy, 8.1-10.0 Gy, 10.1-12.0 Gy, and  $>12$  Gy, respectively. The overall risk of RION in patients receiving  $>8$  Gy to the AVP was 1.0% (95% CI 0-6.2%). CONCLUSIONS: The risk of RION after single-fraction SRS in patients with benign skull base tumors who have no prior radiation exposure is very low if the maximum dose to the AVP is  $\leq 12$  Gy. Physicians performing single-fraction SRS should remain cautious when treating lesions adjacent to the AVP, especially when the maximum dose exceeds 10 Gy.

[159]

**TÍTULO / TITLE:** - Deriving therapies for children with primary CNS tumors using pharmacokinetic modeling and simulation of cerebral microdialysis data.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eur J Pharm Sci. 2013 Nov 20. pii: S0928-0987(13)00449-1. doi: 10.1016/j.ejps.2013.11.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.ejps.2013.11.010](#)

**AUTORES / AUTHORS:** - Jacus MO; Throm SL; Turner DC; Patel YT; Freeman BB 3<sup>rd</sup>; Morfouace M; Boulos N; Stewart CF

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmaceutical Sciences, St. Jude Children's Research Hospital, Memphis, TN 38105, USA.

**RESUMEN / SUMMARY:** - The treatment of children with primary central nervous system (CNS) tumors continues to be a challenge despite recent advances in technology and diagnostics. In this overview, we describe our approach for identifying and evaluating active anticancer drugs through a process that enables rational translation from the lab to the clinic. The preclinical approach we discuss uses tumor subgroup-specific models of pediatric CNS tumors, cerebral microdialysis sampling of tumor extracellular fluid (tECF), and pharmacokinetic modeling and simulation to overcome challenges that currently hinder researchers in this field. This approach involves performing extensive systemic (plasma) and target site (CNS tumor) pharmacokinetic studies. Pharmacokinetic modeling and simulation of the data derived from these studies are then used to inform future decisions regarding drug administration, including dosage and schedule. Here, we also present how our approach was used to examine two FDA approved drugs, simvastatin and pemetrexed, as candidates for new therapies for pediatric CNS tumors. We determined that due to unfavorable pharmacokinetic characteristics and insufficient concentrations in tumor tissue in a mouse model of ependymoma, simvastatin would not be efficacious in further preclinical trials. In contrast to simvastatin, pemetrexed was advanced to preclinical efficacy studies after our studies determined that plasma exposures were similar to those in humans treated at similar tolerable dosages and adequate unbound concentrations were found in tumor tissue of medulloblastoma-bearing mice. Generally speaking, the high clinical failure rates for CNS drug candidates can be partially

explained by the fact that therapies are often moved into clinical trials without extensive and rational preclinical studies to optimize the transition. Our approach addresses this limitation by using pharmacokinetic and pharmacodynamic modeling of data generated from appropriate in vivo models to support the rational testing and usage of innovative therapies in children with CNS tumors.

[160]

**TÍTULO / TITLE:** - Virological Diagnosis of Central Nervous System Infections using PCR coupled with Mass Spectrometry Analysis of CSF samples.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Microbiol. 2013 Nov 6.

●● Enlace al texto completo (gratis o de pago) [1128/JCM.02270-13](#)

**AUTORES / AUTHORS:** - Leveque N; Legoff J; Mengelle C; Mercier-Delarue S; N' Guyen Y; Renois F; Tissier F; Simon F; Izopet J; Andreoletti L

**INSTITUCIÓN / INSTITUTION:** - Clinical and Molecular Virology Unit, University Hospital and EA-4684 Cardiovir SFR-CAP sante, Faculty of Medicine, Reims, France.

**RESUMEN / SUMMARY:** - Viruses are the leading cause of central nervous system (CNS) infections ahead of bacteria, parasites and fungal agents. A rapid and comprehensive virologic diagnostic testing method is needed to improve the therapeutic management of hospitalized pediatric or adult patients. In this study, we assessed the clinical performances of PCR amplification coupled with electrospray ionization/time-of-flight mass spectrometry analysis (PCR-MS) for the diagnosis of viral CNS infections. Three hundred and twenty-seven cerebrospinal fluid (CSF) samples prospectively tested by routine PCR assays between 2004 and 2012 in two University Hospital Centres (Toulouse and Reims, France), were retrospectively analyzed by PCR-MS analysis using primers targeted to adenovirus, Human Herpesviruses (HHV1-8), Polyomaviruses BK and JC, Parvovirus B19 and enterovirus (EV). PCR-MS detected single or multiple virus infections in 190 (83%) of the 229 samples tested positive by routine PCR analysis and in 10 (10.2%) of the 98 tested negative samples. PCR-MS results correlated well with HSV1, VZV and EV detection by routine PCR assays (Kappa tests= 0.80 [0.69-0.92; 95%], 0.85 [0.71-0.98; 95%] and 0.84 [0.78-0.90; 95%], respectively), whereas a weak correlation was observed with EBV (0.34 [0.10-0.58; 95%]). Twenty-six co-infections and 16 uncommon neurotropic viruses (HHV7 (n=13), Parvovirus B19 (n=2) and adenovirus (n=1)) were identified by the PCR-MS analysis whereas only 4 co-infections had been prospectively evidenced using routine PCR assays (P<0.01). In conclusion, our results demonstrated that PCR-MS analysis is a valuable tool to identify common neurotropic viruses in CSF with, however, limitations that were identified regarding EBV and EV detection, and may be of major interest to better understanding the clinical impact of multiple or neglected virus neurological infections.

[161]

**TÍTULO / TITLE:** - Peptide Receptor Radionuclide Therapy With <sup>177</sup>Lu DOTATATE in a Case of Recurrent Carotid Body Paraganglioma With Spinal Metastases.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Nov 7.

- Enlace al texto completo (gratis o de pago)

[1097/RLU.0000000000000273](https://doi.org/10.1097/RLU.0000000000000273)

**AUTORES / AUTHORS:** - Gupta SK; Singla S; Karunanithi S; Damle N; Bal C

**INSTITUCIÓN / INSTITUTION:** - From the Department of Nuclear Medicine, All India Institute of Medical Sciences, New Delhi, India.

**RESUMEN / SUMMARY:** - Paragangliomas are rare benign neuroendocrine tumors, and 80% of all paragangliomas are either carotid body tumors or glomus jugulare tumors. We present a case of recurrent unresectable carotid body paraganglioma with nodal and T7 vertebral metastases in a 30-year-old man 6 years postsurgery detected with Ga DOTANOC PET/CT and was administered with peptide receptor radionuclide therapy using Lu DOTATATE. After 5 cycles of Lu DOTATATE (total cumulative activity of 750 mCi [27 GBq]), significant response at the primary site on Ga DOTANOC PET/CT and complete disappearance of nodal and T7 vertebral metastases were noted.

[162]

**TÍTULO / TITLE:** - Teaching NeuroImages: FDG-PET imaging in primary diffuse leptomeningeal gliomatosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurology. 2013 Oct 15;81(16):e119-20. doi: 10.1212/WNL.0b013e3182a840db.

- Enlace al texto completo (gratis o de pago)

[1212/WNL.0b013e3182a840db](https://doi.org/10.1212/WNL.0b013e3182a840db)

**AUTORES / AUTHORS:** - Weijenberg A; van Dijk JM; Pruijm J; Lijckx GJ

**INSTITUCIÓN / INSTITUTION:** - From the Departments of Neurology (A.W., G.-J.L.), Neurosurgery (J.M.C.v.D.), and Nuclear Medicine (J.P.), University Medical Center Groningen, University of Groningen, the Netherlands.

[163]

**TÍTULO / TITLE:** - Spinal meningioma diagnosis based on transesophageal endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rev Esp Enferm Dig. 2013 Sep;105(8):500-501.

**AUTORES / AUTHORS:** - Reyna C; Viudez A; Lozano MD; Echeveste J; Zarate R; Bastarrika G; Broncano J; Subtil JC

[164]

**TÍTULO / TITLE:** - Central Nervous System Involvement in Diffuse Large B-cell Lymphoma: An Analysis of Risks and Prevention Strategies in the Post-Rituximab Era.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Leuk Lymphoma. 2013 Nov 29.

- Enlace al texto completo (gratis o de pago) [3109/10428194.2013.869326](https://doi.org/10.3109/10428194.2013.869326)

**AUTORES / AUTHORS:** - Fletcher CD; Kahl BS

**RESUMEN / SUMMARY:** - ABSTRACT Central nervous system (CNS) relapse in patients with diffuse large B-cell lymphoma (DLBCL) occurs infrequently (approximately

5%), but is almost universally fatal. Controversy exists regarding which factors most reliably identify high-risk patients in the post-rituximab era. Clarification is also needed regarding the value of prophylaxis strategies when contemporary rituximab-based chemotherapy regimens (chemoimmunotherapy) are used. A systematic review with focus on the era of chemoimmunotherapy was performed. Involvement of >1 extranodal site plus an elevated lactate dehydrogenase level identify individuals at highest risk (> 20%) for CNS recurrence who merit additional evaluation. Only certain solitary extranodal sites (testis, kidney and breast, but not bones, orbit, or epidural space) appear to confer higher risk in patients receiving chemoimmunotherapy. Data from studies employing modern regimens suggest that intrathecal prophylaxis is ineffective even for high risk populations. Systemic prophylaxis (e.g. high dose methotrexate) may be useful, but does not have strong support in the literature. A significant portion of patients with high-risk features (approximately 25%) may already have subclinical CNS disease which requires alternate detection and treatment strategies. Flow cytometry is a promising approach with increased sensitivity. Widespread use of this approach could redefine what risk and prophylaxis mean. An algorithm for incorporating risk factors, evaluation and treatment is presented.

[165]

**TÍTULO / TITLE:** - Central nervous system involvement in chronic lymphocytic leukemia: uncommon manifestation with undefined therapeutic management.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Leuk Lymphoma. 2013 Nov 17.

●● Enlace al texto completo (gratis o de pago) [3109/10428194.2013.858152](#)

**AUTORES / AUTHORS:** - Michallet AS; Rossi C; Brisou G; Baseggio L; Roch J; Safar V; Karlin L; Sesques P; Bouafia-Sauvy F; Lebras L; Coiffier B; Salles G

[166]

**TÍTULO / TITLE:** - Oligodendrogloma cells synthesize the differentiation-specific linker histone H1 and release it into the extracellular environment through shed vesicles.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Oncol. 2013 Dec;43(6):1771-6. doi: 10.3892/ijo.2013.2115. Epub 2013 Oct 1.

●● Enlace al texto completo (gratis o de pago) [3892/ijo.2013.2115](#)

**AUTORES / AUTHORS:** - Schiera G; Di Liegro CM; Saladino P; Pitti R; Savettieri G; Proia P; Di Liegro I

**INSTITUCIÓN / INSTITUTION:** - Dipartimento di Scienze e Tecnologie Biologiche Chimiche e Farmaceutiche (STEBICEF), Università degli Studi di Palermo, Palermo, Italy.

**RESUMEN / SUMMARY:** - Chromatin remodelling can be involved in some of the epigenetic modifications found in tumor cells. One of the mechanisms at the basis of chromatin dynamics is likely to be synthesis and incorporation of replacement histone variants, such as the H1 linker histone. Regulation of the expression of this protein can thus be critical in tumorigenesis. In developing brain, H1 expression is mainly regulated at the post-transcriptional level and RNA-binding proteins (RBPs) are involved. In the past, attention mainly focused on the whole brain or isolated neurons and little

information is available on H1 expression in other brain cells. Even less is known relating to tumor glial cells. In this study we report that, like in maturing brain and isolated neurons, H1 synthesis sharply increases in differentiating astrocytes growing in a serum-free medium, while the corresponding mRNA decreases. Unexpectedly, in tumor glial cells both H1 RNA and protein are highly expressed, in spite of the fact that H1 is considered a differentiation-specific histone variant. Persistence of H1 mRNA in oligodendroglioma cells is accompanied by high levels of H1 RNA-binding activities which seem to be present, at least in part, also in actively proliferating, but not in differentiating, astrocytes. Finally, we report that oligodendroglioma cells, but not astrocytes, release H1 protein into the culture medium by shedding extracellular vesicles. These findings suggest that deregulation of H1 histone expression can be linked to tumorigenesis.

[167]

**TÍTULO / TITLE:** - Expression of somatostatin receptors, SSTR and SSTR, in 108 endocrine pituitary tumors using immunohistochemical detection with new specific monoclonal antibodies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Hum Pathol. 2013 Oct 31. pii: S0046-8177(13)00343-2. doi: 10.1016/j.humpath.2013.08.007.

●● Enlace al texto completo (gratis o de pago) [1016/j.humpath.2013.08.007](#)

**AUTORES / AUTHORS:** - Chinezu L; Vasiljevic A; Jouanneau E; Francois P; Borda A; Trouillas J; Raverot G

**INSTITUCIÓN / INSTITUTION:** - Department of Histology, University of Medicine and Pharmacy, 540139 Tirgu Mures, Romania.

**RESUMEN / SUMMARY:** - Medical treatment of endocrine pituitary tumors with somatostatin analogs depends on tumor type and somatostatin receptor (SSTR) expression. Immunohistochemical detection of these receptors using polyclonal antibodies has given conflicting results. We studied the expression of SSTR2A and SSTR5 with new procedures in 108 pituitary tumors. Using 2 new, specific monoclonal antibodies (clone UMB-1 and UMB-4), 2 fixatives (Bouin-Hollande and zinc-formalin) and 2 technical procedures (manual and automated), SSTR2A and SSTR5 expression was studied in 60 GH (growth hormone), 15 ACTH (adrenocorticotrophic hormone), 23 FSH/LH (follicle-stimulating hormone/luteinizing hormone), 7 PRL (prolactin), and 3 TSH (thyroid-stimulating hormone) tumors. Only membrane staining was taken into account, and the SSTR expression was considered positive when more than 5% of the cells were immunoreactive. GH tumors were classified as GH or GH/PRL, densely or sparsely granulated, and into 3 groups according to the percentage of SSTR-immunoreactive cells (group 1: <25%; group 2: 25%-75%; group 3: >75%). Almost all GH tumors expressed SSTR2A (93%) and SSTR5 (83%) at high levels (group 3: >75%) in 52% and 37%, respectively. SSTR2A expression was significantly higher in densely than in sparsely granulated tumors. Moreover, SSTR2A was also expressed in the 3 TSH tumors and weakly expressed in 26% of the FSH/LH tumors, although not in ACTH or PRL tumors. SSTR5 expression was noted in 2 of the 3 TSH tumors, in only 20% of ACTH tumors, and was absent from FSH/LH and PRL tumors. The immunohistochemical detection of SSTR is a reproducible and specific method that could help direct the choice of postoperative medical treatment.

[168]

**TÍTULO / TITLE:** - Reduced Risk of Brain Cancer Mortality from Walking and Running.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Med Sci Sports Exerc. 2013 Oct 1.

- Enlace al texto completo (gratis o de pago)

[1249/MSS.000000000000176](#)

**AUTORES / AUTHORS:** - Williams PT

**INSTITUCIÓN / INSTITUTION:** - Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, CA.

**RESUMEN / SUMMARY:** - PURPOSE: Test prospectively whether exercise is associated with lower brain cancer mortality in 111,266 runners and 42,136 walkers from the National Runners' and Walkers' Health Studies. METHODS: Hazard ratios (HR) and 95% confidence intervals (95%CI) from Cox proportional hazards analyses of mortality vs. metabolic equivalent hours per day of exercise (MET-hours/d, where one MET=3.5 ml O<sub>2</sub>/kg/min, or approximately 1 km run). RESULT: The National Death Index identified 110 brain cancer deaths during 11.7-year average follow-up. Runners and walkers were combined because the brain cancer risk reduction did not differ significantly between MET-hours/d run and MET-hours/d walked (P=0.66). When adjusted for sex, age, race, education, and cohort effects, the risk for brain cancer mortality was 43.2% lower for those who exercised  $\geq 1.8$  MET-hours/d (95%CI: 2.6% to 66.8% lower, P=0.04), and 39.8% lower for those who exercised  $\geq 3.6$  MET-hours/d (95%CI: 0.0% to 64.0% lower, P=0.05), compared to  $<1.8$  MET-hours/d at baseline. Pooling the runners and walkers who expended  $\geq 1.8$  MET-hours/d showed a 42.5% lower risk of brain cancer mortality for the entire sample, and 40.0% lower risk when three deaths that occurred within one year of the baseline survey were excluded (95%CI: 1.3% to 62.4%, P=0.04). CONCLUSION: The risk for fatal brain cancer decreased in association with running and walking energy expenditure. Our ability to detect an exercise-brain cancer relationship may relate to the use of cohorts specifically designed to detect exercise-health associations, and the calculation of exercise energy expenditure from km/day walked and run rather than time spent exercising.

[169]

**TÍTULO / TITLE:** - Optical Coherence Tomography in the Diagnosis of Optic Pathway Gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Invest Ophthalmol Vis Sci. 2013 Oct 29. pii: iovs.13-13093v1. doi: 10.1167/iov.13-13093.

- Enlace al texto completo (gratis o de pago) [1167/iov.13-13093](#)

**AUTORES / AUTHORS:** - Parozzani R; Clementi M; Kotsafti O; Miglionico G; Trevisson E; Orlando G; Pilotto E; Midena E

**INSTITUCIÓN / INSTITUTION:** - Ocular Oncology and Toxicology Research Unit, GB Bietti Foundation, IRCCS, Roma, 00198, Italy.

**RESUMEN / SUMMARY:** - Purpose: To compare visual function assessment, optic disc evaluation by indirect ophthalmoscopy and retinal nerve fibres layer analysis by optical

coherence tomography (OCT) for the screening of optic pathway gliomas in paediatric patients (2-15 years) affected by neurofibromatosis type-1. Methods: Fifty-seven consecutive patients affected by neurofibromatosis type-1 with recent (<6 months) orbital/brain MRI were included. Patients underwent visual function assessment (Hyvarinen symbols chart and/or Snellen charts) and optic disc evaluation by indirect ophthalmoscopy by experienced, masked paediatric ophthalmologists. Spectral domain-OCT was performed to assess retinal nerve fibres layer. Results: Fifteen out of fifty-seven enrolled patients were affected by MRI-proven optic pathway gliomas (26%). Visual function assessment, optic disc evaluation and retinal nerve fibres layer analysis by OCT were feasible in 84%, 95%, 88% of patients, respectively. Visual function assessment, retinal nerve fibres layer analysis and optic disc evaluation results correlate with the presence of optic pathway gliomas ( $p=0.007$ ,  $p<0.0001$  and  $p=0.03$ , respectively). Specificity and negative predictive value of each test were statistically significant in detecting OPG ( $p<0.0001$ ), whereas only RNFL analysis reached statistically significant sensitivity and positive predictive value ( $p=0.0386$ ). Conclusions: Retinal nerve fibres layer analysis assessment using spectral domain-OCT is superior to visual function assessment and optic disc evaluation as a clinical screening tool for optic pathway gliomas.

[170]

**TÍTULO / TITLE:** - Extent of resection and survival in supratentorial infiltrative low-grade gliomas: analysis of and adjustment for treatment bias.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Nov 22.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00701-013-1945-0](#)

**AUTORES / AUTHORS:** - Gousias K; Schramm J; Simon M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospital of Bonn, Sigmund-Freud-Str. 25, 53105, Bonn, Germany, [kostasgousias@yahoo.com](mailto:kostasgousias@yahoo.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Any correlation between the extent of resection and the prognosis of patients with supratentorial infiltrative low-grade gliomas may well be related to biased treatment allocation. Patients with an intrinsically better prognosis may undergo more aggressive resections, and better survival may then be falsely attributed to the surgery rather than the biology of the disease. The present study investigates the potential impact of this type of treatment bias on survival in a series of patients with low-grade gliomas treated at the authors' institution. METHODS: We conducted a retrospective study of 148 patients with low-grade gliomas undergoing primary treatment at our institution from 1996-2011. Potential prognostic factors were studied in order to identify treatment bias and to adjust survival analyses accordingly. RESULTS: Eloquence of tumor location proved the most powerful predictor of the extent of resection, i.e., the principal source of treatment bias. Univariate as well as multivariate Cox regression analyses identified the extent of resection and the presence of a preoperative neurodeficit as the most important predictors of overall survival, tumor recurrence and malignant progression. After stratification for eloquence of tumor location in order to correct for treatment bias, Kaplan-Meier estimates showed a consistent association between the degree of resection and improved survival. CONCLUSION: Treatment bias was not responsible for the correlation between extent of resection and survival observed in the present

series. Our data seem to provide further support for a strategy of maximum safe resections for low-grade gliomas.

[171]

**TÍTULO / TITLE:** - Inhibition of autophagy enhances apoptosis induced by proteasome inhibitor bortezomib in human glioblastoma U87 and U251 cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cell Biochem. 2014 Jan;385(1-2):265-75. doi: 10.1007/s11010-013-1835-z. Epub 2013 Oct 9.

●● Enlace al texto completo (gratis o de pago) [1007/s11010-013-1835-z](#)

**AUTORES / AUTHORS:** - Zhang X; Li W; Wang C; Leng X; Lian S; Feng J; Li J; Wang H

**INSTITUCIÓN / INSTITUTION:** - Affiliated Hospital of Changchun University of Traditional Chinese Medicine, Changchun, 130033, Jilin, China.

**RESUMEN / SUMMARY:** - Glioblastoma is the most aggressive cerebral gliomas. Despite advances in therapies, the prognosis is still very poor. Therefore, novel therapeutic strategies are required. As a proteasome inhibitor, bortezomib has shown its efficacy as an active antitumor agent against a variety of tumors. However, inhibition of proteasome activity leads to cell death and also induces cell autophagy, and due to the dual roles of autophagy in the survival and death of tumor cells, the effect of inhibition of autophagy on glioblastoma cells remains to be explored. We therefore assessed whether bortezomib is capable of inducing autophagy, and investigated the antitumor effect of bortezomib combined with autophagy inhibitors on human glioblastoma U251 and U87 cells. Cell viability was measured by MTT assay. The expressions of autophagy and apoptosis-related proteins were determined by Western blot analysis. U251 and U87 cells proliferation was inhibited in a dose-dependent manner. Both apoptosis and autophagy induced by bortezomib were observed in human glioblastoma U87 and U251 cells. However, when U251 and U87 cells were co-treated with bortezomib and autophagy inhibitors 3-MA or Atg7 siRNA, the autophagy inhibitors blocked the autophagy in the cells and resulted in a further inhibition of cell proliferation and a further increase in cell apoptosis as compared with that treated with bortezomib alone. These findings indicated that combination of bortezomib and autophagy inhibitors may shed new light on glioblastoma treatment.

[172]

**TÍTULO / TITLE:** - Erratum to: Retrospective analysis of treatment outcome of pediatric ependymomas in Korea: analysis of Korean multi-institutional data.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Dec;115(3):523. doi: 10.1007/s11060-013-1296-y.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1296-y](#)

**AUTORES / AUTHORS:** - Kim YJ; Kim JY; Lim do H; Park HJ; Joo J; Sung KW; Shin HJ; Kim SK; Phi JH; Kim IH; Park KD; Ahn SD; Jung J; Ra YS; Kim DS; Suh CO

**INSTITUCIÓN / INSTITUTION:** - Research Institute and Hospital, National Cancer Center, Goyang, South Korea.

[173]

**TÍTULO / TITLE:** - Malignant paraganglioma presenting with hemorrhagic stroke in a child.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatrics. 2013 Dec;132(6):e1709-14. doi: 10.1542/peds.2013-0492. Epub 2013 Nov 25.

●● Enlace al texto completo (gratis o de pago) [1542/peds.2013-0492](#)

**AUTORES / AUTHORS:** - Luiz HV; da Silva TN; Pereira BD; Santos JG; Goncalves D; Manita I; Portugal J

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**RESUMEN / SUMMARY:** - Sympathetic paragangliomas are rare catecholamine-secreting tumors of extra-adrenal origin, and their diagnosis in children is even more infrequent. They usually manifest as hypertension, palpitations, headache, sweating, and pallor. Malignant paragangliomas are identified by the presence of metastasis. Hemorrhagic stroke in the pediatric population is a life-threatening condition with several etiologies. We report here the case of a 12-year-old boy with malignant sympathetic paraganglioma presenting with hemorrhagic stroke. Severe hypertension was found and the patient evolved into a coma. Brain computed tomography scan showed right thalamus hemorrhage with intraventricular extension. After clinical improvement, further investigation revealed elevated catecholamine and metanephrine levels, and 2 abdominal tumors were identified by computed tomography. Resection of both lesions was performed, and histologic findings were consistent with paraganglioma. Multiple metastatic involvement of bones and soft tissues appeared several years later. Genetic testing identified a mutation in succinate dehydrogenase subunit B gene, with paternal transmission. (131)I-metaiodobenzylguanidine therapy was performed 3 times with no tumoral response. Our patient is alive, with adequate quality of life, 25 years after initial diagnosis. To our knowledge, this is the first pediatric case of paraganglioma presenting with hemorrhagic stroke. Intracerebral hemorrhage was probably caused by severe hypertension due to paraganglioma. Therefore, we expand the recognized clinical spectrum of the disease. Physicians evaluating children with hemorrhagic stroke, particularly if hypertension is a main symptom, should consider the possibility of catecholamine-secreting tumors. Metastatic disease is associated with succinate dehydrogenase subunit B mutations and, although some patients have poor prognosis, progression can be indolent.

[174]

**TÍTULO / TITLE:** - DRR regulates AKT activation to drive brain cancer invasion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncogene. 2013 Oct 21. doi: 10.1038/onc.2013.436.

●● Enlace al texto completo (gratis o de pago) [1038/onc.2013.436](#)

**AUTORES / AUTHORS:** - Dudley A; Sater M; Le PU; Trinh G; Sadr MS; Bergeron J; Deleavey GF; Bedell B; Damha MJ; Petrecca K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology and Neurosurgery, Montreal Neurological Institute and Hospital, McGill University, Montreal, Quebec, Canada.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most common and invasive adult brain cancer. The rapid invasion of cancer cells into the normal brain is a major cause of treatment failure, yet the mechanisms that regulate this process are poorly understood. We have identified a novel mechanism of brain cancer invasion. We show that downregulated in renal cell carcinoma (DRR), which is newly expressed in invasive gliomas, recruits AKT to focal adhesions. This DRR- induced pathological relocation of AKT bypasses commonly altered upstream signaling events and leads to AKT activation and invasion. We also developed an oligonucleotide therapeutic that reduces DRR expression and prevents glioma invasion in an in vivo preclinical model of the disease. Our findings identify DRR as a novel GBM target and show that oligonucleotides targeting DRR is a novel therapeutic approach for the treatment of DRR-positive GBMs. Oncogene advance online publication, 21 October 2013; doi:10.1038/onc.2013.436.

[175]

**TÍTULO / TITLE:** - Oncoprotein stabilization in brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncogene. 2013 Oct 28. doi: 10.1038/onc.2013.445.

- Enlace al texto completo (gratis o de pago) [1038/onc.2013.445](#)

**AUTORES / AUTHORS:** - Hede SM; Savov V; Weishaupt H; Sangfelt O; Swartling FJ

**INSTITUCIÓN / INSTITUTION:** - Department of Immunology, Genetics and Pathology, Rudbeck Laboratory, Uppsala University, Uppsala, Sweden.

**RESUMEN / SUMMARY:** - Proteins involved in promoting cell proliferation and viability need to be timely expressed and carefully controlled for the proper development of the brain but also efficiently degraded in order to prevent cells from becoming brain cancer cells. A major pathway for targeted protein degradation in cells is the ubiquitin-proteasome system (UPS). Oncoproteins that drive tumor development and tumor maintenance are often deregulated and stabilized in malignant cells. This can occur when oncoproteins escape degradation by the UPS because of mutations in either the oncoprotein itself or in the UPS components responsible for recognition and ubiquitylation of the oncoprotein. As the pathogenic accumulation of an oncoprotein can lead to effectively sustained cell growth, viability and tumor progression, it is an indisputable target for cancer treatment. The most common types of malignant brain tumors in children and adults are medulloblastoma and glioma, respectively. Here, we review different ways of how deregulated proteolysis of oncoproteins involved in major signaling cancer pathways contributes to medulloblastoma and glioma development. We also describe means of targeting relevant oncoproteins in brain tumors with treatments affecting their stability or therapeutic strategies directed against the UPS itself. Oncogene advance online publication, 28 October 2013; doi:10.1038/onc.2013.445.

[176]

**TÍTULO / TITLE:** - Recurrent craniopharyngiomas in children and adults: long-term recurrence rate and management.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Nov 19.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1938-z](http://1007/s00701-013-1938-z)

**AUTORES / AUTHORS:** - Steno J; Bizik I; Steno A; Matejcek V

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Derer's Faculty Hospital, Comenius University, Limbova 5, 811 04, Bratislava, Slovakia, [juraj.steno@fmed.uniba.sk](mailto:juraj.steno@fmed.uniba.sk).

**RESUMEN / SUMMARY:** - BACKGROUND: The significance of the majority of the factors influencing the recurrence rate (RR) of craniopharyngiomas remains unclear, and the management of this significance is controversial. The present study aimed to evaluate the influence of patient age and tumor topography on the RR, the efficacy of radiotherapy, and the safety of surgery for recurrences. METHODS: The RR was analyzed in 38 children (follow-up, 2-256 months [mean, 147.6]) and 63 adults (follow-up, 2-221 months [mean, 100.2]). The efficacy of 18 sessions of radiotherapy (13 patients) and the outcome of 52 secondary surgeries (37 patients) were evaluated. RESULTS: The RR reached 39.5 % in children and 22.2 % in adults ( $p = 0.053$ ). After radical tumor removal, the RR in children (36.7 %) was significantly higher ( $p = 0.024$ ) than that in adults (14 %). In children after radical removal of intraventricular and extraventricular craniopharyngiomas (IECs), the RR was higher (60 %;  $p = 0.071$ ) than in extraventricular (intrasellar and suprasellar; purely suprasellar extraventricular) tumors (25 %). Radical removal of 50 % of tumors was achieved (73.1 % in children; 26.9 % in adults;  $p = 0.002$ ) in 56.7 % of the first and 40.9 % of further recurrences. There was no early mortality after 52 surgeries; functional worsening (endocrine, 2; obesity, 2; visual, 3) occurred after 7/52 secondary surgeries. Recurrence occurred after 9/18 sessions of radiotherapy. CONCLUSIONS: The RR was higher in children than in adults and in IECs relative to other topographic groups. Children with IECs represent a risk group. The efficacy of radiotherapy was inconclusive. Early detection of recurrences enabled safe excision with low morbidity.

[177]

**TÍTULO / TITLE:** - Neobavaisoflavone sensitizes apoptosis via the inhibition of metastasis in TRAIL-resistant human glioma U373MG cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Life Sci. 2013 Nov 11. pii: S0024-3205(13)00682-6. doi: 10.1016/j.lfs.2013.10.035.

●● Enlace al texto completo (gratis o de pago) [1016/j.lfs.2013.10.035](http://1016/j.lfs.2013.10.035)

**AUTORES / AUTHORS:** - Kim YJ; Choi WI; Ko H; So Y; Kang KS; Kim I; Kim K; Yoon HG; Kim TJ; Choi KC

**INSTITUCIÓN / INSTITUTION:** - Natural Medicine Center, Korea Institute of Science and Technology, Gangneung, Gangwon-do, South Korea.

**RESUMEN / SUMMARY:** - AIMS: Neobavaisoflavone (NBIF), an isoflavone isolated from *Psoralea corylifolia* (Leguminosae), has striking anti-inflammatory and anti-cancer effects. NBIF inhibits the proliferation of prostate cancer in vitro and in vivo. MAIN METHODS: Tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) is a key endogenous molecule that selectively induces apoptosis in cancer cells with little or no toxicity in normal cells. However, some cancer cells, including U373MG cells, are resistant to TRAIL-mediated apoptosis. We demonstrated that the cell viability, migration and invasion assay were used in U373MG glioma cells. KEY FINDINGS: In this study, we found that NBIF sensitizes human U373MG glioma cells to TRAIL-

mediated apoptosis. Co-treatment of TRAIL and NBIF effectively induced Bid cleavage and activated caspases 3, 8, and 9. Importantly, DR5 expression was upregulated by NBIF. We also observed that the combination NBIF and TRAIL increased expression of BAX. We further demonstrate that NBIF induced TRAIL-mediated apoptosis in human glioma cells by suppressing migration and invasion, and by inhibiting anoikis resistance. SIGNIFICANCE: Taken together, our results suggest that NBIF reduces the resistance of cancer cells to TRAIL and that the combination of NBIF and TRAIL may be a new therapeutic strategy for treating TRAIL-resistant glioma cells.

[178]

**TÍTULO / TITLE:** - Gross-total resection outcomes in an elderly population with glioblastoma: a SEER-based analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 8.

●● Enlace al texto completo (gratis o de pago) [3171/2013.9.JNS13877](#)

**AUTORES / AUTHORS:** - Noorbakhsh A; Tang JA; Marcus LP; McCutcheon B; Gonda DD; Schallhorn CS; Talamini MA; Chang DC; Carter BS; Chen CC

**INSTITUCIÓN / INSTITUTION:** - School of Medicine.

**RESUMEN / SUMMARY:** - Object There is limited information on the relationship between patient age and the clinical benefit of resection in patients with glioblastoma. The purpose of this study was to use a population-based database to determine whether patient age influences the frequency that gross-total resection (GTR) is performed, and also whether GTR is associated with survival difference in different age groups. Methods The authors identified 20,705 adult patients with glioblastoma in the Surveillance, Epidemiology, and End Results (SEER) registry (1998-2009). Surgical practice patterns were defined by the categories of no surgery, subtotal resection (STR), and GTR. Kaplan-Meier and multivariate Cox regression analyses were used to assess the pattern of surgical practice and overall survival. Results The frequency that GTR was achieved in patients with glioblastoma decreased in a stepwise manner as a function of patient age (from 36% [age 18-44 years] to 24% [age  $\geq$  75];  $p < 0.001$ ). For all age groups, glioblastoma patients who were selected for and underwent GTR showed a 2- to 3-month improvement in overall survival ( $p < 0.001$ ) relative to those who underwent STR. These trends remained true after a multivariate analysis that incorporated variables including ethnicity, sex, year of diagnosis, tumor size, tumor location, and radiotherapy status. Conclusions Gross-total resection is associated with improved overall survival, even in elderly patients with glioblastoma. As such, surgical decisions should be individually tailored to the patient rather than an adherence to age as the sole clinical determinant.

[179]

**TÍTULO / TITLE:** - The safety and efficacy of magnetic nano-iron hyperthermia therapy on rat brain glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Oct 28.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1324-8](#)

**AUTORES / AUTHORS:** - Yi GQ; Gu B; Chen LK

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Zhongda Hospital, Southeast University, Nanjing, 210009, China.

**RESUMEN / SUMMARY:** - Gliomas are a group of heterogeneous primary central nervous system tumors arising from glial cells. These tumors are associated with high morbidity and mortality. New opportunities for the development of effective therapies for malignant gliomas are urgently needed. Magnetic nano-particles can heat up tumor tissues and induce the killing of cancer cells. However, the in vivo action of magnetic nano-iron hyperthermia on brain gliomas has not been widely investigated. The safety, efficacy, and suitable dose of hyperthermia therapy remain unknown. We successfully established a rat model of brain glioma by injecting C6 glioma cells into the right caudate nuclei of rats. Fixed doses (2.5, 5, or 10 mg) of magnetic nano-iron were then injected into the tumors of tumor-bearing rats. The survival time of tumor-bearing rats was subsequently observed, and imaging studies were conducted on the brain tumors. Of the 80 rats that underwent C6 glioma cell implantation, 70 exhibited decreased mobility and appetite, and wasting. Establishment of this brain glioma model was confirmed to be successful by magnetic resonance imaging. After injection of different doses of magnetic nano-iron, the survival times of the different dose groups of tumor-bearing rats were not significantly different. However, the tumor size exhibited a significant decrease with magnetic nano-iron hyperthermia therapy. Injection of various doses of magnetic nano-iron was safe in tumor-bearing rats. The effective doses were 2.5 and 5 mg. Magnetic nano-iron hyperthermia significantly shrank the brain gliomas in tumor-bearing rats.

[180]

**TÍTULO / TITLE:** - Honokiol inhibits U87MG human glioblastoma cell invasion through endothelial cells by regulating membrane permeability and the epithelial-mesenchymal transition.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Oncol. 2014 Jan;44(1):187-94. doi: 10.3892/ijo.2013.2178. Epub 2013 Nov 15.

●● Enlace al texto completo (gratis o de pago) [3892/ijo.2013.2178](#)

**AUTORES / AUTHORS:** - Joo YN; Eun SY; Park SW; Lee JH; Chang KC; Kim HJ

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmacology, School of Medicine, Institute of Health Sciences, Gyeongsang National University, Jinju, Republic of Korea.

**RESUMEN / SUMMARY:** - Glioblastoma is one of the most lethal and prevalent malignant human brain tumors, with aggressive proliferation and highly invasive properties. There is still no effective cure for patients with glioblastoma. Honokiol, derived from *Magnolia officinalis*, can cross the blood-brain barrier (BBB) and the blood-cerebrospinal fluid barrier (BCSFB), making it a strong candidate for an effective drug for the treatment of brain tumors, including glioblastoma. In our previous study, we demonstrated that honokiol effectively induced apoptotic cell death in glioblastoma. Metastasis poses the largest problem to cancer treatment and is the primary cause of death in cancer patients. Thus, in this study, we investigated the effect of honokiol on the cell invasion process of U87MG human glioblastoma cells through brain microvascular endothelial cells (BMECs) and its possible mechanisms. Honokiol dose-dependently inhibited TNF-alpha-induced VCAM-1 expression in BMECs and adhesion of U87MG to BMECs. Moreover, honokiol effectively blocked U87MG invasion through

BMEC-Matrigel-coated transwell membranes. Increased phosphorylation of VE-cadherin and membrane permeability by TNF-alpha were suppressed by honokiol in BMECs. Furthermore, we investigated the effect of honokiol on the epithelial-mesenchymal transition (EMT) in U87MG cells. Honokiol reduced the expression levels of Snail, N-cadherin and beta-catenin, which are mesenchymal markers, but increased E-cadherin, an epithelial marker. In conclusion, these results suggest that honokiol inhibits metastasis by targeting the interaction between U87MG and BMECs, regulating the adhesion of U87MG to BMECs by inhibiting VCAM-1, and regulating the invasion of U87MG through BMECs by reducing membrane permeability and EMT processes of U87MG cells.

[181]

**TÍTULO / TITLE:** - The case of acoustic neuroma: Comment on: Mobile phone use and risk of brain neoplasms and other cancers.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Epidemiol. 2013 Sep 27.

- [Enlace al texto completo \(gratis o de pago\) 1093/ije/dyt185](#)

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[182]

**TÍTULO / TITLE:** - Authors' response to: The case of acoustic neuroma: comment on mobile phone use and risk of brain neoplasms and other cancers.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Epidemiol. 2013 Sep 27.

- [Enlace al texto completo \(gratis o de pago\) 1093/ije/dyt186](#)

**AUTORES / AUTHORS:** - Benson VS; Pirie K; Schuz J; Reeves GK; Beral V; Green J

**INSTITUCIÓN / INSTITUTION:** - Cancer Epidemiology Unit, University of Oxford, Richard Doll Building, Roosevelt Drive, Oxford, OX3 7LF, UK and International Agency for Research on Cancer (IARC), Section of Environment and Radiation, 150 Cours Albert Thomas, 69372 Lyon Cedex 08, France.

[183]

**TÍTULO / TITLE:** - Phosphoglycerate kinase 1 promotes radioresistance in U251 human glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Nov 27. doi: 10.3892/or.2013.2874.

- [Enlace al texto completo \(gratis o de pago\) 3892/or.2013.2874](#)

**AUTORES / AUTHORS:** - Ding H; Cheng YJ; Yan H; Zhang R; Zhao JB; Qian CF; Zhang WB; Xiao H; Liu HY

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Nanjing Medical University, Affiliated Nanjing Brain Hospital, Nanjing, Jiangsu, P.R. China.

**RESUMEN / SUMMARY:** - Phosphoglycerate kinase 1 (PGK1) has been found to be increased in radioresistant astrocytomas. The present study was designed to investigate the potential role of PGK1 in the radioresistance in U251 human cells. Quantitative PCR and western blot analysis were performed to evaluate PGK1 expression for mRNA levels and protein levels, respectively. The short hairpin RNA (shRNA)-PGK1 and the high expression plasmids were transfected to radioresistant U251 cells (RR-U251 cells) or normal U251 cells using lipofectamine 2000. The cell viability was determined by MTT assay. The wound-healing assay (WHA) was used to evaluate cell migration ability. Cell invasion abilities were examined using a Transwell culture chamber system. Our results showed that the expression of PGK1 was significantly increased in RR-U251 cells compared to normal U251 cells. Following irradiation, the cell viability as well as the migration and invasion ability were significantly higher in RR-U251 cells compared with normal U251 cells. Downregulating PGK1 using shRNA induced a significantly downregulated cell viability and decreased migration and invasion ability, and overexpression of PGK1 contributed to upregulated cell viability and increased migration and invasion ability, both in RR-U251 cells and normal U251 cells. These findings suggest that PGK1 could promote radioresistance in U251 human cells.

[184]

**TÍTULO / TITLE:** - Dandy-Walker Malformation, Papillary Thyroid Carcinoma, and SDHD-Associated Paranglioma Syndrome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Endocrinol Metab. 2013 Oct 23.

●● Enlace al texto completo (gratis o de pago) [1210/jc.2013-3015](#)

**AUTORES / AUTHORS:** - Huguet I; Walker L; Karavitaki N; Byrne J; Grossman AB

**INSTITUCIÓN / INSTITUTION:** - Oxford Centre for Diabetes, Endocrinology, and Metabolism (I.H., N.K., A.B.G.), Churchill Hospital, University of Oxford, Oxford OX3 7LE, United Kingdom; Department of Clinical Genetics (L.W.), Churchill Hospital, Oxford OX3 7LE, United Kingdom; and Department of Neuroradiology (J.B.), Oxford Radcliffe Hospital, Oxford OX3 9DU, United Kingdom.

**RESUMEN / SUMMARY:** - Abstract Not Available.

[185]

**TÍTULO / TITLE:** - Mosaicism in HIF2A-related polycythaemia-paranglioma syndrome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Endocrinol Metab. 2013 Nov 25.

●● Enlace al texto completo (gratis o de pago) [1210/jc.2013-2600](#)

**AUTORES / AUTHORS:** - Buffet A; Smati S; Mansuy L; Menara M; Lebras M; Heymann MF; Simian C; Favier J; Murat A; Cariou B; Gimenez-Roqueplo AP

**INSTITUCIÓN / INSTITUTION:** - 1 Assistance Publique-Hopitaux de Paris, Hopital europeen Georges Pompidou, Service de Genetique, Paris, France;

**RESUMEN / SUMMARY:** - Context:HIF2A germline mutations were known to cause congenital polycythaemia. Recently HIF2A somatic mutations were found in several patients with polycythaemia and paranglioma, pheochromocytoma or

somatostatinoma suggesting the occurrence of de novo post-zygotic HIF2A mutation that has not been demonstrated clearly. Patients: Patient 1 is a woman suffering from polycythaemia diagnosed at the age of 16. She was operated on for a pheochromocytoma at 45 years and for two abdominal paragangliomas at 59 years. She was also diagnosed with somatostatinoma. Patient 2 is a young boy suffered from polycythaemia since infancy. He underwent surgery for a non-functional adrenal paraganglioma at the age of nine. Methods: We sequenced by Sanger and next generation sequencing the HIF2A gene in DNA extracted from tumors, leucocytes and buccal cells. Results: In patient 1, we identified a somatic HIF2A mutation (c.1586T>C; p.Leu529Pro) in DNA extracted from both paragangliomas. The mutation was detected as a somatic mosaic in DNA extracted from somatostatinoma and was absent from germline DNA. In patient 2, we found a HIF2A heterozygous mutation (c.1625T>C; p.Leu542Pro) in the paraganglioma but the mutation was also present as a mosaic in leucocyte DNA and in DNA extracted from buccal cells (3.3% and 8.96% of sequencing reads, respectively). Both mutations disrupt the hydroxylation domain of the HIF2alpha protein. Conclusions: Our study shows that HIF2A-related tumors are caused by postzygotic mutations occurring in early developmental stage. Potential germline mosaicism should be considered during the familial genetic counselling when an individual has been diagnosed with HIF2A-related polycythaemia-paraganglioma syndrome.

[186]

**TÍTULO / TITLE:** - Increased Mitotic and Proliferative Activity Are Associated With Worse Prognosis in Papillary Tumors of the Pineal Region.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am J Surg Pathol. 2013 Oct 10.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1097/PAS.0b013e31829e492d](#)

**AUTORES / AUTHORS:** - Heim S; Beschorner R; Mittelbronn M; Keyvani K; Riemenschneider MJ; Vajtai I; Hartmann C; Acker T; Blumcke I; Paulus W; Hasselblatt M

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**RESUMEN / SUMMARY:** - Papillary tumors of the pineal region are rare glial tumors located in the vicinity of the third ventricle, the clinical behavior of which is often aggressive. Little is known about the prognostic markers that might aid to identify patients at increased risk for recurrence. Therefore, the prognostic value of histopathologic and clinical features was examined in a series of 21 patients. Median

age of the 12 male and 9 female patients was 35 years (range, 10 to 56 y). On histopathologic examination, all tumors were characterized by loose papillary structures and tumor cells forming broad perivascular pseudorosettes showing cytokeratin expression. In addition, tumors showed increased cellularity (n=4; 19%), nuclear pleomorphism (n=4; 19%), solid growth (n=11; 52%), necrosis (n=8; 38%), increased mitotic activity ( $\geq 3$  mitoses per 10 high-power fields [n=10; 48%]), and increased proliferation (Ki67/MIB1 index  $\geq 10\%$  [n=8/20; 40%]). Gross total resection could be achieved in 13/21 patients (62%). Postoperatively, 13 patients received radiotherapy and 4 patients chemotherapy. Median recurrence-free survival was 66 months in 19 patients, for whom detailed follow-up information was available. Twelve patients (63%) experienced tumor progression. Three patients (16%) died of disease. Among the clinical and histopathologic features examined, only increased mitotic activity (52 [8 to 96] vs. 68 [66 to 70] mo [median [95% confidence interval]]) and proliferative activity (29 [0 to 64] vs. 67 [44 to 90] mo) were significantly associated with recurrence ( $P < 0.05$ ). Tumors of the 3 patients who had succumbed to disease showed increased mitotic and proliferative activity. In conclusion, increased mitotic and proliferative activities are associated with worse prognosis in papillary tumors of the pineal region.

[187]

**TÍTULO / TITLE:** - When numbers matters: mitochondrial DNA and gliomagenesis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Differ. 2013 Dec;20(12):1601-2. doi: 10.1038/cdd.2013.156.

●● Enlace al texto completo (gratis o de pago) [1038/cdd.2013.156](#)

**AUTORES / AUTHORS:** - Barbieri E; Scorrano L

**INSTITUCIÓN / INSTITUTION:** - Department of Biology, University of Padova, Via G. Colombo 3, 35121 Padova, Italy.

[188]

**TÍTULO / TITLE:** - Intramedullary gangliogliomas: clinical features, surgical outcomes, and neuropathic scoliosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 17.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1267-3](#)

**AUTORES / AUTHORS:** - Yang C; Li G; Fang J; Wu L; Yang T; Deng X; Xu Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, No. 6, Tiantan Xili, Chongwen District, Beijing, 100050, China.

**RESUMEN / SUMMARY:** - Intramedullary spinal cord gangliogliomas are rare tumors composed of glial components and ganglion cells. These gangliogliomas are generally considered as slow-growing tumors, corresponding histologically to WHO grade I or II. There are few reports of large case series of intramedullary spinal cord gangliogliomas from a single center. We retrospectively reviewed a consecutive series of 18 patients with pathologically diagnosed ganglioglioma. Clinical manifestations, radiological features, treatment and follow-up data, and concomitant scoliosis were investigated.

The mean age at diagnosis was 27.5 years, with a slight female predominance. The primary clinical symptoms were sensorimotor deficits. Magnetic resonance (MR) imaging manifestations varied considerably. Some associated, but not necessary, features were found, such as young age at onset, large tumor dimension, and bony changes. Scoliosis was observed in seven patients. Remnant tumor progression was observed in five patients during the follow-up period, and no deaths occurred. The last neurological evaluation showed functional improvement from preoperative status in five patients. Differential diagnosis of ganglioglioma based on MR images alone is challenging, but the combination of some characteristic features can be helpful. An accurate diagnosis of ganglioglioma depends on pathological criteria. Despite the benign course of ganglioglioma, considerable growth may affect its resectability and prognosis. The extent of resection should be meticulously planned, and the potential risk of recurrence and neurological deterioration should be evaluated. The concomitant scoliosis is noteworthy.

[189]

**TÍTULO / TITLE:** - Clinical, radiological, histological, and molecular characteristics of paediatric epithelioid glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuropathol Appl Neurobiol. 2013 Oct 15. doi: 10.1111/nan.12093.

●● [Enlace al texto completo \(gratis o de pago\) 1111/nan.12093](#)

**AUTORES / AUTHORS:** - Broniscer A; Tatevossian RG; Sabin ND; Klimo P Jr; Dalton J; Lee R; Gajjar A; Ellison DW

**INSTITUCIÓN / INSTITUTION:** - Department of Oncology, St. Jude Children's Research Hospital, Memphis, TN, USA; Department of Pediatrics, University of Tennessee Health Science Center, Memphis, TN, USA.

**RESUMEN / SUMMARY:** - AIMS: A few case series in adults have described the characteristics of epithelioid glioblastoma (e-GB), one of the rarest variants of this cancer. We evaluated clinical, radiological, histological, and molecular characteristics in the largest series to date of paediatric e-GB. METHODS: Review of clinical characteristics and therapy, imaging studies, and histology was performed in patients younger than 22 years with e-GB seen at our institution over 15 years. Sequencing of hotspot mutations and FISH of relevant genes were undertaken. RESULTS: Median age at diagnosis of six patients was 7.6 years. Tumours originated in the cerebral cortex (n=2) or diencephalon (n=4). Three patients presented with acute, massive haemorrhage and three had leptomeningeal dissemination at diagnosis. Paediatric e-GB had the typical histological characteristics seen in adult tumours. Universal immunoreactivity for INI1 and lack of diverse protein expression were seen in all cases. One tumour had a chromosome 22q loss. Three tumours (50%) harboured a BRAF: p.V600E. One thalamic tumour had an H3F3A p.K27M. All patients received radiation therapy with (n=3) or without chemotherapy (n=3). All patients experienced tumour progression with a median survival of 169 days. One patient with non-metastatic disease had early leptomeningeal progression. Two patients had symptomatic tumour spread outside the central nervous system (CNS) through a ventriculo-peritoneal shunt. One additional patient had widespread metastases outside the CNS identified at autopsy. CONCLUSIONS: Paediatric e-GBs are rare cancers with an aggressive

behaviour that share histological and genetic characteristics with their adult counterparts. BRAF inhibition is a potential treatment for these tumours.

[190]

**TÍTULO / TITLE:** - H NMR detects different metabolic profiles in glioblastoma stem-like cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - NMR Biomed. 2013 Oct 21. doi: 10.1002/nbm.3044.

●● [Enlace al texto completo \(gratis o de pago\) 1002/nbm.3044](#)

**AUTORES / AUTHORS:** - Guidoni L; Ricci-Vitiani L; Rosi A; Palma A; Grande S; Luciani AM; Pelacchi F; di Martino S; Colosimo C; Biffoni M; De Maria R; Pallini R; Viti V

**INSTITUCIÓN / INSTITUTION:** - Department of Technology and Health and INFN Sanita Group, Istituto Superiore di Sanita, Rome, Italy.

**RESUMEN / SUMMARY:** - The metabolic profiles of glioblastoma stem-like cells (GSCs) growing in neurospheres were examined by <sup>1</sup>H NMR spectroscopy. Spectra of two GSC lines, labelled 1 and 83, from tumours close to the subventricular zone of the temporal lobe were studied in detail and compared with those of neural stem/progenitor cells from the adult olfactory bulb (OB-NPCs) and of the T98G glioblastoma cell line. In both GSCs, signals from myoinositol (Myo-I), UDP-hexosamines (UDP-Hex) and glycine indicated an astrocyte/glioma metabolism. For line 1, the presence of signals from N-acetyl aspartate, GABA and creatine pointed to a neuronal fingerprint. These metabolites were almost absent from line 83 spectra, whereas lipid signals, absent from normal neural lineages, were intense in line 83 spectra and remained low in those of line 1, irrespective of apoptotic fate. Spectra of OB-NPC cells displayed strong similarities with those from line 1, with low lipid signals and clearly detectable neuronal signals. In contrast, the spectral profile of line 83 was more similar to that of T98G, displaying high lipids and nearly complete absence of the neuronal markers. A mixed neural-astrocyte metabolic phenotype with a strong neuronal fingerprint was therefore found in line 1, while an astrocytic/glioma-like metabolism prevailed in line 83. We found a signal assigned to the amide proton of N-acetyl galactosamine in GSC lines and in OB-NPC spectra, whereas it was absent from those of T98G cells. This signal may be related to a stem-cell-specific protein glycosylation pattern and is therefore suggested as a marker of cell multipotency. Other GSC lines from patients with different clinical outcomes were then examined. Unsupervised analysis of spectral data from 13 lines yielded two clusters, with six lines resembling spectral features of line 1 and seven resembling those of line 83, suggesting that distinct metabolic phenotypes may be present in GSC lines. Copyright © 2013 John Wiley & Sons, Ltd.

[191]

**TÍTULO / TITLE:** - Nanoparticles of 2-deoxy-d-glucose functionalized poly(ethylene glycol)-co-poly(trimethylene carbonate) for dual-targeted drug delivery in glioma treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomaterials. 2014 Jan;35(1):518-29. doi: 10.1016/j.biomaterials.2013.09.094. Epub 2013 Oct 11.

- Enlace al texto completo (gratis o de pago)

[1016/j.biomaterials.2013.09.094](https://doi.org/10.1016/j.biomaterials.2013.09.094)

**AUTORES / AUTHORS:** - Jiang X; Xin H; Ren Q; Gu J; Zhu L; Du F; Feng C; Xie Y; Sha X; Fang X

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Smart Drug Delivery, Ministry of Education, School of Pharmacy, Fudan University, Shanghai 201203, China; Department of Pharmaceutics, School of Pharmacy, Center for Nano Drug/Gene Delivery and Tissue Engineering, Jiangsu University, Zhenjiang 212013, China.

**RESUMEN / SUMMARY:** - Based on the facilitative glucose transporter (GLUT) over-expression on both blood-brain barrier (BBB) and glioma cells, 2-deoxy-d-glucose modified poly(ethylene glycol)-co-poly(trimethylene carbonate) nanoparticles (dGlu-NP) were developed as a potential dual-targeted drug delivery system for enhancing the BBB penetration via GLUT-mediated transcytosis and improving the drug accumulation in the glioma via GLUT-mediated endocytosis. In vitro physicochemical characterization of the dual-targeted nanoparticulate system presented satisfactory size of 71 nm with uniform distribution, high encapsulation efficiency and adequate loading capacity of paclitaxel (PTX). Compared with non-glucosylated nanoparticles (NP), a significantly higher amount of dGlu-NP was internalized by RG-2 glioma cells through caveolae-mediated and clathrin-mediated endocytosis. Both of the transport ratios across the in vitro BBB model and the cytotoxicity of RG-2 cells after crossing the BBB were significantly greater of dGlu-NP/PTX than that of NP/PTX. In vivo fluorescent image indicated that dGlu-NP had high specificity and efficiency in intracranial tumor accumulation. The anti-glioblastoma efficacy of dGlu-NP/PTX was significantly enhanced in comparison with that of Taxol and NP/PTX. Preliminary safety tests showed no acute toxicity to hematological system, liver, kidney, heart, lung and spleen in mice after intravenous administration at a dose of 100 mg/kg blank dGlu-NP per day for a week. Therefore, these results indicated that dGlu-NP developed in this study could be a potential dual-targeted vehicle for brain glioma therapy.

[192]

**TÍTULO / TITLE:** - Human umbilical cord mesenchymal stem cells inhibit C6 glioma growth via secretion of dickkopf-1 (DKK1).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cell Biochem. 2014 Jan;385(1-2):277-86. doi: 10.1007/s11010-013-1836-y. Epub 2013 Oct 9.

- Enlace al texto completo (gratis o de pago) [1007/s11010-013-1836-y](https://doi.org/10.1007/s11010-013-1836-y)

**AUTORES / AUTHORS:** - Ma S; Liang S; Jiao H; Chi L; Shi X; Tian Y; Yang B; Guan F  
**INSTITUCIÓN / INSTITUTION:** - School of Life Sciences, Zhengzhou University, Zhengzhou, 450001, Henan, China.

**RESUMEN / SUMMARY:** - Mesenchymal stem cells (MSCs) represent a potential therapeutic target for glioma. We determined the molecular mechanism of inhibitory effect of human umbilical cord-derived MSCs (hUC-MSCs) on the growth of C6 glioma cells. We demonstrated that hUC-MSCs inhibited C6 cell growth and modulated the cell cycle to G0/G1 phase. The expression of beta-catenin and c-Myc was downregulated in C6 cells by conditioned media from hUC-MSCs, and the levels of secreted DKK1 were positively correlated with concentrations of hUCMSCs-CM. The inhibitory effect of hUC-MSCs on C6 cell proliferation was enhanced as the

concentration of DKK1 in hUCMSCs-CM increased. When DKK1 was neutralized by anti-DKK1 antibody, the inhibitory effect of hUC-MSCs on C6 cells was attenuated. Furthermore, we found that conditioned media from hUC-MSCs transfection with siRNA targeting DKK1 mRNA or pEGFPN1-DKK1 plasmid lost or enhanced the abilities to regulate the Wnt signaling in C6 cells. Therefore, hUC-MSCs inhibited C6 glioma cell growth via secreting DKK1, an inhibitor of Wnt pathway, may represent a novel therapeutic strategy for malignant glioma.

[193]

**TÍTULO / TITLE:** - Primary leptomeningeal lymphoma: International Primary CNS Lymphoma Collaborative Group report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurology. 2013 Nov 5;81(19):1690-6. doi: 10.1212/01.wnl.0000435302.02895.f3. Epub 2013 Oct 9.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1212/01.wnl.0000435302.02895.f3](#)

**AUTORES / AUTHORS:** - Taylor JW; Flanagan EP; O'Neill BP; Siegal T; Omuro A; Deangelis L; Baehring J; Nishikawa R; Pinto F; Chamberlain M; Hoang-Xuan K; Gonzalez-Aguilar A; Batchelor T; Blay JY; Korfel A; Betensky RA; Lopes MB; Schiff D

**INSTITUCIÓN / INSTITUTION:** - From the Massachusetts General Hospital (J.W.T., T.B., R.A.B.), Boston; Mayo Clinic (E.P.F., B.P.O.), Rochester, MN; Hadassah Hebrew University Medical Center (T.S.), Jerusalem, Israel; Memorial Sloan-Kettering (A.O., L.D.), New York, NY; Yale University (J.B.), New Haven, CT; Saitama Medical University (R.N.), Japan; Kings College Hospital (F.P.), London, UK; University of Washington (M.C.), Seattle; LOC National Expert Center (K.H.-X., A.G.-A.), APHP, UPMC, Pitie-Salpetriere, Paris; Centre Leon Berard (J.-Y.B.), Lyon, France; Campus Benjamin Franklin (A.K.), Charite Universitätsmedizin Berlin, Germany; Department of Biostatistics (R.A.B.), Harvard School of Public Health, Boston, MA; and University of Virginia (M.-B.S.L., D.S.), Charlottesville.

**RESUMEN / SUMMARY:** - OBJECTIVE: To evaluate clinical presentation, optimal diagnostic evaluation and treatment, and outcome in primary leptomeningeal lymphoma, a rare form of primary CNS lymphoma without parenchymal or systemic involvement. METHODS: The International Primary CNS Lymphoma Collaborative Group, a multidisciplinary group of physicians with a particular interest in primary CNS lymphoma, retrospectively identified cases of lymphoma isolated to the leptomeninges as diagnosed by CSF cytology, flow cytometry, or biopsy, without systemic or parenchymal brain/spinal cord lymphoma or immunodeficiency. RESULTS: Forty-eight patients were identified, with median age at diagnosis of 51 years and median Eastern Cooperative Oncology Group performance status of 2. Presenting symptoms were multifocal in 68%. Leptomeningeal enhancement was seen in 74% and CSF profile was abnormal in all cases. CSF cytology detected malignant lymphocytes in 67%. Flow cytometry identified monoclonal population in 80%, as did receptor gene rearrangement studies in 71%. Sixty-two percent had B-cell lymphoma, 19% T-cell, and 19% unclassified. Treatment varied and included fractionated radiotherapy (36%), systemic chemotherapy (78%), and intra-CSF chemotherapy (66%), with 66% receiving  $\geq 2$  modalities. Seventy-one percent had a favorable clinical response; ultimately, 44% received salvage treatment. Median overall survival was 24 months,

with 11 patients still alive at 50 months follow-up. CONCLUSION: Primary leptomeningeal lymphoma is a rare form of primary CNS lymphoma. Patients usually present with multifocal symptoms, with evidence of leptomeningeal enhancement and diagnostic CSF analysis. Although treatment is highly variable, patients have a better prognosis than previously reported and a subset may be cured.

[194]

**TÍTULO / TITLE:** - Isolated acquired primary gusto-lacrimal reflex from a brainstem glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurology. 2013 Nov 19;81(21):1877-9. doi: 10.1212/01.wnl.0000436062.12890.fb. Epub 2013 Oct 16.

●● Enlace al texto completo (gratis o de pago)

[1212/01.wnl.0000436062.12890.fb](http://1212/01.wnl.0000436062.12890.fb)

**AUTORES / AUTHORS:** - Klein A; Miller NR

**INSTITUCIÓN / INSTITUTION:** - From the Wilmer Eye Institute, the Johns Hopkins Hospital, Baltimore, MD.

**RESUMEN / SUMMARY:** - The gusto-lacrimal reflex, also known as Bogorad syndrome, is an autonomic synkinesia in which patients tear excessively in response to salivary stimuli.(1,2) It most often results from aberrant reinnervation following acute idiopathic or traumatic facial nerve palsy. In rare cases, it occurs as a primary phenomenon in the setting of a slow-growing lesion that compresses or infiltrates the nerve, such as a vestibular schwannoma or meningioma in the internal auditory canal.(3,4) We describe a patient with gusto-lacrimal reflex without other evidence of facial nerve dysfunction from a low-grade glioma infiltrating the brainstem and cerebellum.

[195]

**TÍTULO / TITLE:** - The efficacy of neuroendoscopic treatment for middle cranial fossa arachnoid cysts assessed by MRI 3D segmentation and modeling.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2329-8](http://1007/s00381-013-2329-8)

**AUTORES / AUTHORS:** - Li Y; Chen X; Xu B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Chinese PLA General Hospital, 28 Fuxing Rd, Haidian District, 100853, Beijing, China.

**RESUMEN / SUMMARY:** - PURPOSE: The purpose of this study was to present a more precise and objective way to assess the effectiveness of neuroendoscopic application in the treatment of middle cranial fossa arachnoid cysts. METHODS: Between March 2009 and December 2012, 28 patients affected by middle cranial fossa arachnoid cysts were initially treated with endoscopic fenestration at the three spaces. The volumes of the cysts on MR images at the time of pre-op and 4 months after surgery were reconstructed by 3D Slicer and quantitatively calculated to compare the volumetric changes. The possible predisposing factors of surgical outcomes were analyzed as well. RESULTS: All the models of the cysts were successfully reconstructed, and the mean volume of the cysts was 135.77 +/- 90.43 cm<sup>3</sup> before surgery and 93.08 +/- 100.31 cm<sup>3</sup> after surgery at 4 months follow-up (t = 2.98, P = 0.006). The volumes of

those two cases (7.14 %), presenting intracranial hypertension and ventricular dilation after surgery, were dramatically increased, whereas the others were decreased in 20 cases (71.43 %) or remained unchanged in 6 cases (21.43 %). There was significant difference on the age factor among the three result groups (P = 0.001).

CONCLUSIONS: The reconstruction of 3D for the assessment of the endoscopic fenestration outcomes is a feasible and precise way for clinical work. The variety of outcomes probably depends on age discrepancy.

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[196]

**TÍTULO / TITLE:** - Hepatic Sinusoidal Obstruction Syndrome During Chemotherapy for Childhood Medulloblastoma: Report of a Case and Review of the Literature.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Hematol Oncol. 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago)

[1097/MPH.0b013e3182a8f352](https://doi.org/10.1097/MPH.0b013e3182a8f352)

**AUTORES / AUTHORS:** - Kotecha RS; Buckland A; Phillips MB; Cole CH; Gottardo NG

**INSTITUCIÓN / INSTITUTION:** - \*Department of Haematology and Oncology, Princess Margaret Hospital for Children daggerTelethon Institute for Child Health Research, Centre for Child Health Research, University of Western Australia double daggerSchool of Paediatrics and Child Health, University of Western Australia, Perth, WA.

**RESUMEN / SUMMARY:** - Hepatic sinusoidal obstruction syndrome (HSOS), also known as veno-occlusive disease, is a well-recognized toxic complication after autologous and allogeneic hematopoietic stem cell transplant, during treatment of Wilms tumor and rhabdomyosarcoma associated with actinomycin-D, and during acute lymphoblastic leukemia therapy due to oral 6-thioguanine. However, its occurrence in the context of chemotherapy regimens for other childhood malignancies is rare. We report a 5-year-old girl with high-risk anaplastic medulloblastoma, who developed severe HSOS during her second cycle of maintenance chemotherapy, consisting of vincristine, cisplatin, and cyclophosphamide. She was treated with defibrotide with complete resolution of the HSOS. These findings and a review of the literature, highlight the occurrence of HSOS in children outside the established settings of hematopoietic stem cell transplantation, Wilms tumor, rhabdomyosarcoma, and acute lymphoblastic leukemia. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 3.0 License, where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially.

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[197]

**TÍTULO / TITLE:** - 18beta-Glycyrrhetic acid induces apoptosis in pituitary adenoma cells via ROS/MAPKs-mediated pathway.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 27.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1292-2](https://doi.org/10.1007/s11060-013-1292-2)

**AUTORES / AUTHORS:** - Wang D; Wong HK; Feng YB; Zhang ZJ

**INSTITUCIÓN / INSTITUTION:** - School of Chinese Medicine, Li Ka Shing Faculty of Medicine, The University of Hong Kong, 10 Sassoon Road, Pokfulam, Hong Kong, China.

**RESUMEN / SUMMARY:** - The purpose of the present study was to evaluate the anti-tumor effects of 18beta-glycyrrhetic acid (GA), a natural compound extracted from liquorice, against pituitary adenoma and its underlying mechanisms in cultured cells and mouse model of xenografted tumor. GA induced cellular damage in rat pituitary adenoma-derived MMQ and GH3 cells, manifested as reduced cell viability, increased lactate dehydrogenase release, elevated intracellular reactive oxygen species (ROS) and Ca<sup>2+</sup> concentration. GA also caused G0/G1 phase arrest, increased apoptosis rate and increased mitochondrial membrane permeabilization by suppressing the mitochondrial membrane potential and down-regulating a ratio of B cell lymphoma 2 (Bcl-2) and Bax. GA activated calcium/calmodulin-dependent protein kinase II (CaMKII), c-Jun N-terminal kinase (JNK) and P38; but these activating effects were attenuated by pretreatment with N-acetyl-L-cysteine, a ROS inhibitor. Pretreatment with KN93, a CaMKII inhibitor, also abolished the GA activation of JNK and P38. GA remarkably inhibited growth of pituitary adenoma grafted on nude mice. These results suggest that the anti-pituitary adenoma effect of GA is associated with its apoptotic actions by activating mitochondria-mediated ROS/mitogen-activated protein kinase pathways in particular CaMKII that may serve a linkage between ROS accumulation and the activation of JNK and P38. This study provides experimental evidence in the support of further developing GA as a chemotherapeutic agent for pituitary adenoma.

[198]

**TÍTULO / TITLE:** - Diffusion weighted MR imaging and proton MR spectroscopy findings of central Neurocytoma with Pathological Correlation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuroradiol. 2013 Nov 12. pii: S0150-9861(13)00097-7. doi: 10.1016/j.neurad.2013.09.004.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.neurad.2013.09.004](#)

**AUTORES / AUTHORS:** - Tlili-Graïess K; Mama N; Arifa N; Kadri K; Hasni I; Krifa H; Mokni M

**INSTITUCIÓN / INSTITUTION:** - Service de radiologie, hopital Sahloul, route ceinture, 4011 Sousse, Tunisia. Electronic address: [kalthoum.tlili@rns.tn](mailto:kalthoum.tlili@rns.tn).

**RESUMEN / SUMMARY:** - **PURPOSE:** Three cases of histopathologically confirmed central neurocytoma (CN) are presented, emphasizing diagnostic imaging issues: conventional magnetic resonance imaging with Proton magnetic resonance spectroscopy (MRS) and diffusion-weighted imaging (DWI) findings of CN. **MATERIALS AND METHODS:** Patients age ranged from 17 to 32 years, Imaging include a CT scan and MR examination with DWI and proton MRS on a 1.5-T system. DWI and subsequent apparent diffusion coefficient (ADC) were obtained in all. Single voxel MRS was performed prior to surgery using a point resolved spectroscopy sequence (PRESS) with short 35 ms and long echotime (TE) 144 ms, associated with a two-dimensional chemical Shift Imaging (2D-CSI) with 144 ms TE (one case). Histopathological examination included immunostaining with synaptophysin. **RESULTS:** With the long TE, a variable amount of glycine with markedly increased choline, very small to almost complete loss of N-acetylaspartate and creatine, and

inverted triplet of alanine-lactate were observed in all three patients. Increased glutamate and glutamine complex (Glx) was also observed in all with short TE. DWI demonstrated variable low ADC which appeared well correlated with the tumor signal intensity and cell density: the most homogeneous and highly dense cellular tumor with increased nucleus to cytoplasm ratio demonstrated the lower ADC. Histological pattern was typical in two cases and demonstrated an oligodendroglioma-like pattern in one case. Positivity for synaptophysin confirmed the neuronal origin in all. CONCLUSION: The demonstration within an intraventricular tumor of both glycine and alanine on MRS along with high choline, bulky Glx and restricted diffusion appear diagnostic of CN.

[199]

**TÍTULO / TITLE:** - Entry of a cationic lytic-type peptide into the cytoplasm via endocytosis-dependent and -independent pathways in human glioma U251 cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Peptides. 2013 Dec;50:28-35. doi: 10.1016/j.peptides.2013.09.015. Epub 2013 Oct 3.

●● Enlace al texto completo (gratis o de pago) [1016/j.peptides.2013.09.015](#)

**AUTORES / AUTHORS:** - Ohara K; Kohno M; Hamada T; Kawakami K

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmacoepidemiology, Graduate School of Medicine and Public Health, Kyoto University Yoshidakonoecho, Sakyo, Kyoto city, Kyoto 606-8501, Japan.

**RESUMEN / SUMMARY:** - Cationic lytic-type peptides have been studied for clinical application in various infections and cancers. This study aimed to determine the functions of our specially designed lytic peptide. To investigate the functional mechanism at the cell membrane level, we used giant unilayer vesicles (GUVs) mimicking cell membranes. In GUVs treated with FITC-labeled lytic peptide (lytic-FITC), fluorescence increased in a time-dependent manner. However, no inner fluorescence was detected in GUVs treated with lytic peptide and calcein. Next, distribution of lytic-FITC peptide on the cell membrane and in the cytoplasm was examined in a living human glioma U251 cell line. In the immunocytochemical study, some lytic peptide stains colocalized with early endosome antigen protein 1 (EEA-1). In cells treated with lytic peptide, the immunofluorescence intensity of lytic peptide increased in a concentration and treatment time-dependent manner. Cytotoxic activity of lytic peptide decreased after pretreatment with the endocytosis inhibitors cytochalasin D, chlorpromazine and amiloride. These findings suggest that lytic peptide exerts cytotoxic activity after cellular uptake via an endocytosis pathway. In conclusion, the influx mechanism of lytic peptide was shown to include not only disintegration and pore formation at the cell membrane, but also cell entry via endocytosis dependent and independent pathways.

[200]

**TÍTULO / TITLE:** - CD8 T lymphocytes encephalitis mimicking brain tumor in HIV-1 infection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurovirol. 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1007/s13365-013-0217-3](#)

**AUTORES / AUTHORS:** - Moulignier A; Savatovsky J; Polivka M; Boutboul D; Depaz R; Lescure FX

**INSTITUCIÓN / INSTITUTION:** - Service de Neurologie, Fondation Adolphe de Rothschild, 25 rue Manin, 75019, Paris, France, [amoulignier@fo-rothschild.fr](mailto:amoulignier@fo-rothschild.fr).

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[201]

**TÍTULO / TITLE:** - Using intraoperative dynamic contrast-enhanced T1-weighted MRI to identify residual tumor in glioblastoma surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Oct 18.

- [Enlace al texto completo \(gratis o de pago\) 3171/2013.9.JNS121924](#)

**AUTORES / AUTHORS:** - Ozduman K; Yildiz E; Dincer A; Sav A; Pamir MN

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurosurgery.

**RESUMEN / SUMMARY:** - Object The goal of surgery in high-grade gliomas is to maximize the resection of contrast-enhancing tumor without causing additional neurological deficits. Intraoperative MRI improves surgical results. However, when using contrast material intraoperatively, it may be difficult to differentiate between surgically induced enhancement and residual tumor. The purpose of this study was to assess the usefulness of intraoperative dynamic contrast-enhanced T1-weighted MRI to guide this differential diagnosis and test it against tissue histopathology. Methods Preoperative and intraoperative dynamic contrast-enhanced MRI was performed in 21 patients with histopathologically confirmed WHO Grade IV gliomas using intraoperative 3-T MRI. Standardized regions of interest (ROIs) were placed manually at 2 separate contrast-enhancing areas at the resection border for each patient. Time-intensity curves (TICs) were generated for each ROI. All ROIs were biopsied and the TIC types were compared with histopathological results. Pharmacokinetic modeling was performed in the last 10 patients to confirm nonparametric TIC analysis findings. Results Of the 42 manually selected ROIs in 21 patients, 25 (59.5%) contained solid tumor tissue and 17 (40.5%) retained the brain parenchymal architecture but contained infiltrating tumor cells. Time-intensity curves generated from residual contrast-enhancing tumor and their preoperative counterparts were comparable and showed a quick and persistently increasing slope ("climbing type"). All 17 TICs obtained from regions that did not contain solid tumor tissue were undulating and low in amplitude, compared with those obtained from residual tumors ("low-amplitude type"). Pharmacokinetic findings using the transfer constant, extravascular extracellular volume fraction, rate constant, and initial area under the curve parameters were significantly different for the tumor mass, nontumoral regions, and surgically induced contrast-enhancing areas. Conclusions Intraoperative dynamic contrast-enhanced MRI provides quick, reproducible, high-quality, and simply interpreted dynamic MR images in the intraoperative setting and can aid in differentiating surgically induced enhancement from residual tumor.

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[202]

**TÍTULO / TITLE:** - Complement Activation and Intraventricular Rituximab Distribution in Recurrent Central Nervous System Lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-](https://doi.org/10.1158/1078-0432.CCR-13-0474)

[0474](https://doi.org/10.1158/1078-0432.CCR-13-0474)

**AUTORES / AUTHORS:** - Kadoch C; Li J; Wong VS; Chen L; Cha S; Munster PN; Lowell CA; Shuman MA; Rubenstein JL

**INSTITUCIÓN / INSTITUTION:** - Medicine, UCSF.

**RESUMEN / SUMMARY:** - PURPOSE: To elucidate the mechanistic basis for efficacy of intrathecal rituximab. We evaluated complement activation as well as the pharmacokinetics of intraventricular rituximab in patients who participated in two phase 1 multicenter studies. EXPERIMENTAL DESIGN: We evaluated complement activation as a candidate mediator of rituximab within the CNS. Complement C3 and C5b-9 were quantified by ELISA in serial CSF specimens after intraventricular rituximab administration. We determined rituximab concentration profiles in CSF and serum. A population three-compartment pharmacokinetic model was built to describe the disposition of rituximab following intraventricular administration. The model was derived from results of the first trial and validated with results of the second trial. RESULTS: Complement C3 and C5b-9 were reproducibly activated in CSF after intraventricular rituximab. Ectopic expression of C3 mRNA and protein within CNS lymphoma lesions was localized to myeloid cells. Constitutive high C3 activation at baseline was associated with adverse prognosis. A PK model was built which contains three distinct compartments to describe the distribution of rituximab within the neuroaxis after intraventricular administration. CONCLUSIONS: We provide the first evidence of C3 activation within the neuroaxis with intraventricular immunotherapy and suggest that complement may contribute to immunotherapeutic responses of rituximab in CNS lymphoma. Penetration of rituximab into neural tissue is supported by this pharmacokinetic model and may contribute to efficacy. These findings have general implications for intraventricular immunotherapy. Our data highlight potential innovations to improve efficacy of intraventricular immunotherapy both via modulation of the innate immune response as well as innovations in drug delivery.

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[203]

**TÍTULO / TITLE:** - Direct inhibition of Retinoblastoma phosphorylation by Nimbolide causes cell cycle arrest and suppresses glioblastoma growth.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-](https://doi.org/10.1158/1078-0432.CCR-13-0762)

[0762](https://doi.org/10.1158/1078-0432.CCR-13-0762)

**AUTORES / AUTHORS:** - Karkare S; Chhipa RR; Anderson J; Liu X; Henry H; Gasilina A; Nassar N; Roychoudhury J; Clark JP; Kumar A; Pauletti GM; Ghosh PK; Dasgupta B

**INSTITUCIÓN / INSTITUTION:** - Oncology, Cincinnati Childrens Hospital Medical Center.

**RESUMEN / SUMMARY:** - PURPOSE: Reverse pharmacology allows the use and development of conventional phytochemistry faster and more economically than conventional drugs. This approach should be tested for their efficacy in terms of complementarity and disease control. The purpose of this study was to determine the molecular mechanisms by which nimbolide, a triterpenoid found in the well-known medicinal plant Azadirachta indica controls glioblastoma (GBM) growth. EXPERIMENTAL DESIGN: Using in vitro signaling, anchorage-independent growth,

kinase assays, and xenograft models, we investigated the mechanisms of its growth inhibition in glioblastoma. RESULTS: We show that nimbolide or an ethanol soluble fraction of *A. indica* leaves (Azt) that contains nimbolide as the principal cytotoxic agent is highly cytotoxic against GBM in vitro and in vivo. Azt caused cell cycle arrest, most prominently at the G1-S stage in GBM cells expressing EGFRvIII, an oncogene present in over 40% of GBMs. Azt/nimbolide directly inhibited CDK4/CDK6 kinase activity leading to hypophosphorylation of the retinoblastoma (RB) protein and cell cycle arrest at G1-S. Independent of RB hypophosphorylation, Azt also significantly reduced proliferative and survival advantage of GBM cells in vitro and in tumor xenografts by downregulating Bcl2 and blocking growth factor induced phosphorylation of Akt, Erk1/2 and STAT3. These effects were specific since Azt did not affect mTOR or other cell cycle regulators. In vivo, Azt completely prevented initiation and significantly blocked progression of GBM growth. CONCLUSIONS: Our preclinical findings demonstrate Nimbolide as a potent anti-glioma agent that blocks cell cycle and inhibits glioma growth in vitro and in vivo.

[204]

**TÍTULO / TITLE:** - Quantitative assessment of the association between XRCC3 C18607T polymorphism and glioma risk.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Nov 5.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s13277-013-1147-7](#)

**AUTORES / AUTHORS:** - Wang R; Li M; Gao WW; Gu Y; Guo Y; Wang G; Tian HL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Shanghai Sixth People's Hospital, Shanghai Jiaotong University, Shanghai, 200233, China.

**RESUMEN / SUMMARY:** - XRCC3 has an important function in the DNA double-strand break, and XRCC3 C18607T polymorphism is a common polymorphism at exon 7 of the XRCC3 gene. Published data on the association between XRCC3 C18607T polymorphism and glioma risk were inconclusive. Electronic databases of PubMed, and Embase were searched for studies assessing the association between XRCC3 C18607T polymorphism and glioma risk. Pooled odds ratio (OR) and 95 % confidence interval (95 % CI) were calculated to estimate the association. Ten studies with five studies from Caucasians and five studies from Asians were included, including 9,369 subjects. Meta-analysis of total included studies showed that XRCC3 C18607T polymorphism was associated with increased risk of glioma (T vs. C: OR = 1.14, 95 % CI 1.02-1.28, P = 0.02; TT vs. CC: OR = 1.37, 95 % CI 1.03-1.83, P = 0.03; TT vs. CC/CT: OR = 1.31, 95 % CI 1.00-1.71, P = 0.05; TT/CT vs. CC: OR = 1.12, 95 % CI 1.02-1.22, P = 0.02). Meta-analysis of the five studies from Asians showed that XRCC3 C18607T polymorphism was associated with increased risk of glioma (T vs. C: OR = 1.22, 95% CI 1.09-1.36, P < 0.01; TT vs. CC: OR = 1.89, 95 % CI 1.38-2.57, P < 0.01; TT vs. CC/CT: OR = 1.78, 95 % CI 1.31-2.40, P < 0.01; TT/CT vs. CC: OR = 1.19, 95 % CI 1.04-1.36, P = 0.01). Meta-analysis of the five studies from Caucasians didn't find the association. In conclusion, the finding from the meta-analysis provides strong evidence for the association between XRCC3 C18607T polymorphism and glioma risk.

[205]

**TÍTULO / TITLE:** - Association between FAS and FASL Genetic Variants and Risk of Primary Brain Tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Neurosci. 2013 Nov 19.

●● Enlace al texto completo (gratis o de pago) [3109/00207454.2013.850083](#)

**AUTORES / AUTHORS:** - Dalan AB; Timirci-Kahraman O; Turan S; Kafadar AM; Yaylim I; Ergen A; Gormus U; Gulec-Yilmaz S; Kaspar C; Isbir T

**INSTITUCIÓN / INSTITUTION:** - 1Yeditepe University Hospital , Istanbul , Turkey.

**RESUMEN / SUMMARY:** - The purpose of this study was to investigate whether functional polymorphisms of apoptosis pathway genes FAS and FASL are associated with the development of primary brain tumors. The study constituted 83 patients with primary brain tumor and 108 healthy individuals. In the present case-control study, the primary brain tumors were divided into two groups: gliomas and meningiomas. Evaluation of FAS -1377 G/A and FASL -844 T/C gene polymorphisms were performed by polymerase chain reaction (PCR) and restriction fragment length polymorphism (RFLP). To confirm the genotyping, results were examined by DNA sequencing method. Our results were analyzed by SPSS. The frequency of the FAS -1377 AA genotype was significantly lower in meningioma and glioma patients compared to controls ( $p = 0.023$ ;  $p = 0.001$ , respectively). Multivariate logistic regression analysis revealed that FAS -1377 AA genotype was associated with decreased risk of meningioma and glioma (OR = 0.092, 95% CI: 0.012-0.719,  $p = 0.023$  for meningiomas; OR = 0.056, 95% CI: 0.007-0.428,  $p = 0.006$  for gliomas). However, there was no significant differences in FASL -844 T/C genotype frequencies between patients with primary brain tumors and controls ( $p > 0.05$ ). In this study, combined genotypes were evaluated for association with primary brain tumors. Combined genotype analysis showed that the frequencies of AATC and AACC were significantly lower in glioma patients in comparison with those of controls ( $p = 0.023$ ;  $p = 0.022$ , respectively). This study provides the first evidence that FAS -1377 AA genotype may have a protective effect on the developing primary brain tumor in a Turkish population.

[206]

**TÍTULO / TITLE:** - Sparse Manifold Clustering and Embedding to discriminate gene expression profiles of glioblastoma and meningioma tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Comput Biol Med. 2013 Nov;43(11):1863-9. doi: 10.1016/j.combiomed.2013.08.025. Epub 2013 Sep 7.

●● Enlace al texto completo (gratis o de pago)

[1016/j.combiomed.2013.08.025](#)

**AUTORES / AUTHORS:** - Garcia-Gomez JM; Gomez-Sanchis J; Escandell-Montero P; Fuster-Garcia E; Soria-Olivas E

**INSTITUCIÓN / INSTITUTION:** - Biomedical Informatics Group (IBIME-ITACA), Universitat Politecnica de Valencia. Cami de Vera s/n, Building 8G, 1st Floor. 46022, Valencia, España; GIBI230(Grupo de Investigacion Biomedica en Imagen), Instituto de Investigacion Sanitaria (IIS) hospital la Fe, España. Electronic address: [juanmig@ibime.upv.es](mailto:juanmig@ibime.upv.es).

**RESUMEN / SUMMARY:** - Sparse Manifold Clustering and Embedding (SMCE) algorithm has been recently proposed for simultaneous clustering and dimensionality

reduction of data on nonlinear manifolds using sparse representation techniques. In this work, SMCE algorithm is applied to the differential discrimination of Glioblastoma and Meningioma Tumors by means of their Gene Expression Profiles. Our purpose was to evaluate the robustness of this nonlinear manifold to classify gene expression profiles, characterized by the high-dimensionality of their representations and the low discrimination power of most of the genes. For this objective, we used SMCE to reduce the dimensionality of a preprocessed dataset of 35 single-labeling cDNA microarrays with 11500 original clones. Afterwards, supervised and unsupervised methodologies were applied to obtain the classification model: the former was based on linear discriminant analysis, the later on clustering using the SMCE embedding data. The results obtained using both approaches showed that all (100%) the samples could be correctly classified and the results of all repetitions but one formed a compatible cluster of predictive labels. Finally, the embedding dimensionality of the dataset extracted by SMCE revealed large discrimination margins between both classes.

[207]

**TÍTULO / TITLE:** - Correlation between progression free survival and dynamic susceptibility contrast MRI perfusion in WHO grade III glioma subtypes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 1.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1298-9](#)

**AUTORES / AUTHORS:** - Mangla R; Ginat DT; Kamalian S; Milano MT; Korones DN; Walter KA; Ekholm S

**INSTITUCIÓN / INSTITUTION:** - Department of Imaging Sciences, University of Rochester School of Medicine & Dentistry, Rochester, NY, USA.

**RESUMEN / SUMMARY:** - The purpose of this study was to determine whether dynamic susceptibility contrast MR perfusion relative cerebral blood volume (rCBV) correlates with prognosis of World Health Organization (WHO) grade III glial tumors and their different subtypes. Retrospective evaluation of pre-treatment tumor rCBV derived from dynamic susceptibility contrast MR perfusion was performed in 34 patients with histopathologically diagnosed WHO grade III glial tumors (anaplastic astrocytomas (n = 20), oligodendrogliomas (n = 4), and oligoastrocytomas (n = 10)). Progression free survival was correlated with rCBV using Spearman rank analysis. ROC curve analysis was performed to determine the operating point for rCBV in patients with anaplastic astrocytomas dichotomized at the median progression free survival time. For all grade III tumors (n = 34) the mean rCBV was 2.51 with a progression free survival of 705.5 days. The mean rCBV of anaplastic astrocytomas was 2.47 with progression free survival 495.2 days. In contrast, the mean rCBV for oligodendroglial tumors was 2.56 with a progression free survival of 1005.6 days. Although there was no significant correlation between rCBV and progression free survival among all types of grade III gliomas (P = 0.12), among anaplastic astrocytomas there was a significant correlation between pretreatment rCBV and progression free survival with correlation coefficient of -0.51 (P = 0.02). The operating point for rCBV in patients with anaplastic astrocytomas dichotomized at the median progression free survival time (446.5 days) was 2.86 with 78 % accuracy and there was a significant difference between the survival of patients with anaplastic astrocytomas in the dichotomized groups (P = 0.0009). Pre-treatment

rCBV may serve as a prognostic imaging biomarker for anaplastic astrocytomas, but not grade III oligodendroglioma tumors.

[208]

**TÍTULO / TITLE:** - Erratum to: Factors associated with a higher rate of distant failure after primary treatment for glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 20.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1305-1](#)

**AUTORES / AUTHORS:** - Tejada S; Aldave G; Marigil M; Gallego Perez-Larraya J; Dominguez PD; Diez-Valle R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Clinica Universidad de Navarra, C/Pio XII, 36, 31008, Pamplona, España, [stejadasolis@yahoo.es](mailto:stejadasolis@yahoo.es).

[209]

**TÍTULO / TITLE:** - Factors associated with a higher rate of distant failure after primary treatment for glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 18.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1279-z](#)

**AUTORES / AUTHORS:** - Tejada S; Diez-Valle R; Aldave G; Marigil M; de Gallego J; Dominguez PD

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Clinica Universidad de Navarra, C/Pio XII, 36, 31008, Pamplona, España, [stejadasolis@yahoo.es](mailto:stejadasolis@yahoo.es).

**RESUMEN / SUMMARY:** - Our purpose was to analyze the pattern of failure in glioblastoma (GBM) patients at first recurrence after radiotherapy and temozolomide and its relationship with different factors. From 77 consecutive GBM patients treated at our institution with fluorescence guided surgery and standard radiochemotherapy, 58 first recurrences were identified and included in a retrospective review. Clinical data including age, Karnofsky performance score, preoperative tumor volume and location, extend of resection, MGMT promoter methylation status, time to progression (PFS), overall survival (OS) and adjuvant therapies were reviewed for every patient. Recurrent tumor location respect the original lesion was the end point of the study. The recurrence pattern was local only in 65.5 % of patients and non-local in 34.5 %. The univariate and multivariate analysis showed that greater preoperative tumor volume in T1 gadolinium enhanced sequences, was the only variable with statistical significance ( $p < 0.001$ ) for increased rate of non-local recurrences, although patients with MGMT methylation and complete resection of enhancing tumor presented non-local recurrences more frequently. PFS was longer in patients with non-local recurrences (13.8 vs. 6.4 months;  $p = 0.019$ , log-rank). However, OS was not significantly different in both groups (24.0 non-local vs. 19.3 local;  $p = 0.9$ ). Rate of non-local recurrences in our series of patients treated with fluorescence guided surgery and standard radiochemotherapy was higher than previously published in GBM, especially in patients with longer PFS. Greater preoperative enhancing tumor volume was associated with increased rate of non-local recurrences.

[210]

**TÍTULO / TITLE:** - Cisplatin associated with LY294002 increases cytotoxicity and induces changes in transcript profiles of glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Biol Rep. 2013 Nov 12.

●● Enlace al texto completo (gratis o de pago) [1007/s11033-013-2849-z](#)

**AUTORES / AUTHORS:** - Carminati PO; Donaires FS; Marques MM; Donadi EA; Passos GA; Sakamoto-Hojo ET

**INSTITUCIÓN / INSTITUTION:** - Department of Genetics, Faculty of Medicine of Ribeirao Preto, University of Sao Paulo (USP), Ribeirao Preto, SP, Brazil.

**RESUMEN / SUMMARY:** - Glioblastoma, one of the deadliest forms of brain tumor, responds poorly to available therapies. This highlights the intense search for new treatment approaches, and an emerging strategy is based on molecular targets. In the present work, we aimed to study whether glioblastoma cells can be sensitized by cisplatin combined with LY294002 (LY), which is an inhibitor of PI3K-related family (ATM, ATR, DNA-PK). We observed that cisplatin caused a pronounced reduction in cell proliferation in U343 and U87 cells, and LY significantly increased the cytotoxic effects caused by cisplatin under these conditions. Differently of U343, U87 cells did not show a significant induction of apoptosis. The phosphorylation level of damage response proteins was analyzed after drug-treatment either with/without LY. The presence of gammaH2AX foci and phosphorylation of TP53(ser15) and CHK1(ser317) were shown in U343 cells, compatible with cisplatin-induced DNA damage. Similarly, the level of ATR phosphorylation (ser428) was also increased (24 h). The transcript expression profiles of drug-treated compared with untreated U343 cells showed significant changes in the expression of 108 genes, while 274 genes were modulated by cisplatin+LY. The combined treatment caused a high proportion of down-regulated genes, which were mainly involved with DNA repair, cell death and cell cycle control/proliferation, metabolism, transcription regulation and cellular adhesion. Altogether, the present results indicate that most probably, PI3K-related kinases may play an important role in the resistance of glioblastomas cells to cisplatin, and the combination with LY can, at least in part, sensitize these cells to drug treatment.

[211]

**TÍTULO / TITLE:** - Loss of FUBP1 expression in gliomas predicts FUBP1 mutation and is associated with oligodendroglial differentiation, IDH1 mutation and 1p/19q loss of heterozygosity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuropathol Appl Neurobiol. 2013 Oct 3. doi: 10.1111/nan.12088.

●● Enlace al texto completo (gratis o de pago) [1111/nan.12088](#)

**AUTORES / AUTHORS:** - Baumgarten P; Harter PN; Tonjes M; Capper D; Blank AE; Sahm F; von Deimling A; Kolluru V; Schwamb B; Rabenhorst U; Starzetz T; Kogel D; Rieker RJ; Plate KH; Ohgaki H; Radlwimmer B; Zornig M; Mittelbronn M

**INSTITUCIÓN / INSTITUTION:** - Institute of Neurology (Edinger Institute), Goethe University, Frankfurt.

**RESUMEN / SUMMARY:** - AIMS: The Far Upstream Element [FUSE] Binding Protein 1 (FUBP1) regulates target genes, such as the cell cycle regulators MYC and p21. FUBP1 is up-regulated in many tumours and acts as an oncoprotein by stimulating proliferation and inhibiting apoptosis. Recently, FUBP1 mutations were identified in approximately 15% of oligodendrogliomas. To date, all reported FUBP1 mutations have been predicted to inactivate FUBP1, which suggests that in contrast to most other tumours FUBP1 may act as a tumour suppressor in oligodendrogliomas. METHODS: As no data are currently available concerning FUBP1 protein levels in gliomas, we examined the FUBP1 expression profiles of human glial tumours by immunohistochemistry and immunofluorescence. We analysed FUBP1 expression related to morphological differentiation, IDH1 and FUBP1 mutation status, 1p/19q loss of heterozygosity (LOH) as well as proliferation rate. RESULTS: Our findings demonstrate that FUBP1 expression levels are increased in all glioma subtypes as compared to normal central nervous system (CNS) control tissue and are associated with increased proliferation. In contrast, FUBP1 immunonegativity predicted FUBP1 mutation with a sensitivity of 100% and a specificity of 90% in our cohort and was associated with oligodendroglial differentiation, IDH1 mutation and 1p/19q loss of heterozygosity (LOH). Using this approach, we detected a to-date undescribed FUBP1 mutation in an oligodendrogloma. CONCLUSION: In summary, our data indicate an association between of FUBP1 expression and proliferation in gliomas. Furthermore, our findings present FUBP1 immunohistochemical analysis as a helpful additional tool for neuropathological glioma diagnostics predicting FUBP1 mutation.

[212]

**TÍTULO / TITLE:** - Neutrophils promote the malignant glioma phenotype through S100A4.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 Nov 15.

- [Enlace al texto completo \(gratis o de pago\) 1158/1078-0432.CCR-13-1279](#)

**AUTORES / AUTHORS:** - Liang J; Piao Y; Holmes LS; Fuller GN; Henry V; de Groot JF; Tiao N

**INSTITUCIÓN / INSTITUTION:** - Neuro-Oncology - Research, University of Texas MD Anderson Cancer Center.

**RESUMEN / SUMMARY:** - PURPOSE: Antiangiogenic therapy is effective in blocking vascular permeability, inhibiting vascular proliferation, and slowing tumor growth, but studies in multiple cancer types have shown that tumors eventually acquire resistance to blockade of blood vessel growth. Currently, the mechanisms by which this resistance occurs are not well understood. EXPERIMENTAL DESIGN: In this study, we evaluated the effects of neutrophils on glioma biology both in vitro and in vivo and determined target genes by which neutrophils promote the malignant glioma phenotype during anti-VEGF therapy. RESULTS: We found that an increase in neutrophil infiltration into tumors is significantly correlated with glioma grade and in glioblastoma with acquired resistance to anti-VEGF therapy. Our data demonstrate that neutrophils and their condition media increased the proliferation rate of Glioblastoma-initiating cells (GICs). In addition, neutrophils significantly increased GICs transwell migration compared to controls. Consistent with this behavior, co-culture with neutrophils promoted GICs to

adopt morphologic and gene expression changes consistent with a mesenchymal signature. Neutrophil-promoting tumor progression could be blocked by S100A4 down-regulation in vitro and in vivo. Furthermore, S100A4 depletion increased the effectiveness of anti-VEGF therapy in glioma. CONCLUSIONS: Collectively, these data suggest that increased recruitment of neutrophils during anti-VEGF therapy promotes glioma progression and may promote treatment resistance. Tumor progression with mesenchymal characteristics is partly mediated by S100A4, the expression of which is increased by neutrophil infiltration. Targeting granulocytes and S100A4 may be effective approaches to inhibit the glioma malignant phenotype and diminish antiangiogenic therapy resistance.

[213]

**TÍTULO / TITLE:** - The EFEMP1 Gene: A Frequent Target for Epigenetic Silencing in Multiple Human Pituitary Adenoma Subtypes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroendocrinology. 2013 Nov 6.

●● Enlace al texto completo (gratis o de pago) [1159/000355624](#)

**AUTORES / AUTHORS:** - Duong CV; Yacqub-Usman K; Emes RD; Clayton RN; Farrell WE

**INSTITUCIÓN / INSTITUTION:** - Institute of Science and Technology in Medicine, Keele University School of Medicine, Stoke-on-Trent, Staffordshire, UK.

**RESUMEN / SUMMARY:** - Background/Aims: In a genome-wide investigation we recently identified the EGF-containing fibulin-like extracellular matrix protein 1 gene, EFEMP1, as hypermethylated in growth hormone-secreting adenoma. Methods: In an independent cohort we determined expression of EFEMP1, CpG island methylation and histone tail modification status. The causal consequences of epigenetic modification were determined through epidrug-induced reversal and enforced EFEMP1 expression in GH3 cells. Results: The majority of adenomas, irrespective of subtype, show reduced EFEMP1 expression. However, epigenetic change, as determined by CpG island methylation, was not invariantly associated with decreased EFEMP1 expression. Conversely, chromatin immunoprecipitation assays revealed enrichment for modifications associated with either active or silenced genes in adenoma that did or did not express EFEMP1 respectively. In AtT-20 and GH3 cells a causal relationship between epigenetic silencing and expression of EFEMP1 was established where co-incubation with the epidrugs zebularine and TSA induced expression of EFEMP1 and concomitant histone tail modifications toward those associated with expressed genes. Enforced expression of EFEMP1 in GH3 cells was without effect on cell proliferation or apoptotic end-points, however inhibition of endogenous matrix metalloproteinase (MMP)-2 expression was apparent. Primary adenomas did not show this relationship, however a positive correlation was apparent with the MMP7 transcript and perhaps reflects cell or species differences. Conclusions: The protein product of the EFEMP1 gene, fibulin-3, is reported to impact on multiple pathways in a cell-specific context. Subtype-independent loss of EFEMP1 expression in the majority of primary adenomas should prompt more detailed investigation in this tumour type. © 2013 S. Karger AG, Basel.

[214]

**TÍTULO / TITLE:** - Gross total resection improves overall survival in children with choroid plexus carcinoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 29.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1281-5](#)

**AUTORES / AUTHORS:** - Sun MZ; Ivan ME; Clark AJ; Oh MC; Delance AR; Oh T; Safaee M; Kaur G; Bloch O; Molinaro A; Gupta N; Parsa AT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of California San Francisco, 505 Parnassus Ave., San Francisco, CA, 94117, USA.

**RESUMEN / SUMMARY:** - Choroid plexus carcinoma (CPC) is a rare, malignant, primary brain tumor with a poor prognosis. While previous reports have shown benefits of aggressive surgery, very few large-scale studies have focused exclusively on the pediatric population, for whom the risks of aggressive surgery must be weighed carefully against the benefits. We performed a comprehensive systematic review of pediatric CPCs to test the effects of gross total resection (GTR) on overall survival (OS) and progression-free survival (PFS). A Pubmed search was performed to identify children with CPC who underwent surgical resection. Only disaggregated clinical cases in which extent of resection was confirmed by CT or MRI were included for analysis. Kaplan-Meier and multivariate Cox regression survival analyses were performed to determine the effects of extent of resection on OS and PFS. Disaggregated clinical data from a total of 102 pediatric CPC patients (age  $\leq 18$  years) with known extent of resection and overall survival were analyzed. GTR was significantly associated with better OS by Kaplan-Meier analysis (logrank  $p < 0.001$ ). Multivariate Cox regression analysis adjusting for age, gender, tumor location (supratentorial vs. infratentorial), and type of adjuvant therapy (chemotherapy, radiation, and combined therapy), showed that GTR independently increased OS ( $p = 0.006$ ). While GTR also improved PFS on Kaplan-Meier analysis ( $p = 0.027$ ), the effect did not meet our criteria for significance in our multivariate Cox model ( $p = 0.120$ ). GTR improved OS of pediatric CPC and is recommended if it can be safely performed.

[215]

**TÍTULO / TITLE:** - Non-paraneoplastic voltage-gated calcium channels antibody-mediated cerebellar ataxia responsive to IVIG treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Sci. 2013 Oct 29. pii: S0022-510X(13)02977-8. doi: 10.1016/j.jns.2013.10.031.

●● Enlace al texto completo (gratis o de pago) [1016/j.jns.2013.10.031](#)

**AUTORES / AUTHORS:** - Rigamonti A; Lauria G; Stanzani L; Mantero V; Andreetta F; Salmaggi A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, "Alessandro Manzoni" General Hospital, Via Dell'Eremo 9/11, 23900 Lecco, Italy. Electronic address: [rig74@libero.it](mailto:rig74@libero.it).

**RESUMEN / SUMMARY:** - Non-paraneoplastic cerebellar ataxia associated with voltage-gated calcium channel (VGCC) antibodies is a rare entity with only few cases reported in literature. We describe a 60-year-old man with subacute cerebellar ataxia and subclinical Lambert-Eaton myasthenic syndrome (LEMS) in whom VGCC

antibodies were detected at high titer in serum and cerebrospinal fluid. Screening for underlying malignancies was negative. Intravenous immunoglobulin treatment led to the improvement of clinical picture and reduction of serum antibody titer over a 13-month follow-up period. We emphasize that VGCC antibodies should be included in the diagnostic work-up of patients with subacute cerebellar ataxia and that treatment with IVIG can improve the clinical picture and prevent disability.

[216]

**TÍTULO / TITLE:** - Radiation Optic Neuropathy After Proton Beam Therapy for Optic Nerve Sheath Meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuroophthalmol. 2013 Oct 14.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1097/WNO.0000000000000077](#)

**AUTORES / AUTHORS:** - Vaphiades M

**INSTITUCIÓN / INSTITUTION:** - Departments of Ophthalmology, Neurology, and Neurosurgery, University of Alabama at Birmingham, Birmingham, Alabama.

[217]

**TÍTULO / TITLE:** - Gross total but not incomplete resection of glioblastoma prolongs survival in the era of radiochemotherapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Oncol. 2013 Dec;24(12):3117-23. doi: 10.1093/annonc/mdt388. Epub 2013 Oct 14.

●● [Enlace al texto completo \(gratis o de pago\)](#) [1093/annonc/mdt388](#)

**AUTORES / AUTHORS:** - Kreth FW; Thon N; Simon M; Westphal M; Schackert G; Nikkha G; Hentschel B; Reifenberger G; Pietsch T; Weller M; Tonn JC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Munich LMU, Munich.

**RESUMEN / SUMMARY:** - BACKGROUND: This prospective multicenter study assessed the prognostic influence of the extent of resection when compared with biopsy only in a contemporary patient population with newly diagnosed glioblastoma. PATIENTS AND METHODS: Histology, O(6)-methylguanine-DNA methyltransferase (MGMT) promoter methylation status, and clinical data were centrally analyzed. Survival analyses were carried out with the Kaplan-Meier method. Prognostic factors were assessed with proportional hazard models. RESULTS: Of 345 patients, 273 underwent open tumor resection and 72 biopsies; 125 patients had gross total resections (GTRs) and 148, incomplete resections. Surgery-related morbidity was lower after biopsy (1.4% versus 12.1%,  $P = 0.007$ ). 64.3% of patients received radiotherapy and chemotherapy (RT plus CT), 20.0% RT alone, 4.3% CT alone, and 11.3% best supportive care as an initial treatment. Patients  $\leq 60$  years with a Karnofsky performance score (KPS) of  $\geq 90$  were more likely to receive RT plus CT ( $P < 0.01$ ). Median overall survival (OS) (progression free survival; PFS) ranged from 33.2 months (15 months) for patients with MGMT-methylated tumors after GTR and RT plus CT to 3.0 months (2.4 months) for biopsied patients receiving supportive care only. Favorable prognostic factors in multivariate analyses for OS were age  $\leq 60$

years [hazard ratio (HR) = 0.52; P < 0.001], preoperative KPS of  $\geq 80$  (HR = 0.55; P < 0.001), GTR (HR = 0.60; P = 0.003), MGMT promoter methylation (HR = 0.44; P < 0.001), and RT plus CT (HR = 0.18, P < 0.001); patients undergoing incomplete resection did not better than those receiving biopsy only (HR = 0.85; P = 0.31). CONCLUSIONS: The value of incomplete resection remains questionable. If GTR cannot be safely achieved, biopsy only might be used as an alternative surgical strategy.

[218]

**TÍTULO / TITLE:** - Long-term efficacy of fractionated radiotherapy for benign meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Radiother Oncol. 2013 Oct 31. pii: S0167-8140(13)00509-4. doi: 10.1016/j.radonc.2013.10.006.

●● Enlace al texto completo (gratis o de pago) [1016/j.radonc.2013.10.006](#)

**AUTORES / AUTHORS:** - Solda F; Wharram B; De Ieso PB; Bonner J; Ashley S; Brada M

**INSTITUCIÓN / INSTITUTION:** - Neuro-oncology Unit, The Royal Marsden NHS Foundation Trust, London, UK.

**RESUMEN / SUMMARY:** - PURPOSE: To assess long term efficacy of fractionated stereotactic radiotherapy (fSRT) in the treatment of benign intracranial meningiomas. MATERIALS AND METHODS: Retrospective study of 222 patients with histologically confirmed (58%) and unverified presumed (42%) grade I intracranial meningioma treated with fSRT in a single institution to doses of 50-55Gy in 30-33 fractions. RESULTS: At a median follow-up of 43months (range 3-144) the 5 and 10years local control (LC) were 93% and 86%. Patients with tumors involving the optic nerve (42 patients) and patients with cavernous sinus/parasellar region meningiomas (78 patients) had 5 and 10years LC of 100%. The 5 and 10years survival probabilities were 93% and 84%. On multivariate analysis gender and tumor site were independent predictors of LC. Worsening of pre-existing cranial nerve deficit occurred in 8 (3.5%) and onset of new deficit in 1 (0.5%) patient. Two patients with optic nerve sheath meningioma (1%) developed radiation retinopathy. There were no cases of radiation necrosis or second brain tumors. CONCLUSION: fSRT achieves excellent medium and long term tumor control with minimal morbidity particularly in patients with benign meningiomas involving the parasellar region and the optic nerves and questions the role of other treatment modalities for tumors at these locations.

[219]

**TÍTULO / TITLE:** - Glial cell line-derived neurotrophic factor (GDNF) expression and NMJ plasticity in skeletal muscle following endurance exercise.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroscience. 2013 Nov 8. pii: S0306-4522(13)00921-4. doi: 10.1016/j.neuroscience.2013.10.068.

●● Enlace al texto completo (gratis o de pago)

[1016/j.neuroscience.2013.10.068](#)

**AUTORES / AUTHORS:** - Gyorkos AM; McCullough MJ; Spitsbergen JM

**INSTITUCIÓN / INSTITUTION:** - Western Michigan University, Department of Biological Sciences, 1903 West Michigan Avenue, Kalamazoo, MI 49008-5410, USA. Electronic address: [amy.gyorkos@wmich.edu](mailto:amy.gyorkos@wmich.edu).

**RESUMEN / SUMMARY:** - Glial cell line-derived neurotrophic factor (GDNF) supports and maintains the neuromuscular system during development and through adulthood by promoting neuroplasticity. The aim of this study was to determine if different modes of exercise can promote changes in GDNF expression and neuromuscular junction (NMJ) morphology in slow- and fast-twitch muscles. Rats were randomly assigned to a run training (run group), swim training (swim group), or sedentary control group. GDNF protein content was determined by enzyme-linked immunosorbant assay. GDNF protein content increased significantly in soleus (SOL) following both training protocols ( $P < 0.05$ ). Although not significant, an increase of 60% in the extensor digitorum longus (EDL) followed swim-training (NS;  $P < 0.06$ ). NMJ morphology was analyzed by measuring alpha-bungarotoxin labeled post-synaptic end plates. GDNF content and total end plate area were positively correlated. End plate area decreased in EDL of the run group and increased in SOL of the swim group. The results indicate that GDNF expression and NMJ morphological changes are activity dependent and that different changes may be observed by varying the exercise intensity in slow- and fast-twitch fibers.

[220]

**TÍTULO / TITLE:** - Incidence and prognostic value of multiple gene promoter methylations in gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 6.

- [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1301-5](#)

**AUTORES / AUTHORS:** - Zhang L; Wang M; Wang W; Mo J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Affiliated Hospital of Xi'an Jiaotong University, College of Medicine, No. 277 Yanta West Road, Xi'an, 710061, Shaanxi, People's Republic of China, [longzhou1983@126.com](mailto:longzhou1983@126.com).

**RESUMEN / SUMMARY:** - Aberrant CpG island methylation is a common phenomenon in malignancy. The methylation status of multiple tumor suppressor genes may serve as a biomarker for early diagnostics and the prediction of prognosis. In this study, we quantitatively determined the promoter methylation status of five tumor-related genes in tumor tissue and paired serum from 240 patients with gliomas. The relationship between hyper-methylation and clinic-pathological parameters was evaluated, and the prognostic value of the methylation status was determined. Hypermethylation in serum was shown to be accompanied by hypermethylation in paired tumor tissues. In both tumors and serum, methylation of polymerase-1 (PARP-1), SHP-1, DAPK-1 and TIMP-3 genes was at significantly higher levels in high-grade compared with low-grade gliomas, indicating that the promoter methylation status positively correlates with tumor grade. In malignant gliomas, the serum methylation levels of PARP-1, and SHP-1 together with IDH-1 mutations were found to be independent prognostic factors for overall survival. Moreover, hypermethylation of PARP-1 in serum correlated with a shorter progression-free survival time. These results suggest that hypermethylation in gliomas correlates with increased malignancy and poor prognosis. Analysis of the

serum promoter methylation status of multiple genes could therefore be used as a biomarker for the detection and evaluation of the prognosis of glioma patients.

[221]

**TÍTULO / TITLE:** - Inhibition of CXCL12/CXCR4 autocrine/paracrine loop reduces viability of human glioblastoma stem-like cells affecting self-renewal activity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Toxicology. 2013 Dec 15;314(2-3):209-20. doi: 10.1016/j.tox.2013.10.003. Epub 2013 Oct 21.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.tox.2013.10.003](#)

**AUTORES / AUTHORS:** - Gatti M; Pattarozzi A; Bajetto A; Wurth R; Daga A; Fiaschi P; Zona G; Florio T; Barbieri F

**INSTITUCIÓN / INSTITUTION:** - Section of Pharmacology, Department of Internal Medicine, University of Genova, Viale Benedetto XV, 2, 16132 Genova, Italy.

**RESUMEN / SUMMARY:** - Cancer stem cells (CSCs) or tumor initiating cells (TICs) drive glioblastoma (GBM) development, invasiveness and drug resistance. Distinct molecular pathways might regulate CSC biology as compared to cells in the bulk tumor mass, representing potential therapeutic targets. Chemokine CXCL12 and its receptor CXCR4 control proliferation, invasion and angiogenesis in GBM cell lines and primary cultures, but little is known about their activity in GBM CSCs. We demonstrate that CSCs, isolated from five human GBMs, express CXCR4 and release CXCL12 in vitro, although different levels of expression and secretion were observed in individual cultures, as expected for the heterogeneity of GBMs. CXCL12 treatment induced Akt-mediated significant pro-survival and self-renewal activities, while proliferation was induced at low extent. The role of CXCR4 signaling in CSC survival and self-renewal was further demonstrated using the CXCR4 antagonist AMD3100 that reduced self-renewal and survival with greater efficacy in the cultures that released higher CXCL12 amounts. The specificity of CXCL12 in sustaining CSC survival was demonstrated by the lack of AMD3100-dependent inhibition of viability in differentiated cells derived from the same GBMs. These findings, although performed on a limited number of tumor samples, suggest that the CXCL12/CXCR4 interaction mediates survival and self-renewal in GBM CSCs with high selectivity, thus emerging as a candidate system responsible for maintenance of cancer progenitors, and providing survival benefits to the tumor.

[222]

**TÍTULO / TITLE:** - Health-related quality of life and cognitive functioning in long-term anaplastic oligodendroglioma and oligoastrocytoma survivors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 26.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1278-0](#)

**AUTORES / AUTHORS:** - Habets EJ; Taphoorn MJ; Nederend S; Klein M; Delgadillo D; Hoang-Xuan K; Bottomley A; Allgeier A; Seute T; Gijtenbeek AM; de Gans J; Enting RH; Tijssen CC; van den Bent MJ; Reijneveld JC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Medical Center Haaglanden, Lijnbaan 32, 2512 VA, PO Box 432, 2501 CK, The Hague, The Netherlands, [e.habets@mchaaglanden.nl](mailto:e.habets@mchaaglanden.nl).

**RESUMEN / SUMMARY:** - Overall survival of patients with anaplastic oligodendroglial tumors has been improved due to the addition of procarbazine, lomustine and vincristine (PCV) chemotherapy to radiotherapy (RT), especially in 1p/19q-codeleted tumors. With improved survival, quality of survival becomes pivotal. We evaluated cognitive functioning and health-related quality of life (HRQOL) in a cohort of long-term anaplastic oligodendroglioma survivors. Thirty-two out of 37 long-term survivors included in European Organisation for Research and Treatment of Cancer (EORTC) study 26951 in the Netherlands and France participated. Cognition was assessed using neuropsychological tests for 6 domains, and HRQOL with the EORTC Quality of Life Questionnaire (EORTC QLQ-C30) and Brain Cancer Module (EORTC QLQ-BN20). Fatigue and mood were evaluated. Results were compared to healthy controls and to patients' own HRQOL 2.5 years following initial treatment. At the time of assessment, median survival for the patients was 147 months, 27 were still progression-free since initial treatment. Of progression-free patients, 26 % were not, and 30 % were severely cognitively impaired; 41 % were employed and 81 % could live independently. Patients' HRQOL was worse compared to controls, but similar to 2.5 years after initial treatment. Initial treatment (RT versus RT + PCV) was not correlated with cognition or HRQOL. In conclusion, cognitive functioning in long-term anaplastic oligodendroglioma survivors is variable. However, most patients function independently. In progression-free patients, HRQOL is relatively stable during the disease course. In this small sample, no effect of the addition of PCV on cognition or HRQOL was identified.

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[223]

**TÍTULO / TITLE:** - Cerebral meningioma presenting as dystonic head tremor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mov Disord. 2013 Nov 20. doi: 10.1002/mds.25764.

●● [Enlace al texto completo \(gratis o de pago\) 1002/mds.25764](#)

**AUTORES / AUTHORS:** - Diyora B; Kukreja S; Sharma A

**INSTITUCIÓN / INSTITUTION:** - Lokmanya Tilak Municipal Medical College and Sion Hospital.

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[224]

**TÍTULO / TITLE:** - Surgery for insular low-grade glioma: predictors of postoperative seizure outcome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 15.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.9.JNS13728](#)

**AUTORES / AUTHORS:** - Ius T; Pauletto G; Isola M; Gregoraci G; Budai R; Lettieri C; Eleopra R; Fadiga L; Skrap M

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurosurgery and.

**RESUMEN / SUMMARY:** - Object Although a number of recent studies on the surgical treatment of insular low-grade glioma (LGG) have demonstrated that aggressive resection leads to increased overall patient survival and decreased malignant

progression, less attention has been given to the results with respect to tumor-related epilepsy. The aim of this investigation was to evaluate the impact of volumetric, histological, and intraoperative neurophysiological factors on seizure outcome in patients with insular LGG. Methods The authors evaluated predictors of seizure outcome with special emphasis on both the extent of tumor resection (EOR) and the tumor's infiltrative pattern quantified by computing the difference between the preoperative T2- and T1-weighted MR images (DeltaVT2T1) in 52 patients with preoperative drug-resistant epilepsy. Results The 12-month postoperative seizure outcome (Engel class) was as follows: seizure free (Class I), 67.31%; rare seizures (Class II), 7.69%; meaningful seizure improvement (Class III), 15.38%; and no improvement or worsening (Class IV), 9.62%. Poor seizure control was more common in patients with a longer preoperative seizure history ( $p < 0.002$ ) and higher frequency of seizures ( $p = 0.008$ ). Better seizure control was achieved in cases with EOR  $\geq 90\%$  ( $p < 0.001$ ) and DeltaVT2T1  $< 30 \text{ cm}^3$  ( $p < 0.001$ ). In the final model, DeltaVT2T1 proved to be the strongest independent predictor of seizure outcome in insular LGG patients ( $p < 0.0001$ ). Conclusions No or little postoperative seizure improvement occurs mainly in cases with a prevalent infiltrative tumor growth pattern, expressed by high DeltaVT2T1 values, which consequently reflects a smaller EOR.

[225]

**TÍTULO / TITLE:** - Surgical outcomes of the minimum anterior and posterior combined transpetrosal approach for resection of retrochiasmatic craniopharyngiomas with complicated conditions.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 15.

●● Enlace al texto completo (gratis o de pago) [3171/2013.10.JNS13673](#)

**AUTORES / AUTHORS:** - Kunihiro N; Goto T; Ishibashi K; Ohata K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Osaka City University Graduate School of Medicine, Osaka, Japan.

**RESUMEN / SUMMARY:** - Object Retrochiasmatic craniopharyngiomas are surgically challenging tumors. Retrochiasmatic craniopharyngiomas with complicated conditions such as large diameter, major calcification, or significant extension to the third ventricle or posterior fossa present surgical challenges; moreover, recurrent retrochiasmatic craniopharyngiomas are particularly formidable challenges. Although the transpetrosal approach to retrochiasmatic craniopharyngiomas published by Hakuba in 1985 can provide unique advantageous exposure of the retrochiasmatic area to allow safe neurovascular dissection and facilitate radical tumor removal, the procedure is viewed as complicated and time consuming and has a high risk of damaging hearing functions. The authors have modified Hakuba's technique to minimize petrosectomy and reduce surgical complications and have applied this modified approach to retrochiasmatic craniopharyngiomas with complicated conditions. In this study, the authors describe their technique and surgical outcomes to elucidate the role of this modified transpetrosal approach for retrochiasmatic craniopharyngiomas with complicated conditions. This is the first study to report surgical outcomes of the transpetrosal approach for retrochiasmatic craniopharyngiomas. Methods Between 1999 and 2011, the minimum anterior and posterior combined (MAPC) transpetrosal approach, which is a modification of Hakuba's transpetrosal approach, was applied in 16 cases of

retrochiasmatic craniopharyngiomas with complicated conditions. Eight cases were recurrent tumors, 4 had previously received radiotherapy, 11 had a large diameter, 10 had large calcification, 15 had superior extension of the tumor into the third ventricle, and 10 had a posterior extension of the tumor that compressed the midbrain and pons. In all 16 patients, more than 2 of these complicated conditions were present. The follow-up duration ranged from 0.8 to 12.5 years (mean 5.3 years). Surgical outcomes assessed were the extent of resection, surgical complications, visual function, endocrinological status, and neuropsychological function. Five-year and 10-year recurrence-free survival rates were also calculated. Results Gross-total or near-total resection was achieved in 15 cases (93.8%). Facial nerve function was completely maintained in all 16 patients. Serviceable hearing was preserved in 15 cases (93.8%). Visual function improved in 13 out of 14 cases (92.9%) that had visual disturbance before surgery. None of the patients experienced deterioration of their visual function. Twelve cases had endocrinological deficit and received hormonal replacement before surgery. New endocrinological deficit occurred in 2 cases (12.5%). Neuropsychological function was maintained in 14 cases (87.5%) and improved in 1 case (6.3%). One case that had received previous conventional radiotherapy treatment showed a gradual decline in neuropsychological function. The 5-year and 10-year recurrence-free survival rates were both 86.5%. Conclusions The authors obtained good results by using the MAPC transpetrosal approach for the removal of retrochiasmatic craniopharyngiomas with complicated conditions. The MAPC transpetrosal approach should be considered as a therapeutic option for selected cases of retrochiasmatic craniopharyngiomas with complicated conditions.

[226]

**TÍTULO / TITLE:** - Imaging of cancer therapy-induced central nervous system toxicity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Clin. 2014 Feb;32(1):147-57. doi:

10.1016/j.ncl.2013.07.004. Epub 2013 Oct 31.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.ncl.2013.07.004](#)

**AUTORES / AUTHORS:** - Dietrich J; Klein JP

**INSTITUCIÓN / INSTITUTION:** - Division of Neuro-Oncology, Department of Neurology, Massachusetts General Hospital Cancer Center, Center for Regenerative Medicine, Harvard Medical School, 55 Fruit Street, Yawkey 9E, Boston, MA 02114, USA.

Electronic address: [Dietrich.Jorg@mgh.harvard.edu](mailto:Dietrich.Jorg@mgh.harvard.edu).

**RESUMEN / SUMMARY:** - Cancer therapy, including radiation and chemotherapy, can be associated with harmful effects to the central nervous system. Recognition of classical neurotoxic syndromes is critical to appropriately guide and optimize patient management. As a result of cancer therapy-induced toxicity, patients may present with acute, subacute, and chronic neurologic symptoms that can be misinterpreted as tumor recurrence, infection, or paraneoplastic syndromes. In this review the advantages and limitations of various neuroimaging modalities such as computed tomography, magnetic resonance imaging, and positron emission tomography, frequently used in patients with cancer who present with diverse neurotoxic syndromes, are highlighted.

[227]

**TÍTULO / TITLE:** - Clinical Suspicion of Bilateral Carotid Body Paraganglioma and an Unexpected Histologic Diagnosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Vasc Surg. 2013 Oct 3. pii: S0890-5096(13)00347-6. doi: 10.1016/j.avsg.2013.05.005.

●● Enlace al texto completo (gratis o de pago) [1016/j.avsg.2013.05.005](#)

**AUTORES / AUTHORS:** - Bozzani A; Arici V; Ragni F; Sagrada PF

**INSTITUCIÓN / INSTITUTION:** - Division of Vascular Surgery, Foundation I.R.C.C.S. Policlinico San Matteo, Pavia, Italy. Electronic address: [a.bozzani@smatteo.pv.it](mailto:a.bozzani@smatteo.pv.it).

**RESUMEN / SUMMARY:** - Carotid body tumor (CBT) is the most common of the head and neck paragangliomas (PGLs). Conversely, synovial sarcomas are usually located around knee and ankle joint and rare variants occur in the oral cavity. A 68-year-old man presented with a left voluminous painless cervical mass. The diagnosis of CBT of type III Shamblin was suspected. The cervical mass was removed en bloc. Unexpectedly, pathologic examination showed monophasic synovial sarcoma. Excision of PGLs remains the therapy of choice, especially to make a correct histologic diagnosis.

[228]

**TÍTULO / TITLE:** - Supratentorial gross-totally resected non-anaplastic ependymoma: population based patterns of care and outcomes analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Dec;115(3):513-20. doi: 10.1007/s11060-013-1254-8. Epub 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1254-8](#)

**AUTORES / AUTHORS:** - Ghia AJ; Mahajan A; Allen PK; Armstrong TS; Lang FF Jr; Gilbert MR; Brown PD

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, The University of Texas, M.D. Anderson Cancer Center, 1515 Holcombe Blvd. Unit 0097, Houston, TX, 77030, USA, [aighia@mdanderson.org](mailto:aighia@mdanderson.org).

**RESUMEN / SUMMARY:** - Observation following gross-total resection (GTR) for non-anaplastic supratentorial ependymomas is often advocated based on small, retrospective series. The purpose of this study is to perform a population-based analysis to examine outcomes for this rare cohort of low-risk patients. A retrospective analysis was conducted utilizing the Surveillance, Epidemiology and End Results Program of the United States National Cancer Institute. We identified patients with supratentorial non-anaplastic ependymoma who underwent GTR alone or GTR followed by radiation. We identified 92 patients who met these criteria. The median age was 17.5 years (range 1-83) with the majority female (58 %) and white (75 %). Radiotherapy (RT) was delivered in half of patients. The 5-/10-year Kaplan-Meier estimated overall survival (OS) and cause-specific survival (CSS) for the overall cohort was 83.2/71.4 and 84.1/78.0 %, respectively. There was no evidence of decreased CSS (HR 0.52 [0.18-1.51]; p = 0.23) or OS (HR 0.63 [0.25-1.59]; p = 0.33) with the omission of RT on univariate analysis. Age  $\geq$ 18 years correlated with worse OS (HR 4.01 [1.45-11.11]; p = 0.008) and CSS (HR 2.86 [0.99-8.31]; p = 0.05). RT did not

impact outcome for this low-risk cohort of patients. Older age correlates with poor prognosis.

[229]

**TÍTULO / TITLE:** - Cellular neurothekeoma: analysis of 37 cases emphasizing atypical histologic features.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mod Pathol. 2013 Nov 1. doi: 10.1038/modpathol.2013.190.

●● Enlace al texto completo (gratis o de pago) [1038/modpathol.2013.190](#)

**AUTORES / AUTHORS:** - Stratton J; Billings SD

**INSTITUCIÓN / INSTITUTION:** - Department of Anatomic Pathology, Cleveland Clinic, Cleveland, OH, USA.

**RESUMEN / SUMMARY:** - Cellular neurothekeoma is a frequent source of diagnostic difficulty. In order to gain more insight into the range of histologic features of cellular neurothekeoma, we examined all cases from our institution, with a focus on describing atypical histologic features. Cases with sufficient histologic material for evaluation were retrieved. Cases were analyzed for demographics, growth pattern, myxoid stroma, cytologic atypia, mitotic rate, perineural invasion, and other histologic features. The 37 patients (16 M; 21 F) had a mean age of 31.0 years (range: 4-89). Tumors involved the head and neck (n=16), arms (n=11), trunk and shoulders (n=8), and foot (n=2). All cases had at least focal nesting of epithelioid to spindled tumor cells characteristic of cellular neurothekeoma. In many, alternate growth patterns were present and represented the dominant pattern in some. These patterns included fascicular (n=9), sheet-like (n=6), and corded (n=4). Myxoid stroma was present in 14 and was prominent in 5. Cytologic atypia was present in 19 patients, with 3 having severe atypia. Mean mitotic rate was 2.0/mm<sup>2</sup> (range 0-10 per mm<sup>2</sup>). Neurotropism was seen in four cases. Other unusual features included collagen trapping, giant cells, hemorrhage, lymphocytic cuffing, chondroid stroma, and cellular vacuolization. Cellular neurothekeoma has a wider range of features than is commonly recognized. The presence of nests of epithelioid tumor cells with characteristic cytologic features, no matter how focal, is a clue to the diagnosis. Modern Pathology advance online publication, 1 November 2013; doi:10.1038/modpathol.2013.190.

[230]

**TÍTULO / TITLE:** - Morphologic characteristics and immunohistochemical profile of diffuse intrinsic pontine gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am J Surg Pathol. 2013 Sep;37(9):1357-64. doi: 10.1097/PAS.0b013e318294e817.

●● Enlace al texto completo (gratis o de pago)

[1097/PAS.0b013e318294e817](#)

**AUTORES / AUTHORS:** - Ballester LY; Wang Z; Shandilya S; Miettinen M; Burger PC; Eberhart CG; Rodriguez FJ; Raabe E; Nazarian J; Warren K; Quezado MM

**INSTITUCIÓN / INSTITUTION:** - \*Laboratory of Pathology daggerPediatric Oncology Branch, NCI, NIH, Bethesda double daggerDepartment of Pathology, Division of

Neuropathology, Johns Hopkins Hospital, Baltimore, MD section signChildren's National Medical Center, Research Center for Genetic Medicine, Washington, DC.

**RESUMEN / SUMMARY:** - Tumors of the central nervous system are the second most common malignancy in children. In particular, diffuse intrinsic pontine gliomas (DIPGs) are aggressive tumors with poor prognosis and account for 10% to 25% of pediatric brain tumors. The majority of DIPGs are astrocytic, infiltrative, and localized to the pons. Studies have shown median survival times of less than a year, with 90% of children dying within 2 years. We built multitissue arrays with 24 postmortem DIPG samples and analyzed the morphology and expression of several proteins (p53, EGFR, GFAP, MIB1, BMI1, beta-catenin, p16, Nanog, Nestin, OCT4, OLIG2, SOX2) with the goal of identifying potential treatment targets and improving our understanding of the biology of these tumors. The majority of DIPGs were high-grade gliomas (22), with 18 cases having features of glioblastoma (World Health Organization [WHO] grade IV) and 4 cases with high-grade features consistent with anaplastic astrocytoma (WHO grade III). One case was low grade (WHO grade II), and 1 case showed intermediate features between a grade II and grade III glioma (low mitotic rate but increased cellularity and cell atypia), being difficult to grade precisely. The majority of the tumors were positive for GFAP (24/24), MIB1 (23/24), OLIG2 (22/24), p16 (20/24), p53 (20/24), SOX2 (19/24), EGFR (16/24), and BMI1 (9/24). Our results suggest that dysregulation of EGFR and p53 may play an important role in the development of DIPGs. The majority of DIPGs express stem cell markers such as SOX2 and OLIG2, consistent with a role for tumor stem cells in the origin and maintenance of these tumors. Targeted therapies against these proteins could be beneficial in treatment.

[231]

**TÍTULO / TITLE:** - Beyond high-dose methotrexate and brain radiotherapy: novel targets and agents for primary CNS lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Oncol. 2013 Nov 20.

●● Enlace al texto completo (gratis o de pago) [1093/annonc/mdt385](#)

**AUTORES / AUTHORS:** - Ponzoni M; Issa S; Batchelor TT; Rubenstein JL

**INSTITUCIÓN / INSTITUTION:** - Pathology Unit and Unit of Lymphoid Malignancies, San Raffaele Scientific Institute, Milan, Italy.

**RESUMEN / SUMMARY:** - BACKGROUND: While there has been significant progress in outcomes for patients diagnosed with primary central nervous system (CNS) lymphoma (PCNSL), survival rates will likely plateau with the current armamentarium of agents used to treat these patients. Moreover, given that PCNSL increasingly impacts an older population, a significant proportion of patients are not eligible for intensive therapies such as high-dose chemotherapy or whole-brain radiation. There is a need for the development of novel agents, which target key survival pathways in order to continue to make progress in this disease. PATIENTS AND METHODS: We reviewed the key molecular pathways and genomic aberrations in PCNSL in order to identify candidate targets. We focused on molecules and pathways that have been identified and confirmed by more than one investigator or methodology. RESULTS: While PCNSL tumors usually express a BCL6+, MUM1+ 'activated, germinal center' immunophenotype, they exhibit multiple shared genetic properties with ABC-type diffuse large B-cell lymphomas. Candidate targets and pathways include NFκB, the B-

cell receptor, the JAK/STAT pathway, IRF4, BCL-6 as well as PIM kinases. Elements of the tumor microenvironment that may be exploited therapeutically include chemokine pathways, as well as macrophage and T-cell responses. CONCLUSIONS: There is a significant need for developing novel therapies in PCNSL, given that an increasing proportion of patients are not eligible for high-dose chemotherapy and brain radiation is associated with detrimental cognitive side-effects. We provide an overview of potential drug targets and novel agents that may be integrated with existing strategies in order to make further progress in this disease.

[232]

**TÍTULO / TITLE:** - Epilepsy in primary cerebral tumors: the characteristics of epilepsy at the onset (results from the PERNO study—Project of Emilia Romagna Region on Neuro-Oncology).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Epilepsia. 2013 Oct;54 Suppl 7:86-91. doi: 10.1111/epi.12314.

●● [Enlace al texto completo \(gratis o de pago\) 1111/epi.12314](#)

**AUTORES / AUTHORS:** - Michelucci R; Pasini E; Meletti S; Fallica E; Rizzi R; Florindo I; Chiari A; Monetti C; Cremonini AM; Forlivesi S; Albani F; Baruzzi A

**INSTITUCIÓN / INSTITUTION:** - IRCCS - Institute of Neurological Sciences of Bologna, Bellaria Hospital, Bologna, Italy.

**RESUMEN / SUMMARY:** - PURPOSE: To present new information on the semiology and short-term evolution of seizures associated with primary brain tumors (PBTs) in a prospective study. METHODS: This study is a section of the PERNO study—Project of Emilia Romagna Region on Neuro-Oncology, the main aim of which is to collect prospectively all cases of PBTs occurring in the Emilia-Romagna region, northeast Italy (3,983,346 population) from January 2009 to December 2011, to allow epidemiologic, clinical, and biomolecular studies. The epilepsy section of the PERNO study included all the patients who experienced seizures, either as first symptom of the tumor or appearing during the course of the disease. Each patient was interviewed by the referring neurologist with a specific interest in epilepsy. The patients who entered the study were followed up with visits on a quarterly basis. KEY FINDINGS: We collected 100 cases with full clinical, neuroradiologic, and pathologic data. The majority (79%) had high grade PBTs (glioblastoma in 50 cases), whereas the remaining patients had low-grade gliomas, mostly localized in the frontal (60%), temporal (38%), and parietal (28%) lobes. Seizures were the first symptom of the tumor in 72 cases. Overall, the initial seizures were tonic-clonic (48%) (without clear initial focal signs in more than half of the patients), focal motor (26%), complex partial (10%), and somatosensitive (8%). The majority of cases (60%) had isolated seizures or a low seizure frequency at the onset of the disease, whereas a high seizure frequency or status epilepticus was observed in 18% and 12% of cases, respectively. Ninety-two patients underwent surgical removal of the tumor, which was either radical (38%) or partial (53%). Seven patients underwent only cerebral biopsy. In the 72 patients in whom seizures were the first symptom, the mean time to the surgical treatment was 174 days, with a significant difference between high grade (95 days) and low grade (481 days) gliomas. At the time of our first observation, the majority of patients (69%) had already undergone surgical removal, with a mean follow-up of 3 months after the procedure. Overall, 39 patients (56%) were seizure free after tumor removal. The good outcome did not depend on

presurgical seizure frequency or tumor type, although there was a trend for better results with low-grade PBTs. SIGNIFICANCE: These data provide evidence that seizures are strictly linked to the tumoral lesion: They are the initial symptom of the tumor, reflect the tumor location and type, are usually resistant to antiepileptic treatment, and may disappear after the treatment of the lesion.

[233]

**TÍTULO / TITLE:** - Intratumoral COX-2 inhibition enhances GM-CSF immunotherapy against established mouse GL261 brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Cancer. 2013 Nov 14. doi: 10.1002/ijc.28607.

●● [Enlace al texto completo \(gratis o de pago\) 1002/ijc.28607](#)

**AUTORES / AUTHORS:** - Eberstal S; Sanden E; Fritzell S; Darabi A; Visse E; Siesjo P  
**INSTITUCIÓN / INSTITUTION:** - Glioma Immunotherapy group, Division of Neurosurgery, Department of Clinical Sciences, Lund University, Lund, Sweden.

**RESUMEN / SUMMARY:** - Immunotherapy has shown effectiveness against experimental malignant brain tumors, but the clinical results have been less convincing most likely due to immunosuppression. Prostaglandin E2 (PGE2) is the key immunosuppressive product of cyclooxygenase-2 (COX-2) and increased levels of PGE2 and COX-2 have been shown in several tumor types including brain tumors. In the current study, we report enhanced cure rate of mice with established mouse GL261 brain tumors when immunized with granulocyte macrophage-colony stimulating factor (GM-CSF) secreting tumor cells and simultaneously treated with the selective COX-2 inhibitors parecoxib systemically (5 mg/kg/day; 69% cure rate) or valdecoxib intratumorally (5.3 microg/kg/day; 63% cure rate). Both combined therapies induced a systemic anti-tumor response of proliferating CD4+ and CD8+ T cells and further analysis revealed T helper 1 (Th 1) cell supremacy. The GL261 tumor cell line produced very low levels of PGE2 in vitro and co-staining at the tumor site demonstrated that a large fraction of the COX-2+ cells were derived from CD45+ immune cells and more specifically macrophages (F4/80+), indicating that tumor-infiltrating immune cells constitute the primary source of COX-2 and PGE2 in this model. We conclude that intratumoral COX-2 inhibition potentiates GM-CSF immunotherapy against established brain tumors at substantially lower doses than systemic administration. These findings underscore the central role of targeting COX-2 during immunotherapy and implicate intratumoral COX-2 as the primary target. © 2013 Wiley Periodicals, Inc.

[234]

**TÍTULO / TITLE:** - In Vitro and Numerical Support for Combinatorial Irreversible Electroporation and Electrochemotherapy Glioma Treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Biomed Eng. 2013 Oct 29.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10439-013-0923-2](#)

**AUTORES / AUTHORS:** - Neal RE 2nd; Rossmeisl JH Jr; D'Alfonso V; Robertson JL; Garcia PA; Elankumaran S; Davalos RV

**INSTITUCIÓN / INSTITUTION:** - Bioelectromechanical Systems Lab, Virginia Tech - Wake Forest School of Biomedical Engineering and Sciences, Blacksburg, VA, USA, [robert.neal@alfred.org.au](mailto:robert.neal@alfred.org.au).

**RESUMEN / SUMMARY:** - Irreversible electroporation (IRE) achieves targeted volume non-thermal focal ablation using a series of brief electric pulses to kill cells by disrupting membrane integrity. Electrochemotherapy (ECT) uses lower numbers of sub-lethal electric pulses to disrupt membranes for improved drug uptake. Malignant glioma (MG) brain tumors are difficult to treat due to diffuse peripheral margins into healthy neural tissue. Here, in vitro experimental data and numerical simulations investigate the feasibility for IRE-relevant pulse protocols with adjuvant ECT drugs to enhance MG treatment. Cytotoxicity curves were produced on two glioma cell lines in vitro at multiple pulse strengths and drug doses with Bleomycin or Carboplatin. Pulses alone increased cytotoxicity with higher pulse numbers and strengths, reaching >90% by 800 V/cm with 90 pulses. Chemotherapeutic addition increased cytotoxicity by >50% for 1 ng/mL concentrations of either drug relative to 80 pulses alone with J3T cells at electric fields  $\geq 400$  V/cm. In addition to necrosis, transmission electron microscopy visualizes apoptotic morphological changes and Hoescht 33342 staining shows apoptotic cell fractions varying with electric field and drug dose relative to controls. Numerically simulated treatment volumes in a canine brain show IRE combined with ECT expands therapeutic volume by 2.1-3.2 times compared to IRE alone.

[235]

**TÍTULO / TITLE:** - Role of Gamma Knife surgery for intracranial atypical (WHO Grade II) meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Dec;119(6):1410-4. doi: 10.3171/2013.8.JNS13343. Epub 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [3171/2013.8.JNS13343](#)

**AUTORES / AUTHORS:** - Hanakita S; Koga T; Igaki H; Murakami N; Oya S; Shin M; Saito N

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurosurgery and.

**RESUMEN / SUMMARY:** - Object Atypical meningioma often recurs even after resection. As a salvage modality, radiotherapy or stereotactic radiosurgery (SRS) is attempted for this aggressive tumor. This retrospective study was performed to evaluate the efficacy of SRS that involved Gamma Knife surgery (GKS) for atypical meningioma. Methods The authors reviewed records from 22 patients with histologically proven atypical meningioma who underwent GKS for 28 lesions at the authors' institute. The median patient age was 70 years (range 24-91 years), and the median tumor volume for each procedure was 6.0 cm<sup>3</sup> (range 1.6-38.7 cm<sup>3</sup>). The margin dose ranged from 14 to 20 Gy (median 18 Gy). Follow-up periods ranged from 3 months to 98 months (median 23.5 months). Results In total, 39 GKS procedures were performed for 28 lesions. The local control rates at 1, 2, and 5 years were 74%, 39%, and 16%, respectively. Volume less than 6 cm<sup>3</sup> (p = 0.01), a margin dose higher than 18 Gy (p = 0.02), and a Karnofsky Performance Scale (KPS) score of 90 or more (p = 0.02) were factors associated with a longer duration of tumor control in the univariate analysis. Conclusions Atypical meningioma could be more successfully

controlled when a higher margin dose was used to treat patients with a good performance (KPS score of  $\geq 90$ ) status and smaller tumor volumes. It would be desired if patients are treated with a relatively higher margin dose, ideally as high as the dose applied for malignant tumor. A boost SRS after fractionated radiotherapy may be effective to achieve better local control.

[236]

**TÍTULO / TITLE:** - Glioblastoma treatment using perphenazine to block the subventricular zone's tumor trophic functions.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 17.

- Enlace al texto completo (gratis o de pago) [1007/s11060-013-1308-y](#)

**AUTORES / AUTHORS:** - Kast RE; Ellingson BM; Marosi C; Halatsch ME

**INSTITUCIÓN / INSTITUTION:** - IIAIGC Study Center, 22 Church Street, Burlington, VT, 05401, USA, [richarderrickast@gmail.com](mailto:richarderrickast@gmail.com).

**RESUMEN / SUMMARY:** - We present here a potential new treatment adjunct for glioblastoma. Building on murine studies, a series of papers appeared recently showing that therapeutic irradiation of the ipsilateral subventricular zone (SVZ) retards growth of more peripherally growing cortical glioblastomas in humans, suggesting a tumor trophic function for the SVZ. Further studies showed that SVZ cells migrate out towards a peripheral glioblastoma. Dopamine signaling through D3 subtype receptor indirectly drives this centrifugal migration in humans. Since psychiatry has several drugs with good D3 blocking attributes, such as fluphenazine, or perphenazine, we suggest that adding one of these D3 blocking drugs to current standard treatment of resection followed by temozolomide and irradiation might prolong survival by depriving glioblastoma of the trophic functions previously subserved by dopaminergic signaling on SVZ cells.

[237]

**TÍTULO / TITLE:** - Delayed leptomeningeal and subependymal seeding after multiple surgeries for supratentorial diffuse low-grade gliomas in adults.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 29.

- Enlace al texto completo (gratis o de pago) [3171/2013.10.JNS131512](#)

**AUTORES / AUTHORS:** - Alvarez de Eulate-Beramendi S; Rigau V; Taillandier L; Duffau H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hospital Universitario Central de Asturias (HUCA), Oviedo, España;

**RESUMEN / SUMMARY:** - Object Diffuse WHO Grade II glioma (diffuse low-grade glioma [DLGG]) is an infiltrative brain tumor that usually migrates along the white matter fibers. The delayed CSF dissemination of supratentorial DLGGs is an exceptional complication and is rarely described in adults. Here, the authors report outcomes in a surgical series of 9 patients with DLGGs with subsequent leptomeningeal and/or subependymal seeding (LMSS) following multiple incomplete resections. Methods The authors performed a retrospective review of patients who underwent surgery for histopathologically confirmed WHO Grade II gliomas between

1998 and 2012 and experienced a secondary CSF spread. Information regarding clinical features, surgical procedures, histopathological results, adjuvant treatment, and clinical outcomes was collected and analyzed. Results Nine consecutive patients were included in this study. There were 6 men and 3 women whose mean age was 35.5 years (range 22-59 years) at the time of initial symptom onset. All patients underwent surgery with the aid of intraoperative mapping, with incomplete tumor removal because of invasion of eloquent structures. The neuropathological examination diagnosed a DLGG in all cases (7 oligodendrogliomas, 1 astrocytoma, and 1 oligoastrocytoma). Five patients had a 1p19q codeletion. Because of tumor regrowth, the 9 patients underwent reoperation (2 surgeries in 6 cases and 3 surgeries in 3 cases), again with incomplete resection. There were no surgical complications. Adjuvant therapy (radiotherapy and chemotherapy) was administered in all patients because of progression to a higher grade of malignancy that was histopathologically confirmed in all tumors. The patients suddenly worsened, and the diagnosis of LMSS was made with a mean delay of 77 months (range 27-140 months) after the initial symptom onset. Six patients benefited from salvage chemotherapy while palliative care was chosen in 3 cases. The median survival in the 6 patients who underwent LMSS treatment was significantly longer than that in the 3 patients who did not receive salvage chemotherapy ( $p = 0.03$ ). Indeed, all patients died, with a mean delay between the diagnosis of LMSS and death of 11 months (range 2-38 months) and with a mean delay between the initial symptom onset and death of 88 months (range 34-144 months). Conclusions Cerebrospinal fluid dissemination of DLGG is a rare but possible event. It can occur throughout the progression of WHO Grade II oligodendrogliomas, oligoastrocytomas, and astrocytomas, regardless of 1p19q status. This complication seems to appear in patients who have undergone multiple incomplete resections. Salvage therapy can be considered in patients with good neurological status. However, LMSS is associated with a decreased overall survival. Therefore, this rare entity deserves further multicenter studies to better understand its pathophysiology and to adapt therapeutic strategies.

[238]

**TÍTULO / TITLE:** - SELDI-TOF analysis of glioblastoma cyst fluid is an approach for assessing cellular protein expression.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Res. 2013 Dec;35(10):993-1001. doi: 10.1179/016164113X13756993777580.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1179/016164113X13756993777580](#)

**AUTORES / AUTHORS:** - Hoelscher M; Richter N; Melle C; von Eggeling F; Schaenzer A; Nestler U

**INSTITUCIÓN / INSTITUTION:** - Justus Liebig University, Giessen, Germany.

**RESUMEN / SUMMARY:** - **OBJECTIVES:** In about 10% of glioblastoma patients, preoperative MRI discloses the presence of tumor cysts. Whereas the impact of cystic appearance on prognosis has been discussed extensively, only little is known about the tumor cyst fluid. In this study, we tested the feasibility of the surface enhanced laser desorption ionization time of flight (SELDI-TOF) technique to detect cyst fluid proteins. **METHODS:** Cyst fluid was collected from 21 glioblastoma patients for SELDI-TOF

analysis and compared to control cerebrospinal fluids from 15 patients with spinal stenosis. Resulting protein peaks with significant differences between groups were further described, using the molecular weight in an internet search of protein databases and publications. Two potential cyst fluid proteins, basigin and ferritin light chain, were selected for immunohistological detection in the histologic slides of the patients, metallothionein (MT) served as negative control. RESULTS: As supposed from the results of the SELDI-TOF analysis, basigin and ferritin were detected immunohistochemically in the cyst wall, whereas MT was more equally distributed between the cyst wall and the surrounding tumor tissue. Median survival time of the patients was 20 months (range 2 to 102 months) and correlated with age, but not with expression of the three proteins. DISCUSSION: The SELDI-TOF approach reveals a number of proteins, potentially present in glioblastoma cyst fluid. Identification of these proteins in tumor cells may help understand the pathogenetic pathways and the prognostic value of cystic changes.

[239]

**TÍTULO / TITLE:** - Regulation of ASIC1 by Ca<sup>2+</sup>/calmodulin-dependent protein kinase II in human glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Dec;30(6):2852-8. doi: 10.3892/or.2013.2777. Epub 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2777](#)

**AUTORES / AUTHORS:** - Sun X; Zhao D; Li YL; Sun Y; Lei XH; Zhang JN; Wu MM; Li RY; Zhao ZF; Zhang ZR; Jiang CL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, the 2<sup>nd</sup> Affiliated Hospital, Harbin Medical University, Harbin 150086, P.R. China.

**RESUMEN / SUMMARY:** - Recent studies have implicated the acid-sensing ion channel 1 (ASIC1), a proton-gated cation channel that belongs to the epithelial sodium channel (ENaC)/Degenerin family, plays an important role in glioma cell migration. Among the ASIC subunits, only ASIC1a has been found be calcium permeable. However, it has not been determined whether Ca<sup>2+</sup>/calmodulin-dependent protein kinase II (CaMKII) regulates ASIC1 in glioblastoma multiforme (GBM). Herein, we report that ASIC1 and CaMKII assemble to form a functional complex at the plasma membrane of GBM cells. We found that migration ability was significantly attenuated in GBM cells that were pre-treated with autocamtide-2-related inhibitory peptide (AIP), a CaMKII-specific inhibitor, or psalmotoxin 1 (PcTX-1), a selective ASIC1 blocker. Furthermore, the inhibitory effect of AIP or PcTX-1 on migration was diminished when ASIC1 was knocked down in GBM cells; when ASIC1 knockdown GBM cells were concurrently treated with these two inhibitors, cell migration was slightly but significantly decreased. Using whole-cell patch-clamp recordings, we detected an amiloride-sensitive current in GBM cells, and this current was significantly inhibited by both PcTX-1 and AIP. Moreover, the magnitude of this current was dramatically decreased when ASIC1 was knocked down in GBM cells. The addition of AIP failed to further decrease the amplitude of this current. Taken together, these data suggest that ASIC1 and CaMKII form a functional complex in GBM cells. Furthermore, it can be concluded that CaMKII regulates the activity of ASIC1, which is associated with the ability of GBM cells to migrate.

[240]

**TÍTULO / TITLE:** - Combination of anti-VEGF therapy and temozolomide in two experimental human glioma models.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1268-2](#)

**AUTORES / AUTHORS:** - Grossman R; Brastianos H; Blakeley JO; Mangraviti A; Lal B; Zadnik P; Hwang L; Wicks RT; Goodwin RC; Brem H; Tyler B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Johns Hopkins University School of Medicine, CRB II, Suite 2M45, 1550 Orleans Street, Baltimore, MD, 21231, USA.

**RESUMEN / SUMMARY:** - Anti-angiogenic agents, such as bevacizumab (BEV), can induce normalization of the blood brain barrier, which may influence the penetration and activity of a co-administered cytotoxic drug. However, it is unknown whether this effect is associated with a benefit in overall survival. This study employed intracranial human glioma models to evaluate the effect of BEV alone and in combination with temozolomide (TMZ) and/or radiation therapy (XRT) on overall survival. One hundred eight male athymic rats were intracranially injected with either U251 or U87 human glioma. Ten or eleven days after tumor inoculation, animals bearing U251 and U87, respectively, were treated with: TMZ alone (50 mg/kg for 5 consecutive days, P.O.), BEV alone (15 mg/kg, I.V.), a combination of TMZ and BEV, or a combination of TMZ, BEV, and a single fraction of XRT (20 Gy). Controls received no treatment. The U87 experiment was repeated and the relationship between survival and the extent of anti-angiogenesis via anti-laminin antibodies for the detection of blood vessels was assessed. In both U87 glioma experiments, all of the treatment groups had a statistically significant increase in survival as compared to the control groups. Also, for both U87 experiments the combination groups of TMZ and BEV had significantly better survival when compared to either treatment administered alone, with 75 % of animals demonstrating long-term survival (LTS) (defined as animals alive 120 days after tumor implantation) in one experiment and 25 % LTS in the repeat experiment. In the U251 glioma experiment, all treated groups (except BEV alone) had significantly improved survival as compared to controls with minimal statistical variance among groups. The percent vessel area was lowest in the group of animals treated with BEV alone. The addition of BEV to TMZ and/or XRT had variable effect on prolonging survival in the two human glioma models tested with reduced tumor vascularity in groups treated with BEV. These results indicate that BEV has anti-angiogenic activity and does not seem to hinder the effect of TMZ.

[241]

**TÍTULO / TITLE:** - Coupling to a glioblastoma-directed antibody potentiates anti-tumor activity of curcumin.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Cancer. 2013 Oct 19. doi: 10.1002/ijc.28555.

●● Enlace al texto completo (gratis o de pago) [1002/ijc.28555](#)

**AUTORES / AUTHORS:** - Langone P; Debata PR; Rosario Inigo JD; Dolai S; Mukherjee S; Halat P; Mastroianni K; Curcio GM; Castellanos MR; Raja K; Banerjee P

**INSTITUCIÓN / INSTITUTION:** - CUNY Doctoral Programs in Biochemistry, City University of New York at The College of Staten Island, NY, 10314; Chemistry, City University of New York at The College of Staten Island, NY, 10314.

**RESUMEN / SUMMARY:** - Current therapies for glioblastoma are largely palliative, involving surgical resection followed by chemo and radiation therapy, which yield serious side effects and very rarely produce complete recovery. Curcumin, a food component, blocked brain tumor formation but failed to eliminate established brain tumors in vivo, probably because of its poor bioavailability. In the glioblastoma GL261 cells, it suppressed the tumor-promoting proteins NF- $\kappa$ B, P-Akt1, VEGF, Cyclin D1, and BCIXL and triggered cell death. Expression of exogenous p50 and p65 subunits of NF- $\kappa$ B conferred partial protection on transfected GL261 cells against curcumin insult, indicating that NF- $\kappa$ B played a key role in protecting glioblastoma cells. To enhance delivery, we coupled curcumin to the glioblastoma-specific CD68 antibody in a releasable form. This resulted in a 120-fold increase in its efficacy to eliminate GL261 cells. A very similar dose response was also obtained with human glioblastoma lines T98G and U87MG. GL261-implanted mice receiving intra-tumor infusions of the curcumin-CD68 adduct followed by tail-vein injections of solubilized curcumin displayed a 4-5-fold reduction in brain tumor load, survived longer, and about 10% of them lived beyond 100 days. Hematoxylin-eosin staining of brain sections revealed a small scar tissue mass in the rescued mice, indicating adduct-mediated elimination of glioblastoma tumor. The tumor cells were strongly CD68+ and microglial cells in the tumor periphery were strongly positive for microglial Iba1, but weakly positive for CD68. This strategy of antibody-targeting of curcumin to tumor comes with the promise of yielding a highly effective therapy for glioblastoma brain tumors. © 2013 Wiley Periodicals, Inc.

[242]

**TÍTULO / TITLE:** - Gain of Function of Mutant TP53 in Glioblastoma: Prognosis and Response to Temozolomide.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Surg Oncol. 2013 Nov 19.

●● [Enlace al texto completo \(gratis o de pago\) 1245/s10434-013-3380-0](#)

**AUTORES / AUTHORS:** - Wang X; Chen JX; Liu JP; You C; Liu YH; Mao Q

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, West China Hospital of Sichuan University, Chengdu, China, [wangxiangtim@gmail.com](mailto:wangxiangtim@gmail.com).

**RESUMEN / SUMMARY:** - **PURPOSE:** Our aim was to investigate the relationship between mutant p53 and the prognosis of malignant glioma treated with temozolomide, and the regulation of mutant TP53 induced drug resistance, by molecular experimentation and a clinical trial. **METHODS:** Adult patients with newly surgical diagnosed glioblastoma were randomly assigned to receive either temozolomide or semustine after radiation treatment. The statuses of TP53 and expression of TP53 and O6-methylguanine DNA-methyltransferase (MGMT) were determined retrospectively in tumor tissue from enrolled patients. The primary end point was overall survival. Synthetic small interfering RNA was used to knock down mutant TP53 in T98G and U138 cells, which are human glioblastoma cells with a P53 mutation, by screening of exons 4-8. Viable cell survival was measured when these cells were exposed to temozolomide or semustine. Expression of MGMT at the messenger RNA level was

also determined. RESULTS: The overall survival was 34.3 % at 2 years, 22.9 % at 3 years, 11.4 % at 4 years, and 8.6 % at 5 years with temozolomide, versus 18.2, 12.1, 3.0, and 0 %, respectively, with semustine. TP53 mutation and expression of mutant TP53 and MGMT showed significant inverse correlations with overall survival. Knockdown of mutant TP53 led to a fivefold increase in chemosensitivity to temozolomide but not semustine. Mutant TP53 knockdown induced down-regulation of MGMT expression. CONCLUSIONS: Mutant TP53 is strongly associated with a poor prognosis for overall survival in patients with glioblastoma. Also, TP53 mutation may decrease the chemosensitivity of glioblastoma to temozolomide by increasing MGMT expression.

[243]

**TÍTULO / TITLE:** - Reply: Discriminating Ability of 18F-FET PET for Several Cerebral Neoplastic Lesions.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Nucl Med. 2013 Nov 6.

●● Enlace al texto completo (gratis o de pago) [2967/jnumed.113.134007](#)

**AUTORES / AUTHORS:** - Langen KJ; Rapp M; Galldiks N; Reifenberger G; Floeth FW

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[244]

**TÍTULO / TITLE:** - Discriminating Ability of 18F-FET PET for Several Cerebral Neoplastic Lesions.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Nucl Med. 2013 Nov 6.

●● Enlace al texto completo (gratis o de pago) [2967/jnumed.113.128231](#)

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[245]

**TÍTULO / TITLE:** - Microsurgical resection of extensive craniopharyngiomas using a frontolateral approach: operative technique and outcome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago) [3171/2013.9.JNS122133](#)

**AUTORES / AUTHORS:** - Gerganov V; Metwali H; Samii A; Fahlbusch R; Samii M

**INSTITUCIÓN / INSTITUTION:** - International Neuroscience Institute, Hannover, Germany.

**RESUMEN / SUMMARY:** - Object An extensive craniopharyngioma is a tumor that extends into multiple compartments (subarachnoid spaces) and attains a size larger than 4 cm. A wide spectrum of approaches and strategies has been used for resection of such craniopharyngiomas. In this report the authors focused on the feasibility and efficacy of microsurgical resection of extensive craniopharyngiomas using a

frontolateral approach. Methods A retrospective analysis was performed on 16 patients with extensive craniopharyngiomas who underwent operations using a frontolateral approach at one institution. The preoperative and postoperative clinical and radiological data, as well as the operative videos, were reviewed. The main focus of the review was the extent of radical tumor removal, early postoperative outcome, and approach-related complications. Results Gross-total resection of craniopharyngioma was achieved in 14 (87.5%) of 16 cases. Early after surgery (within 3 months), 1 patient showed improvement in hormonal status, while in the remaining 15 patients it worsened. No major neurological morbidity was observed. Two patients experienced temporary psychotic disorders. Visual function improved in 6 patients and remained unchanged in 9. One patient experienced a new bitemporal hemianopsia. Three patients with features of short-term memory disturbances at presentation did show improvement after surgery. There were no deaths or significant approach-related morbidity in this patient series. Only 1 patient required revision surgery for a CSF leak. Conclusions The safe and simple frontolateral approach provides adequate access even to extensive craniopharyngiomas and enables their complete removal with a reasonable morbidity and approach-related complication rate.

[246]

**TÍTULO / TITLE:** - True petroclival meningiomas: results of surgical management.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Oct 25.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.8.JNS13535](#)

**AUTORES / AUTHORS:** - Almefty R; Dunn IF; Pravdenkova S; Abolfotoh M; Al-Mefty O

**INSTITUCIÓN / INSTITUTION:** - Barrow Neurological Institute, Phoenix, Arizona;

**RESUMEN / SUMMARY:** - Object The relentless natural progression of petroclival meningiomas mandates their treatment. The management of these tumors, however, is challenging. Among the issues debated are goals of treatment, outcomes, and quality of life, appropriate extent of surgical removal, the role of skull base approaches, and the efficacy of combined decompressive surgery and radiosurgery. The authors report on the outcome in a series of patients treated with the goal of total removal. Methods The authors conducted a retrospective analysis of 64 cases of petroclival meningiomas operated on by the senior author (O.A.) from 1988 to 2012, strictly defined as those originating medial to the fifth cranial nerve on the upper two-thirds of the clivus. The patients' average age was 49 years; the average tumor size (maximum diameter) was 35.48 +/- 10.09 mm (with 59 tumors > 20 mm), and cavernous sinus extension was present in 39 patients. The mean duration of follow-up was 71.57 months (range 4-276 months). Results In 42 patients, the operative reports allowed the grading of resection. Grade I resection (tumor, dura, and bone) was achieved in 17 patients (40.4%); there was no recurrence in this group (p = 0.0045). Grade II (tumor, dura) was achieved in 15 patients (36%). There was a statistically significant difference in the rate of recurrence with respect to resection grade (Grades I and II vs other grades, p = 0.0052). In all patients, tumor removal was classified based on postoperative contrast-enhanced MRI, and gross-total resection (GTR) was considered to be achieved if there was no enhancement present; on this basis, GTR was achieved in 41 (64%) of 64 patients, with a significantly lower recurrence rate in these patients than in the group with residual enhancement (p = 0.00348). One patient died from pulmonary embolism

after discharge. The mean Karnofsky Performance Status (KPS) score was 85.31 preoperatively (median 90) and improved on follow-up to 88, with 30 patients (47%) having an improved KPS score on follow-up. Three patients suffered a permanent deficit that significantly affected their KPS. Cerebrospinal fluid leak occurred in 8 patients (12.5%), with 2 of them requiring exploration. Eighty-nine percent of the patients had cranial nerve deficits on presentation; of the 54 patients with more than 2 months of follow-up, 21 (32.8%) had persisting cranial nerve deficits. The overall odds of permanent cranial nerve deficit of treated petroclival meningioma was 6.2%. There was no difference with respect to immediate postoperative cranial nerve deficit in patients who had GTR compared with those who had subtotal resection. Conclusions Total removal (Grade I or II resection) of petroclival meningiomas is achievable in 76.4% of cases and is facilitated by the use of skull base approaches, with good outcome and functional status. In cases in which circumstances prevent total removal, residual tumors can be followed until progression is evident, at which point further intervention can be planned.

[247]

**TÍTULO / TITLE:** - Silent GH pituitary tumor: Diagnostic and therapeutic challenges.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Endocrinol (Paris). 2013 Nov 18. pii: S0003-4266(13)00936-0. doi: 10.1016/j.ando.2013.09.003.

●● Enlace al texto completo (gratis o de pago) [1016/j.ando.2013.09.003](#)

**AUTORES / AUTHORS:** - Chinezu L; Jouanneau E; Vasiljevic A; Trouillas J; Raverot G

**INSTITUCIÓN / INSTITUTION:** - Department of Histology, University of Medicine and Pharmacy, Tirgu Mures 540139, Romania.

**RESUMEN / SUMMARY:** - Silent GH pituitary tumors are characterized by the absence of clinical features of acromegaly, normal to slightly elevated GH and/or IGF-1 levels, as well as immunohistochemical expression of GH. The diagnostic and the therapeutic challenges of these "silent" GH tumors are illustrated in this case report, supported by a literature review. A 20-year-old woman presented with visual disturbances related to an invasive macroadenoma but without clinical and biological signs of GH hypersecretion. After two surgeries, a residual tumor remained in the right cavernous sinus. According to the recent classifications, the histopathological diagnosis was a sparsely GH-PRL atypical adenoma or invasive and proliferative (Ki-67 index: 4%) and p53 positive (1%) grade 2b tumor, with high expression (>75% of the cells) of somatostatin receptors type 2A and 5. From this case and the review of the literature, an invasive macroadenoma in young women requires: the preoperative determination of plasma GH and IGF-1, the immunohistochemical detection in the tumor of GH, PRL, somatostatin receptor expression and the evaluation of the proliferation (mitoses count, Ki-67 and p53 indexes). The suspicion of an aggressive behavior needs a particular follow-up. In the case of tumor remnant, a postoperative treatment such as radiotherapy and/or somatostatin analogs must be considered.

[248]

**TÍTULO / TITLE:** - MR imaging findings in colloid cysts of the sellar region: comparison with colloid cysts of the third ventricle and Rathke's cleft cysts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acad Radiol. 2013 Nov;20(11):1457-65. doi: 10.1016/j.acra.2013.08.014.

●● Enlace al texto completo (gratis o de pago) [1016/j.acra.2013.08.014](#)

**AUTORES / AUTHORS:** - Bender B; Honegger JB; Beschorner R; Ernemann U; Horger M

**INSTITUCIÓN / INSTITUTION:** - Department of Diagnostic and Interventional Neuroradiology, Eberhard-Karls-University, Hoppe-Seyler-Str. 3, 72076 Tübingen, Germany. Electronic address: [Benjamin.bender@med.uni-tuebingen.de](mailto:Benjamin.bender@med.uni-tuebingen.de).

**RESUMEN / SUMMARY:** - RATIONALE AND OBJECTIVES: To identify magnetic resonance (MR) imaging characteristics allowing specific preoperative discrimination between colloid cysts (CCs) of the sellar region and third ventricle (CC3rdv) versus Rathke's cleft cysts (RCCs). MATERIALS AND METHODS: MR imaging data of 38 patients with histologically proven CCs/CC3rdv and RCC underwent retrospective analysis with respect to signal intensity and heterogeneity on T1- and T2-weighted images, presence of the dot sign, enhancement, size, location, and accompanying infundibular stalk abnormalities. RESULTS: Thirteen patients had CCs, 12 had CC3rdv, and 13 had RCCs. Signal intensity on T1-weighted images was partly or entirely hyperintense (n = 8), iso- or mixed iso/hypointense (n = 5) in CCs; hyperintense (n = 8), isointense, or mixed hypo/isointense (n = 3) in CC3rdv and hyperintense (n = 9); or mixed (n = 4) in RCCs. On T2-weighted images, signal intensity was hypointense (n = 12) or hyperintense (n = 1) in CCs, hypointense (n = 9) or hyperintense (n = 2) in CC3rdv, and hypointense (n = 5) or iso/hyperintense (n = 8) in RCCs. T2-weighted images were unavailable in two patients. Only one questionable enhancement was found in CCs, whereas an enhancing rim was consistently seen in RCCs. The dot sign was present in 7 CCs, 8 CC3rdv, and 4 RCCs. Mean cyst diameters were 12.6 mm for CCs and 14.5 mm for RCCs. RCCs showed more frequent and even solely suprasellar extent contrary to CCs. CONCLUSION: Cyst wall enhancement was found in all RCCs but in none of the CCs, making this feature a reliable discriminator between the two. Complementary, suprasellar extension was more frequent in RCCs, whereas signal hypointensity on T2w was more common in colloid cysts.

[249]

**TÍTULO / TITLE:** - Are meningeal hemangiopericytoma and mesenchymal chondrosarcoma the same?: a study of HEY1-NCOA2 fusion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am J Clin Pathol. 2013 Nov;140(5):670-4. doi: 10.1309/AJCPGUNG52ZSDNS.

●● Enlace al texto completo (gratis o de pago) [1309/AJCPGUNG52ZSDNS](#)

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**RESUMEN / SUMMARY:** - OBJECTIVES: Meningeal hemangiopericytoma (HPC) and mesenchymal chondrosarcoma are aggressive neoplasms with a propensity to involve the meninges and dura. In addition to similar clinical presentations, both meningeal HPC and mesenchymal chondrosarcoma share overlapping morphologic features, including ovoid cells, variable collagen deposition, and a branching vascular pattern.

Recently, a novel HEY1-NCOA2 fusion was reported as a recurrent event in mesenchymal chondrosarcomas. METHODS: Thirteen mesenchymal chondrosarcomas and 18 meningeal HPCs were identified from surgical pathology archives, and the tumors were evaluated for HEY1-NCOA2 fusion with reverse transcriptase-polymerase chain reaction (RT-PCR). RESULTS: HEY1-NCOA2 fusion transcript was detected in all six cases of mesenchymal chondrosarcoma but in none of the meningeal HPC cases (0/11) that were evaluable with RT-PCR. CONCLUSIONS: These results show that (1) meningeal HPC and mesenchymal chondrosarcoma are distinct at the molecular level, and (2) the identification of HEY1-NCOA2 can be used as an auxiliary diagnostic tool to differentiate these entities.

[250]

**TÍTULO / TITLE:** - Manifestations of CNS germ cell tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr. 2013 Nov;163(5):1235-9. doi: 10.1016/j.jpeds.2013.09.014.

●● Enlace al texto completo (gratis o de pago) [1016/j.jpeds.2013.09.014](#)

**AUTORES / AUTHORS:** - Long SS

[251]

**TÍTULO / TITLE:** - Methylation-specific multiplex ligation-dependent probe amplification and its impact on clinical findings in medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 27.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1286-0](#)

**AUTORES / AUTHORS:** - Feierabend D; Walter J; Grube S; Herbold C; Beetz C; Kalff R; Ewald C

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**RESUMEN / SUMMARY:** - Gain of (proto-)oncogenes and loss or promoter hypermethylation of tumor suppressor genes (TSGs) play essential roles in tumorigenesis. Methylation-specific multiplex ligation-dependent probe amplification (MS-MLPA) allows simultaneous detection of both these alterations. MS-MLPA was performed on 20 medulloblastoma samples (n = 12 cryoconserved; n = 8 formalin-fixed paraffin-embedded, FFPE) in order to screen for copy number changes in 77 unselected TSGs and (proto-)oncogenes as well as for promoter hypermethylation in a subset of 33 TSGs. In all specimens, determination of promoter methylation status was possible, whereas robust data concerning copy number changes could be obtained on cryopreserved material only. We found a median of 1.5 deletions and 6.5 amplifications in the 12 cryopreserved medulloblastoma and a median of 5 promoter hypermethylation per tumor. Frequent copy number changes included amplification of ASC on 16p12 (5/12) and amplification of several adjacent genes on 17q (3/12) including IGFBP4. Hypermethylation of MSH6 on 2p16 was found in 16 samples. MS-MLPA findings were also correlated with clinical and histological characteristics. The number of promoter hypermethylation was significantly associated with presence of

necrosis ( $p = 0.004$ ). Tumors which recurred within 1 year were more likely to show amplification of the GATA5 gene ( $p = 0.038$ ), while hypermethylation of CASP8 was associated with a lower tumor recurrence rate ( $p = 0.036$ ). There was also a trend towards a correlation between total number of aberrations and CSF dissemination ( $p = 0.055$ ). Our findings confirm frequent presence of certain aberrations and reveal novel candidates for improving prognosis based on genetic and epigenetic tumor features. A medulloblastoma-specific MS-MLPA probe set seems a potentially valuable tool for further investigations on larger sample series.

[252]

**TÍTULO / TITLE:** - Cisplatin and Temozolomide Combination in the Treatment of Supratentorial Anaplastic Ependymoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chemotherapy. 2013 Oct 31;59(3):176-180.

●● Enlace al texto completo (gratis o de pago) [1159/000355662](#)

**AUTORES / AUTHORS:** - Lombardi G; Pambuku A; Bellu L; Della Puppa A; Rumano L; Gardiman MP; Pommeri F; Zagonel V

**INSTITUCIÓN / INSTITUTION:** - Medical Oncology 1, Veneto Institute of Oncology - IRCCS, Padua, Italy.

**RESUMEN / SUMMARY:** - Anaplastic ependymomas are rare tumors in adult patients. Maximal safe resection and use of radiation therapy are standard treatment approaches in patients with anaplastic ependymoma. Recurrent anaplastic ependymomas are treated by reoperation when the tumors are surgically accessible, by radiotherapy if not previously administered and by salvage chemotherapy. However, the role of chemotherapy is still unclear. A few retrospective studies showed interesting results with platinum-based regimens, while the administration of temozolomide alone demonstrated conflicting results. We present, for the first time, the case of a patient with anaplastic ependymoma refractory to platinum-based chemotherapy and temozolomide only, but showing a prolonged reduction of the lesion after receiving combination chemotherapy with cisplatin and temozolomide. A brief review of the literature on the treatment of anaplastic ependymoma follows. © 2013 S. Karger AG, Basel.

[253]

**TÍTULO / TITLE:** - A familial frontotemporal dementia associated with C9orf72 repeat expansion and dysplastic gangliocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurobiol Aging. 2014 Feb;35(2):444.e11-4. doi: 10.1016/j.neurobiolaging.2013.08.021. Epub 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago)

[1016/j.neurobiolaging.2013.08.021](#)

**AUTORES / AUTHORS:** - Ferrari R; Kero M; Mok K; Paetau A; Tienari PJ; Tynnen O; Hardy J; Momeni P; Verkkoniemi-Ahola A; Myllykangas L

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Neurogenetics, Department of Internal Medicine, Texas Tech University Health Sciences Center, Lubbock, TX, USA; Institute of Neurology, University College London, Queen Square, London, UK.

**RESUMEN / SUMMARY:** - A hexanucleotide repeat expansion in the chromosome 9 open reading frame 72 gene (C9orf72) was recently identified as the most common genetic cause of frontotemporal dementia/amyotrophic lateral sclerosis. Here we describe the clinical, pathologic, and genetic features of a Finnish C9orf72 expansion carrier, who developed a dysplastic gangliocytoma (Lhermitte-Duclos disease), a rare hamartoma/overgrowth syndrome of cerebellar granule cells associated with mutations in the phosphatase and tensin homolog gene. In addition to the dysplastic gangliocytoma, the patient showed typical transactive response DNA-binding protein with Mr 43 kD (TDP-43) pathology mainly in the cortex and the substantia nigra and numerous p62-positive/TDP-43-negative inclusions in the cerebellar granule cells. His sister carried the same gene defect and showed a similar type of TDP-43/p62 pathology in her brain. Our findings confirm that the clinical and pathologic picture of C9orf72 mutation carriers is more heterogeneous than originally thought and warrants further studies on the possible involvement of phosphatase and tensin homolog gene pathway in the specific cerebellar granule cell pathology associated with C9orf72 expansion.

[254]

**TÍTULO / TITLE:** - Identification and Characterization of Human MIBP1 Gene in Glioma Cell Differentiation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Mol Neurosci. 2013 Oct 26.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s12031-013-0144-z](#)

**AUTORES / AUTHORS:** - Sun L; Chen X; Jin X; Huang Q; Wang W; Zhi D; Chen D

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tianjin Huanhu Hospital, 122 Qixiangtai Road, Tianjin, 300060, People's Republic of China, [sunlijun0808@sina.com](mailto:sunlijun0808@sina.com).

**RESUMEN / SUMMARY:** - Malignant gliomas are the most common and lethal intracranial tumors; differentiation therapy is a promising candidate for their treatment. In order to reveal the mechanisms related to glioma differentiation, after confirming that differentiation was induced by sodium phenylbutyrate in SHG-44 human glioma cells, RNA arbitrary primer differential display was used to screen differentially expressed genes. One gene was found to be upregulated by differential display, and this was also confirmed by reverse northern blot and quantitative real-time PCR analysis. After it was cloned and sequenced, the 505-bp fragment was identified as the MIBP1 (c-myc intron-binding protein 1) gene, also named Hivep2/MBP-2/Schnurri-2. Quantitative real-time PCR analysis of 30 human tissue samples revealed that the expression of MIBP1 tended to decrease with increasing WHO grade and was significantly depressed in the high malignancy gliomas group (WHO grade IV). We cloned and sequenced the MIBP1 gene, which was accepted by GenBank as number DQ231041. Finally, transfection of MIBP1 in a reverse transcription vector into glioma cells inhibited cell growth, induced differentiation, and blocked the cell cycle. Here, we identify and describe the structure and function of a differentiation-related gene, human MIBP1, in human glioma.

[255]

**TÍTULO / TITLE:** - Long-term outcome after aneurysmal subarachnoid hemorrhage-risks of vascular events, death from cancer and all-cause death.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol. 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1007/s00415-013-7192-8](#)

**AUTORES / AUTHORS:** - Nieuwkamp DJ; de Wilde A; Wermer MJ; Algra A; Rinkel GJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology and Neurosurgery, UMC Utrecht Stroke Center, The Rudolf Magnus Institute of Neuroscience, University Medical Center Utrecht, Utrecht, The Netherlands, [d.nieuwkamp@umcutrecht.nl](mailto:d.nieuwkamp@umcutrecht.nl).

**RESUMEN / SUMMARY:** - Smoking and hypertension are risk factors for aneurysmal subarachnoid hemorrhage (aSAH), but also for other cardiovascular diseases and cancer. Few prospective data are available on the very long term risks of vascular diseases and vascular, cancer-related and overall death after aSAH. We determined vascular events and survival status in 1,765 patients with aSAH admitted to our center from 1985 to 2010. Cumulative risks were estimated with survival analysis. We compared risks of vascular, cancer-related and all-cause death with the general population with standardized mortality ratios (SMRs). Incidences of vascular events and death were compared with those after TIA/minor stroke. Conditional on surviving 3 months after aSAH, the risk of death was 8.7 % (95 % CI 7.3-10.1) within 5 years, 17.9 % (16.1-19.9) within 10 years, 29.5 % (27.3-31.8) within 15 years, and 43.6 % (41.2-46.1) within 20 years after SAH. The SMR for all-cause death was 1.8 (1.6-2.1), for vascular death 2.0 (95 % CI 1.6-2.5) and for cancer-related death 1.2 (0.9-1.5; sensitivity analysis 1.4; 95 % CI 1.1-1.8). The increased SMR for all-cause death persevered up to 20 years after aSAH. Compared with TIA/minor stroke patients, the age- and sex-adjusted cumulative incidence on vascular events was lower for aSAH patients [hazard ratio (HR) 0.48; 95 % CI 0.40-0.57]; the HR for all-cause death was 0.96 (95 % CI 0.84-1.10). After aSAH, risks of vascular events and death, and probably also that of cancer-related death, are higher than in the general population. Although the long-term risk of vascular events was lower in aSAH patients than in TIA/minor stroke patients, the risk of death was similar.

[256]

**TÍTULO / TITLE:** - High-grade meningiomas: new avenues for drug treatment?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Neurol. 2013 Dec;26(6):708-15. doi: 10.1097/WCO.0000000000000035.

●● Enlace al texto completo (gratis o de pago)

[1097/WCO.0000000000000035](#)

**AUTORES / AUTHORS:** - Preusser M; Berghoff AS; Hottinger AF

**INSTITUCIÓN / INSTITUTION:** - aDepartment of Medicine I & Comprehensive Cancer Center - CNS Unit, Medical University of Vienna bDepartment of Clinical Neurosciences, CHUV, Lausanne University Medical Center and University of Lausanne, Switzerland.

**RESUMEN / SUMMARY:** - PURPOSE OF REVIEW: For standard first-line treatment of high-grade meningiomas, surgical resection and radiotherapy are regarded as standard of care. In the recurrent setting after exhaustion of all local treatment options, no effective therapies are known and several drugs have failed to show efficacy, but novel

compounds may offer hope for better disease control. RECENT FINDINGS: Upregulation of proangiogenic molecules and dysregulation of some signaling pathways such as the platelet-derived growth factor and mammalian target of rapamycin are recurrently found in high-grade meningiomas. Furthermore, in-vitro studies and single patient experience indicate that trabectedin may be an effective therapy in this tumor type. Unfortunately, so far there is a lack of conclusive clinical trials to draw definite conclusions of efficacy of these approaches. SUMMARY: There remains a significant unmet need for defining the role of medical therapy in recurrent high-grade meningioma, and more basic research and multicentric well designed trials are needed in this rare and devastating tumor type. Potentially promising novel therapeutics include antiangiogenic drugs, molecular inhibitors of signaling cascades, immunotherapeutics or trabectedin. However, more basic research is required to identify more promising drug targets. VIDEO ABSTRACT AVAILABLE: See the Video Supplementary Digital Content 1 (<http://links.lww.com/CONR/A22>).

[257]

**TÍTULO / TITLE:** - Pediatric intracranial arachnoid cysts: comparative effectiveness of surgical treatment options.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Oct 27.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2306-2](http://1007/s00381-013-2306-2)

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**RESUMEN / SUMMARY:** - PURPOSE: A variety of surgical approaches for the treatment of pediatric intracranial arachnoid cysts exist. In an effort to identify the optimal surgical treatment for this disorder, we developed a decision analytic model to evaluate outcomes of four surgical approaches in children. These included open craniotomy for cyst excision, open craniotomy for cyst fenestration, endoscopic cyst fenestration, and cystoperitoneal shunting. METHODS: Pooled data were used to create evidence tables, from which we calculated incidence, relative risks, and summary outcomes in quality-adjusted life years (QALYs) for the four surgical treatments. Our study incorporated data up to 5 years postsurgery. RESULTS: We analyzed 1,324 cases from 36 case series. There were no significant differences in outcome among the four surgical strategies. The QALYs (maximum of 5) for surgical approaches resulted in a range from 4.79 (for open craniotomy and excision) to 4.92 (for endoscopic fenestration). CONCLUSIONS: Overall quality of life is comparable between patients undergoing open craniotomy for cyst excision or fenestration, endoscopic fenestration, and cystoperitoneal shunting up to 5 years after surgery. While each approach offers unique advantages and disadvantages, an individualized treatment strategy should be employed in the setting of surgical outcome equipoise.

[258]

**TÍTULO / TITLE:** - Cancer-specific health-related quality of life in children with brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Qual Life Res. 2013 Oct 17.

●● Enlace al texto completo (gratis o de pago) [1007/s11136-013-0555-x](#)

**AUTORES / AUTHORS:** - Sato I; Higuchi A; Yanagisawa T; Mukasa A; Ida K; Sawamura Y; Sugiyama K; Saito N; Kumabe T; Terasaki M; Nishikawa R; Ishida Y; Kamibeppu K

**INSTITUCIÓN / INSTITUTION:** - Department of Family Nursing, Faculty of Medicine, Graduate School of Health Sciences and Nursing, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan.

**RESUMEN / SUMMARY:** - PURPOSE: To understand the influence of disease and treatment on the health-related quality of life (HRQOL) of children with brain tumors, compared to the HRQOL of children with other cancers, from the viewpoints of children and parents. METHODS: A total of 133 children aged 5-18 years and 165 parents of children aged 2-18 completed questionnaires of the Pediatric Quality of Life Inventory Cancer Module (Pain and Hurt, Nausea, Procedural Anxiety, Treatment Anxiety, Worry, Cognitive Problems, Perceived Physical Appearance, and Communication scales); higher scores indicate a better HRQOL. The Cancer Module scores, weighted by age and treatment status, were compared to those obtained in a previous study of children with other cancers (mostly leukemia). RESULTS: The weighted mean scores for Pain and Hurt (effect size  $d = 0.26$ ) and Nausea ( $d = 0.23$ ) from child reports and the scores for Nausea ( $d = 0.28$ ) from parent reports were higher for children with brain tumors than scores for children with other cancers. The scores for Procedural Anxiety ( $d = -0.22$ ) and Treatment Anxiety ( $d = -0.32$ ) from parent reports were lower for parents of children with brain tumors than the scores for parents of children with other cancers. The child-reported Pain and Hurt score of the Cancer Module was higher ( $d = 0.29$ ) and in less agreement (intraclass correlation coefficient = 0.43) with scores from the Brain Tumor Module, indicating that assessments completed with the Cancer Module misestimate pain and hurt problems in children with brain tumors. CONCLUSIONS: The profiles of cancer-specific HRQOL in children with brain tumors differ from those of children with other cancers; we therefore suggest that these children receive specific psychological support.

[259]

**TÍTULO / TITLE:** - Letter to the Editor: Thyroid and meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 1.

●● Enlace al texto completo (gratis o de pago) [3171/2011.2.JNS101991](#)

**AUTORES / AUTHORS:** - Contratti F

**INSTITUCIÓN / INSTITUTION:** - University of Rome, Rome, Italy.

[260]

**TÍTULO / TITLE:** - Growing teratoma syndrome in intracranial non-germinomatous germ cell tumors (iNGGCTs): a risk for secondary malignant transformation-a report of two cases.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Oct 12.

- Enlace al texto completo (gratis o de pago) [1007/s00381-013-2295-1](https://doi.org/10.1007/s00381-013-2295-1)

**AUTORES / AUTHORS:** - Glass T; Cochrane DD; Rassekh SR; Goddard K; Hukin J

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Neurology, British Columbia's Children's Hospital, University of British Columbia, 4480 Oak Street, Vancouver, V6H 3V4, Canada.

**RESUMEN / SUMMARY:** - PURPOSE: About 5 % of pediatric intracranial germ cell tumors and 20 % of non-germinomatous germ cell tumors (NGGCT) progress to growing teratoma syndrome (GTS) following chemoradiotherapy. The growing teratoma is thought to arise from the chemotherapy-resistant, teratomatous portion of a germ cell tumor and is commonly benign but may undergo malignant transformation. METHODS: Two pediatric patients whose intracranial NGGCTs progressed to growing teratomas during chemotherapy and later transformed to secondary malignant tumors after partial resection and radiation therapy (RT). RESULTS: Both tumors were diagnosed by MRI scans and elevated serum and CSF markers. Following normalization of tumor markers with chemotherapy and initial decrease in tumor volume, subsequent imaging showed regrowth during chemotherapy with pathology revealing benign teratoma. RT was administered. Several years following this treatment, further growth was seen with pathology indicating malignant carcinoma in one patient and malignant rhabdomyosarcoma in the other. The patient with carcinoma received palliative care while the patient with the sarcoma received further resection, intensive chemotherapy, and an autologous stem cell transplant and is currently in remission, 36 months since malignant transformation. CONCLUSION: Malignant transformation of presumed residual teratoma has been seldom reported. Treatment of NGGCT involves platinum-based chemotherapy with craniospinal RT and boost to the primary site, with cure rates of around 80 %. Teratomas are characteristically chemotherapy and RT resistant and are treated surgically. In the event that residual or growing teratoma is suspected, a complete resection should be considered early in the management as there is a risk of malignant transformation of residual teratoma.

[261]

**TÍTULO / TITLE:** - Therapeutic implications of accurate classification of pituitary adenomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Semin Diagn Pathol. 2013 Aug;30(3):158-64. doi: 10.1053/j.semdp.2013.06.002.

- Enlace al texto completo (gratis o de pago) [1053/j.semdp.2013.06.002](https://doi.org/10.1053/j.semdp.2013.06.002)

**AUTORES / AUTHORS:** - Mete O; Asa SL

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Laboratory Medicine Program, University Health Network, Ontario, Canada; Department of Laboratory Medicine and Pathobiology, University of Toronto, Toronto, Ontario, Canada. Electronic address: [ozgur.mete2@uhn.ca](mailto:ozgur.mete2@uhn.ca).

**RESUMEN / SUMMARY:** - Recent data suggest that 1 of 5 individuals in the general population is affected with a pituitary adenoma. Many of these neoplasms are clinically non-functioning adenomas that may be small and clinically undetected or may present as mass lesions; others are hormonally active and cause significant morbidity due to the metabolic effects of hormone excess (e.g., acromegaly and Cushing's disease). In

either case, they can grow and invade adjacent anatomic structures. Tumors with similar clinical features are morphologically heterogeneous and detailed comprehensive classification of pituitary adenomas is important to predict specific clinical behaviors and genetic changes that serve as targets for therapy. We provide a practical approach to clinical diagnosis and highlight the pitfalls in the classification of these common neoplasms.

[262]

**TÍTULO / TITLE:** - Correlation between the prognostic value and the expression of the stem cell marker CD133 and isocitrate dehydrogenase1 in glioblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Dec;115(3):333-41. doi: 10.1007/s11060-013-1234-z. Epub 2013 Oct 16.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1234-z](#)

**AUTORES / AUTHORS:** - Shin JH; Lee YS; Hong YK; Kang CS

**INSTITUCIÓN / INSTITUTION:** - Department of Hospital Pathology, College of Medicine, The Catholic University of Korea, Seoul, Korea, [shinjungha@gmail.com](mailto:shinjungha@gmail.com).

**RESUMEN / SUMMARY:** - Cancer stem cells are thought to be responsible for tumor recurrence and resistance in glioblastomas. An isocitrate dehydrogenase1 (IDH1) mutation, affecting codon132 of the isocitrate dehydrogenase1 gene, has prognostic significance in glioblastomas. We investigated whether stem cell marker expression [CD133, CD34, and vascular endothelial growth factor (VEGF)] and IDH1 mutation correlate with clinical factors and prognosis in glioblastoma. CD133, CD34, and VEGF expression was evaluated by immunohistochemistry in 67 cases of glioblastoma identified between 2005 and 2012. IDH1 mutation was assessed by immunohistochemistry, peptide-nucleic-acid mediated PCR clamping, and direct gene sequencing. Diffuse CD133 expression was detected in 12 (17.9 %) cases and was associated with poor overall survival (OS) (P = 0.010) and progression-free survival (P = 0.017). CD34 and VEGF expression were not associated with prognosis in these samples. IDH1 mutation was detected in ten (14.9 %) cases. Eight were clinically secondary tumors and two were primary tumors (P < 0.001); the mean age of the secondary tumor patients was significantly younger (P = 0.001, 41.20 vs. 59.14). IDH1-positive patients had longer OS than IDH1-negative patients (25.78 vs. 22.95 months), but this difference was not significant. In addition, IDH1 and CD34 expression showed a negative correlation (P = 0.024). Multivariate analysis showed that age, extent of surgery, and diffuse CD133 expression correlated with OS. CD133 may be a survival marker for glioblastoma. Further characterization of CD133, IDH1, and vascular markers in glioblastoma may help identify new therapeutic targets.

[263]

**TÍTULO / TITLE:** - Increased expression of microRNA-9 predicts an unfavorable prognosis in human glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cell Biochem. 2013 Oct 12.

●● Enlace al texto completo (gratis o de pago) [1007/s11010-013-1805-5](#)

**AUTORES / AUTHORS:** - Wu Z; Wang L; Li G; Liu H; Fan F; Li Z; Li Y; Gao G

**INSTITUCIÓN / INSTITUTION:** - Department of Anatomy, Histology and Embryology and K.K. Leung Brain Research Centre, Fourth Military Medical University, Xi'an, 710032, China.

**RESUMEN / SUMMARY:** - microRNA-9 (miR-9) has been found to be upregulated along with tumor progression of gliomas by microarray-based expression profiling, and also be strongly linked to glioblastoma subtypes. However, its prognostic value in glioma is still elusive. miR-9 expression in human gliomas and nonneoplastic brain tissues was measured by real-time quantitative RT-PCR assay. miR-9 expression in glioma tissues was significantly higher than that in corresponding nonneoplastic brain tissues ( $P < 0.001$ ). The increased expression of miR-9 was more frequently observed in glioma tissues with high WHO grade than those with low WHO grade tissues ( $P = 0.001$ ). The expression levels of miR-9 in glioma tissues with low Karnofsky performance score (KPS) were also significantly higher than those with high KPS ( $P = 0.008$ ). Moreover, the overall survival of glioma patients with high miR-9 expression was obviously lower than that with low miR-9 expression ( $P < 0.001$ ). Multivariate analysis further showed that high miR-9 expression was an independent prognostic factor for overall survival in glioma patients ( $P = 0.01$ ). More importantly, the subgroup analyses indicated that the overall survival of glioma patients with high WHO grade (III-IV) was significantly worse for high miR-9 expression group than for low miR-9 expression group ( $P < 0.001$ ), but no significant difference was found for patients with low WHO grade (I-II). These findings suggest for the first time that the increased expression of miR-9 may play an important role in tumor progression in human gliomas. miR-9 might be a useful marker for predicting the clinical outcome of glioma patients, especially for advanced subtypes.

[264]

**TÍTULO / TITLE:** - Pituitary macroadenoma causing symptomatic internal carotid artery compression: Surgical treatment through transsphenoidal tumor resection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Aug 23. pii: S0967-5868(13)00444-X. doi: 10.1016/j.jocn.2013.08.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.08.002](http://1016/j.jocn.2013.08.002)

**AUTORES / AUTHORS:** - Rey-Dios R; Payner TD; Cohen-Gadol AA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Mississippi Medical Center, Jackson, MS, USA.

**RESUMEN / SUMMARY:** - Pituitary macroadenomas can invade the cavernous sinus and rarely cause occlusion of the internal carotid artery (ICA). Most patients with symptomatic obstruction of the ICA by a pituitary tumor have been reported as a result of apoplexy. The authors review the literature about this condition and report a 48-year-old man who presented with transient ischemic attacks leading to a stroke. Imaging studies demonstrated complete occlusion of the left ICA and critical narrowing of the right ICA at the level of the clinoid processes, most likely due to macroadenoma mass effect. There was no radiologic evidence of apoplexy. Surgical resection of the tumor and ICA decompression via the transsphenoidal route resulted in prevention of further symptoms. Histopathologic analysis confirmed a nonfunctioning pituitary adenoma without evidence of hemorrhage or intratumoral infarction. This patient, to the authors'

knowledge, is the first documented patient with symptomatic carotid compression by a pituitary adenoma without evidence of apoplexy.

[265]

**TÍTULO / TITLE:** - Targeted gene delivery to glioblastoma using a C-end rule RGERPPR peptide-functionalised polyethylenimine complex.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Pharm. 2013 Dec 15;458(1):48-56. doi: 10.1016/j.ijpharm.2013.10.017. Epub 2013 Oct 19.

●● Enlace al texto completo (gratis o de pago) [1016/j.ijpharm.2013.10.017](#)

**AUTORES / AUTHORS:** - Wang J; Lei Y; Xie C; Lu W; Yan Z; Gao J; Xie Z; Zhang X; Liu M

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Smart Drug Delivery (Fudan University), Ministry of Education, Department of Pharmaceutics, School of Pharmacy, Fudan University, 826 Zhangheng Road, Shanghai 201203, PR China.

**RESUMEN / SUMMARY:** - Safe and efficient systems capable of specifically targeting brain tumour cells represent a promising approach for the treatment glioblastoma multiforme. Neuropilin-1 (NRP-1) is over-expressed in U87 glioma cells. In the current study, the tumour specific peptide RGERPPR, which binds specifically to NRP-1, was used as a targeting ligand in a gene delivery strategy for glioblastoma. The RGERPPR peptide was coupled to branched polyethylenimine (PEI, 25kDa) using heterobifunctional Mal-PEG-NHS, resulting in a novel gene delivery polymer. Polymer/plasmid DNA (pDNA) complexes were formed and their sizes and zeta potentials were measured. Compared with the unmodified mPEG-PEI/pDNA complexes, the RGERPPR-PEG-PEI/pDNA complex led to a significant enhancement in intracellular gene uptake and tumour spheroid penetration. Furthermore, the RGERPPR-PEG-PEI/pDNA complex facilitated enhanced transfection efficiency levels, as well as a reduction in cytotoxicity when tested in U87 glioma cells in vitro. Most significantly of all, when complexes formed with pDsRED-N1 were injected into the tail vein of intracranial U87 tumour-bearing nude mice, the RGERPPR-PEG-PEI complexes led to improved levels of red fluorescence protein expression in the brain tissue. Taken together, the results show that RGERPPR-PEG-PEI could be used as a safe and efficient gene delivery vehicle with potential applications in glioblastoma gene delivery.

[266]

**TÍTULO / TITLE:** - EGFR signaling in the HGG-02 glioblastoma cell line with an unusual loss of EGFR gene copy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Rep. 2014 Jan;31(1):480-7. doi: 10.3892/or.2013.2864. Epub 2013 Nov 20.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2864](#)

**AUTORES / AUTHORS:** - Skoda J; Neradil J; Zitterbart K; Sterba J; Veselska R

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Tumor Biology, Department of Experimental Biology, Faculty of Science, Masaryk University, Brno, Czech Republic.

**RESUMEN / SUMMARY:** - Epidermal growth factor receptor (EGFR) gene amplification and the overexpression of EGFR are described as common features of glioblastoma multiforme (GBM). Nevertheless, we previously reported the loss of EGFR gene copy in a GBM specimen from a patient with an unusually favorable course of the disease, and the HGG02 cell line with this aberration was successfully derived from this tumor. Here, we present a detailed analysis of changes in gene expression and cell signaling in the HGG-02 cell line; the GM7 reference cell line with a standard EGFR gene copy number derived from a very aggressive GBM was used as a control. We confirmed the downregulation of EGFR expression and signaling in HGG-02 cells using different methods (RTK analysis, gene profiling and RT-PCR). Other changes that may have contributed to the non-aggressive phenotype of the primary tumor were identified, including the downregulated phosphorylation of the Axl and Trk receptors, as well as increased activity of JNK and p38 kinases. Notably, differences in PDGF signaling were detected in both of these cell lines; HGG-02 cells preferentially expressed and signaled through PDGFRalpha, and PDGFRbeta was strongly overexpressed and phosphorylated in the GM7 reference cell line. Using expression profiling of cancer-related genes, we revealed the specific profile of HGG02 cells that included upregulated tumor-suppressors as well as downregulated genes associated with the extracellular matrix. This study represents the first comprehensive analysis of gene expression and cell signaling in glioblastoma cells with lower EGFR gene dosage. As indicated by our results, the TAM receptors, Trk receptors and PDGFRs need to be investigated further since their regulation appears to be important for glioblastoma biological features as well as the clinical course of the disease.

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[267]

**TÍTULO / TITLE:** - Radiation-associated meningioma in the elderly: development of meningioma with olfactory neuroblastoma recurrence 10 years after irradiation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Clin Lab Sci. 2013 Fall;43(4):460-3.

**AUTORES / AUTHORS:** - Johnson MD; Piech K; Emandian S

**INSTITUCIÓN / INSTITUTION:** - Division of Neuropathology, Department of Pathology and Laboratory Medicine, University of Rochester Medical Center, 601 Elmwood Ave. Box 626, Rochester, NY 14642, USA; phone: 585 276 3087; fax: 585 273 1027; e mail: [mahlon\\_johnson@urmc.rochester.edu](mailto:mahlon_johnson@urmc.rochester.edu).

**RESUMEN / SUMMARY:** - Introduction The pathogenesis of meningiomas is not established [1,2]. However, intracranial irradiation in childhood is a risk factor for the development of meningiomas later in life [2-6]. Children treated with irradiation for tinea capitis of the scalp showed an almost ten-fold increase in development of meningiomas relative to age-matched controls [2,3]. In a study of almost 18,000 children who survived for at least five years after receiving external beam radiation, 2.3% developed meningiomas within 17 years of follow-up [5]. Notably, meningioma formation after radiation therapy (RT) occurs almost exclusively in patients irradiated as children or young adults. Development of a radiation-associated meningioma (RAM) in patients who received RT in the sixth or seventh decade is very rare. For example, in studies including a total of 58 adults receiving RT, only two cases of RAM occurred in patients 50 years old or older [8,9].

[268]

**TÍTULO / TITLE:** - Spontaneously Regressing Leukoencephalopathy with Bilateral Temporal Cysts in Congenital Rubella Infection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Pediatr Infect Dis J.* 2013 Oct 22.

●● Enlace al texto completo (gratis o de pago) [1097/INF.000000000000134](#)

**AUTORES / AUTHORS:** - Severino M; Zarem A; Biancheri R; Cristina E; Rossi A  
**INSTITUCIÓN / INSTITUTION:** - 1Neuroradiology Unit, Istituto Giannina Gaslini, Genoa, Italy 2Pediatric Neurology Unit, Wolfson Medical Center, Holon, Israel. 3Child Neurology and Psychiatry Unit, Istituto Giannina Gaslini, Genoa, Italy 4Infectious Diseases Division, Istituto Giannina Gaslini, Genoa, Italy.

**RESUMEN / SUMMARY:** - Very little is known regarding neuroimaging findings in patients with congenital rubella syndrome. We report a 1.9-year-old boy with congenital rubella syndrome who presented in the neonatal period with severe multisystem involvement and diffuse leukoencephalopathy with subcortical anterior temporal cysts, that showed spontaneous improvement during a period of 3 years.

[269]

**TÍTULO / TITLE:** - Local non-viral gene delivery of apoptin delays the onset of paresis in an experimental model of intramedullary spinal cord tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Spinal Cord.* 2013 Nov 5. doi: 10.1038/sc.2013.106.

●● Enlace al texto completo (gratis o de pago) [1038/sc.2013.106](#)

**AUTORES / AUTHORS:** - Pennant WA; An S; Gwak SJ; Choi S; Banh DT; Nguyen AB; Song HY; Ha Y; Park JS

**INSTITUCIÓN / INSTITUTION:** - Spine and Spinal Cord Institute, Department of Neurosurgery, Yonsei University College of Medicine, Seoul, Republic of Korea.

**RESUMEN / SUMMARY:** - Objective: The objective of this study is to evaluate the safety and efficacy of a tumor-specific apoptosis-inducing gene, apoptin, as delivered by the non-viral carrier, PAM-RG4, in an animal model of spinal cord tumor. Methods: Male Sprague-Dawley rats were given a 2.5- $\mu$ l intramedullary injection of C6 glioma (100 000) cells and randomized into three groups (day 0). On day 5, animals received a 7.5- $\mu$ l intramedullary injection of Dulbecco's modified Eagle's medium (Group 1; n=7), PAM-RG4/control gene polyplex (Group 2; n=7), or PAM-RG4/apoptin gene polyplex (Group 3; n=8). Hindlimb functional strength was assessed every other day for the duration of the study. The spinal cords of killed animals were collected and hematoxylin-eosin stained. Results: Following treatment, animals that received apoptin had significantly higher mean functional hindlimb scores than those of sham control animals, showing a level of preserved hindlimb function throughout the study. In addition, Group 1 (sham control) and Group 2 (control gene) animals had median survival scores lower than those of animals receiving apoptin. Histopathological analysis showed marked retardation of tumor progression in apoptin-treated animals compared with sham controls. Conclusion: Our study suggests that apoptin is safe for use in the mammalian spinal cord as well as effective in slowing the progression of tumor growth in the spinal cord. The significant slowing of tumor progression, as manifested by the preserved hindlimb function, coupled with the reduction in tumor

volume, shows local non-viral delivery of apoptin could serve as an emerging therapy for the treatment of intramedullary spinal cord tumors. Spinal Cord advance online publication, 5 November 2013; doi:10.1038/sc.2013.106.

[270]

**TÍTULO / TITLE:** - Prognostic relevance of global histone 3 lysine 9 acetylation in ependymal tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Dec;119(6):1424-31. doi: 10.3171/2013.9.JNS13511. Epub 2013 Oct 11.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.9.JNS13511](#)

**AUTORES / AUTHORS:** - Ebrahimi A; Schittenhelm J; Honegger J; Schluesener H

**INSTITUCIÓN / INSTITUTION:** - Division of Immunopathology of the Nervous System;

**RESUMEN / SUMMARY:** - Object Ependymal tumors are highly variable in clinical and molecular behavior and affect both children and adults. Regarding the paucity of appropriate experimental models, the underlying molecular mechanisms of their behavioral variability are poorly understood. Considering the increasing evidence of epigenetic changes in various tumors, in addition to the preclinical success of epigenetic-based therapeutics in tumors of the CNS, epigenetic study of ependymal tumors is warranted. Methods Using immunohistochemistry, the authors investigated the patterns of global acetylation of lysine position 9 of histone 3 (H3K9Ac), an epigenetic marker of active gene transcription, in 85 ependymal tumors with various WHO grades and clinicopathological characteristics. Results Most of the nuclei in all ependymal tumors were H3K9Ac negative (mean +/- SD 65.9% +/- 26.5 vs 34.1% +/- 26.5% positive,  $p < 0.0001$ ). Subependymomas had more H3K9Ac-positive nuclei (67.2% +/- 10.2%) than myxopapillary ependymomas, ependymomas, and anaplastic ependymomas ( $p < 0.05$ ). Additionally, intracranial parenchymal tumors had significantly fewer H3K9Ac-positive nuclei (13.1% +/- 21.9%) than tumors of other CNS localizations ( $p < 0.001$ ), and supratentorial ventricular tumors had the highest number of H3K9Ac-positive nuclei (66.4% +/- 11.8%) among CNS ependymal tumors ( $p < 0.0001$ ). The H3K9Ac pattern in ependymal tumors also revealed prognostic significance such that tumors with less than 20% acetylated nuclei had a higher probability of recurrence than tumors with 20% or more acetylated nuclei ( $p = 0.0327$ ), and recurrent tumors had significantly fewer H3K9Ac-positive nuclei than primary ones (16% +/- 22.5% vs. 38% +/- 25.8%;  $p < 0.0001$ ). However, the effect of tumor location on survival of patients was nonsignificant in a multivariate survival analysis, and H3K9 acetylation levels of tumors contributed independently to the survival of patients. In addition, ependymal tumors with more than or equal to 20% H3K9 acetylated cells had lower MIB-1 expression than those with less than 20% H3K9 acetylated cells ( $p < 0.01$ ). Conclusions Global H3K9Ac contributes independently to the prognosis of patients with ependymal tumors such that tumors with lower H3K9Ac values have a higher probability of recurrence and are more proliferative. Additionally, subependymomas have a higher H3K9Ac profile than other ependymal tumor subclasses, underlining their benign clinical behavior.

[271]

**TÍTULO / TITLE:** - Cystic Glioblastoma: An Evaluation of IDH1 Status and Prognosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Oct 1.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1227/NEU.0000000000000200](#)

**AUTORES / AUTHORS:** - Sarmiento JM; Nuno M; Ortega A; Mukherjee D; Fan X; Black KL; Patil CG

**INSTITUCIÓN / INSTITUTION:** - Center for Neurosurgical Outcomes Research, Maxine Dunitz Neurosurgical Institute, Department of Neurosurgery, Cedars-Sinai Medical Center.

**RESUMEN / SUMMARY:** - BACKGROUND:: Controversy exists regarding the prognostic significance of cystic features in newly diagnosed glioblastoma (GBM) and the pathological origin of cystic GBMs. OBJECTIVE:: To determine whether cystic GBMs develop from low-grade gliomas by evaluating IDH1 status and to evaluate differences in overall survival between patients with cystic and non-cystic tumors. METHODS:: We retrospectively reviewed the records of 351 consecutive newly diagnosed adult GBM patients treated at our institution from October 1997 to November 2011; patients with >50% cystic tumor composition were further identified. IDH1 mutation was determined by immunohistochemical staining. Patient characteristics and treatment were reported for cystic and non-cystic tumors separately. Overall survival was reported for cystic and non-cystic cohorts using the Kaplan-Meier estimates. RESULTS:: Of 351 patients, 27 (7.7%) had cystic tumors and 324 (92.3%) had non-cystic. Tumor samples for cystic GBM patients were immunohistochemically analyzed for IDH1 mutations. Two (7.4%) of the 27 tumor samples were documented as having IDH1 mutations. Characteristics such as age, gender, perioperative KPS, tumor size, extent of resection, post-surgery radiation and temozolomide therapy were comparable in the cystic and non-cystic cohorts. Cystic patients had a median overall survival of 15.0 months compared to 18.2 months for non-cystic (log-rank  $p=0.77$ ). CONCLUSION:: The low frequency of IDH1 mutation status in our cystic cohort strongly suggests that most newly diagnosed cystic GBMs do not arise from malignant transformation of previously undiagnosed cystic low-grade gliomas. Furthermore, there is no difference in overall survival between cystic and non-cystic newly diagnosed GBM patients.

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[272]

**TÍTULO / TITLE:** - Leprosy nerve abscess in Indian male, misdiagnosed as tuberculous lymphadenitis and neuroma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Lepr Rev. 2013 Jun;84(2):158-60.

**AUTORES / AUTHORS:** - Chugh S; Barman KD; Goel K; Garg VK

**INSTITUCIÓN / INSTITUTION:** - Department of Dermatology & VD, Maulana Azad Medical College, Bahadur SahZafar Marg, New Delhi 110002, India.

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[273]

**TÍTULO / TITLE:** - Medulloblastoma molecular dissection: the way toward targeted therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Oncol. 2013 Nov;25(6):674-81. doi: 10.1097/CCO.0000000000000008.

●● Enlace al texto completo (gratis o de pago)

[1097/CCO.0000000000000008](#)

**AUTORES / AUTHORS:** - Remke M; Ramaswamy V; Taylor MD

**INSTITUCIÓN / INSTITUTION:** - aDivision of Neurosurgery, Hospital for Sick Children  
bDepartment of Laboratory Medicine and Pathobiology, University of Toronto  
cLabatt Brain Tumour Research Centre, Hospital for Sick Children, Toronto, Ontario, Canada  
\*Marc Remke and Vijay Ramaswamy contributed equally to the writing of this article.

**RESUMEN / SUMMARY:** - PURPOSE OF REVIEW: The advent of integrated genomics revealed profound insights into medulloblastoma pathogenesis. However, these biological findings have yet to be translated into the clinic, as current treatment comprises surgical resection, conventional irradiation, and chemotherapy resulting in significant long-term sequelae. We sought to highlight the potential areas for targeted therapy based on our new understanding of the subgroup-specific tumor biology. RECENT FINDINGS: Recently, four distinct molecular subgroups of medulloblastoma have been identified [WNT (wingless), SHH (sonic hedgehog), Group 3, and Group 4]. Profiling of these subgroups revealed distinct genomic events, several of which represent actionable targets for therapy. Specifically, stratification of patients into their respective subgroups has profound prognostic impact, wherein therapy can be de-escalated in patients with favorable prognosis, and intensified therapy or novel agents can be considered in patients with poor prognosis. Novel subgroup-specific therapies are being explored in clinical trials, particularly for the SHH subgroup. Epigenetic modifiers are also recurrently affected in medulloblastoma suggesting that epigenetic therapy can be considered in a subset of patients. SUMMARY: The identification of subgroup-specific, actionable therapeutic targets has the potential to revolutionize therapy for medulloblastoma patients, and result in significantly improved quality of life in survivors and improved overall survival.

[274]

**TÍTULO / TITLE:** - Major depressive disorder induced by prolactinoma-a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Gen Hosp Psychiatry. 2013 Oct 30. pii: S0163-8343(13)00015-7. doi: 10.1016/j.genhosppsy.2013.01.010.

●● Enlace al texto completo (gratis o de pago)

[1016/j.genhosppsy.2013.01.010](#)

**AUTORES / AUTHORS:** - Liao WT; Bai YM

**INSTITUCIÓN / INSTITUTION:** - Department of Psychiatry, Taipei Veterans General Hospital, Taipei 112, Taiwan.

**RESUMEN / SUMMARY:** - Prolactinomas, the most common type of pituitary tumor, can induce hyperprolactinemia and cause some psychiatric symptoms, such as anxiety, depression and even psychotic symptoms [1-3]. However, in previous case reports, no information about estrogen levels was mentioned. Here, we present a 48-year-old female patient who had a recurrent episode of major depressive disorder (MDD) and amenorrhea. Hyperprolactinemia (167 ng/ml), low estrogen (15.31 pg/ml) and a pituitary prolactinoma were found by MRI. After a dopamine agonist (Dostinex) and

aripiprazole were prescribed, the patient's depressed mood remitted and her menstruation normalized. The possible mechanism of MDD induced by prolactinoma is discussed.

[275]

**TÍTULO / TITLE:** - Schwannoma and nerve abscess of leprosy: differential diagnosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Lepr Rev. 2013 Jun;84(2):141-4.

**AUTORES / AUTHORS:** - Lima CM; Da Costa PC; Carneiro L; De Oliveira ML

**INSTITUCIÓN / INSTITUTION:** - Dermatology Service, Federal University of Rio de Janeiro (HUCFF/UFRJ), Brazil.

[276]

**TÍTULO / TITLE:** - Establishment of a green fluorescent protein tracing murine model focused on the functions of host components in necrosis repair and the niche of subcutaneously implanted glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Nov 27. doi: 10.3892/or.2013.2873.

●● [Enlace al texto completo \(gratis o de pago\) 3892/or.2013.2873](#)

**AUTORES / AUTHORS:** - Lu ZH; Lv K; Zhang JS; Dai CG; Liu B; Ma XY; He LM; Jia JY; Chen YM; Dai XL; Wang AD; Dong J; Zhang QB; Lan Q; Huang Q

**INSTITUCIÓN / INSTITUTION:** - Neurosurgical Department of The Second Affiliated Hospital, Soochow University, Suzhou 215004, P.R. China.

**RESUMEN / SUMMARY:** - Due to progress in the research of glioma stem cells and the glioma niche, development of an animal model that facilitates the elucidation of the roles of the host tissue and cells is necessary. The aim of the present study was to develop a subcutaneous xenograft green fluorescent protein nude mouse model and use this model to analyze the roles of host cells in tumor necrosis repair. Tumors derived from the human glioma stem/progenitor cell line SU3 were subcutaneously implanted in green fluorescent protein nude mice. The implanted tumors were then passed from animal to animal for 10 generations. Finally, subcutaneous xenografts were assayed with traditional pathology, immunopathological techniques and fluorescence photography. For each generation, the tumorigenicity rate was 100%. Subcutaneous xenografts were rich in blood vessels, and necrotic and hemorrhagic foci, which highly expressed hypoxia-inducible factor-1alpha, tumor necrosis factor, Ki-67, CD68 and CD11b. In the interstitial tissue, particularly in old hemorrhagic foci, there were numerous cells expressing green fluorescent protein, CD68 and CD11b. Green fluorescent protein nude mouse subcutaneous xenografts not only consistently maintained the high invasiveness and tumorigenicity of glioma stem/progenitor cells, but also consisted of a high concentration of tumor blood vessels and necrotic and hemorrhagic foci. Subcutaneous xenografts also expressed high levels of tumor microenvironment-related proteins and host-derived tumor interstitial molecules. The model has significant potential for further research on tumor tissue remodeling and the tumor microenvironment.

[277]

**TÍTULO / TITLE:** - Peptide-based inhibition of the HOXA9/PBX interaction retards the growth of human meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Chemother Pharmacol. 2013 Oct 20.

●● Enlace al texto completo (gratis o de pago) [1007/s00280-013-2316-5](#)

**AUTORES / AUTHORS:** - Ando H; Natsume A; Senga T; Watanabe R; Ito I; Ohno M; Iwami K; Ohka F; Motomura K; Kinjo S; Ito M; Saito K; Morgan R; Wakabayashi T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School of Medicine, Nagoya University, 65, Tsurumai-cho, Showa-ku, Nagoya, 466-8550, Japan.

**RESUMEN / SUMMARY:** - BACKGROUND: Meningiomas are the most common type of intracranial tumor, accounting for between 24 and 30 % of primary intracranial tumors. Thus far, no biomarkers exist to reliably predict the clinical outcome of meningiomas. A previous genome-wide methylation analysis revealed that HOXA9 is one of the most functionally relevant biomarkers. In this study, we have examined whether HOXA9 is a potential therapeutic target in meningiomas, using HXR9, a peptide inhibitor of the interaction between HOXA9 and its cofactor PBX. METHODS: We determined the expression level of HOXA9 in human meningiomas, meningioma cell lines, and normal brain tissue. Meningioma in culture and in subcutaneous tumors was treated with HXR9. We also examined the disruption of HOXA9/PBX dimers. RESULTS: We first confirmed that HOXA9 is highly expressed in meningiomas, but not in normal brain tissue. The HXR9 peptide blocks the binding of HOXA9 to PBX, leading to an alteration of DNA binding, and subsequent regulation of their target genes. HXR9 markedly inhibited the growth of meningioma cells and subcutaneous meningeal tumors. CONCLUSION: There is no effective chemotherapy for meningiomas at present, and targeting the HOXA9/PBX interaction may represent a novel treatment option for this disease.

[278]

**TÍTULO / TITLE:** - Grading of Cerebral Glioma with Multiparametric MR Imaging and F-FDG-PET: Concordance and Accuracy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eur Radiol. 2013 Sep 28.

●● Enlace al texto completo (gratis o de pago) [1007/s00330-013-3019-3](#)

**AUTORES / AUTHORS:** - Yoon JH; Kim JH; Kang WJ; Sohn CH; Choi SH; Yun TJ; Eun Y; Song YS; Chang KH

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Seoul National University Hospital, 101 Daehak-ro, Jongno-gu, Seoul, 110-744, Korea.

**RESUMEN / SUMMARY:** - OBJECTIVES: To retrospectively evaluate concordance rates and predictive values in concordant cases among multiparametric MR techniques and FDG-PET to grade cerebral gliomas. METHODS: Multiparametric MR imaging and FDG-PET were performed in 60 consecutive patients with cerebral gliomas (12 low-grade and 48 high-grade gliomas). As the dichotomic variables, conventional MRI, minimum apparent diffusion coefficient in diffusion-weighted imaging, maximum relative cerebral blood volume ratio in perfusion-weighted imaging, choline/creatine ratio and (lipid and lactate)/creatine ratio in MR spectroscopy, and maximum standardised uptake value ratio in FDG-PET in low- and high-grade gliomas were compared. Their

concordance rates and positive/negative predictive values (PPV/NPV) in concordant cases were obtained for the various combinations of multiparametric MR techniques and FDG-PET. RESULTS: There were significant differences between low- and high-grade gliomas in all techniques. Combinations of two, three, four, and five out of the five techniques showed concordance rates of 77.0 +/- 4.8 %, 65.5 +/- 4.0 %, 58.3 +/- 2.6 % and 53.3 %, PPV in high-grade concordant cases of 97.3 +/- 1.7 %, 99.1 +/- 1.4 %, 100.0 +/- 0 % and 100.0 % and NPV in low-grade concordant cases of 70.2 +/- 7.5 %, 78.0 +/- 6.0 %, 80.3 +/- 3.4 % and 80.0 %, respectively. CONCLUSION: Multiparametric MR techniques and FDG-PET have a concordant tendency in a two-tiered classification for the grading of cerebral glioma. If at least two examinations concordantly indicated high-grade gliomas, the PPV was about 95 %. KEY POINTS: \* Modern imaging techniques can help predict the aggressiveness of cerebral gliomas. \* Multiparametric MRI and FDG-PET have a concordant tendency to grade cerebral gliomas. \* Their high-grade concordant cases revealed at least 95 % positive predictive values. \* Their low-grade concordant cases revealed about 70-80 % negative predictive values.

[279]

**TÍTULO / TITLE:** - Molecular insights into brain tumors: ready for translation into novel treatment strategies?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Neurol. 2013 Dec;26(6):678-80. doi: 10.1097/WCO.000000000000038.

●● Enlace al texto completo (gratis o de pago)

[1097/WCO.000000000000038](#)

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**INSTITUCIÓN / INSTITUTION:** - Laboratory of Brain Tumor Biology and Genetics, Service of Neurosurgery, Department of Clinical Neurosciences, University Hospital Lausanne (CHUV), Lausanne, Switzerland.

[280]

**TÍTULO / TITLE:** - Skull base meningiomas: neurological outcome after microsurgical resection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1309-x](#)

**AUTORES / AUTHORS:** - Scheitach J; Schebesch KM; Brawanski A; Proescholdt MA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Regensburg Medical Center, Franz Josef Strauss Allee 11, 93053, Regensburg, Germany.

**RESUMEN / SUMMARY:** - Microsurgical resection is the primary treatment of skull base meningiomas. Maximal resection provides the best tumor control rates but can be associated with high surgical morbidity. To understand the relation between extent of resection (EOR) and functional outcome we have analyzed the neurological improvement and recurrence rate in a large consecutive series of skull base meningioma patients. In addition, we defined anatomical and biological factors predictive for recurrence and overall outcome. We investigated 226 skull base

meningioma patients receiving tumor resection in our institution. The most frequent location was the medial sphenoid ridge (29.6 %). EOR was rated according to the Simpson scale. Overall performance was measured by the Karnofsky performance score (KPS); neurological deficits were quantified using the Medical Research Council Neurological Severity Score (MRC-NPS). Complete resection was achieved in 62.8 % and the EOR was significantly correlated to tumor location. The morbidity and mortality rate was 32.1 and 2.7 % respectively, new permanent neurological deficits occurred in 3.5 % of all patients. From all patients with focal neurological deficits, 60.1 % experienced significant improvement. Both the MRC-NPS and the KPS significantly improved from the preoperative status to discharge, however the improvement rate was dependent on the tumor location. Recurrence rate was 15.5 %; tumor size, bone- and venous sinus infiltration, WHO grade, poor EOR but not MIB-1 labeling index were independent factors predictive for recurrence. Microsurgical resection of skull base meningiomas improves neurological impairment in the majority of patients. Specific risk factors for recurrence require consideration for postoperative management.

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[281]

**TÍTULO / TITLE:** - Epithelial-to-mesenchymal transition is involved in BCNU resistance in human glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuropathology. 2013 Sep 22. doi: 10.1111/neup.12062.

●● [Enlace al texto completo \(gratis o de pago\) 1111/neup.12062](#)

**AUTORES / AUTHORS:** - Yan YR; Xie Q; Li F; Zhang Y; Ma JW; Xie SM; Li HY; Zhong XY

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Medical School of Jinan University, Guangzhou, China.

**RESUMEN / SUMMARY:** - Chemotherapy has been considered as an effective treatment for malignant glioma; however, it becomes increasingly ineffective with tumor progression. Epithelial-to-mesenchymal transition (EMT) is a process whereby cells acquire morphologic and molecular alterations that facilitate tumor metastasis and progression. Emerging evidence associates chemoresistance with the acquisition of EMT in cancer. However, it is not clear whether this phenomenon is involved in glioma. We used the previously established human glioma cell lines SWOZ1, SWOZ2 and SWOZ2-BCNU to assess cellular morphology, molecular changes, migration and invasion. We found that BCNU-resistant cells showed multiple drug resistance and phenotypic changes consistent with EMT, including spindle-shaped morphology and enhanced pseudopodia formation. Decreased expression of the epithelial adhesion molecule E-cadherin and increased expression of the mesenchymal marker vimentin were observed in BCNU-resistant SWOZ1 and SWOZ2-BCNU cells compared to SWOZ2 cells. Migratory and metastatic potentials were markedly enhanced in SWOZ1 and SWOZ2-BCNU cells compared to SWOZ2 cells. These data suggest that there is a possible link between drug resistance and EMT induction in glioma cells. Gaining further insight into the mechanisms underlying chemoresistance and EMT may enable the restoration of chemosensitivity or suppression of metastasis.

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[282]

**TÍTULO / TITLE:** - Cognitive Tasks Challenging Brain Tumor Survivors at Work.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Occup Environ Med. 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago)

[1097/JOM.0b013e3182a64206](#)

**AUTORES / AUTHORS:** - Collins C; Gehrke A; Feuerstein M

**INSTITUCIÓN / INSTITUTION:** - From the Uniformed Services University of the Health Sciences, Bethesda, Md.

**RESUMEN / SUMMARY:** - OBJECTIVE:: To identify problematic work tasks involving cognitive function in employed brain tumor survivors. METHODS:: Work tasks involving cognitive functions were compared between employed brain tumor survivors (n = 137) and a disease-free group (n = 96). Multivariable logistic regressions were conducted. RESULTS:: In the brain tumor survivors, 44% (26/59) of work tasks were more likely to be problematic. Top five problematic work tasks included were as follows: following the flow of events (odds ratio [OR] = 11.72; 95% confidence interval [CI] = 3.19 to 43.07), remembering train of thought while speaking (OR = 11.70; 95% CI = 5.25 to 26.10), putting together materials for a task (OR = 10.90; 95% CI = 2.80 to 42.38), shifting between tasks (OR = 10.71; 95% CI = 3.62 to 31.74), and following written instructions (OR = 9.96; 95% CI = 2.65 to 37.41). CONCLUSION:: Findings identified problematic work tasks involving major domains of cognitive function.

[283]

**TÍTULO / TITLE:** - Pseudotumor cerebri/idiopathic intracranial hypertension in children: An experience of a tertiary care hospital.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Dev. 2013 Oct 16. pii: S0387-7604(13)00288-X. doi: 10.1016/j.braindev.2013.09.007.

●● Enlace al texto completo (gratis o de pago) [1016/j.braindev.2013.09.007](#)

**AUTORES / AUTHORS:** - Degerliyurt A; Teber S; Karakaya G; Guven A; Seker ED; Arhan EP; Sayli TR

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Neurology, Ankara Pediatrics, Hematology-Oncology Training and Research Hospital, Ankara, Turkey. Electronic address: [degerliyurta@gmail.com](mailto:degerliyurta@gmail.com).

**RESUMEN / SUMMARY:** - Objective: Pseudotumor cerebri (PTC) is diagnosed at increasing rates probably due to the increase in obesity prevalence all over the world and awareness about the disease. Our aim in this study was to evaluate the PTC clinical picture and etiological factors in children at the present time. Method: The records of 53 patients with 32 females, who were diagnosed with PTC in a child neurology department between the years of 2005 and 2012 were retrospectively analyzed. Results: The mean age at presentation was 10.9years (3-17years) and approximately half of patients were aged of 11years or less. While more than half of prepubertal patients were male, girls rate reaches 74% at puberty. An etiological factor such as venous sinus thrombosis, infections, anemia, steroid discontinuation, drugs, slit ventricle syndrome and minor head injury causing the PTC was identified in 43% of the patients. The mean duration of treatment was 6.4months (3-24months) and the mean follow-up duration 16.5months (3-52months). Visual field constriction was moderate in only two pubertal and obese female patients and mild in four patients.

Conclusions: PTC is seen in prepubertal children as often as in puberty. An etiological factor causing PTC is present in about half the patients in childhood. The main etiological factors of the disease currently consist of cranial venous thrombosis, infections, anemia and drugs. Malnutrition, renutrition and related vitamin deficiencies or excesses commonly seen previously have become less important in PTC etiology. PTC is a disease that requires long-term treatment and follow-up but the prognosis is good in patients who are diagnosed early, receive appropriate treatment and show good compliance with the treatment.

[284]

**TÍTULO / TITLE:** - Tumor shrinkage after transsphenoidal surgery for nonfunctioning pituitary adenoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Dec;119(6):1447-52. doi: 10.3171/2013.8.JNS13790. Epub 2013 Sep 27.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.8.JNS13790](#)

**AUTORES / AUTHORS:** - Berkmann S; Schlaffer S; Buchfelder M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospital Erlangen, Germany.

**RESUMEN / SUMMARY:** - Object Volume reduction of nonfunctioning pituitary adenomas has been described, for example, after radiotherapy and pituitary tumor apoplexy. Even when considerable remnants remain after surgery, spontaneous shrinkage and relief of mass lesion symptoms can sometimes occur. The aim of this study was to assess shrinkage of tumor residues after transsphenoidal surgery and to identify predictors of tumor shrinkage. Methods A total of 140 patients with postoperative remnants of nonfunctioning pituitary adenomas treated at the Department of Neurosurgery, University Hospital Erlangen, Erlangen, Germany, were included in this study. All patients underwent transsphenoidal procedures with guidance by 1.5-T intraoperative MRI. The intraoperative images of remnants were compared with images taken at 3 months and at 1 year after surgery. The possible predictors analyzed were age; sex; preoperative and intraoperative tumor dimensions; tumor growth pattern; endocrinological, ophthalmological, and histological characteristics; and history of previous pituitary surgery. For statistical analyses, the Fisher's exact test, Mann-Whitney U-test, and multivariate regression table analysis were used. Results Follow-up imaging 3 months after surgery showed tumor remnant shrinkage of 0.5 +/- 0.6 cm(3) for 70 (50%) patients. This reduction was 89% +/- 20% of the residual volume depicted by intraoperative MRI. In 45 (64%) patients, the remnants disappeared completely. Age, sex, and preoperative tumor volume did not significantly differ between the shrinkage and no-shrinkage groups. Positive predictors for postoperative shrinkage were cystic tumor growth (p = 0.02), additional resection of tumor remnants guided by intraoperative MRI (p = 0.04), smaller tumor volume (p = 0.04), and smaller craniocaudal tumor diameter of remnants (p = 0.0014). Negative predictors were growth into the cavernous sinus (p = 0.009), history of previous pituitary surgery (p = 0.0006) and tumor recurrence (p = 0.04), and preoperative panhypopituitarism (p = 0.04). Multivariate regression analysis indicated a positive correlation between tumor shrinkage and smaller tumor remnants (p < 0.0001) and no history of previous pituitary surgery (p = 0.003). No spontaneous change in tumor

remnant volume was detected between 3 months and 1 year postoperatively. During a mean follow-up time of 2.7 years, 1 (2%) patient with postoperative tumor shrinkage had to undergo another operation because of tumor progression. Conclusions Spontaneous volume reduction of nonfunctioning pituitary adenoma remnants can occur within 3 months after surgery. Predictors of shrinkage are smaller tumor remnant volume and no history of previous pituitary surgery.

[285]

**TÍTULO / TITLE:** - Diffuse Pontine Lesions in Children with Neurofibromatosis Type 1: Making a Case for Unidentified Bright Objects.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Pediatr Neurosurg*. 2013 Oct 29.

●● Enlace al texto completo (gratis o de pago) [1159/000355417](#)

**AUTORES / AUTHORS:** - Hervey-Jumper SL; Singla N; Gebarski SS; Robertson P; Maher CO

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Michigan, Ann Arbor, Mich., USA.

**RESUMEN / SUMMARY:** - Using an illustrative case of a presumed pontine unidentified bright object (UBO) with spontaneous lesion regression over 2 years, we review the importance of including UBOs in the differential diagnosis of children with confirmed or possible neurofibromatosis type 1 (NF1) who present with diffuse pontine enlargement and T2-weighted changes on MRI. Asymptomatic children with presumed NF1 and diffuse pontine lesions should not be treated with radiation and should not be biopsied. Prior reports of good prognosis associated with pontine glioma in patients with NF1 may have been unrecognized UBOs in some cases. © 2013 S. Karger AG, Basel.

[286]

**TÍTULO / TITLE:** - Is there pseudoprogression in secondary glioblastomas?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Int J Radiat Oncol Biol Phys*. 2013 Dec 1;87(5):1094-9. doi: 10.1016/j.ijrobp.2013.09.036.

●● Enlace al texto completo (gratis o de pago) [1016/j.ijrobp.2013.09.036](#)

**AUTORES / AUTHORS:** - Juratli TA; Engelland K; Lautenschlaeger T; Geiger KD; von Kummer R; Cerhova J; Chakravarti A; Krex D; Schackert G

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospital Carl Gustav Carus, Technical University of Dresden, Dresden, Germany. Electronic address: [Tareq.Juratli@uniklinikum-dresden.de](mailto:Tareq.Juratli@uniklinikum-dresden.de).

**RESUMEN / SUMMARY:** - PURPOSE: Pseudoprogression (PP) during adjuvant treatment of glioblastoma (GBM) is frequent and is a clinically and radiologically challenging problem. While there are several reports of the frequency of PP in GBM cohorts including mainly patients with primary GBM, there are few data on the incidence of PP in patients with secondary glioblastomas (sGBM). Therefore, the goal of this study was to evaluate the frequency of PP in sGBM. METHODS AND MATERIALS: We retrospectively evaluated the incidence of PP in adult patients with sGBM treated with chemoradiation therapy (CRTx) using temozolomide (TMZ) and sought to assess if there was an association between PP and MGMT promoter

methylation status, IDH mutations status, or 1p/19q codeletion. The definition of PP according to the Response Assessment in Neuro-Oncology Working Group was used. RESULTS: None of the evaluable 15 sGBM patients in our series demonstrated a PP. Of the 9 sGBM patients who received concomitant CRTx with TMZ, 6 patients had the methylated MGMT promoter, and 6 patients had IDH mutations. There also was no PP identified in sGBM patients who received sequential CRTx, irrespective of MGMT or IDH status. The median time of follow-up was 3.4 years after diagnosis of an sGBM, and the median overall survival was 18.2 months (range, 14.3-45.2 months). Three of 15 patients had previously received radiation therapy for their World Health Organization low-grade 2 glioma, while none of them had received chemotherapy at that stage. CONCLUSIONS: Based on this small series of sGBM patients treated with CRTx (concomitantly or sequentially) the frequency of PP appears to be very low in sGBM, even in those patients with methylated MGMT promoter or IDH mutations. Our results highlight the differences between primary glioblastomas and sGBM in particular as they relate to PP.

[287]

**TÍTULO / TITLE:** - Assessing Therapy Response of Secreting Pineal Germ Cell Tumor on Simultaneous 18F-Choline PET/MRI.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Nov 8.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1097/RLU.0000000000000231](#)

**AUTORES / AUTHORS:** - Panagiotidis E; Shankar A; Afaq A; Bomanji J

**INSTITUCIÓN / INSTITUTION:** - From the \*Institute of Nuclear Medicine and Paediatric & Adolescent Oncology, University College London Hospitals NHS Trust, London, United Kingdom.

**RESUMEN / SUMMARY:** - An 18-year-old man presented with 6 weeks' history of diplopia, early morning headaches, and blurred vision; on ophthalmologic examination, Parinaud syndrome was revealed. Brain MRI scan showed a calcified pineal mass. Brain simultaneous PET/MRI with F-choline showed an avid enhancing mass occupying the pineal region with restricted diffusion. A second examination after chemotherapy demonstrated reduction in both size and radiotracer activity of the mass. Our study emphasizes the potential of simultaneous F-choline PET/MRI being a useful tool for contribution in the diagnosis and treatment assessment in a convenient way with minimal radiation exposure and reduced throughput patient time.

[288]

**TÍTULO / TITLE:** - Dynamic intraoperative MRI in transsphenoidal resection of pituitary macroadenomas: A quantitative analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Magn Reson Imaging. 2013 Sep 23. doi: 10.1002/jmri.24414.

●● [Enlace al texto completo \(gratis o de pago\)](#) [1002/jmri.24414](#)

**AUTORES / AUTHORS:** - Boellis A; Espagnet MC; Romano A; Trillo G; Raco A; Moraschi M; Bozzao A

**INSTITUCIÓN / INSTITUTION:** - Neuroradiology NESMOS Department, University of Rome "La Sapienza" and Azienda Ospedaliera Sant'Andrea, Rome.

**RESUMEN / SUMMARY:** - PURPOSE: To compare intraoperative dynamic contrast-enhanced (dCE) sequences with conventional CE (cCE) in the evaluation of the surgical bed after transsphenoidal removal of pituitary macroadenomas. MATERIALS AND METHODS: Twenty-one patients with macroadenoma were selected. They all underwent intraoperative magnetic resonance imaging (iMRI) (1.5T) acquisitions during transsphenoidal resection of the tumor. For each patient, dCE and cCE images were acquired in the operating room after tumor removal. The mean values of surgical cavities volumes were measured and statistically compared through Student's t-test analysis. Informed consent to iMRI was obtained from the patients as a part of the surgical procedure. Institutional Review Board (IRB) approval was obtained.

RESULTS: No patient showed recurrence within at least 1 year of follow-up. Two patients showed residual tumor in the iMRI. Intraoperative analysis of the remaining 19 demonstrated that the mean value of the surgical cavities was significantly bigger in dCE than in cCE images (2955 mm<sup>3</sup> vs. 1963 mm<sup>3</sup>, respectively, P = 0.022).

CONCLUSION: This study demonstrated underestimation of surgical cavity by conventional iMRI, simulating residual tumor and potentially leading to unnecessary surgical revision. J. Magn. Reson. Imaging 2013. Esta es una cita bibliográfica que va por delante de la publicación en papel. La fecha indicada en la cita provista, NO corresponde con la fecha o la cita bibliográfica de la publicación en papel. La cita bibliográfica definitiva (con el volumen y su paginación) saldrá en 1 ó 2 meses a partir de la fecha de la emisión electrónica-online. \*\*\* This is a bibliographic record ahead of the paper publication. The given date in the bibliographic record does not correspond to the date or the bibliographic citation on the paper publication. The publisher will provide the final bibliographic citation (with the volume, and pagination) within 1 or 2 months from the date the record was published online. © 2013 Wiley Periodicals, Inc.

[289]

**TÍTULO / TITLE:** - Loss of endoplasmic reticulum calcium pump expression in choroid plexus tumours.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuropathol Appl Neurobiol. 2013 Nov 13. doi: 10.1111/nan.12098.

●● [Enlace al texto completo \(gratis o de pago\) 1111/nan.12098](#)

**AUTORES / AUTHORS:** - Ghezali LA; Arbabian A; Jeibmann A; Hasselblatt M; Hallaert GG; Van den Broecke C; Gray F; Brouland JP; Varin-Blank N; Papp B

**INSTITUCIÓN / INSTITUTION:** - Institut National de la Sante et de la Recherche Medicale, UMR U978, Bobigny, France; Universite Paris-13, PRES Sorbonne Paris-Cite, 74 rue Marcel Cachin 93017 Bobigny, France.

**RESUMEN / SUMMARY:** - AIMS: Sarco/Endoplasmic Reticulum Calcium ATPase-type calcium pumps (SERCA enzymes) control cell activation by sequestering calcium ions from the cytosol into the endoplasmic reticulum. Although endoplasmic reticulum calcium signaling plays an important role in the regulation of choroid plexus epithelial function, SERCA expression in the choroid plexus has not been investigated so far. METHODS: In this work we investigated the expression of the SERCA3-type calcium pump in choroid plexus epithelial cells grown in vitro, and in normal and hyperplastic

choroid plexus tissue, in choroid plexus papillomas displaying various degrees of atypia, and in choroid plexus carcinoma by immunohistochemistry in situ. RESULTS: Whereas normal choroid plexus epithelial cells express SERCA3 abundantly, SERCA3 expression is strongly decreased in papillomas, and is absent in choroid plexus carcinoma, whilst expression in hyperplastic epithelium is high, similarly to normal epithelium. SERCA3 expression was detected also in normal primary choroid plexus epithelial cells grown in vitro, and expression was markedly enhanced by short chain fatty acid-type cell differentiation inducing agents, including valproate. CONCLUSION: These observations show that SERCA3 is a new phenotypic marker of normal choroid plexus epithelial differentiation, and that SERCA3 constitutes an early tumour marker "by loss of expression" in the choroid plexus that may be useful to distinguish hyperplastic processes from papillomas. Endoplasmic reticulum calcium homeostasis becomes anomalous, due to loss of SERCA3 expression, already in benign neoplastic lesions of the choroid plexus epithelium.

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[290]

**TÍTULO / TITLE:** - Anti-angiogenic therapy in pediatric brain tumors: An effective strategy?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Crit Rev Oncol Hematol. 2013 Oct 10. pii: S1040-8428(13)00210-2. doi: 10.1016/j.critrevonc.2013.09.005.

●● Enlace al texto completo (gratis o de pago) [1016/j.critrevonc.2013.09.005](#)

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**RESUMEN / SUMMARY:** - Brain tumors are still the leading cause of cancer morbidity and mortality among children, despite different therapeutic options including neurosurgery, chemotherapy and radiation. As angiogenesis is highly crucial in brain tumor growth and progression, numerous clinical trials evaluating diverse anti-angiogenic agents have been described. In the present review, we aimed to answer the question if anti-angiogenic therapy is an effective strategy in the treatment of children with brain tumors. Although some encouraging results have been published of anti-angiogenic therapy targeting vascular endothelial growth factor (VEGF)/VEGF receptor signaling or epidermal growth factor receptor (EGFR), still more insight is warranted to be highly conclusive about the efficacy of anti-angiogenic therapy with currently potential upcoming anti-angiogenic agents in pediatric brain tumors. However, given the need for new therapeutic strategies, multi targeted therapy with anti-angiogenic agents anticipating on possible tumor escape mechanisms could be effective in the future treatment of pediatric brain tumors.

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[291]

**TÍTULO / TITLE:** - The evolving landscape of glioblastoma stem cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Neurol. 2013 Dec;26(6):701-7. doi: 10.1097/WCO.0000000000000032.

●● Enlace al texto completo (gratis o de pago)

[1097/WCO.0000000000000032](https://doi.org/10.1097/WCO.0000000000000032)

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**RESUMEN / SUMMARY:** - **PURPOSE OF REVIEW:** Recent advances in the role of cancer stem cells (CSCs) in glioblastoma will be reviewed. **RECENT FINDINGS:** In the decade since the description of brain tumor CSCs, the potential significance of these cells in tumor growth, therapeutic resistance, and spread has become evident. Most recently, the interplay between CSCs, tumor genetics, and the microenvironment has offered potential nodes of fragility under therapeutic development. The CSC phenotype is informed by specific receptor signaling, and study of the regulation of stem cell genes by transcription factors and microRNAs has identified a number of new targets amenable to treatment. Like normal stem cells, CSCs display specific epigenetic landscapes and metabolic profiles. **SUMMARY:** Brain cancers activate core stem cell regulatory pathways to empower self-renewal, maintenance of an organ system (albeit an aberrant one), and survival under stress that collectively permits tumor growth, therapeutic resistance, invasion, and angiogenesis. These properties have implicated CSCs as contributors in GBM progression and recurrence, spurring a search for anti-CSC therapies that do not disrupt normal stem cell maintenance. The last year has witnessed a rapid evolution in the understanding of CSC biology to inform preclinical targeting.

[292]

**TÍTULO / TITLE:** - Dimethyl phenyl piperazine iodide (DMPP) induces glioma regression by inhibiting angiogenesis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Exp Cell Res. 2013 Oct 23. pii: S0014-4827(13)00426-6. doi: 10.1016/j.yexcr.2013.10.009.

●● Enlace al texto completo (gratis o de pago) [1016/j.yexcr.2013.10.009](https://doi.org/10.1016/j.yexcr.2013.10.009)

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**INSTITUCIÓN / INSTITUTION:** - Key Laboratory for Regenerative Medicine of the Ministry of Education, Division of Histology & Embryology, Medical College, Jinan University, Guangzhou 510632, China.

**RESUMEN / SUMMARY:** - 1,1-Dimethyl-4-phenyl piperazine iodide (DMPP) is a synthetic nicotinic acetylcholine receptor (nAChR) agonist that could reduce airway inflammation. In this study, we demonstrated that DMPP could dramatically inhibit glioma size maintained on the chick embryonic chorioallantoic membrane (CAM). We first performed MTT and BrdU incorporation experiments on U87 glioma cells in vitro to understand the mechanism involved. We established that DMPP did not significantly affect U87 cell proliferation and survival. We speculated that DMPP directly caused the

tumor to regress by affecting the vasculature in and around the implanted tumor on our chick CAM model. Hence, we conducted detailed analysis of DMPP's inhibitory effects on angiogenesis. Three vasculogenesis and angiogenesis in vivo models were used in the study which included (1) early chick blood islands formation, (2) chick yolk-sac membrane (YSW) and (3) CAM models. The results revealed that DMPP directly suppressed all developmental stages involved in vasculogenesis and angiogenesis - possibly by acting through Ang-1 and HIF-2alpha signaling. In sum, our results show that DMPP could induce glioma regression grown on CAM by inhibiting vasculogenesis and angiogenesis.

[293]

**TÍTULO / TITLE:** - Management of medically refractory prolactinoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 22.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1270-8](#)

**AUTORES / AUTHORS:** - Molitch ME

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**RESUMEN / SUMMARY:** - Resistance to dopamine agonists is defined here as failure to normalize prolactin levels and failure to decrease macroprolactinoma size by  $\geq 50\%$ . Failure to normalize prolactin levels is found in about 25 % of patients treated with bromocriptine and 10-15 % of those treated with cabergoline. Failure to achieve at least a 50 % reduction in tumor size occurs in about one-third of those treated with bromocriptine and 10-15 % of those treated with cabergoline. Treatment approaches for patients resistant to dopamine agonists include changing to another dopamine agonist and increasing the dose of the drug as long as there is continued response to the dose increases and no adverse effects with higher doses. Transsphenoidal surgery is also an option. Clomiphene, gonadotropins, and GnRH can be used if fertility is desired. For those not desiring fertility, estrogen replacement may be used unless there is a macroadenoma, in which case control of tumor growth is also an issue and dopamine agonists are generally necessary. In many patients modest or even no reduction in tumor size may be acceptable as long as there is not tumor growth. Hormone replacement [estrogen or testosterone] may cause a decrease in efficacy of the dopamine agonist. Reduction of endogenous estrogen, use of selective estrogen receptor modulators, and aromatase inhibitors are potential experimental approaches. Temozolomide may be useful as a last resort for aggressive, invasive tumors refractory to other medical and ablative therapies.

[294]

**TÍTULO / TITLE:** - Immature mesenchymal stem cell-like pericytes as mediators of immunosuppression in human malignant glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuroimmunol. 2013 Dec 15;265(1-2):106-16. doi: 10.1016/j.jneuroim.2013.09.011. Epub 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) [1016/j.jneuroim.2013.09.011](#)

**AUTORES / AUTHORS:** - Ochs K; Sahm F; Opitz CA; Lanz TV; Oezen I; Couraud PO; von Deimling A; Wick W; Platten M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurooncology, University Hospital Heidelberg and National Center for Tumor Diseases, Heidelberg, Germany; Clinical Cooperation Unit Neuroimmunology and Brain Tumor Immunology, German Cancer Research Center (DKFZ), Heidelberg, Germany.

**RESUMEN / SUMMARY:** - Malignant gliomas are primary brain tumors characterized by profound local immunosuppression. While the remarkable plasticity of perivascular cells - resembling mesenchymal stem cells (MSC) - in malignant gliomas and their contribution to angiogenesis is increasingly recognized, their role as potential mediators of immunosuppression is unknown. Here we demonstrate that FACS-sorted malignant glioma-derived pericytes (HMGP) were characterized by the expression of CD90, CD248, and platelet-derived growth factor receptor-beta (PDGFR-beta). HMGP shared this expression profile with human brain vascular pericytes (HBVP) and human MSC (HMSC) but not human cerebral microvascular endothelial cells (HCMEC). CD90+PDGFR-beta+perivascular cells distinct from CD31+ endothelial cells accumulated in human gliomas with increasing degree of malignancy and negatively correlated with the presence of blood vessel-associated leukocytes and CD8+ T cells. Cultured CD90+PDGFR-beta+HBVP were equally capable of suppressing allogeneic or mitogen-activated T cell responses as human MSC. HMGP, HBVP and HMSC expressed prostaglandin E synthase (PGES), inducible nitric oxide synthase (iNOS), human leukocyte antigen-G (HLA-G), hepatocyte growth factor (HGF) and transforming growth factor-beta (TGF-beta). These factors but not indoleamine 2,3-dioxygenase-mediated conversion of tryptophan to kynurenine functionally contributed to immunosuppression of immature pericytes. Our data provide evidence that human cerebral CD90+ perivascular cells possess T cell inhibitory capability comparable to human MSC and suggest that these cells, besides their critical role in tumor vascularization, also promote local immunosuppression in malignant gliomas and possibly other brain diseases.

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[295]

**TÍTULO / TITLE:** - Social competence in pediatric brain tumor survivors: evaluating the psychometric properties of assessment tools.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Support Care Cancer. 2013 Nov 27.

●● Enlace al texto completo (gratis o de pago) [1007/s00520-013-2035-9](#)

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**INSTITUCIÓN / INSTITUTION:** - Department of Oncology and Pediatrics, University of Calgary, Alberta Children's Hospital Research Institute, Calgary, Alberta, Canada, [fiona.schulte@albertahealthservices.ca](mailto:fiona.schulte@albertahealthservices.ca).

**RESUMEN / SUMMARY:** - PURPOSE: This study was conducted to identify and describe the instruments that have been used to measure social competence in pediatric brain tumor patients and to summarize the psychometric properties of the most common instruments used to measure social competence in pediatric brain tumor patients. METHODS: The following psychometric properties were assessed: (a) construct validity; (b) internal consistency reliability; (c) test retest and inter-rater reliability; and (d) responsiveness. Measures were evaluated based on published

criteria for psychometric suitability. RESULTS: Ten studies met inclusion criteria for the current review. Based on review of these studies, the Social Skills Rating System (SSRS) yielded the most comprehensive data on psychometric properties. Psychometric properties for the SSRS were considered to be adequate in a pediatric brain tumor population. Specifically, the SSRS meets criteria for construct validity, internal consistency and responsiveness. Other commonly used measures included the CBCL/YSR, the PedsQL4.0 and the Revised Class Play each with sufficient psychometric properties. CONCLUSIONS: The SSRS is an appropriate tool to measure social competence in pediatric brain tumor patients. Data for inter-rater reliability and responsiveness in this population is still lacking.

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[296]

**TÍTULO / TITLE:** - Pediatric Arachnoid Cysts and Subdural Hygromas in the Early Infancy: Challenging the Direction of the Causality Paradigm.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Nov 4.

●● Enlace al texto completo (gratis o de pago)

[1227/NEU.0000000000000181](#)

**AUTORES / AUTHORS:** - Mattei TA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery.

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[297]

**TÍTULO / TITLE:** - Role of Transient Receptor Potential Channel 1 (TRPC1) in Glutamate-Induced Cell Death in the Hippocampal Cell Line HT22.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Mol Neurosci. 2013 Nov 16.

●● Enlace al texto completo (gratis o de pago) [1007/s12031-013-0171-9](#)

**AUTORES / AUTHORS:** - Narayanan KL; Subramaniam S; Bengston CP; Irmady K; Unsicker K; von Bohlen Und Halbach O

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Harvard Medical School, Massachusetts General Hospital, Charlestown, MA, 02129-4404, USA.

**RESUMEN / SUMMARY:** - Transient receptor potential channel 1 (TRPC1; a cation channel activated by store depletion and/or through an intracellular messenger) is expressed in a variety of tissues, including the brain. To study the physiological function of TRPC1, we investigated the role of endogenously expressed TRPC1 in glutamate-induced cell death, using the murine hippocampal cell line HT22. Knocking down TRPC1 mRNA using TRPC1-shRNA or blocking of TRPC channels using 2-APB ( $\geq 200$   $\mu$ M) robustly attenuated glutamate-induced cell death after 24 h of incubation with 5 mM glutamate. Glutamate toxicity in HT22 cells seems to involve metabotropic glutamate receptor mGluR5 since MPEP (2-methyl-6-(phenylethynyl)-pyridine), an mGluR5 antagonist ( $\geq 100$   $\mu$ M), abrogated glutamate toxicity. Furthermore, a direct activation of mGluR5 by CHPG [(RS)-chloro-5-hydroxyphenylglycine; 100  $\mu$ M or 300  $\mu$ M] promoted HT22 cell death. TRPC1 knock-down markedly reduced CHPG-induced cell death. These observations suggest that glutamate-induced cell death in HT22 cells activates mGluR5 receptors, which significantly increases Ca<sup>2+</sup> influx through TRPC1 channels. TRPC1 knock-down prevented glutamate- and CHPG-

induced cell death, suggesting that glutamate-induced toxicity in HT22 cells is mediated through TRPC1 channels and an mGluR5-dependent pathway. Together, this work provides evidence for a novel receptor activation pathway of TRPC1 in glutamate-induced toxicity.

[298]

**TÍTULO / TITLE:** - Detection of an Atypical Teratoid Rhabdoid Brain Tumor Gene Deletion in Circulating Blood Using Next-Generation Sequencing.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Child Neurol. 2013 Oct 17.

●● Enlace al texto completo (gratis o de pago) [1177/0883073813503904](#)

**AUTORES / AUTHORS:** - Chakravadhanula M; Tembe W; Legendre C; Carpentieri D; Liang WS; Bussey KJ; Carpten J; Berens ME; Bhardwaj RD

**INSTITUCIÓN / INSTITUTION:** - 1Phoenix Children's Hospital, Phoenix, Arizona, USA.

**RESUMEN / SUMMARY:** - Circulating biomarkers such as somatic chromosome mutations are novel diagnostic tools to detect cancer noninvasively. We describe focal deletions found in a patient with atypical teratoid rhabdoid tumor, a highly aggressive early childhood pediatric tumor. First, we used magnetic resonance imaging (MRI) and histopathology to study the tumor anatomy. Next, we used whole genome sequencing (Next Gen Sequencing) and Bioinformatics interrogation to discover the presence of 3 focal deletions in tumor tissue and 2 of these 3 focal deletions in patient's blood also. About 20% of the blood DNA sequencing reads matched the tumor DNA reads at the SMARCB1 gene locus. Circulating, tumor-specific DNA aberrations are a promising biomarker for atypical teratoid rhabdoid tumor patients. The high percentage of tumor DNA detected in blood indicates that either circulating brain tumor cells lyse in the blood or that contents of brain tumor cells traverse a possibly compromised blood-brain barrier in this patient.

[299]

**TÍTULO / TITLE:** - Recurrence patterns across medulloblastoma subgroups: an integrated clinical and molecular analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Lancet Oncol. 2013 Nov;14(12):1200-7. doi: 10.1016/S1470-2045(13)70449-2. Epub 2013 Oct 17.

●● Enlace al texto completo (gratis o de pago) [1016/S1470-2045\(13\)70449-2](#)

**AUTORES / AUTHORS:** - Ramaswamy V; Remke M; Bouffet E; Faria CC; Perreault S; Cho YJ; Shih DJ; Luu B; Dubuc AM; Northcott PA; Schuller U; Gururangan S; McLendon R; Bigner D; Fouladi M; Ligon KL; Pomeroy SL; Dunn S; Triscott J; Jabado N; Fontebasso A; Jones DT; Kool M; Karajannis MA; Gardner SL; Zagzag D; Nunes S; Pimentel J; Mora J; Lipp E; Walter AW; Ryzhova M; Zheludkova O; Kumirova E; Alshami J; Croul SE; Rutka JT; Hawkins C; Tabori U; Codispoti KE; Packer RJ; Pfister SM; Korshunov A; Taylor MD

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Hospital for Sick Children, Toronto, ON, Canada; Labatt Brain Tumour Research Centre, Hospital for Sick Children, Toronto, ON, Canada; Department of Laboratory Medicine and Pathobiology, University of Toronto, Toronto, ON, Canada.

**RESUMEN / SUMMARY:** - BACKGROUND: Recurrent medulloblastoma is a therapeutic challenge because it is almost always fatal. Studies have confirmed that medulloblastoma consists of at least four distinct subgroups. We sought to delineate subgroup-specific differences in medulloblastoma recurrence patterns. METHODS: We retrospectively identified a discovery cohort of all recurrent medulloblastomas at the Hospital for Sick Children (Toronto, ON, Canada) from 1994 to 2012 (cohort 1), and established molecular subgroups using a nanoString-based assay on formalin-fixed paraffin-embedded tissues or frozen tissue. The anatomical site of recurrence (local tumour bed or leptomeningeal metastasis), time to recurrence, and survival after recurrence were assessed in a subgroup-specific manner. Two independent, non-overlapping cohorts (cohort 2: samples from patients with recurrent medulloblastomas from 13 centres worldwide, obtained between 1991 and 2012; cohort 3: samples from patients with recurrent medulloblastoma obtained at the NN Burdenko Neurosurgical Institute [Moscow, Russia] between 1994 and 2011) were analysed to confirm and validate observations. When possible, molecular subgrouping was done on tissue obtained from both the initial surgery and at recurrence. RESULTS: Cohort 1 consisted of 30 patients with recurrent medulloblastomas; nine with local recurrences, and 21 with metastatic recurrences. Cohort 2 consisted of 77 patients and cohort 3 of 96 patients with recurrent medulloblastoma. Subgroup affiliation remained stable at recurrence in all 34 cases with available matched primary and recurrent pairs (five pairs from cohort 1 and 29 pairs from cohort 2 [15 SHH, five group 3, 14 group 4]). This finding was validated in 17 pairs from cohort 3. When analysed in a subgroup-specific manner, local recurrences in cohort 1 were more frequent in SHH tumours (eight of nine [89%]) and metastatic recurrences were more common in group 3 and group 4 tumours (17 of 20 [85%] with one WNT,  $p=0.0014$ , local vs metastatic recurrence, SHH vs group 3 vs group 4). The subgroup-specific location of recurrence was confirmed in cohort 2 ( $p=0.0013$  for local vs metastatic recurrence, SHH vs group 3 vs group 4,) and cohort 3 ( $p<0.0001$ ). Treatment with craniospinal irradiation at diagnosis was not significantly associated with the anatomical pattern of recurrence. Survival after recurrence was significantly longer in patients with group 4 tumours in cohort 1 ( $p=0.013$ ) than with other subgroups, which was confirmed in cohort 2 ( $p=0.0075$ ), but not cohort 3 ( $p=0.70$ ). INTERPRETATION: Medulloblastoma does not change subgroup at the time of recurrence, reinforcing the stability of the four main medulloblastoma subgroups. Significant differences in the location and timing of recurrence across medulloblastoma subgroups have potential treatment ramifications. Specifically, intensified local (posterior fossa) therapy should be tested in the initial treatment of patients with SHH tumours. Refinement of therapy for patients with group 3 or group 4 tumours should focus on metastases. FUNDING: Canadian Institutes of Health Research, National Institutes of Health, Pediatric Brain Tumor Foundation, Garron Family Chair in Childhood Cancer Research at The Hospital for Sick Children and The University of Toronto.

[300]

**TÍTULO / TITLE:** - Frontobasal interhemispheric approach for large suprasellar craniopharyngiomas: do the benefits outweigh the risks?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Oct 19.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1905-8](http://1007/s00701-013-1905-8)

**AUTORES / AUTHORS:** - Han S; Tie X; Qin X; Wang Y; Wu A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Hospital of China Medical University, Nanjing street 155, Heping District, Shenyang, 110001, China.

**RESUMEN / SUMMARY:** - OBJECTIVE: Large suprasellar craniopharyngiomas are surgically challenging. The aim of our study was to explore the therapeutic efficacy of the frontobasal interhemispheric approach for these lesions. METHODS: Twenty-nine consecutive adult patients with large suprasellar craniopharyngiomas (diameter >4 cm) who underwent the frontobasal interhemispheric approach were retrospectively evaluated. Surgical and clinical outcomes were analyzed. RESULTS: Gross total removal was achieved in 23 cases (79.3 %) and subtotal removal in 6 cases (20.7 %). The mean follow-up period was 76.5 +/- 33.2 months (range, 12-132 months). Twenty-four patients (82.7 %) had improvement of the visual impairment score (VIS) after surgery. VIS was unchanged in five patients (17.3 %), and no patients experienced visual deterioration. Among 23 patients who had preoperative hypopituitarism, 8 (34.8 %) had an improvement. Postoperative new or aggravated hypopituitarism was observed in four patients (13.8 %). Permanent diabetes insipidus was observed in ten patients (34.4 %). Postoperative anosmia occurred in two earlier cases (6.9 %). There was no intracranial infection or cerebrospinal fluid fistula. At last follow-up, >9 % BMI gain was observed in 34.5 % of patients, and 65.5 % of patients returned to work. Four patients (13.8 %) suffered recurrence. CONCLUSION: Although the frontobasal interhemispheric approach has some disadvantages, it provides ideal access to the suprasellar region and the third ventricle with limited brain retraction. The surgically visible angle is adequate; thus, vital structures can be better protected. For large suprasellar craniopharyngiomas, the benefits of this approach can outweigh its potential risks.

[301]

**TÍTULO / TITLE:** - Sirt2 suppresses glioma cell growth through targeting NF-kappaB-miR-21 axis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biochem Biophys Res Commun. 2013 Nov 22;441(3):661-7. doi: 10.1016/j.bbrc.2013.10.077. Epub 2013 Oct 22.

●● Enlace al texto completo (gratis o de pago) [1016/j.bbrc.2013.10.077](http://1016/j.bbrc.2013.10.077)

**AUTORES / AUTHORS:** - Li Y; Dai D; Lu Q; Fei M; Li M; Wu X

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Changhai Hospital, Second Military Medical University, Shanghai, China.

**RESUMEN / SUMMARY:** - Sirtuins are NAD(+)-dependent deacetylases that regulate numerous cellular processes including aging, DNA repair, cell cycle, metabolism, and survival under stress conditions. The roles of sirtuin family members are widely studied in carcinogenesis. However, their roles in glioma remain unclear. Here we report that Sir2 was under expressed in human glioma tissues and cell lines. We found that Sirt2 overexpression decreased cell proliferation and colony formation capacity. In addition, Sirt2 overexpression induced cellular apoptosis via up-regulating cleaved caspase 3 and Bax, and down-regulating anti-apoptotic protein Bcl-2. Sirt2 knockdown obtained opposing results. We showed that Sirt2 overexpression inhibited miR-21 expression,

and Sirt2 was not sufficient to reduce cell proliferation and colony formation as well as to induce apoptosis when miR-21 was knocked down in glioma cells. Mechanically, we demonstrated that Sirt2 deacetylated p65 at K310 and blocked p65 binding to the promoter region of miR-21, thus regressing the transcription of miR-21. In summary, Sirt2 is critical in human glioma via NF-kappaB-miR-21 pathway and Sirt2 activator may serve as candidate drug for glioma therapy.

[302]

**TÍTULO / TITLE:** - Biliverdin reductase plays a crucial role in hypoxia-induced chemoresistance in human glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biochem Biophys Res Commun. 2013 Nov 1;440(4):658-63. doi: 10.1016/j.bbrc.2013.09.120. Epub 2013 Oct 8.

●● Enlace al texto completo (gratis o de pago) [1016/j.bbrc.2013.09.120](http://1016/j.bbrc.2013.09.120)

**AUTORES / AUTHORS:** - Kim SS; Seong S; Lim SH; Kim SY

**INSTITUCIÓN / INSTITUTION:** - College of Oriental Medicine, Kyung Hee University, Seoul 130-701, Republic of Korea.

**RESUMEN / SUMMARY:** - Hypoxia-induced alterations in the cellular redox status play a critical role in the development of hypoxia-induced chemoresistance in cancer cells. Human biliverdin reductase (hBVR), an enzyme involved in the conversion of biliverdin into bilirubin in heme metabolism, was recently identified as an important cytoprotectant against oxidative stress and hypoxia. However, the role of hBVR on hypoxia-induced drug resistance has not been previously investigated. Using human glioblastoma cell lines, we evaluated the potential role of hBVR in hypoxia-induced drug resistance. We found that hypoxia caused a significant increase in hBVR expression in glioblastoma cells that was accompanied by chemoresistance. We also observed that siRNA-based targeting of hBVR genes attenuated the hypoxia-induced chemoresistance. Furthermore, knocking down hBVR induced a marked increase in the levels of intracellular reactive oxygen species under hypoxic conditions, and the chemosensitizing effect of hBVR depletion was reversed by pretreatment with the antioxidant N-acetylcysteine. These findings suggest that hBVR significantly contributes to the modulation of hypoxia-induced chemoresistance of glioblastoma cells by adjusting their cellular redox status.

[303]

**TÍTULO / TITLE:** - Cytomegalovirus and brain tumor: epidemiology, biology and therapeutic aspects.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Oncol. 2013 Nov;25(6):682-8. doi: 10.1097/CCO.0000000000000005.

●● Enlace al texto completo (gratis o de pago)

[1097/CCO.0000000000000005](http://1097/CCO.0000000000000005)

**AUTORES / AUTHORS:** - Cobbs CS

**INSTITUCIÓN / INSTITUTION:** - Swedish Neuroscience Institute, Seattle, Washington, USA.

**RESUMEN / SUMMARY:** - PURPOSE OF REVIEW: First described in 2002, the presence and role of human cytomegalovirus (HCMV) infection in glioblastoma (GBM) has remained a controversial topic. New research indicates HCMV gene products likely promote GBM pathogenesis and that therapies aimed at HCMV might influence disease progression. RECENT FINDINGS: Recently, investigators have begun to analyze HCMV genome and proteins present in GBM cells in vivo. Furthermore, the research has demonstrated that several HCMV gene products that have oncomodulatory properties are expressed in GBM and may be impacting tumor pathogenesis in vivo. These HCMV gene products modulate GBM proliferation, apoptosis, angiogenesis, invasion and immune evasion. A recent mouse model provides mechanistic information as to how CMV may promote gliomagenesis in the setting of tumor suppressor dysfunction and STAT3 signaling. In addition, clinical outcomes of GBM patients are associated with the degree of HCMV infection. Novel therapies aimed at direct antiviral and immunotherapy approaches to HCMV suggest that these modalities may impact the future treatment of this disease. SUMMARY: A more precise understanding of the role of HCMV infection in gliomagenesis and GBM pathogenesis could reveal novel therapeutic and preventive strategies.

[304]

**TÍTULO / TITLE:** - Transverse Sinus Stenting for Pseudotumor Cerebri: A Cost Comparison with CSF Shunting.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - AJNR Am J Neuroradiol. 2013 Nov 28.

- Enlace al texto completo (gratis o de pago) [3174/ajnr.A3806](#)

**AUTORES / AUTHORS:** - Ahmed RM; Zmudzki F; Parker GD; Owler BK; Halmagyi GM  
**INSTITUCIÓN / INSTITUTION:** - Departments of Neurology and Radiology, Royal Prince Alfred Hospital, Sydney Australia; Epoque Consulting, Sydney, Australia; TY Nelson Department of Neurology and Neurosurgery, Children's Hospital at Westmead, Sydney, Australia; and Discipline of Pediatrics and Child Health, and Surgery, University of Sydney, Sydney, Australia.

**RESUMEN / SUMMARY:** - BACKGROUND AND PURPOSE: Transverse sinus venous stent placement has been shown to lower intracranial pressure in patients with venogenic pseudotumor cerebri and to reverse, or at least stabilize, its symptoms and signs. There have been no studies comparing the cost of venous stenting with the time-honored treatment for pseudotumor cerebri-CSF shunting. The purpose of this study was to compare the cost of transverse sinus stenting versus CSF shunting for the treatment of pseudotumor cerebri. MATERIALS AND METHODS: This work was a retrospective cost analysis of individual resource use in 86 adults who were stented for pseudotumor cerebri during a 12-year period compared with resource use in 110 children who were shunted for hydrocephalus during a 3-year period. RESULTS: There was no significant difference between the cost of inserting an initial venous stent (\$13,863 +/- 4890) versus inserting an initial CSF shunt (\$15,797 +/- 5442) (P = .6337) or between inserting an additional venous stent (\$9421 +/- 69) versus revising a CSF shunt (\$10,470 +/- 1245) (P = .4996). There were far fewer additional venous stent insertions per patient than there were subsequent CSF shunt revisions; 87% of stents placed required just 1 stent procedure, whereas only 45% of shunts required 1 shunt procedure. The main cause of the cost difference was the need for repeated revisions

of the shunts, especially when they became infected-24 instances of a total 143 shunt procedures (16.8%) at an average cost of \$84,729, approximately 5 times the cost of an initial shunt insertion. CONCLUSIONS: Venous stenting costs significantly less per 100 procedures than does CSF shunting, due largely to the high cost of treating shunt infections and the need for repeated shunt revisions.

[305]

**TÍTULO / TITLE:** - Temporal relationship of post-operative radiotherapy with temozolomide and oncologic outcome for glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 5.

- [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1302-4](#)

**AUTORES / AUTHORS:** - Spratt DE; Folkert M; Zumsteg ZS; Chan TA; Beal K; Gutin PH; Pentsova E; Yamada Y

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, Box 22, New York, NY, 10065, USA.

**RESUMEN / SUMMARY:** - To determine the impact of delay between surgery and radiotherapy on overall survival (OS) in temozolomide treated patients with the incorporation of O6-methylguanine-DNA methyltransferase (MGMT). From 2000 to 2012, 345 consecutive glioblastoma patients were treated with surgery, radiotherapy, and temozolomide at our institution. A Cox-regression model was constructed using significant univariate parameters, known prognostic factors including MGMT, and the interval from surgery to radiotherapy ( $\leq 2$ , 2-5, and  $\geq 6$  weeks). Survival rates were calculated by Kaplan-Meier methods. Cox-regression was utilized to calculate adjusted hazard ratios (HR). The median survival for the entire cohort was 12.2 months. The 1 year actuarial OS was 43.1 %, 53.3 %, and 64.3 % ( $p = 0.11$ ), for intervals from surgery to radiotherapy of  $\leq 2$ , 2-5, and  $\geq 6$  weeks, respectively. Patients radiated within 2 weeks post-surgery were more likely to have older age ( $p = 0.03$ ), treated with 2D techniques ( $p < 0.001$ ) and dose  $< 36$  Gy ( $p < 0.001$ ), undergo a biopsy only ( $p < 0.001$ ), KPS of  $< 70$  ( $p < 0.001$ ), severe pre-radiotherapy neurologic symptoms ( $p = 0.04$ ), and bilateral disease ( $p = 0.02$ ). Multivariate analysis including MGMT status demonstrated a significant detriment in delaying radiotherapy ( $\leq 2$  weeks as reference); 3-5 weeks (HR 2.80 [0.72-10.89],  $p = 0.14$ ), and  $> 6$  weeks (HR 3.76 [1.01-14.57],  $p = 0.05$ ). We report the first analysis on the survival impact of delaying post-operative radiotherapy for temozolomide treated glioblastoma patients with MGMT information. Our data does not support the OS benefit previously seen in delayed RT when correcting for important covariates. We demonstrate a survival detriment with delaying RT post-surgery greater than 6 weeks on multivariate analysis.

[306]

**TÍTULO / TITLE:** - Arachnoid cyst masquerades as late onset obsessive-compulsive disorder.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Gen Hosp Psychiatry. 2013 Oct 28. pii: S0163-8343(13)00247-8. doi: 10.1016/j.genhosppsych.2013.09.002.

- Enlace al texto completo (gratis o de pago)

[1016/j.genhosppsy.2013.09.002](http://1016/j.genhosppsy.2013.09.002)

**AUTORES / AUTHORS:** - Hegde A; Ghosh A; Grover S; Kumar A; Chhabra R

**INSTITUCIÓN / INSTITUTION:** - Department of Psychiatry Postgraduate Institute of Medical Education & Research, Chandigarh 160012, India.

**RESUMEN / SUMMARY:** - Literature evidence suggests that onset of obsessive-compulsive disorder (OCD) at a later age is usually associated with brain lesions. However, none of previous reports suggest an association between arachnoid cyst and OCD. In this report, we present a case of OCD, starting at the age of 40 years, in which the obsessive symptoms were characteristically associated with fluctuating insight. Investigation revealed an arachnoid cyst, in the area of left fronto-parietal region, with broad base towards the falx.

[307]

**TÍTULO / TITLE:** - Molecular analysis of diffuse intrinsic brainstem gliomas in adults.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 17.

- Enlace al texto completo (gratis o de pago) [1007/s11060-013-1312-2](http://1007/s11060-013-1312-2)

**AUTORES / AUTHORS:** - Reyes-Botero G; Giry M; Mokhtari K; Labussiere M; Idbaih A; Delattre JY; Laigle-Donadey F; Sanson M

**INSTITUCIÓN / INSTITUTION:** - Service de Neurologie 2, AP-HP, Groupe Hospitalier Pitie-Salpetriere, Paris, France.

**RESUMEN / SUMMARY:** - Diffuse intrinsic brainstem gliomas (DIBG) account for 1-2 % of adult gliomas. Their biological characteristics are scarcely understood and whether DIBG are biologically different from supratentorial gliomas remains to be established. We analyzed 17 DIBG samples for IDH1 R132H, alpha internexin, p53, and Ki67 expression, and, in a subset with sufficient DNA amount, for IDH1 and histone H3 mutational status, genomic profiling and MGMT promoter methylation status. A series of 738 adult supratentorial gliomas was used for comparison. Median age at diagnosis was 41 years (range 18.9-65.3 years). Median overall survival was 48.7 months (57 months for low-grade vs. 16 months for high-grade gliomas,  $p < 0.01$ ). IDH1 sequencing revealed two mutations (IDH1 R132G, IDH1 R132C) out of 7 DIBG whereas the R132H IDH1 enzyme was detected in 1/17 DIBG, suggesting that IDH1 mutations are mostly non R132H in DIBG (2/2), in contrast to supratentorial gliomas (31/313;  $p = 0.01$ ). Mutations in histone genes H3F3A (encoding H3.3) and HIST1H3B (encoding H3.1) were found in 3/8 (37.5 %) of the DIBG (two H3F3A K27M and one HIST1H3B K27M) versus 6/205 (2.9 %) of the supratentorial high-grade gliomas (four H3F3A G34R and two H3F3A K27M) ( $p = 0.002$ ). The CGH array showed a higher frequency of chromosome arm 1q gain, 9q gain and 11q loss in DIBG compared to the supratentorial high-grade gliomas, which had a less frequent chromosome 7 gain, and a less frequent chromosome 10 loss. No EGFR amplification was found. These data suggest that adult DIBG differ from adult supratentorial gliomas. In particular, histone genes (H3F3A K27M, HIST1H3B K27M) mutations are frequent in adult DIBG whereas IDH1 R132H mutations are rare.

[308]

**TÍTULO / TITLE:** - Differentiating cerebellopontine angle meningioma from schwannoma using caloric testing and vestibular-evoked myogenic potentials.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Sci. 2013 Dec 15;335(1-2):155-9. doi: 10.1016/j.jns.2013.09.020. Epub 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) [1016/j.jns.2013.09.020](#)

**AUTORES / AUTHORS:** - Su CH; Chen CM; Young YH

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology, Catholic Cardinal Tien Hospital, Fu-Jen Catholic University, Taipei, Taiwan.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** This study utilized audiometry, and caloric, ocular vestibular-evoked myogenic potential (oVEMP) and cervical VEMP (cVEMP) tests to differentiate between cerebellopontine angle (CPA) meningioma and schwannoma. **PATIENTS AND METHODS:** Eleven CPA meningioma patients with mean tumor size 2.8+/-1.4cm and another 11 CPA schwannoma patients with mean tumor size 2.7+/-1.0cm were enrolled in this study. All patients underwent a battery of audiovestibular function tests. **RESULTS:** The two groups did not differ significantly in terms of clinical manifestation. The abnormal percentage of caloric test in the meningioma group was 36%, compared to 91% in the schwannoma group, and thus both groups differed significantly. However, such difference was not observed between the two groups regardless of mean hearing level, oVEMP test and cVEMP test. **CONCLUSION:** Combined caloric with oVEMP test results may help differentiate a CPA tumor. Correlation between the caloric and oVEMP test results in a CPA tumor indicates a schwannoma nature, while dissociation between the caloric and oVEMP test results depicts a meningioma character.

[309]

**TÍTULO / TITLE:** - Diffusion Imaging for Tumor Grading of Supratentorial Brain Tumors in the First Year of Life.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - AJNR Am J Neuroradiol. 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3757](#)

**AUTORES / AUTHORS:** - Kralik SF; Taha A; Kamer AP; Cardinal JS; Seltman TA; Ho CY

**INSTITUCIÓN / INSTITUTION:** - From Indiana University School of Medicine, Department of Radiology and Imaging Sciences, Indianapolis, Indiana.

**RESUMEN / SUMMARY:** - **BACKGROUND AND PURPOSE:** Supratentorial tumors in the first year of life are typically large and heterogeneous at presentation, making differentiation of these CNS neoplasms on pre-operative imaging difficult. We hypothesize that the ADC value can reliably differentiate high- versus low-grade supratentorial tumors in this patient population. **MATERIALS AND METHODS:** A blinded review of ADC maps was performed on 19 patients with histologically proved supratentorial brain tumors diagnosed within the first year of life. Minimum ADC values obtained by region of interest from 2 neuroradiologists were averaged and compared with World Health Organization tumor grade. ADC values for the entire tumor were also obtained by use of a semi-automated histogram method and compared with World Health Organization tumor grade. Data were analyzed by use of Spearman rho and Student t test, with a value of  $P < .05$  considered statistically significant. **RESULTS:** For

the manual ADC values, a significant negative correlation was found between the mean minimum ADC and tumor grade ( $P = .0016$ ). A significant difference was found between the mean minimum ADC of the low-grade ( $1.14 \times 10^{-3} \text{ mm}^2/\text{s} \pm 0.30$ ) and high-grade tumors ( $0.64 \times 10^{-3} \text{ mm}^2/\text{s} \pm 0.28$ ) ( $P = .0018$ ). Likewise, the semi-automated method demonstrated a significant negative correlation between the lowest 5<sup>th</sup> ( $P = .0002$ ) and 10<sup>th</sup> ( $P = .0009$ ) percentile individual tumor ADC values and tumor grade, a significant difference between the mean 5<sup>th</sup> and 10<sup>th</sup> percentile ADC values of the low-grade and high-grade groups ( $P = .0028$ ), and a significant positive correlation with values obtained by manual region-of-interest placement ( $P < .000001$ ). CONCLUSIONS: ADC maps can differentiate high- versus low-grade neoplasms for supratentorial tumors presenting in the first year of life, given the significant negative correlation between ADC values and tumor grade.

[310]

**TÍTULO / TITLE:** - Long-term evaluation of cognition after glioma surgery in eloquent areas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 31.

- [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1275-3](#)

**AUTORES / AUTHORS:** - Satoer D; Visch-Brink E; Smits M; Kloet A; Looman C; Dirven C; Vincent A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Erasmus MC - University Medical Center Rotterdam, Dr. Molewaterplein 50, Room EE220, 3015 GE, Rotterdam, The Netherlands, [d.satoer@i.cloud.com](mailto:d.satoer@i.cloud.com).

**RESUMEN / SUMMARY:** - Preservation of cognition is an important outcome measure in eloquent area glioma surgery. Glioma patients may have pre-operative deficits in one or more cognitive domains which could deteriorate post-operatively. It is assumed that these impairments recover within 3 months; some studies however, still detected cognitive decline. Longer follow-up is necessary to elucidate the conclusive effects of surgery. 45 patients with gliomas (low- and high-grade, but without contrast enhancement at diagnosis) in eloquent areas were assessed pre-operatively, 3 months and 1 year post-operatively with a neuropsychological test-protocol. Patients' performance was compared to normal population and between test-moments. Univariate analyses were performed between cognitive change and tumor-characteristics (localization, grade, volume, extent of resection [EOR]) and treatment-related factors (radio-/chemotherapy). Pre- and post-operatively, impairments were found in all cognitive domains; language, memory, attention and executive functions ( $p < 0.05$ ). Post-operatively, permanent improvement was observed on a memory test (verbal recall:  $t = -1.931$ ,  $p = 0.034$ ), whereas deterioration was found on a language test (category fluency:  $t = 2.517$ ,  $p = 0.030$ ). Between 3 months and 1 year, patients improved on 2 language tests (naming:  $t = -2.781$ ,  $p = 0.026$  and letter fluency:  $t = -1.975$ ,  $p = 0.047$ ). There was no influence of tumor- or treatment-related factors on cognitive change. The findings underline the importance of cognitive testing at longer term post-operatively, as cognitive recovery took longer than 3 months, especially within the language domain. However, this longitudinal follow-up study showed that glioma surgery is possible without major long-term damage of cognitive functions. Tumor characteristics and EOR are no additional risk factors for cognitive outcome.

[311]

**TÍTULO / TITLE:** - Study of Stem cell marker Nestin and its correlation with Vascular endothelial growth factor and microvascular density in Ependymomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuropathol Appl Neurobiol. 2013 Nov 13. doi: 10.1111/nan.12097.

●● Enlace al texto completo (gratis o de pago) [1111/nan.12097](#)

**AUTORES / AUTHORS:** - Nambirajan A; Sharma MC; Gupta RK; Suri V; Singh M; Sarkar C

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, All India Institute of Medical Sciences, New Delhi, India, 110029.

**RESUMEN / SUMMARY:** - BACKGROUND: Ependymomas are relatively rare glial tumours, whose pathogenesis is not well elucidated. They are enigmatic tumours that show site-specific differences in their biological behaviour. Recent studies have hypothesized that ependymoma cancer stem cells (CSC) are derived from radial glia and express stem-cell markers such as nestin, which is associated with a poor prognosis. CSCs reside in 'vascular niches', where endothelial cells and molecular signals like vascular endothelial growth factor (VEGF) play an important role in their survival. Studies analyzing VEGF expression in ependymomas showed that ependymal vascular proliferation is less sensitive to induction by VEGF, questioning the possible beneficial effect of anti-VEGF therapy in ependymomas. We aimed to study nestin and VEGF immunoexpression in ependymomas, correlate them with clinicopathological parameters and reveal a role for VEGF in ependymomas that extends beyond the context of tumour angiogenesis. METHODS: We analyzed 126 cases of ependymomas of different grades and location for nestin and VEGF immunoexpression. Endothelial cells were labeled with CD34. Vascular patterns and microvascular density was determined. RESULTS: Nestin and VEGF expression in tumour cells were more frequent in supratentorial tumours {89% (33/37) & 65% (24/37) respectively}, and were associated with a significantly poor progression-free survival (PFS). VEGF expression did not reveal any correlation with necrosis or bizarre vascular patterns. CONCLUSIONS: Supratentorial location is an independent predictor of a poor PFS. Significant co-expression of nestin and VEGF suggests that latter possibly augments stem cell survival. Thus, anti-VEGF therapy may be a good option in future for nestin immunopositive ependymomas.

[312]

**TÍTULO / TITLE:** - Vision specific quality of life in children with optic pathway gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1300-6](#)

**AUTORES / AUTHORS:** - Avery RA; Hardy KK

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Children's National Medical Center, 111 Michigan Ave, NW, Washington, DC, 20010, USA, [ravery@childrensnational.org](mailto:ravery@childrensnational.org).

**RESUMEN / SUMMARY:** - Children with optic pathway gliomas (OPGs) frequently experience vision loss from their tumors. Most pediatric OPG research has focused on radiographic and visual outcomes, yet the impact of vision loss on quality of life (QOL) in children with OPGs has not been studied. The present study prospectively recruited children  $\leq 10$  years of age with sporadic or neurofibromatosis type 1 (NF1)-related OPGs. Vision specific QOL was assessed by parent proxy using the Children's Visual Function Questionnaire (CVFQ), and scores were analyzed according to magnitude of visual acuity (VA) loss and presence of visual field (VF) loss. Thirty-six subjects completed the study (53 % female) with median age of 4.6 years. Children with mild, moderate and severe vision loss have lower CVFQ subscale scores, indicating a lower vision specific QOL, compared to those with normal vision. Lower Competence scores were noted in participants with more profound vision loss ( $p < 0.05$ ), reflecting a decreased ability to complete activities of daily living (e.g., feeding, grooming). Children with two visually impaired eyes were rated as having greater difficulty with social interactions and pleasurable activities (Personality subscale,  $p = 0.039$ ) compared to those with only one impaired eye. In summary, our findings demonstrate that children with vision loss secondary to their OPG have a decreased vision specific QOL compared to those with normal vision. Measuring vision specific QOL may be considered a meaningful secondary outcome measure for pediatric OPG clinical trials.

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[313]

**TÍTULO / TITLE:** - Familial Isolated Pituitary Adenoma Caused by a Aip Gene Mutation not Described Before in a Family Context.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocr Pathol. 2013 Sep 29.

●● Enlace al texto completo (gratis o de pago) [1007/s12022-013-9268-5](#)

**AUTORES / AUTHORS:** - Garcia-Arnes JA; Gonzalez-Molero I; Oriola J; Mazuecos N; Luque R; Castano J; Arraez MA

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology and Nutrition, Carlos Haya Hospital, Plaza del Hospital Civil s/n, 29010, Malaga, España.

**RESUMEN / SUMMARY:** - The cause of familial isolated pituitary adenomas (FIPA) remains unknown in a high percentage of cases, but the AIP gene plays an important role in the etiology. The aim of the study is to describe a family with FIPA syndrome and the results of genomic studies. A 16-year-old man had a giant prolactinoma resistant to medical treatment with delayed growth and pubertal development. His mother had been previously diagnosed with a nonfunctioning pituitary macroadenoma. Transsphenoidal endoscopic resection was performed and a genetic study revealed a heterozygous mutation in exon 6: 974G > A (p.Arg325Gln). Because the AIP gene is a tumor suppressor gene, we searched for loss of heterozygosity within the AIP gene by amplifying exon 6 from tumor tissue of the patient. In the electropherogram, only the A allele was amplified (hemizygous state), indicating loss of the normal allele. We report a Spanish family with FIPA in whom a mutation in the AIP gene previously unreported in a familiar context was identified.

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[314]

**TÍTULO / TITLE:** - Epigenetic repression of the dopamine receptor D4 in pediatric tumors of the central nervous system.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1313-1](#)

**AUTORES / AUTHORS:** - Unland R; Kerl K; Schlosser S; Farwick N; Plagemann T; Lechtape B; Clifford SC; Kreth JH; Gerss J; Muhlich J; Richter GH; Hasselblatt M; Fruhwald MC

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Hematology and Oncology, University Children's Hospital Munster, Munster, Germany.

**RESUMEN / SUMMARY:** - Epigenetic alterations are common events in cancer. Using a genome wide methylation screen (Restriction Landmark Genomic Scanning-RLGS) we identified the gene for the dopamine receptor D4 (DRD4) as tumor-specific methylated. As DRD4 is involved in early brain development and may thus be involved in developmentally dependent tumors of the CNS in children epigenetic deregulation of DRD4 and its functional consequences were analyzed in vitro. CpG methylation of DRD4 was detected in 18/24 medulloblastomas, 23/29 ependymomas, 6/6 high-grade gliomas, 7/10 CNS PNET and 8/8 cell lines by qCOBRA and bisulfite sequencing. Real-time RT-PCR demonstrated a significantly inferior expression of DRD4 in primary tumors compared to cell lines and non-malignant control tissues. Epigenetic deregulation of DRD4 was analyzed in reexpression experiments and restoration of DRD4 was observed in medulloblastoma (MB) cells treated with 5-Aza-CdR. Reexpression was not accompanied by demethylation of the DRD4 promoter but by a significant decrease of H3K27me3 and of bound enhancer of zeste homologue 2 (EZH2). Knockdown of EZH2 demonstrated DRD4 as a direct target for inhibition by EZH2. Stimulation of reexpressed DRD4 resulted in an activation of ERK1/2. Our analyses thus disclose that DRD4 is epigenetically repressed in CNS tumors of childhood. DRD4 is a direct target of EZH2 in MB cell lines. EZH2 appears to dominate over aberrant DNA methylation in the epigenetic inhibition of DRD4, which eventually leads to inhibition of a DRD4-mediated stimulation of the ERK1/2 kinase pathway.

[315]

**TÍTULO / TITLE:** - Acute hydrocephalus in a child with a third ventricle arachnoid cyst and coincidental enteroviral meningitis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Oct 30.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2299-x](#)

**AUTORES / AUTHORS:** - Jeltama HR; Kuijlen JM; Hoving EW

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Medical Center Groningen, University of Groningen, Hanzeplein 1, P.O.box 30.001, 9700 RB, Groningen, The Netherlands, [j.r.jeltama@umcg.nl](mailto:j.r.jeltama@umcg.nl).

**RESUMEN / SUMMARY:** - We present a 2.5-year-old child suffering from acute hydrocephalus. First, the child was diagnosed with aseptic viral meningitis. The PCR of the cerebrospinal fluid (CSF) was positive for enterovirus. Subsequently, MRI revealed that the hydrocephalus was caused by a cyst in the third ventricle. During ventriculoscopy, the cyst had all aspects of an arachnoid cyst. An endoscopic fenestration and partial removal of the cyst was performed, combined with a

ventriculocisternostomy. The coincidental finding of viral meningitis and a third ventricle arachnoid cyst in a patient with acute hydrocephalus has, to our knowledge, not been described in literature before. If there is a relation between the enteroviral meningitis, the arachnoid cyst (possibly causing a pre-existing subclinical hydrocephalus) and the rapidly evolving neurological deterioration, remains speculative. Proposed mechanisms, by which the viral meningitis could accelerate the disease process, are slight brain swelling or increased CSF production. This rare combination of diagnoses could also be coincidental.

[316]

**TÍTULO / TITLE:** - Glioma-homing peptide with a cell-penetrating effect for targeting delivery with enhanced glioma localization, penetration and suppression of glioma growth.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Control Release. 2013 Oct 11;172(3):921-928. doi: 10.1016/j.jconrel.2013.10.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.jconrel.2013.10.002](#)

**AUTORES / AUTHORS:** - Gao H; Yang Z; Zhang S; Cao S; Pang Z; Yang X; Jiang X

**INSTITUCIÓN / INSTITUTION:** - School of Pharmacy, Fudan University, Key Laboratory of Smart Drug Delivery, Ministry of Education, 826 Zhangheng Road, Shanghai 201203, China.

**RESUMEN / SUMMARY:** - Tumor-targeted delivery systems are useful in enhancing drug delivery and increasing anti-tumor effects. Cell-penetrating peptides have been widely used for this purpose but have been hampered by the poor selectivity between neoplastic and non-neoplastic cells. As a peptide derived from interleukin-13, interleukin-13 peptide (IL-13p) is specifically targeted to IL13Ralpha2, a tumor-restricted receptor. More interestingly, IL-13p possesses cell-penetrating properties that can specifically enhance the uptake by tumor cells compared with endothelial cells. Thus, we anchored IL-13p onto nanoparticles (ILNPs) for glioma-targeting delivery. The uptake of ILNPs by U87 cells was higher than that of unmodified nanoparticles (NPs). However, there was no significant difference in the uptake by human umbilical vein endothelial cells. In addition, free IL-13p could also enhance the uptake of both NPs and ILNPs by U87 cells. Anchoring with IL-13p could enhance the penetration of particles into the core of spheroids. In vivo, the fluorescence intensity of ILNPs in tumors was 2.96-fold higher than that of NPs. The modification with IL-13p also significantly improved the speed and rate of penetration from vessels to tumor cells. The enhanced tumor localization of ILNPs was mostly attributable to the elevated tumor cell internalization of ILNPs, whereas most NPs were colocalized with microvessels or macrophages. Correspondingly, docetaxel-loaded NPs effectively suppressed the growth of subcutaneous U87 tumors. The average tumor volume of the ILNP group was only 31.4% that of the control, which was significantly smaller than that of the docetaxel and NP groups. In conclusion, the modification of IL-13p selectively enhanced tumor cell uptake, improved the penetration effect of NPs and improved the glioma localization ability, which led to a better tumor-suppression effect.

[317]

**TÍTULO / TITLE:** - Patterns of *Toxoplasma gondii* cyst distribution in the forebrain associate with individual variation in predator odor avoidance and anxiety-related behavior in male Long-Evans rats.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Behav Immun. 2013 Nov 21. pii: S0889-1591(13)00543-6. doi: 10.1016/j.bbi.2013.11.012.

●● Enlace al texto completo (gratis o de pago) [1016/j.bbi.2013.11.012](#)

**AUTORES / AUTHORS:** - Evans AK; Strassmann PS; Lee IP; Sapolsky RM

**INSTITUCIÓN / INSTITUTION:** - Department of Biological Sciences, Stanford University, Stanford, CA 94305, USA. Electronic address: [akelleyevans@gmail.com](mailto:akelleyevans@gmail.com).

**RESUMEN / SUMMARY:** - *Toxoplasma gondii* (*T. gondii*) is one of the world's most successful brain parasites. *T. gondii* engages in parasite manipulation of host behavior and infection has been epidemiologically linked to numerous psychiatric disorders. Mechanisms by which *T. gondii* alters host behavior are not well understood, but neuroanatomical cyst presence and the localized host immune response to cysts are potential candidates. The aim of these studies was to test the hypothesis that *T. gondii* manipulation of specific host behaviors is dependent on neuroanatomical location of cysts in a time-dependent function post-infection. We examined neuroanatomical cyst distribution (53 forebrain regions) in infected rats after predator odor aversion behavior and anxiety-related behavior in the elevated plus maze and open field arena, across a 6-week time course. In addition, we examined evidence for microglial response to the parasite across the time course. Our findings demonstrate that while cysts are randomly distributed throughout the forebrain, individual variation in cyst localization, beginning 3 weeks post-infection, can explain individual variation in the effects of *T. gondii* on behavior. Additionally, not all infected rats develop cysts in the forebrain, and attenuation of predator odor aversion and changes in anxiety-related behavior are linked with cyst presence in specific forebrain areas. Finally, the immune response to cysts is striking. These data provide the foundation for testing hypotheses about proximate mechanisms by which *T. gondii* alters behavior in specific brain regions, including consequences of establishment of a homeostasis between *T. gondii* and the host immune response.

[318]

**TÍTULO / TITLE:** - Cerebral radiation injury and changes in the brain tissues of rat models with glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1314-x](#)

**AUTORES / AUTHORS:** - Sha L; Cao Q; Lv L; Fan G

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, the Second Affiliated Hospital of Dalian Medical University, Dalian, 116027, People's Republic of China.

**RESUMEN / SUMMARY:** - Cerebral radiation injury (CRI) is a crucial and common complication of radiotherapy for patients with glioma. In the study, we aimed to investigate the changes in the diffusion-weighted imaging (DWI) and perfusion-weighted imaging (PWI) and the histological changes in the brain tissues of mice models with glioma. After the tumor cell seeding, there was an obvious increase in the proportion of cellular nucleus in the brain tissues of rat models with glioma. There was

also an obvious increase in the microvascular density (MVD) in the brain tissues of rat models with glioma. There was a linear correlation between the mean apparent diffusion coefficient value and the proportion of cellular nucleus in the brain tissues of rat models with glioma ( $P < 0.05$ ). There was also a linear correlation between the maximal relative cerebral volume and MVD count in the brain tissues of rat models with glioma ( $P < 0.01$ ). Therefore, the changes in the DWI and PWI are related with the histological changes in the brain tissues of glioma, and the finding may help us make a distinction between postoperative recurrent glioma and CRI.

[319]

**TÍTULO / TITLE:** - Letter to the Editor: Diffuse low-grade gliomas and UCSF scores.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 8.

●● Enlace al texto completo (gratis o de pago) [3171/2013.9.JNS131902](#)

**AUTORES / AUTHORS:** - Pallud J; Mandonnet E; Duffau H

**INSTITUCIÓN / INSTITUTION:** - Sainte-Anne Hospital, Paris, France;

[320]

**TÍTULO / TITLE:** - Intraoperative 5-aminolevulinic acid-induced fluorescence in primary central nervous system lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Oct 18.

●● Enlace al texto completo (gratis o de pago) [3171/2013.9.JNS131076](#)

**AUTORES / AUTHORS:** - Grossman R; Nossek E; Shimony N; Raz M; Ram Z

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tel-Aviv Medical Center, Tel-Aviv University Sackler Faculty of Medicine, Tel-Aviv, Israel.

**RESUMEN / SUMMARY:** - The authors report a case of primary CNS lymphoma located in the floor of the fourth ventricle that showed intense fluorescence after preoperative administration of 5-aminolevulinic acid. The authors believe that this is the first demonstration of a 5-aminolevulinic acid-induced fluorescence pattern in primary CNS lymphoma.

[321]

**TÍTULO / TITLE:** - Letter to the Editor: CD97 and glioma invasion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Nov 29.

●● Enlace al texto completo (gratis o de pago) [3171/2012.11.JNS12437](#)

**AUTORES / AUTHORS:** - Huang LC; Hueng DY

**INSTITUCIÓN / INSTITUTION:** - Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan.

[322]

**TÍTULO / TITLE:** - CD137 stimulation and p38 MAPK inhibition improve reactivity in an in vitro model of glioblastoma immunotherapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Immunol Immunother. 2013 Dec;62(12):1797-809. doi: 10.1007/s00262-013-1484-9. Epub 2013 Oct 16.

●● Enlace al texto completo (gratis o de pago) [1007/s00262-013-1484-9](#)

**AUTORES / AUTHORS:** - Kuhnl C; Herbarth M; Foll J; Staeger MS; Kramm C

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Martin-Luther-University Halle-Wittenberg, Ernst-Grube-Str. 40, 06097, Halle, Germany.

**RESUMEN / SUMMARY:** - Dendritic cell vaccination has become an interesting option for cancer immunotherapy. Tumor-lysate-pulsed dendritic cells (DC) can prime naive T cells and induce the regression of established tumors including gliomas as shown in various animal models. Despite hopeful results even in clinical studies, the outcome for many patients is still unsatisfying. In the present study, we tested the combination of tumor-lysate-pulsed dendritic cells (TPDC) with a monoclonal antibody against CD137, a monoclonal antibody against CD25 (daclizumab) and a specific p38 mitogen-activated protein kinase (p38 MAPK) inhibitor (SB203580) for improving immunostimulation in an in vitro model of immunotherapy for human gliomas. We observed a higher secretion of interferon gamma by TPDC-primed peripheral blood mononuclear cells (PBMC) that were incubated with an antibody against CD137 or the p38 MAPK inhibitor. In addition, we observed higher specific lysis of tumor cells after incubation of PBMC with the p38 MAPK inhibitor or the anti-CD137 antibody. In contrast, incubation of TPDC-primed PBMC with the anti-CD25 antibody did not enhance neither interferon gamma secretion nor cellular cytotoxicity. Cell depletion experiments demonstrated that the immune reaction induced by TPDC is strongly dependent on CD4-positive and CD8-positive cells. Incubation of DC during maturation and antigen loading with the anti-CD137 antibody did not enhance cytotoxicity and interferon gamma secretion in comparison with application of the anti-CD137 antibody during priming. In conclusion, our data suggest that p38 MAPK inhibition and anti-CD137 antibodies can enhance the immune response against glioblastoma cells.

[323]

**TÍTULO / TITLE:** - Are pediatric brain tumors on the rise in the USA? Significant incidence and survival findings from the SEER database analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Oct 27.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2307-1](#)

**AUTORES / AUTHORS:** - Patel S; Bhatnagar A; Wear C; Osiro S; Gabriel A; Kimball D; John A; Fields PJ; Tubbs RS; Loukas M

**INSTITUCIÓN / INSTITUTION:** - Department of Anatomical Sciences, School of Medicine, St. George's University, St. George's, Grenada.

**RESUMEN / SUMMARY:** - INTRODUCTION: Central nervous system tumors are the second most common form of cancer in children between the ages of 1 and 19 years. We aimed to provide the most recent data on the incidence and survival of these tumors in the USA and to assess the literature. METHODS: Frequency, rates, and survival sessions were calculated using the November 2008 submission for the US Surveillance Epidemiology and End Results Program. Data were collected and analyzed for children and adolescents aged 1 to 19 years with primary brain tumors. RESULTS: We found that the incidence rate of all pediatric brain tumors has been on a

gradual but steady increase from 1973 to 2008 ( $p < 0.001$ ). The average annual increase was 1.37 %. Our survival analysis of the individual tumors revealed that the 5-year overall survival for children diagnosed between 1974 and 1978 with medulloblastoma was 43.7 %. However, this increased to 62.8 % for children diagnosed between 1999 and 2003. A similar survival trend was also observed when all the other pediatric brain cancer histologies were collectively analyzed ( $p < 0.001$ ). CONCLUSIONS: From our study, we can conclude that contrary to previous reports indicating a plateau in the incidence rates of pediatric brain tumors since the mid-1980s, there has been an increase from 1973 to 2008. Potential causes include environmental carcinogens, but more research is needed to investigate the factors behind this sustained rise in incidence over the years.

[324]

**TÍTULO / TITLE:** - Evaluation of tumor blood flow after feeder embolization in meningiomas by arterial spin-labeling perfusion magnetic resonance imaging.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuroradiol. 2013 Oct;40(4):303-6. doi: 10.1016/j.neurad.2013.04.005. Epub 2013 Oct 4.

●● Enlace al texto completo (gratis o de pago) [1016/j.neurad.2013.04.005](http://1016/j.neurad.2013.04.005)

**AUTORES / AUTHORS:** - Kawaji H; Koizumi S; Sakai N; Yamasaki T; Hiramatsu H; Kanoko Y; Kamiya M; Yamashita S; Takehara Y; Sakahara H; Namba H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hamamatsu University School of Medicine, 1-20-1 Handayama, Higashi-ku, Hamamatsu 431-3192, Japan.

**RESUMEN / SUMMARY:** - Preoperative embolization changes the amount of blood flow and pattern of flow distribution in meningioma. Tumor blood flow was investigated in eight meningioma patients before and after embolization using arterial spin-labeling (ASL) perfusion imaging. Although blood flow was significantly reduced in the whole tumor after embolization, changes in flow distribution patterns varied from one case to another. The findings suggest that evaluation of post-embolization tumor blood flow by ASL perfusion imaging would be useful in the surgical planning of meningioma.

[325]

**TÍTULO / TITLE:** - T11TS inhibits glioma angiogenesis by modulation of MMPs, TIMPs, with related integrin  $\alpha$ v and TGF- $\beta$ 1 expressions.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Nov 19.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1296-8](http://1007/s13277-013-1296-8)

**AUTORES / AUTHORS:** - Singh MK; Bhattacharya D; Chaudhuri S; Acharya S; Kumar P; Santra P; Basu AK; Chaudhuri S

**INSTITUCIÓN / INSTITUTION:** - Department of Laboratory Medicine, School of Tropical Medicine, 108, C.R. Avenue, Kolkata, 700073, West Bengal, India.

**RESUMEN / SUMMARY:** - During glioma development, angiogenesis plays a crucial role in growth and vascularization of primary brain tumors. T11 target structure (T11TS), a bioactive molecule, has been documented as an anti-neoplastic agent in glioma-induced rats and also in human glioma in vitro. This novel molecule induces apoptosis of tumor cells by way of immune potentiation and impairs the glioma cell cycle, but its

role in glioma angiogenesis has not been worked out in detail. Matrix metalloproteinases (MMPs) are enzymes promoting tumor angiogenesis by enzymatically remodeling the extracellular matrix and altering surface protein expression such as integrin alpha<sub>v</sub> and the matrix-bound proteins like TGF-beta1. The present study was formulated to assess the efficacy of T11TS in the modulations of MMP-2 and -9 and their endogenous inhibitors (TIMP-1 and TIMP-2) as well as modulations of integrin alpha<sub>v</sub> and TGF-beta1 in glioma-induced rats and also on the phenotypic markers of endothelial cells (CD31 and CD34). The parameters used were zymography, western blot, and flow cytometric analyses. It was observed that T11TS administration significantly downregulates the expression of matrix metalloproteinase-2 and -9 along with its ligand integrin alpha<sub>v</sub> and upregulates TIMP-1 and TIMP-2. In situ immunofluorescence and FACS results revealed that T11TS administration decreased the expression of the phenotypic markers (CD31/PECAM1, CD34), inhibiting the cell grip and also downregulating TGF-beta1 expression (ELISA) from microglia cells in the glioma microenvironment. These results suggest that T11TS suppresses the expression of positive angiogenic growth factors and potentiates the expression of negative regulators in glioma-associated endothelial cells (ECs), resulting in an anti-angiogenic effect on glioma-induced angiogenesis.

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[326]

**TÍTULO / TITLE:** - Fractionated stereotactic radiosurgery for recurrent ependymoma in children.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Sep 27.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1259-3](#)

**AUTORES / AUTHORS:** - Hoffman LM; Reed Plimpton S; Foreman NK; Stence NV; Hankinson TC; Handler MH; Hemenway MS; Vibhakar R; Liu AK

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, University of Colorado Denver, The Anschutz Medical Campus, Mail Stop C296, Academic Office 1, L15-1503, 12631 East 17<sup>th</sup> Avenue, Aurora, CO, 80045, USA,  
[lindsey.hoffman@childrenscolorado.org](mailto:lindsey.hoffman@childrenscolorado.org).

**RESUMEN / SUMMARY:** - Outcomes for children with relapsed ependymoma are poor. Re-irradiation is a potentially viable salvage option in these patients. Data were reviewed for 12 patients (median age 5.6 years) with relapsed ependymoma who received fractionated stereotactic radiosurgery (fSRS) following maximal surgical resection from 1995 to 2012. Four patients experienced a second recurrence, including 2 in-field and 2 distant failures. Median time to second recurrence (32 months) was significantly longer than time to first recurrence (24 months) ( $p = 0.008$ ). Three-year local control was 89 %, and median event free survival from fSRS was 3.4 years. Radiation necrosis was observed in 6 patients, 3 who were symptomatic. In conclusion, fSRS offers durable response with a tolerable toxicity profile in children with recurrent EPN.

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[327]

**TÍTULO / TITLE:** - Inhibition of Matrix Metalloproteinases-2/-9 Transiently Reduces Pre-Oligodendrocyte Loss during Lipopolysaccharide- but Not Tumour Necrosis Factor-alpha-Induced Inflammation in Fetal Ovine Glial Culture.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Dev Neurosci. 2013 Oct 30.

●● Enlace al texto completo (gratis o de pago) [1159/000354862](#)

**AUTORES / AUTHORS:** - Weaver-Mikaere L; Gunn AJ; Bennet L; Mitchell MD; Fraser M

**INSTITUCIÓN / INSTITUTION:** - The Liggins Institute, University of Auckland, Auckland, New Zealand.

**RESUMEN / SUMMARY:** - To determine whether increased matrix metalloproteinase (MMP) proteolytic activity plays a pathological role in infection/inflammation-induced preterm brain injury, primary cultures of preterm (day 90 of gestation; term 145 days) fetal ovine mixed glia were exposed to 24-96 h of lipopolysaccharide (LPS, 1 µg/ml) or tumour necrosis factor-alpha (TNF-alpha, 100 ng/ml). MMP-2 mRNA levels were significantly increased after TNF-alpha (96 h) and LPS exposure (48 and 96 h), and MMP-9 mRNA levels were significantly increased at 48 and 96 h after TNF-alpha. On zymography, the active form of secreted MMP-2 was significantly increased 24 h after LPS, but not TNF-alpha. Both active and latent forms of MMP-9 gelatinolytic activity were significantly increased by TNF-alpha (96 h) and LPS (72 and 96 h). On reverse zymography, inhibitory activity of TIMP-1 but not TIMP-2 was significantly increased by TNF-alpha and LPS. SB-3CT-mediated MMP-2 and MMP-9 inhibition transiently reduced LPS-induced oligodendrocyte cell death but had no effect during TNF-alpha exposure. Collectively, these observations suggest a limited, transient effect of MMPs on immature white matter damage associated with infection but not TNF-alpha-mediated inflammation. © 2013 S. Karger AG, Basel.

[328]

**TÍTULO / TITLE:** - Pre-operative peritumoral edema and survival rate in glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Onkologie. 2013;36(11):679-84. doi: 10.1159/000355651. Epub 2013 Oct 14.

●● Enlace al texto completo (gratis o de pago) [1159/000355651](#)

**AUTORES / AUTHORS:** - Liu SY; Mei WZ; Lin ZX

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Affiliated Hospital of Fujian Medical University, Fuzhou, Fujian, China.

**RESUMEN / SUMMARY:** - The aim of this systematic review was to examine the relationship between pre-operative peritumoral edema and survival in patients with glioblastoma multiforme (GBM). We searched for studies involving patients with GBM who underwent pre-operative imaging (magnetic resonance imaging and/or computed tomography) in which the peritumoral edema was assessed as a prognostic factor for survival. 7 retrospective studies met the eligibility criteria and were included in the study. 2 studies found that pre-operative peritumoral edema was an independent prognostic factor for decreased survival. 1 study found that survival was dependent on the severity of the peritumoral edema (minimal and severe: increased survival; moderate: decreased survival). 2 studies found that pre-operative peritumoral edema

was a predictor of decreased survival based on univariate but not multivariate analysis. 1 study found that there was no relationship between pre-operative peritumoral edema and survival, while the remaining study found that patients with peritumoral edema had decreased survival compared with patients without peritumoral edema. There was considerable heterogeneity between the studies regarding the patient characteristics. The results of our systematic review are inconclusive; the available evidence does not definitely support or rule out an association between pre-operative peritumoral edema and survival. Hence, further, well-designed, prospective studies are clearly needed. © 2013 S. Karger GmbH, Freiburg.

[329]

**TÍTULO / TITLE:** - Reversible extrapyramidal symptoms of extrapontine myelinolysis in a child following surgery for craniopharyngioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Nov 1. pii: S0303-8467(13)00425-3. doi: 10.1016/j.clineuro.2013.10.016.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.10.016](#)

**AUTORES / AUTHORS:** - Sai Kiran NA; Mohan D; Sadashiva Rao A; Assis ZA; Thakar S; Hegde AS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Sri Sathya Sai Institute of Higher Medical Sciences, Whitefield, Bangalore, India. Electronic address: [saikiransssihms@gmail.com](mailto:saikiransssihms@gmail.com).

[330]

**TÍTULO / TITLE:** - Lateral ventricle's choroid plexus tumors surgery in children: how I do it.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Oct 30.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1912-9](#)

**AUTORES / AUTHORS:** - d'Avella D; Rossetto M; Denaro L; Sturiale CL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, University of Padua, via Giustiniani, 5, 35128, Padua, Italy, [domenico.davella@unipd.it](mailto:domenico.davella@unipd.it).

**RESUMEN / SUMMARY:** - BACKGROUND: Choroid plexus tumors (CPTs) are intraventricular lesions originating from ventricular neuroepithelium and represent up to 4 % of brain neoplasms affecting pediatric population. They are more frequently benign papillomas, but malignant carcinomas can sometimes occur. METHOD: The authors present a description of surgical approach for CPTs, particularly focusing on the complications related to the cerebrospinal fluid (CSF) circulation, which may affect outcome. CONCLUSION: Microsurgical resection represents the first line treatment for CPTs. The goal is the complete removal of the tumor and the restoration of a physiological CSF circulation.

[331]

**TÍTULO / TITLE:** - Medulloblastoma with multi-lineage differentiation including myogenic and melanotic elements: a case report with molecular data.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 Oct 16.

●● Enlace al texto completo (gratis o de pago) [5414/NP300675](#)

**AUTORES / AUTHORS:** - Stefanits H; Ebetsberger-Dachs G; Weis S; Haberler C

**RESUMEN / SUMMARY:** - We present an unusual medulloblastoma in a 3.9-year-old boy who had a 2-week history of nausea and vertigo. MRI revealed a 5x5.5x5 cm sized tumor located in the fourth ventricle and spinal leptomeningeal dissemination. The patient was treated according to the MET-HIT 2000-BIS4 protocol but showed tumor progression after 6 months and died 9 months postoperatively. Histopathologically and immunohistochemically, the tumor showed PNET-like areas with focal anaplasia, admixed rhabdomyoblastic and pigmented elements, cartilage and bone formation, as well as areas with neurocytic and glial differentiation. Neither CTNNB1 mutation nor MYCC/MYCN amplification was detected. The combination of rhabdomyoblastic and melanotic elements in medulloblastoma is exceptionally rare. Although the histopathological features suggested a teratoid tumor, the endodermal cell lineage required for this diagnosis was not present. An atypical teratoid-rhabdoid tumor was ruled out due to the presence of the INI1-protein. Regarding the molecular profile with 1q and 17q chromosomal gains and loss of chromosome 8, this tumor could be compatible with a molecular medulloblastoma Group 3 or 4. Yet, it cannot be definitively ruled out that medulloblastomas with multi-lineage differentiation represent a distinct subgroup of medulloblastoma, and it remains to be clarified whether these tumors are associated with a distinct clinical behavior.

[332]

**TÍTULO / TITLE:** - Inhibition of EGFR induces a c-MET driven stem cell population in Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Stem Cells. 2013 Oct 1. doi: 10.1002/stem.1554.

●● Enlace al texto completo (gratis o de pago) [1002/stem.1554](#)

**AUTORES / AUTHORS:** - Jun HJ; Bronson RT; Charest A

**INSTITUCIÓN / INSTITUTION:** - Molecular Oncology Research Institute, Tufts Medical Center, Boston, MA 02111, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most lethal form of primary brain tumors, characterized by highly invasive and aggressive tumors that are resistant to all current therapeutic options. GBMs are highly heterogeneous in nature and contain a small but highly tumorigenic and self-renewing population of stem or initiating cells (Glioblastoma stem cells or GSCs). GSCs have been shown to contribute to tumor propagation and resistance to current therapeutic modalities. Recent studies of human GBMs have elucidated the genetic alterations common in these tumors, but much remains unknown about specific signaling pathways that regulate GSCs. Here we identify a distinct fraction of cells in a genetically engineered mouse model of EGFR-driven GBM that respond to anti-EGFR therapy by inducing high levels of c-MET expression. The MET positive cells displayed clonogenic potential and long-term self-renewal ability in vitro and are capable of differentiating into multiple lineages. The MET positive GBM cells are resistant to radiation and highly tumorigenic in vivo. Activation of MET signaling led to an increase in expression of the stemness transcriptional regulators Oct4, Nanog and Klf4. Pharmacological inhibition of MET

activity in GSCs prevented the activation of Oct4, Nanog and Klf4 and potently abrogated stemness. Finally, the MET expressing cells were preferentially localized in perivascular regions of mouse tumors consistent with their function as GSCs. Together, our findings indicate that EGFR inhibition in GBM induces MET activation in GSCs, which is a functional requisite for GSCs activity and thus represents a promising therapeutic target. Stem Cells 2013.

[333]

**TÍTULO / TITLE:** - Fibrin-binding, peptide amphiphile micelles for targeting glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomaterials. 2014 Jan;35(4):1249-56. doi: 10.1016/j.biomaterials.2013.10.064. Epub 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago)

[1016/j.biomaterials.2013.10.064](http://1016/j.biomaterials.2013.10.064)

**AUTORES / AUTHORS:** - Chung EJ; Cheng Y; Morshed R; Nord K; Han Y; Wegscheid ML; Auffinger B; Wainwright DA; Lesniak MS; Tirrell MV

**INSTITUCIÓN / INSTITUTION:** - Institute for Molecular Engineering, The University of Chicago, 5747 S. Ellis Ave. Jones 222, Chicago, IL 60637, USA.

**RESUMEN / SUMMARY:** - Glioblastoma-targeted drug delivery systems facilitate efficient delivery of chemotherapeutic agents to malignant gliomas, while minimizing systemic toxicity and side effects. Taking advantage of the fibrin deposition that is characteristic of tumors, we constructed spherical, Cy7-labeled, targeting micelles to glioblastoma through the addition of the fibrin-binding pentapeptide, cysteine-arginine-glutamic acid-lysine-alanine, or CREKA. Conjugation of the CREKA peptide to Cy7-micelles increased the average particle size and zeta potential. Upon intravenous administration to GL261 glioma bearing mice, Cy7-micelles passively accumulated at the brain tumor site via the enhanced permeability and retention (EPR) effect, and Cy7-CREKA-micelles displayed enhanced tumor homing via active targeting as early as 1 h after administration, as confirmed via in vivo and ex vivo imaging and immunohistochemistry. Biodistribution of micelles showed an accumulation within the liver and kidneys, leading to micelle elimination via renal clearance and the reticuloendothelial system (RES). Histological evaluation showed no signs of cytotoxicity or tissue damage, confirming the safety and utility of this nanoparticle system for delivery to glioblastoma. Our findings offer strong evidence for the glioblastoma-targeting potential of CREKA-micelles and provide the foundation for CREKA-mediated, targeted therapy of glioma.

[334]

**TÍTULO / TITLE:** - MiR-200a impairs glioma cell growth, migration, and invasion by targeting SIM2-s.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroreport. 2014 Jan 8;25(1):12-7. doi: 10.1097/WNR.0000000000000032.

●● Enlace al texto completo (gratis o de pago)

[1097/WNR.0000000000000032](http://1097/WNR.0000000000000032)

**AUTORES / AUTHORS:** - Su Y; He Q; Deng L; Wang J; Liu Q; Wang D; Huang Q; Li G  
**INSTITUCIÓN / INSTITUTION:** - Departments of aEmergency Surgery bNeurosurgery, Qilu Hospital of Shandong University cBrain Science Research Institute, Shandong University, Jinan dDepartment of Neurology, The Affiliated Yantai Yuhuangding Hospital of Qingdao Medical College, Yantai, China.

**RESUMEN / SUMMARY:** - Recently, single-minded homolog 2-short form (SIM2-s) was reported to be related to tumor development and progression and to be elevated in many human cancer cells. In this study, we investigated the factors that contribute to the regulation of SIM2-s expression in gliomas. The results showed that SIM2-s was elevated in gliomas. In addition, inhibition of SIM2-s reduced glioma cell growth, migration, and invasion. Next, we demonstrated that SIM2-s is a functional target of miR-200a. Further, miR-200a is downregulated in human glioma and inhibition of miR-200a caused upregulation of SIM2-s in T98G cells and promoted their motility. Finally, blockage of miR-200a expression in a mouse model of human glioma resulted in significant promotion of tumor growth. These findings suggest that miR-200a could serve as a therapeutic tool for glioma.

[335]

**TÍTULO / TITLE:** - A Review of Childhood and Adolescent Craniopharyngiomas With Particular Attention to Hypothalamic Obesity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Pediatr Neurol.* 2013 Nov 1. pii: S0887-8994(13)00560-2. doi: 10.1016/j.pediatrneurol.2013.09.003.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1016/j.pediatrneurol.2013.09.003](#)

**AUTORES / AUTHORS:** - Rosenfeld A; Arrington D; Miller J; Olson M; Gieseck A; Etzl M; Harel B; Schembri A; Kaplan A

**INSTITUCIÓN / INSTITUTION:** - Center for Cancer and Blood Disorders, Phoenix Children's Hospital, Phoenix, Arizona. Electronic address:

[arosenfeld@phoenixchildrens.com](mailto:arosenfeld@phoenixchildrens.com).

**RESUMEN / SUMMARY:** - **BACKGROUND:** Although craniopharyngiomas are considered "benign" neoplasms by the World Health Organization classification, these tumors may create significant morbidity and mortality in patients. Hypothalamic obesity is a frequent complication of craniopharyngiomas and is refractory to current management options. **PATIENTS/METHODS:** We reviewed 24 cases of craniopharyngiomas treated from 1992 to 2010 in patients <18 years of age regarding clinical presentation, neuroimaging, recurrence, morbidity, and mortality, with particular attention to hypothalamic obesity. **RESULTS:** Our cohort conformed to published data in regard to neuroimaging characteristics, and clinical findings in the areas of endocrine, visual, neurological, neurobehavioral, and hypothalamic domains. At last follow-up, 53% of our patients were overweight (8%) or obese (46%). Only 25% of our patients had a healthy body mass index. Contrasting these data with body mass indices at diagnosis, where 21% of patients were overweight and 17% were obese, we found that there was a significant trend towards obesity over time. A significant portion of our mortality appears to be related to complications of obesity. The Native American population in Arizona appears to have a statistically greater incidence of obesity in childhood. Despite our small sample size, 75% of our Native Americans were obese at

last follow-up and accounted for 50% of the mortality. CONCLUSION: Hypothalamic obesity is a significant complication of craniopharyngiomas associated with increased mortality. The development of hypothalamic obesity is influenced by premorbid obesity, genetics, and therapy received, specifically radiation. Because of the intractability of hypothalamic obesity, improved understanding of neuroendocrine mechanisms, genomics, and newer antiobesity medications will be necessary to curb this significant complication.

[336]

**TÍTULO / TITLE:** - Assessment of the association between XRCC1 Arg399Gln polymorphism and glioma susceptibility.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1397-4](#)

**AUTORES / AUTHORS:** - Zhu W; Yao J; Li Y; Xu B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Chinese PLA General Hospital, 28 Fuxing RD, Beijing, 100853, China.

**RESUMEN / SUMMARY:** - The Arg399Gln polymorphism, located in the region of the BRCT-I interaction domain of XRCC1, has been extensively explored in its function and association with glioma risk. However, these studies generated contradictory instead of conclusive results. A meta-analysis was performed to derive a more precise evaluation of the relationship between XRCC1 Arg399Gln polymorphism and glioma risk. We searched the PubMed, EMBASE, and Web of Science and extracted 12 eligible studies with 4,062 glioma cases and 5,302 glioma-free controls for this meta-analysis. The pooled odds ratios (ORs) and 95 % confidence intervals (CIs) were calculated to assess the strength of the association. In the overall analysis, we found that the XRCC1 Arg399Gln polymorphism was statistically associated with the risk of glioma (ORGG vs. AG + AA = 0.90, 95 % CI = 0.84-0.97, P heterogeneity = 0.020; ORAllele G vs. allele A = 0.96, 95 % CI = 0.91-1.00, P heterogeneity = 0.110). We also observed significant association between this polymorphism and glioma risk in Asian populations. The results of the meta-analysis suggest a potential decreased susceptibility to glioma in association with the XRCC1 Arg399Gln polymorphism, especially in Asians. Yet, it is necessary to conduct future prospective explorations to gain a better insight into the impact of XRCC1 Arg399Gln polymorphism on glioma risk.

[337]

**TÍTULO / TITLE:** - miR-331-3p regulates expression of neuropilin-2 in glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 19.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1271-7](#)

**AUTORES / AUTHORS:** - Epis MR; Giles KM; Candy PA; Webster RJ; Leedman PJ

**INSTITUCIÓN / INSTITUTION:** - Laboratory for Cancer Medicine, Western Australian Institute for Medical Research and University of Western Australia Centre for Medical Research, Level 6, MRF Building, Rear 50 Murray Street, Perth, WA, 6000, Australia.

**RESUMEN / SUMMARY:** - Aberrant expression of microRNAs (miRNAs), a class of small non-coding regulatory RNAs, has been implicated in the development and

progression of high-grade gliomas. However, the precise mechanistic role of many miRNAs in this disease remains unclear. Here, we investigate the functional role of miR-331-3p in glioblastoma multiforme (GBM). We found that miR-331-3p expression in GBM cell lines is significantly lower than in normal brain, and that transient overexpression of miR-331-3p inhibits GBM cell line proliferation and clonogenic growth, suggesting a possible tumor suppressor role for miR-331-3p in this system. Bioinformatics analysis identified neuropilin-2 (NRP-2) as a putative target of miR-331-3p. Using transfection studies, we validated NRP-2 mRNA as a target of miR-331-3p in GBM cell lines, and show that NRP-2 expression is regulated by miR-331-3p. RNA interference (RNAi) to inhibit NRP-2 expression in vitro decreased the growth and clonogenic growth of GBM cell lines, providing further support for an oncogenic role for NRP-2 in high-grade gliomas. We also show that miR-331-3p inhibits GBM cell migration, an effect due in part to reduced NRP-2 expression. Finally, we identified a significant inverse correlation between miR-331-3p and NRP-2 expression in The Cancer Genome Atlas GBM cohort of 491 patients. Together, our results suggest that a loss of miR-331-3p expression contributes to GBM development and progression, at least in part via upregulating NRP-2 expression and increasing cell proliferation and clonogenic growth.

[338]

**TÍTULO / TITLE:** - Hypertrophic olivary degeneration with gadolinium enhancement after posterior fossa surgery in a child with medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Oct 10.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00381-013-2296-0](#)

**AUTORES / AUTHORS:** - Nowak J; Alkonyi B; Rutkowski S; Homola GA; Warmuth-Metz M

**INSTITUCIÓN / INSTITUTION:** - Department of Neuroradiology, University Hospital of Würzburg, Würzburg, Germany.

**RESUMEN / SUMMARY:** - Hypertrophic olivary degeneration (HOD) is a rare transsynaptic form of degeneration occurring secondary to the disruption of the dentato-rubro-olivary pathway ("Guillain-Mollaret triangle"). HOD can be caused by ischemic, hemorrhagic, traumatic, or neoplastic lesions, and it can also occur following posterior fossa surgery. MRI characteristics of HOD include T2 signal increase and hypertrophy. To date, blood-brain barrier disruption has not been reported in HOD. Here, we present the first case of HOD with temporary gadolinium enhancement in a 10-year-old child 7 months after resection of a posterior fossa medulloblastoma. The recognition of gadolinium enhancement as a radiological feature of HOD may help to distinguish between this benign secondary condition and tumor recurrence.

[339]

**TÍTULO / TITLE:** - Next-generation molecular genetics of brain tumours.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Neurol. 2013 Dec;26(6):681-7. doi: 10.1097/WCO.000000000000027.

- Enlace al texto completo (gratis o de pago)

[1097/WCO.000000000000027](https://doi.org/10.1097/WCO.000000000000027)

**AUTORES / AUTHORS:** - Suva ML; Louis DN

**INSTITUCIÓN / INSTITUTION:** - aDepartment of Pathology and Center for Cancer Research, Massachusetts General Hospital and Harvard Medical School, Boston bBroad Institute of Harvard and MIT, Cambridge, Massachusetts, USA.

**RESUMEN / SUMMARY:** - PURPOSE OF REVIEW: Systematic use of next-generation sequencing technologies has transformed the field of cancer genomics, leading to the identification of genetic alterations in an unanticipated number of genes and regulatory elements. Here, we review recent advances in brain tumour genomics and highlight how these findings improve classification and diagnosis of brain tumours. RECENT FINDINGS: The studies discussed in this review have shed light on different areas of neuro-oncology. In-depth analysis of paediatric low-grade gliomas as well as paediatric glioblastomas has clarified our molecular understanding of these diseases, clearly distinguishing them from their adult counterparts. Unexpected novel mutations have been discovered in adult low-grade astrocytomas and in glioblastomas. Novel studies also highlighted candidate tumour suppressor genes located on the chromosome arms frequently deleted in oligodendrogliomas. Finally, we review recent discoveries in the molecular landscapes of medulloblastomas and meningiomas. SUMMARY: These recent studies begin to provide an in-depth view of the molecular routes leading to brain tumour development. The findings will be critical for refining classification systems and improving clinical management.

[340]

**TÍTULO / TITLE:** - Combined delivery of BCNU and VEGF siRNA using amphiphilic peptides for glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Drug Target. 2013 Nov 13.

- Enlace al texto completo (gratis o de pago) [3109/1061186X.2013.850502](https://doi.org/10.1080/1061186X.2013.850502)

**AUTORES / AUTHORS:** - Yi N; Oh B; Kim HA; Lee M

**INSTITUCIÓN / INSTITUTION:** - Department of Bioengineering, College of Engineering, Hanyang University, Seoul, Republic of Korea.

**RESUMEN / SUMMARY:** - Abstract Combined delivery of chemical drug and therapeutic gene has been introduced as an efficient method for the treatment of cancers such as glioblastoma. In this study, bis-chloroethylnitrosourea (BCNU) and vascular endothelial growth factor (VEGF) small interfering RNA (VEGF-siRNA) were co-delivered into C6 glioblastoma cells using a non-toxic peptide-based carrier. The R3V6 peptides, which are composed of 3-arginine and 6-valine, formed self-assembled micelles in aqueous solution. BCNU, a hydrophobic anti-cancer drug, was loaded into the hydrophobic core of the micelles, forming BCNU-loaded R3V6 micelles (R3V6-BCNU). In gel retardation assay, R3V6-BCNU formed a stable complex with siRNA. In vitro transfection assay showed that the VEGF-siRNA/R3V6-BCNU complex had the highest transfection efficiency into C6 cells at a 1:20 weight ratio (VEGF-siRNA:R3V6-BCNU). In addition, the VEGF-siRNA/R3V6-BCNU complexes had higher delivery efficiency than lipofectamine or naked siRNA. VEGF expressions were remarkably decreased by transfection of the VEGF-siRNA/R3V6 or VEGF-siRNA/R3V6-BCNU complexes. Furthermore, R3V6-BCNU delivered BCNU more efficiently into the cells than BCNU

only. Therefore, R3V6 delivered both VEGF-siRNA and BCNU efficiently into the glioblastoma cells. The results suggest that R3V6-BCNU may be useful for combined delivery of siRNA and chemical drug into cancer cells.

[341]

**TÍTULO / TITLE:** - "No growth" on serial MRI scans of a low grade glioma?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Dec;155(12):2243-4. doi: 10.1007/s00701-013-1914-7. Epub 2013 Oct 22.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1914-7](#)

**AUTORES / AUTHORS:** - Jakola AS; Moen KG; Solheim O; Kvistad KA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, St.Olavs University Hospital, 7006, Trondheim, Norway, [asgeir.s.jakola@ntnu.no](mailto:asgeir.s.jakola@ntnu.no).

[342]

**TÍTULO / TITLE:** - Cytopathology of Extracranial Ectopic and Metastatic Meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Cytol. 2013 Nov 1.

●● Enlace al texto completo (gratis o de pago) [1159/000355284](#)

**AUTORES / AUTHORS:** - Ocque R; Khalbuss WE; Monaco SE; Michelow PM; Pantanowitz L

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, University of Pittsburgh Medical Center, Shadyside Hospital, Pittsburgh, Pa., USA.

**RESUMEN / SUMMARY:** - Introduction: Extracranial meningiomas may infrequently be encountered as ectopic or metastatic tumors. Their rarity and unique cytomorphology often pose significant diagnostic dilemmas. The aim of this study was to report our experience with a series of ectopic and metastatic meningiomas, characterizing their cytomorphology with histological correlation. Materials and Methods: A retrospective analysis involving 13 patients with cytological preparations from extracranial meningiomas was performed. Cytology cases were correlated with available surgical resection specimens. Data regarding clinical findings, tumor information, cytomorphology, follow-up histological features and immunohistochemistry were recorded and analyzed. Results: There were 5 cases with metastases and 8 ectopic meningiomas. Metastases occurred in the scalp/skull, lung, paraspinal soft tissue and liver. Primary ectopic meningiomas were located in the paranasal sinuses and ear, orbit and neck. Cytomorphological features characteristic of meningiomas were identified in the majority of samples including tightly cohesive clusters of spindled cells, whorls, intranuclear inclusions, nuclear grooves and psammomatous calcification. Unusual cytomorphological features identified in only a few cases included epithelioid cell predominance, abundant inflammatory cells, small-cell change, papillary structures and pseudoacinar growth. Metastatic tumors exhibited more nuclear atypia and occasionally mitoses or necrosis. Meningiomas were shown to be immunoreactive for epithelial membrane antigen, pancytokeratin and vimentin. Conclusion: Although rare, extracranial meningiomas can be encountered in cytologic specimens and should be included in the differential diagnosis when characteristic morphological features of meningiomas are seen. Cytopathologists should be aware that these lesions could be

mistaken for other tumors, especially when confounded by atypia and unusual cytomorphological features. © 2013 S. Karger AG, Basel.

[343]

**TÍTULO / TITLE:** - Using R2\* values to evaluate brain tumours on magnetic resonance imaging: Preliminary results.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eur Radiol. 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1007/s00330-013-3057-x](#)

**AUTORES / AUTHORS:** - Liu Z; Liao H; Yin J; Li Y

**INSTITUCIÓN / INSTITUTION:** - The Department of Magnetic Resonance Imaging, Medical Image Center, the Second Affiliated Hospital of Nanchang University, 1, Minde Road, Donghu District, Nanchang, China, 330006, [wuxiaoshui@126.com](mailto:wuxiaoshui@126.com).

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To determine the usefulness of the R2\* value in assessing the histopathological grade of glioma at magnetic resonance imaging and differentiating various brain tumours. **METHODS:** Sixty-four patients with brain tumours underwent R2\* mapping and diffusion-weighted imaging examinations. ANOVA was performed to analyse R2\* values among four groups of glioma and among high-grade gliomas (grades III and IV), low-grade gliomas (grades I and II), meningiomas, and brain metastasis. Spearman's correlation coefficients were used to determine the relationships between the R2\* values or apparent diffusion coefficient (ADC) and the histopathological grade of gliomas. R2\* values of low- and high-grade gliomas were analysed with the receiver-operator characteristic curve. **RESULTS:** R2\* values were significantly different among high-grade gliomas, low-grade gliomas, meningiomas, and brain metastasis, but not between grade I and grade II or between grade III and grade IV. The R2\* value (18.73) of high-grade gliomas provided a very high sensitivity and specificity for differentiating low-grade gliomas. A strong correlation existed between the R2\* value and the pathological grade of gliomas. **CONCLUSIONS:** R2\* mapping is a useful sequence for determining grade of gliomas and in distinguishing benign from malignant tumours. R2\* values are better than ADC for characterising gliomas. **KEY POINTS:** \* Magnetic resonance imaging parameters are increasingly used to assess cerebral lesions. \* R2\* values are better than diffusion weighting for characterising gliomas. \* R2\* values can help distinguish among different grades of glioma. \* Significant difference existed in R2\* values between high- and low-grade gliomas.

[344]

**TÍTULO / TITLE:** - Imaging and histological characterization of a human brain xenograft in pig: The first induced glioma model in a large animal.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Methods. 2013 Oct 11;221C:159-165. doi: 10.1016/j.jneumeth.2013.10.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.jneumeth.2013.10.002](#)

**AUTORES / AUTHORS:** - Selek L; Seigneuret E; Nogue G; Wion D; Nissou MF; Salon C; Seurin MJ; Carozzo C; Ponce F; Roger T; Berger F

**INSTITUCIÓN / INSTITUTION:** - Clinique de neurochirurgie, CHU Grenoble, B.P. 217, 38043 Grenoble Cedex 09, France; Equipe 7 nanomedecine et cerveau, Inserm U836,

Grenoble institut des Neurosciences, Chemin Fortune Ferrini, Universite Joseph Fourier - Site Sante, Batiment: Edmond J. Safra, 38706 La Tronche Cedex, France. Electronic address: [LSelek@chu-grenoble.fr](mailto:LSelek@chu-grenoble.fr).

**RESUMEN / SUMMARY:** - The prognosis of glioblastoma remains poor despite significant improvement in cytoreductive surgery, external irradiation and new approach of systemic treatment as antiangiogenic therapy. One of the issues is the low concentration in the infiltrated parenchyma of therapeutic agent administered intravenously mainly due to the blood-brain barrier. An intracerebral injection is advocated to overpass this barrier, this kind of administration need a low flow and continuous injection. The development of sophisticated implanted devices for convection-enhanced delivery is a mandatory step to have a controlled released of a therapeutic agent in glioblastoma treatment. Before testing such a device in a clinical trial a serious preclinical studies are required, in order to test it in realistic conditions we have develop the first induced high grade glioma model in a non-rodent animal: the pig. 21 pigs have been implanted in the parietal lobe with human glioblastoma cell lineage under a chemical immunosuppression by ciclosporine. A MRI follow up was then realized. 15 pigs have been implanted with U87MG, 14 have presented a macroscopic significant tumor, with radiological and anatomopathological characteristics of high grade glioma. 6 pigs were implanted with G6, stem-like cells tumors of glioblastoma, 1 pig develops a macroscopic tumor. This is the first reproducible glioma model in a large animal described, it open the way to preclinical studies to test implanted devices in anatomic realistic conditions, without the ethical issues of a primate use.

[345]

**TÍTULO / TITLE:** - “No-no” type bobble-head doll syndrome in an infant with an arachnoid cyst of the posterior fossa: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Pediatr Neurol.* 2013 Dec;49(6):474-6. doi: 10.1016/j.pediatrneurol.2013.07.013. Epub 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago)

[1016/j.pediatrneurol.2013.07.013](http://1016/j.pediatrneurol.2013.07.013)

**AUTORES / AUTHORS:** - Ishihara M; Nonaka M; Oshida N; Hamada Y; Nakajima S; Yamasaki M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Osaka University Graduate School of Medicine, Suita City, Osaka, Japan; Department of Neurosurgery, Osaka Rosai Hospital, Sakai City, Osaka, Japan.

**RESUMEN / SUMMARY:** - **BACKGROUND:** Bobble-head doll syndrome is a rare and surgically treatable movement disorder characterized by up-and-down (yes-yes) head bobbing occurring at a rate of 2-3 Hz. Side-to-side (no-no) head bobbing is less frequently described. Bobble-head doll syndrome is usually associated with dilation of the third ventricle, but is rarely associated with posterior fossa disease. **PATIENT:** We describe an infant with fetal hydrocephalus and an arachnoid cyst of the posterior fossa. Endoscopic fenestration of the arachnoid cyst was performed on postnatal day 12. A routine examination at 4 months indicated the infant showed “no-no” type head bobbing, but no other neurological disorder was observed. The third ventricle was dilated during the perioperative period, but not at 2-4 months. In contrast, cerebellar compression decreased gradually and persisted at 4 months. **CONCLUSION:**

Although few patients with bobble-head doll syndrome do not have third ventricle dilation, these patients typically show cerebellar dysfunction. Our findings support the hypothesis that cerebellar dysfunction is present in bobble-head doll syndrome when third ventricle dilation is absent.

[346]

**TÍTULO / TITLE:** - Design, synthesis, and evaluation of curcumin-derived arylheptanoids for glioblastoma and neuroblastoma cytotoxicity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Bioorg Med Chem Lett. 2013 Dec 15;23(24):6874-8. doi: 10.1016/j.bmcl.2013.09.095. Epub 2013 Oct 11.

●● Enlace al texto completo (gratis o de pago) [1016/j.bmcl.2013.09.095](#)

**AUTORES / AUTHORS:** - Campos CA; Gianino JB; Bailey BJ; Baluyut ME; Wiek C; Hanenberg H; Shannon HE; Pollok KE; Ashfeld BL

**INSTITUCIÓN / INSTITUTION:** - Department of Chemistry and Biochemistry, Mike and Josie Harper Cancer Research Institute, University of Notre Dame, Notre Dame, IN 46556, United States.

**RESUMEN / SUMMARY:** - Using an innovative approach toward multiple carbon-carbon bond-formations that relies on the multifaceted catalytic properties of titanocene complexes we constructed a series of C1-C7 analogs of curcumin for evaluation as brain and peripheral nervous system anti-cancer agents. C2-Arylated analogs proved efficacious against neuroblastoma (SK-N-SH & SK-N-FI) and glioblastoma multiforme (U87MG) cell lines. Similar inhibitory activity was also evident in p53 knockdown U87MG GBM cells. Furthermore, lead compounds showed limited growth inhibition in vitro against normal primary human CD34+hematopoietic progenitor cells. Taken together, the present findings indicate that these curcumin analogs are viable lead compounds for the development of new central and peripheral nervous system cancer chemotherapeutics with the potential for little effects on normal hematopoietic progenitor cells.

[347]

**TÍTULO / TITLE:** - Dynamic aphasia following low-grade glioma surgery near the supplementary motor area: A selective spontaneous speech deficit.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurocase. 2013 Oct 7.

●● Enlace al texto completo (gratis o de pago) [1080/13554794.2013.841954](#)

**AUTORES / AUTHORS:** - Satoer D; Kloet A; Vincent A; Dirven C; Visch-Brink E  
**INSTITUCIÓN / INSTITUTION:** - a Department of Neurosurgery , Erasmus MC-University Medical Center , Rotterdam , the Netherlands.

**RESUMEN / SUMMARY:** - We describe a patient (KO) with reduced spontaneous speech, resembling dynamic aphasia, after awake glioma surgery in the proximity of the supplementary motor area. Naming, repetition, and comprehension were intact. He was tested with an extensive neuropsychological test-battery and a protocol for dynamic aphasia at 1 year. He presented with postoperative reduced spontaneous speech and selective executive function deficits. Most language recovery took place at 3 months postoperatively, whereas the executive functions improved between 3

months and 1 year. Results suggest that resection near the supplementary motor area could increase the risk of cognitive disturbances at long term, especially language.

[348]

**TÍTULO / TITLE:** - Delayed growth of glioma by a polysaccharide from *Aster tataricus* involve upregulation of Bax/Bcl-2 ratio, activation of caspase-3/8/9, and downregulation of the Akt.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Oct 1.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1243-8](#)

**AUTORES / AUTHORS:** - Du L; Mei HF; Yin X; Xing YQ

**INSTITUCIÓN / INSTITUTION:** - Eye Center, Renmin Hospital of Wuhan University, Wuchang Jiefang Road 238, Wuhan, 430060, China.

**RESUMEN / SUMMARY:** - In this study, a homogeneous polysaccharide (ATP-II), with a molecular weight of  $3.4 \times 10^4$  Da, was successfully purified from *Aster tataricus* by DEAE-Sepharose CL-6B ion exchange and Sepharose CL-6B gel filtration chromatography. Monosaccharide component analysis indicated that ATP-II was composed of glucose, galactose, mannose, rhamnose, and arabinose in molar ratios of 2.1:5.2:2.1:1.0:1.2. We evaluated the anticancer efficacy and associated mechanisms of ATP-II on glioma C6 cells in vitro and in vivo. The results showed that treatment of C6 cells with ATP-II inhibited cell proliferation and this biological response came from induction of DNA damage and consequent inducing apoptosis. Likewise, oral ATP-II administration resulted in consistent regression of glioma tumors and induced apoptosis of transplanted tumor tissues by increasing the ratio of Bax/Bcl-2 and activation of caspase-3, caspase-8, and caspase-9 cascade. Importantly, the efficient downregulation of Akt, which is successfully detected in tumor tissues, is a unique contribution to retard the tumor growth by ATP-II. These data suggest that ATP-II may be a potential candidate for glioma treatment.

[349]

**TÍTULO / TITLE:** - The growth of glioblastoma orthotopic xenografts in nude mice is directly correlated with impaired object recognition memory.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Physiol Behav. 2014 Jan 17;123:55-61. doi: 10.1016/j.physbeh.2013.09.012. Epub 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [1016/j.physbeh.2013.09.012](#)

**AUTORES / AUTHORS:** - Wasilewska-Sampaio AP; Santos TG; Lopes MH; Cammarota M; Martins VR

**INSTITUCIÓN / INSTITUTION:** - International Research Center, A.C. Camargo Cancer Center, Brazil.

**RESUMEN / SUMMARY:** - Cognitive dysfunction is found in patients with brain tumors and there is a need to determine whether it can be replicated in an experimental model. In the present study, the object recognition (OR) paradigm was used to investigate cognitive performance in nude mice, which represent one of the most important animal models available to study human tumors in vivo. Mice with orthotopic xenografts of the human U87MG glioblastoma cell line were trained at 9, 14, and

18days (D9, D14, and D18, respectively) after implantation of  $5 \times 10^5$  cells. At D9, the mice showed normal behavior when tested 90min or 24h after training and compared to control nude mice. Animals at D14 were still able to discriminate between familiar and novel objects, but exhibited a lower performance than animals at D9. Total impairment in the OR memory was observed when animals were evaluated on D18. These alterations were detected earlier than any other clinical symptoms, which were observed only 22-24days after tumor implantation. There was a significant correlation between the discrimination index (d2) and time after tumor implantation as well as between d2 and tumor volume. These data indicate that the OR task is a robust test to identify early behavior alterations caused by glioblastoma in nude mice. In addition, these results suggest that OR task can be a reliable tool to test the efficacy of new therapies against these tumors.

[350]

**TÍTULO / TITLE:** - Characterizing the Role of PCDH9 in the Regulation of Glioma Cell Apoptosis and Invasion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Mol Neurosci. 2013 Nov 9.

- Enlace al texto completo (gratis o de pago) [1007/s12031-013-0133-2](#)

**AUTORES / AUTHORS:** - Wang C; Tao B; Li S; Li B; Wang X; Hu G; Li W; Yu Y; Lu Y; Liu J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The 105<sup>th</sup> Hospital of PLA, 424 West Changjiang Road, Hefei, Anhui, 230000, China.

**RESUMEN / SUMMARY:** - PCDH9, a member of the protocadherin superfamily, is frequently lost in many different cancer types. This study aimed to detect PCDH9 expression in glioma tissues. This study also assessed the effects of PCDH9 expression in two different glioma cell lines. This was accomplished by manipulating PCDH9 expression in these glioma cell lines. The data showed that the expression of PCDH9 mRNA and protein was significantly decreased in gliomas compared to normal brain tissues. Lentivirus carrying PCDH9 cDNA restored PCDH9 expression in the U87 and U251 glioma cell lines. PCDH9 restoration in these cell lines reduced tumor cell viability, induced apoptosis, and caused G0/G1 cell cycle arrest. PCDH9 expression also suppressed the colony formation ability and invasion capacity of U87 and U251 cells. Molecularly, the restoration of PCDH9 expression upregulated Bax protein expression, but downregulated Bcl-2 and cyclin D1 expression. These data from the current study suggest that the loss of PCDH9 expression could contribute to glioma development and/or progression. Further studies will evaluate PCDH9 expression as a biomarker for the early detection of gliomas and as a prognostic indicator for this cancer type.

[351]

**TÍTULO / TITLE:** - Level set method with automatic selective local statistics for brain tumor segmentation in MR images.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Comput Med Imaging Graph. 2013 Oct-Dec;37(7-8):522-37. doi: 10.1016/j.compmedimag.2013.05.003. Epub 2013 Oct 20.

- Enlace al texto completo (gratis o de pago)

[1016/j.compmedimag.2013.05.003](http://1016/j.compmedimag.2013.05.003)

**AUTORES / AUTHORS:** - Thapaliya K; Pyun JY; Park CS; Kwon GR

**INSTITUCIÓN / INSTITUTION:** - Department of Information and Communication Engineering, Chosun University, 375 Seosuk-dong, Dong-gu, Gwangju 501-759, South Korea.

**RESUMEN / SUMMARY:** - The level set approach is a powerful tool for segmenting images. This paper proposes a method for segmenting brain tumor images from MR images. A new signed pressure function (SPF) that can efficiently stop the contours at weak or blurred edges is introduced. The local statistics of the different objects present in the MR images were calculated. Using local statistics, the tumor objects were identified among different objects. In this level set method, the calculation of the parameters is a challenging task. The calculations of different parameters for different types of images were automatic. The basic thresholding value was updated and adjusted automatically for different MR images. This thresholding value was used to calculate the different parameters in the proposed algorithm. The proposed algorithm was tested on the magnetic resonance images of the brain for tumor segmentation and its performance was evaluated visually and quantitatively. Numerical experiments on some brain tumor images highlighted the efficiency and robustness of this method.

[352]

**TÍTULO / TITLE:** - Targeted drug delivery to the brain and brain tumors using focused ultrasound and microbubbles.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Acoust Soc Am. 2013 Nov;134(5):4089. doi: 10.1121/1.4830934.

- Enlace al texto completo (gratis o de pago) [1121/1.4830934](http://1121/1.4830934)

**AUTORES / AUTHORS:** - McDannold N

**INSTITUCIÓN / INSTITUTION:** - Radiology, Brigham and Women's Hospital, 75 Francis St., Boston, [MAnjm@bwh.harvard.edu](mailto:MAnjm@bwh.harvard.edu).

**RESUMEN / SUMMARY:** - The physiology of the vasculature in the central nervous system (CNS), which includes the blood-brain barrier (BBB) and other factors, severely limits the delivery of most drugs to the brain and to brain tumors. Focused ultrasound (FUS), when combined with circulating microbubbles, is a noninvasive method to locally and transiently disrupt the BBB at discrete targets and enhance delivery across the "blood-tumor barrier." This talk aims to provide insight on the current status of this unique drug delivery technique, experience with it in preclinical models, and its potential for clinical translation. In particular, methods to monitor the procedure using acoustic receivers and the feasibility of controlling and predicting drug deposition will be reviewed. If this method, which offers a flexible means to target therapeutics to desired points or volumes in the brain, can be translated to the use in humans, it can enable the use of the whole arsenal of drugs in the CNS that are currently prevented by the BBB.

[353]

**TÍTULO / TITLE:** - Etiology, prognosis, and management of secondary pituitary abscesses forming in underlying pituitary adenomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1285-1](#)

**AUTORES / AUTHORS:** - Awad AJ; Rowland NC; Mian M; Hiniker A; Tate M; Aghi MK

**INSTITUCIÓN / INSTITUTION:** - Faculty of Medicine and Health Sciences, An-Najah National University, Nablus, Palestine.

**RESUMEN / SUMMARY:** - Pituitary abscesses occurring in pre-existing pituitary pathology like Rathke's cleft cyst or adenomas (secondary pituitary abscesses) are rare and of unclear etiology. While surgery and antibiotics have been effective in some cases reported to date, leading to the suggestion that secondary pituitary abscesses are mostly indolent, we investigated the hypothesis that infected adenomas, given their propensity to invade the paranasal sinuses and subarachnoid space, could carry a worse prognosis than uninfected adenomas or secondary abscesses forming in other pituitary pathologies. We identified infected adenomas from our center through retrospective review. Given the rarity of this diagnosis at any single center, we also reviewed published cases of secondary pituitary abscesses occurring in pituitary adenomas to look for common features. Twenty-three cases (19 from the literature and four from our center) of infected adenomas were identified. The mean age at presentation was 46 years, with 65 % male. The most common presenting symptoms were visual disturbances (83 %) and headache (65 %), followed by infectious signs like fever (39 %) and meningitis (26 %). The sphenoidal sinus was the most common site of extrasellar invasion. While good outcome occurred in 74 % of patients, and most achieved vision improvement, the mortality was 26 %. Patients with infected pituitary adenomas commonly present with visual disturbances and headache, with symptoms of infection also occurring. Surgery and antibiotics are indicated for these lesions. While the infection is more indolent than other intracranial abscesses, it is associated with high mortality even after prompt operation and antibiotic treatment.

[354]

**TÍTULO / TITLE:** - Role of arterial hypertension as a predictive marker for bevacizumab efficacy in recurrent glioblastoma - a prospective analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Oncol. 2013 Nov 13.

●● Enlace al texto completo (gratis o de pago) [3109/0284186X.2013.852240](#)

**AUTORES / AUTHORS:** - Wagner CC; Held U; Kofmehl R; Battegay E; Zimmerli L; Hofer S

**INSTITUCIÓN / INSTITUTION:** - Division of Internal Medicine, University Hospital Zurich, Zurich, Switzerland.

[355]

**TÍTULO / TITLE:** - SPECT and 18F-FDG PET/CT Imaging of Multiple Paragangliomas and a Growth Hormone-Producing Pituitary Adenoma as Phenotypes From a Novel Succinate Dehydrogenase Subunit D Mutation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Oct 22.

●● Enlace al texto completo (gratis o de pago)

[1097/RLU.0000000000000235](http://1097/RLU.0000000000000235)

**AUTORES / AUTHORS:** - Skoura E; Datsis IE; Xekouki P; Tolis G; Stratakis CA

**INSTITUCIÓN / INSTITUTION:** - From the \*Department of Nuclear Medicine, Evangelismos General Hospital, Athens, Greece; daggerSection on Endocrinology and Genetics, Program on Developmental Endocrinology and Genetics, National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD; and double daggerDivision of Endocrinology and Metabolism, Hippocrateion General Hospital, Athens, Greece.

**RESUMEN / SUMMARY:** - Mutations in the subunits B, C, D, and recently in A of the succinate dehydrogenase have been associated with the development of paragangliomas. We report the case of a 37-year-old man presented with multiple paragangliomas and a growth hormone-producing pituitary adenoma, with a novel succinate dehydrogenase subunit D mutation as the genetic analysis revealed. We present the similarities and the differences of the findings in patient imaging with either methods of SPECT (I-MIBG and In-pentetreotide) or PET/CT with F-FDG. This case revealed that F-FDG PET/CT detected more lesions and was superior compared with the other methods.

[356]

**TÍTULO / TITLE:** - Utility of flow cytometry of cerebrospinal fluid as a screening tool in the diagnosis of central nervous system lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Arch Pathol Lab Med. 2013 Nov;137(11):1610-8. doi: 10.5858/arpa.2012-0313-OA.

●● Enlace al texto completo (gratis o de pago) [5858/arpa.2012-0313-OA](http://5858/arpa.2012-0313-OA)

**AUTORES / AUTHORS:** - Pittman M; Treese S; Chen L; Frater JL; Nguyen TT; Hassan A; Kreisel F

**INSTITUCIÓN / INSTITUTION:** - From the Department of Pathology and Immunology (Drs Pittman, Treese, Frater, Nguyen, Hassan, and Kreisel) and the Division of Biostatistics (Dr Chen), Washington University School of Medicine, Saint Louis, Missouri.

**RESUMEN / SUMMARY:** - Context.-Experiences at our institution show that flow cytometry analysis (FCA) has become routine clinical practice in the workup of patients with altered mental status, even if risk factors are low. Objective.-To assess diagnostic accuracy of combined FCA and cytology in the diagnosis of central nervous system lymphoma in an unselected patient population with neurologic symptoms, including patients with no history of lymphoma or suspicious radiology. Design.-Between 2001 and 2011, cerebrospinal fluid was submitted from 373 patients for lymphoma screening by FCA. The medical records were reviewed for patient symptomatology, history of malignancy, brain imaging, FCA results, cytology results, brain biopsy, and clinical follow-up. Results.-A lymphoid malignancy was detected by FCA in 4% of cases. A positive diagnosis was more likely in patients with either a history of hematologic malignancy and/or a suspicious radiology result (P = .009). All patients with no history of lymphoma and no suspicious radiology (n = 102) had negative cytology, and none had a correspondingly positive FCA result. The positive and negative predictive values

of combined cytology and FCA in the patients with history of lymphoma and/or abnormal imaging results were 92% and 89%, respectively, when compared with open brain tissue biopsy, and 89% and 86%, respectively, when compared with clinical follow-up. When low-risk patients were included, the positive predictive value remained at 92%, but the negative predictive value dropped to 52% with the open brain biopsy as the reference, and values did not change significantly for the group with clinical follow-up. Conclusions.-Concurrent FCA and cytology are most useful in the appropriate clinical setting, and we propose a triage algorithm for how FCA on cerebrospinal fluid is best used.

[357]

**TÍTULO / TITLE:** - Stereotactic radiosurgery of intracranial meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Clin N Am. 2013 Oct;24(4):499-507. doi: 10.1016/j.nec.2013.05.006. Epub 2013 Jul 1.

●● Enlace al texto completo (gratis o de pago) [1016/j.nec.2013.05.006](#)

**AUTORES / AUTHORS:** - Pollock BE; Stafford SL; Link MJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Mayo Clinic College of Medicine, Rochester, MN, USA; Department of Radiation Oncology, Mayo Clinic College of Medicine, Rochester, MN, USA. Electronic address: [pollock.bruce@mayo.edu](mailto:pollock.bruce@mayo.edu).

**RESUMEN / SUMMARY:** - Stereotactic radiosurgery (SRS) has been performed for intracranial meningiomas for more than 30 years. Small to moderate-sized meningiomas are generally considered good candidates for SRS because of their neuro-imaging and radiobiological characteristics. Patient selection is critical for successful meningioma SRS. Factors related to tumor control and radiation-related complications in patients with WHO grade I or presumed meningiomas include history of prior surgery, tumor volume, and tumor location. Patients with small volume, nonoperated skull-base or tentorial meningiomas typically have the best outcomes after SRS.

[358]

**TÍTULO / TITLE:** - Quercetin promotes glioma growth in a rat model.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Food Chem Toxicol. 2013 Nov 16. pii: S0278-6915(13)00747-3. doi: 10.1016/j.fct.2013.11.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.fct.2013.11.002](#)

**AUTORES / AUTHORS:** - Zamin LL; Filippi-Chiela EC; Vargas J; Demartini DR; Meurer L; Souza AP; Bonorino C; Salbego C; Lenz G

**INSTITUCIÓN / INSTITUTION:** - Departamento de Biofísica, Centro de Biotecnologia, Universidade Federal do Rio Grande do Sul (UFRGS), Avenida Bento Gonçalves, n 9500, Porto Alegre 91501-970, RS, Brazil; Universidade Federal da Fronteira Sul (UFFS), Campus Cerro Largo, Avenida Jacob Reinaldo Haupenthal, n 1580, Cerro Largo 97900-000, RS, Brazil. Electronic address: [lauren.zamin@uffs.edu.br](mailto:lauren.zamin@uffs.edu.br).

**RESUMEN / SUMMARY:** - We have previously demonstrated that quercetin (Quer), a polyphenol widely found in vegetables, decreased glioma cell growth in vitro. Here, we

asked whether this compound could affect glioma growth in an in vivo rat glioma model. We found that daily intraperitoneal Quer (50mg/kg) injections lead to a concentration of 0.15µg of Quer per gram of brain tissue, which increased the tumor volume in a time dependent manner. We observed a small reduction in lymphocytic infiltration, a marker of good prognosis in gliomas that was accompanied by a small reduction in cell viability of peripheral T-cells. Moreover, after Quer treatment neither body weight alteration nor liver pathology markers were detected. Although in vitro studies and massive literature reports point to the antitumoral properties of Quer, the present results indicate that great caution has to be taken in the design of clinical trials and the indiscriminate use of this polyphenol as dietary supplement.

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[359]

**TÍTULO / TITLE:** - The management of bifocal intracranial germinoma in children.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Oct 3.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00381-013-2287-1](#)

**AUTORES / AUTHORS:** - Al-Mahfoudh R; Zakaria R; Irvine E; Pizer B; Mallucci CL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Alder Hey Children's NHS Foundation Trust, Eaton Road, Liverpool, L12 2AP, UK, [rafid@doctors.net.uk](mailto:rafid@doctors.net.uk).

**RESUMEN / SUMMARY:** - OBJECTIVES: Bifocal intracranial germinoma (BFG) is a tumour of the pineal and suprasellar regions, which is known to be highly radiosensitive. The definitive treatment and outcomes are not well defined, particularly in the paediatric population. We review our series of purely paediatric cases from a single institution and combine them with the limited reports in the literature to determine the results of different management strategies. METHODS: Four patients were treated at our institution with a median age of 15.3 years. A literature search identified a further 38 paediatric cases with a median age of 12.9 years. RESULTS: All four patients had normal serum and CSF tumour markers. One patient had a diagnosis made based on imaging findings of bifocal pineal and suprasellar lesions presenting with diabetes insipidus. Three others underwent biopsy. All had craniospinal radiotherapy, which has led to complete cure with no cases of progression at a mean follow-up of 3 years. The most common treatment modality in published cases is craniospinal irradiation. In the cases reviewed, limited radiation treatments (whole ventricle or focal) combined with chemotherapy regimens yield comparable outcomes where there is no spinal dissemination. Outcomes do not appear to be altered by biopsy in cases with negative tumour markers and characteristic imaging appearances. CONCLUSION: Patients who present with a classic appearance of germinoma, negative tumour markers and diabetes insipidus probably do not require a biopsy to confirm the diagnosis. No evidence of dissemination may obviate the need for craniospinal irradiation, but good quality long-term follow-up data are required to demonstrate the benefits of combined focal radiotherapy and chemotherapy regimes.

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[360]

**TÍTULO / TITLE:** - Genetics in glioma: lessons learned from genome-wide association studies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Neurol. 2013 Dec;26(6):688-92. doi: 10.1097/WCO.0000000000000033.

●● Enlace al texto completo (gratis o de pago)

[1097/WCO.0000000000000033](https://doi.org/10.1097/WCO.0000000000000033)

**AUTORES / AUTHORS:** - Melin B; Jenkins R

**INSTITUCIÓN / INSTITUTION:** - aDepartment of Radiation Sciences, Oncology, Umea University, Sweden bDepartment of Laboratory Medicine and Pathology, Mayo Clinic, Rochester Minnesota, USA.

**RESUMEN / SUMMARY:** - PURPOSE OF REVIEW: The purpose of this review is to describe the recent knowledge gathered from the identification of seven genomic regions that have been linked to the risk of developing malignant glioma. RECENT FINDINGS: The recent novel discoveries in fine mapping and genotype-phenotype studies will be highlighted. Through imputation and next-generation sequencing a novel genetic variant, rs55705857, with a strong association at 8q24 has been discovered and validated in two studies. This locus is specifically associated with IDH1-mutated and IDH2-mutated tumors and oligodendroglial tumors, albeit the specific mechanism of tumor development is not understood. The genetic variants associated with the risk of glioma in the EGFR gene have also been associated with specific somatic aberrations, including loss at the CDKN2A/B locus and allele specific loss of EGFR in the tumors. A specific TP53 low frequency variant has also been associated with glioma risk and validated in a separate data set. The genetic risk in the telomere regulating genes TERT and RTEL appear to be associated with higher grade tumors without IDH mutations. SUMMARY: The link of genetic loci to specific tumor subtypes may have relevance for understanding glioma biology, and for developing new diagnostic tools and targeted therapy for glioma.

[361]

**TÍTULO / TITLE:** - Craniotomy vs. craniectomy for posterior fossa tumors: a prospective study to evaluate complications after surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Sep 29.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1882-y](https://doi.org/10.1007/s00701-013-1882-y)

**AUTORES / AUTHORS:** - Legnani FG; Saladino A; Casali C; Vetrano IG; Varisco M; Mattei L; Prada F; Perin A; Mangraviti A; Solero CL; Dimeco F

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Fondazione IRCCS Istituto Neurologico Carlo Besta, Via G. Celoria 11, 20133, Milan, Italy.

**RESUMEN / SUMMARY:** - BACKGROUND: Posterior fossa surgery traditionally implies permanent bone removal. Although suboccipital craniectomy offers an excellent exposure, it could lead to complications. Thus, some authors proposed craniotomy as a valuable alternative to craniectomy. In the present study we compare post-operative complications after craniotomy or craniectomy for posterior fossa surgery. METHODS: We prospectively collected data for a consecutive series of patients who underwent either posterior fossa craniotomy or craniectomy for tumor resection. We divided patients into two groups based on the surgical procedure performed and safety, complication rates and length of hospitalization were analyzed. Craniotomies were performed with Control-Depth-Attachment® drill and chisel, while we did craniectomies with perforator and rongeurs. RESULTS: One-hundred-fifty-two patients were included

in the study (craniotomy n = 100, craniectomy n = 52). We detected no dural damage after bone removal in both groups. The total complication rate related to the technique itself was 7 % for the craniotomy group and 32.6 % for the craniectomy group (<0.0001). Pseudomeningocele occurred in 4 % vs. 19.2 % (p = 0.0009), CSF leak in 2 % vs. 11.5 % (p = 0.006) and wound infection in 1 % vs. 1.9 % (p = 0.33), respectively. Post-operative hydrocephalus, a multi-factorial complication which could affect our results, was also calculated and occurred in 4 % of the craniotomy vs. 9.6 % of the craniectomy group (p = 0.08). The mean length of in-hospital stay was 9.3 days for the craniotomy group and 11.8 days for the craniectomy group (p = 0.10).  
CONCLUSIONS: The present study suggests that fashioning a suboccipital craniotomy is as effective and safe as performing a craniectomy; both procedures showed similar results in preserving dural integrity, while post-operative complications were fewer when a suboccipital craniotomy was performed.

[362]

**TÍTULO / TITLE:** - Primary Diffuse Leptomeningeal Gliomatosis Mimicking Tuberculous Meningitis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Child Neurol. 2013 Nov 27.

●● Enlace al texto completo (gratis o de pago) [1177/0883073813509121](#)

**AUTORES / AUTHORS:** - Kosker M; Sener D; Kilic O; Hasiloglu ZI; Islak C; Kafadar A; Batur S; Oz B; Cokugras H; Akcakaya N; Camcioglu Y

**INSTITUCIÓN / INSTITUTION:** - 1Division of Infectious Diseases, Clinical Immunology and Allergy, Department of Pediatrics, Cerrahpasa Medical Faculty, Istanbul University, Istanbul, Turkey.

**RESUMEN / SUMMARY:** - Primary diffuse leptomeningeal gliomatosis is a disease with an aggressive course that can result in death. To date, 82 cases have been reported. Here, the case of a 3-year-old male patient presenting with strabismus, headache, and restlessness is reported. Physical examination revealed paralysis of the left abducens nerve, neck stiffness, and bilateral papilledema. Tuberculous meningitis was tentatively diagnosed, and antituberculosis treatment was initiated when cranial imaging revealed contrast enhancement around the basal cistern. Craniocervical magnetic resonance imaging (MRI) was performed when there was no response to treatment, and it revealed diffuse leptomeningeal contrast enhancement around the basilar cistern, in the supratentorial and infratentorial compartments, and in the spinal region. Primary diffuse leptomeningeal gliomatosis was diagnosed by a meningeal biopsy.

[363]

**TÍTULO / TITLE:** - Renal cell carcinoma metastatic to meningioma: tumor-to-tumor metastasis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 Oct 16.

●● Enlace al texto completo (gratis o de pago) [5414/NP300680](#)

**AUTORES / AUTHORS:** - Carr K; He L; Weaver K; Nickols HH

[364]

**TÍTULO / TITLE:** - Immunohistochemical analysis of KBA.62 in eighteen neurothekeomas: a potential marker for differentiating neurothekeoma from melanocytic tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cutan Pathol. 2013 Oct 23. doi: 10.1111/cup.12251.

●● Enlace al texto completo (gratis o de pago) [1111/cup.12251](#)

**AUTORES / AUTHORS:** - Suarez A; High W

**INSTITUCIÓN / INSTITUTION:** - Dermatology, New York Presbyterian Hospital/Weil Cornell Medical Center, New York, New York, United States.

**RESUMEN / SUMMARY:** - BACKGROUND: Neurothekeoma represents a neoplasm of uncertain histogenesis that often occurs on the head and neck of younger individuals. Distinguishing neurothekeoma from other tumors, particularly malignancies such as melanoma, can be difficult given the variable presence of nuclear atypia, mitoses, and extension into fat or skeletal muscle. KBA.62 represents an anti-melanoma monoclonal antibody that marks approximately 93% of melanomas. This study sought to evaluate KBA.62 expression in neurothekeomas, both as means of affirming the diagnosis and as a potential confounding factor in excluding a melanocytic process. METHODS: Eighteen neurothekeomas from 17 patients were analyzed by light microscopy and immunohistochemistry. Immunohistochemistry was performed with KBA.62, S100, and CD10 antibodies. The diagnosis of neurothekeoma was confirmed by at least two dermatopathologists. RESULTS: All cases showed similar light microscopic and immunohistochemical features. With the exception of two cases, cells expressed CD10 and exhibited morphologic features consistent with neurothekeoma. All 18 cases were S100 immunonegative. The epithelioid cells of all neurothekeomas were KBA.62 immunopositive, including both of two neurothekeomas occurring in the same patient. CONCLUSIONS: In this study 100% of neurothekeomas tested were KBA.62 positive, suggesting the utility of this reagent as being supportive of the diagnosis of neurothekeoma.

[365]

**TÍTULO / TITLE:** - Synergistic anti-glioma effect of Hydroxygenkwanin and Apigenin in vitro.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chem Biol Interact. 2013 Nov 25;206(2):346-55. doi: 10.1016/j.cbi.2013.10.009. Epub 2013 Oct 19.

●● Enlace al texto completo (gratis o de pago) [1016/j.cbi.2013.10.009](#)

**AUTORES / AUTHORS:** - Wang Y; Xu YS; Yin LH; Xu LN; Peng JY; Zhou H; Kang W

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, 1<sup>st</sup> Affiliated Hospital of Dalian Medical University, No. 222, Dalian Zhongshan Road, Dalian 116011, Liaoning, China.

**RESUMEN / SUMMARY:** - Apigenin (AP) and Hydroxygenkwanin (HGK) are two natural flavonoid compounds. Previous studies have already demonstrated the anti-tumor capability of AP. However, it is not clear whether HGK has such property. In the current study, the anti-glioma activities of HGK and its synergistic anti-glioma effects with AP on C6 glioma cells were investigated. In addition, the possible mechanisms were also

studied. MTT assay and morphologic analysis including acridine orange/ethidium bromide (AO/EB) and 4',6-diamidino-2-phenylindole (DAPI) staining were used in the research, and the results indicated that the treatment with AP or HGK could inhibit C6 glioma cell proliferation respectively. Moreover, when AP was administered simultaneously, the anti-glioma effect of HGK was dramatically enhanced in a dose-dependent manner, which is obviously better than that of carmustine (BCNU) at the concentration 25µM for treating of 24h. Compared with control, mitochondrial membrane potential (MPP) loss and mitochondrion damage were detected by JC-1 fluorescence probes (JC-1) and transmission electron microscopy (TEM) after treatment. Obvious DNA damage and cell cycle S phase arrest were detected by alkaline comet assay and flow cytometric analysis (FCM). Additionally, up regulation of TNF-alpha level, activations of caspase-3, -8, over expressions of BID and BAK protein and BCL-XL protein down expression were also observed after treatment by the combination of AP and HGK. The results indicate that HGK may be an effective natural product to treat glioma, and the combination of AP and HGK may be a promising method for glioma chemotherapy.

[366]

**TÍTULO / TITLE:** - Simpson grade: an opportunity to reassess the need for complete resection of meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Nov 6.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00701-013-1923-6](#)

**AUTORES / AUTHORS:** - Heald JB; Carroll TA; Mair RJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Royal Hallamshire Hospital, Glossop Road, Sheffield, UK, S102JF.

**RESUMEN / SUMMARY:** - BACKGROUND: The relevance of the Simpson grading system as a predictor of meningioma progression or recurrence in modern neurosurgical practice has recently been called into question. The aim of our study was to compare the risk of progression/recurrence of tumours that had been treated with different Simpson grade resections in a contemporary population of benign (WHO grade I) meningioma patients. METHOD: One hundred eighty-three patients with histologically confirmed WHO grade I meningioma were retrospectively analysed. All patients underwent first-time craniotomy as their initial therapy between 2004 and 2012. Univariate analysis was performed using log-rank testing and Kaplan-Meier analysis for progression/recurrence-free survival. Multivariate analysis was performed using Cox proportional hazards regression modelling. RESULTS: The three-year progression/recurrence-free survival rates for patients receiving Simpson grade 1, 2 or 4 resections were 95 %, 87 % and 67 %, respectively. Simpson grade 4 resections progressed/recurred at a significantly greater rate than Simpson grade 1 resections (hazard ratio [HR] = 3.26, P = 0.04), whereas Simpson grade 2 resections did not progress/recur at a significantly greater rate than Simpson grade 1 resections (HR = 1.78, P = 0.29). Subtotal resections progressed/recurred at a significantly greater rate than gross-total resections (HR = 2.47, P = 0.03). CONCLUSIONS: Tumours that undergo subtotal resection are at a significantly greater risk of progression/recurrence than tumours that undergo gross-total resection. Gross-total resection should therefore be the aim of surgery. However, given modern access to follow-up imaging and

stereotactic radiosurgery, these results should not be used to justify overly 'heroic' tumour resection.

[367]

**TÍTULO / TITLE:** - Hemorrhagic Ganglioglioma of the Posterior Fossa: Case Report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Pediatr Neurosurg*. 2013 Oct 29.

●● Enlace al texto completo (gratis o de pago) [1159/000353992](#)

**AUTORES / AUTHORS:** - Jeevan DS; Neil JA; Mohan A; Tobias M

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Neurosurgery, Department of Neurological Surgery, Maria Fareri Children's Hospital at Westchester Medical Center, New York Medical College, Valhalla, N.Y., USA.

**RESUMEN / SUMMARY:** - Gangliogliomas are rare tumors of the central nervous system that are usually found in the supratentorial compartment, although cases throughout the nervous system have been described. They are generally low-grade malignancies that are amenable to cure by surgical resection. Most manifest as seizures, though, based on location, they can present with focal neurological deficits. We present here a rare case of an infratentorial ganglioglioma presenting with hemorrhage. To our knowledge this is the only reported case of a hemorrhagic ganglioglioma and, as such, we examine its possible prognosis. © 2013 S. Karger AG, Basel.

[368]

**TÍTULO / TITLE:** - An audit of immunohistochemical marker patterns in meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *J Clin Neurosci*. 2013 Nov 11. pii: S0967-5868(13)00385-8. doi: 10.1016/j.jocn.2013.06.008.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.06.008](#)

**AUTORES / AUTHORS:** - Baxter DS; Orrego A; Rosenfeld JV; Mathiesen T

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Neuroscience, Section of Neurosurgery, Karolinska Institute, R3:02 KS, Stockholm S-17176, Sweden.

**RESUMEN / SUMMARY:** - Meningiomas may express a number of potentially growth-promoting receptors including receptors for progesterone, growth hormone and vascular endothelial growth factor (VEGF). These and other receptors are potential targets for chemotherapy. We have prospectively studied a panel of markers as a routine in order to obtain data of individual expression of markers that may provide targets for anti-receptor treatment. One hundred and seventy-five consecutive patients operated on for meningiomas between 2005 and 2008 were prospectively analysed with antibodies against receptors for growth hormone, insulin-like growth factor 1 (IGF-1), androgen receptors, progesterone receptors (PR) and antibodies against CD34, VEGF, Ki-67 and caspase-3. Expression of IGF-1 receptor (IGF-1r), epidermal growth factor receptor (EGFR) E30 and growth hormone receptor (GHR) was conserved across histological grades and found in 88% to 94% of meningiomas. PR were detected in 87%, but expression decreased in aggressive tumours. Angio-markers such as VEGF and CD34 were detected in 69% and 17% of meningiomas, respectively. Androgen receptors and caspase-3 were uncommon. The analyses of a panel were undertaken

as a clinical routine in order to assess its feasibility and to provide data that can be utilised in a clinical setting. Three putative therapeutic receptor targets, IGF-1r, GHR and EGFR E30 were expressed in a large majority of tumours and in contrast to PR maintained expression despite increasing pathological grade of meningioma. Our data also suggest that anti-progesterone therapies and anti-angiogenic therapies could be targeted to subsets of meningioma patients who express PR or have CD34-positive tumours.

[369]

**TÍTULO / TITLE:** - Spinal meningioma becoming symptomatic in the third trimester of pregnancy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Dec;20(12):1797-9. doi: 10.1016/j.jocn.2013.08.001. Epub 2013 Aug 14.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.08.001](#)

**AUTORES / AUTHORS:** - Pikis S; Cohen JE; Rosenthal G; Barzilay Y; Kaplan L; Shoshan Y; Itshayek E

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hadassah-Hebrew University Medical Center, P.O. Box 12000, Jerusalem 91120, Israel.

**RESUMEN / SUMMARY:** - We report a rare case of a spinal meningioma leading to symptoms of spinal cord compression starting in the third trimester of gestation in a 32-year-old woman. Neurological symptoms, which continued to progress after the patient had given birth, were assumed to be sequelae of pregnancy and delivery, leading to a 6month delay in diagnosis and treatment. Fortunately a gross total resection was achieved at surgery and the patient recovered fully, without permanent consequences. Associated symptoms of spinal cord compression may be falsely attributed to pregnancy, both by the pregnant women and her treating physician. A high index of suspicion and thorough history and physical examination to identify red flags should be performed in patients with neurological symptoms.

[370]

**TÍTULO / TITLE:** - Porous chitosan-hyaluronic acid scaffolds as a mimic of glioblastoma microenvironment ECM.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomaterials. 2013 Dec;34(38):10143-50. doi: 10.1016/j.biomaterials.2013.09.034. Epub 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago)

[1016/j.biomaterials.2013.09.034](#)

**AUTORES / AUTHORS:** - Florczyk SJ; Wang K; Jana S; Wood DL; Sytsma SK; Sham JG; Kievit FM; Zhang M

**INSTITUCIÓN / INSTITUTION:** - Department of Materials Science and Engineering, University of Washington, Seattle, WA 98195, USA.

**RESUMEN / SUMMARY:** - Cancer therapeutics are developed through extensive screening; however, many therapeutics evaluated with 2D in vitro cultures during pre-clinical trials suffer from lower efficacy in patients. Replicating the in vivo tumor microenvironment in vitro with three-dimensional (3D) porous scaffolds offers the

possibility of generating more predictive pre-clinical models to enhance cancer treatment efficacy. We developed a chitosan and hyaluronic acid (HA) polyelectrolyte complex 3D porous scaffold and evaluated its physical properties. Chitosan-HA (C-HA) scaffolds had a highly porous network. C-HA scaffolds were compared to 2D surfaces for in vitro culture of U-118 MG human glioblastoma (GBM) cells. C-HA scaffold cultures promoted tumor spheroid formation and increased stem-like properties of GBM cells as evidenced by the upregulation of CD44, Nestin, Musashi-1, GFAP, and HIF-1alpha as compared with 2D cultures. Additionally, the invasiveness of GBM cells cultured in C-HA scaffolds was significantly enhanced compared to those grown in 2D cultures. C-HA scaffold cultures were also more resistant to chemotherapy drugs, which corresponded to the increased expression of ABCG2 drug efflux transporter. These findings suggest that C-HA scaffolds offer promise as an in vitro GBM platform for study and screening of novel cancer therapeutics.

[371]

**TÍTULO / TITLE:** - NF-kappaB, ERK, p38 MAPK and JNK contribute to the initiation and/or maintenance of mechanical allodynia induced by tumor necrosis factor-alpha in the red nucleus.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Res Bull. 2013 Oct;99:132-9. doi: 10.1016/j.brainresbull.2013.10.008. Epub 2013 Oct 23.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1016/j.brainresbull.2013.10.008](#)

**AUTORES / AUTHORS:** - Zhang Q; Wang J; Duan MT; Han SP; Zeng XY; Wang JY

**INSTITUCIÓN / INSTITUTION:** - Department of Immunology and Pathogenic Biology, Xi'an Jiaotong University College of Medicine, Xi'an, Shaanxi 710061, China; Department of Pathogenic Biology and Immunology, Qinghai University College of Medicine, Xining, Qinghai 810016, China.

**RESUMEN / SUMMARY:** - Previous studies have demonstrated that tumor necrosis factor-alpha (TNF-alpha) in the red nucleus (RN) plays facilitated roles in the development of abnormal pain. Here, the roles of nuclear factor-kappa B (NF-kappaB), extracellular signal-regulated kinase (ERK), p38 mitogen-activated protein kinase (MAPK) and c-Jun N-terminal kinase (JNK) in TNF-alpha-evoked mechanical allodynia were investigated. Repeated microinjection of recombinant rat TNF-alpha (20ng daily for 3 days) into the unilateral RN of normal rats induced a significant mechanical allodynia in the contralateral but not ipsilateral hind paw at the fifth day and disappeared 24h later. Re-injection of a single bolus of 20ng TNF-alpha into the same RN reproduced this mechanical allodynia within 30min, which was used as a pain model for further experiments. Immunohistochemistry demonstrated that NF-kappaB, phospho-ERK (p-ERK) and p-p38 MAPK in the RN were significantly up-regulated at 1h after TNF-alpha microinjection, the up-regulations of NF-kappaB and p-ERK but not p-p38 MAPK remained at high levels till 4h later. A significant up-regulation of p-JNK occurred at 4h (but not 1h) after TNF-alpha microinjection, which was later than those of NF-kappaB, p-ERK and p-p38 MAPK. Pre-treatment with NF-kappaB inhibitor PDTC, ERK inhibitor PD98059 or p38 MAPK inhibitor SB203580 at 30min before TNF-alpha microinjected into the RN completely prevented TNF-alpha-evoked mechanical allodynia. Pre-treatment with JNK inhibitor SP600125 did not prevent but reversed

TNF-alpha-evoked mechanical allodynia during the subsequent detection time. Post-treatment with PDTC, PD98059 or SP600125 (but not SB203580) at 4h after TNF-alpha microinjected into the RN significantly reversed TNF-alpha-evoked mechanical allodynia. These results further prove that TNF-alpha in the RN plays a crucial role in the development of abnormal pain, and the analgesic effect of TNF-alpha is initiated through activating NF-kappaB, ERK and p38 MAPK. The later maintenance of TNF-alpha-evoked mechanical allodynia mainly relies on the activation of NF-kappaB, ERK and JNK, but not p38 MAPK.

[372]

**TÍTULO / TITLE:** - Brainstem Gliomas: Surgical indications and technical considerations in a series of 58 cases.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Neurosurg. 2013 Oct 21.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.829562](#)

**AUTORES / AUTHORS:** - Sinha S; Kale SS; Chandra SP; Suri A; Mehta VS; Sharma BS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, All India Institute of Medical Sciences, New Delhi, India.

**RESUMEN / SUMMARY:** - Objectives. To analyze the indications of surgical treatment, surgical management strategies and post-surgical outcome in patients with brainstem glioma (BSG). Methods. In this retrospective study conducted from 1998 to 2012, 58 patients of surgically treated intrinsic BSG, meeting the inclusion criterion were enrolled. There were 40 males and 18 females, with age range varying from 3 to 55 years. The most common presentation was gait disturbances, either due to cerebellar involvement or motor weakness, followed by motor weakness, ocular involvement and headache. The posteriorly located tumors were operated by midline suboccipital approach (42 patients) and supracerebellar-infratentorial approach (4 patients). Posterolaterally located tumors were operated by retromastoid (10 patients) and all the ventrolateral tumors by subtemporal approach (4 patients). Results. Above 90% patients improved in their neurological status, while 5% deteriorated. Pilocytic astrocytoma was the most common histopathology (41.4%), followed by Grade II astrocytoma (34.5%) and Grade III astrocytoma (24.1%). Overall, 19% patients had postoperative complications and three patients (5%) died in the perioperative period. Conclusions. Surgery is advocated for patients with well delineated, posteriorly, posterolaterally and ventrolaterally located tumors having slow progression and relative preservation of motor power. BSG can have excellent surgical results with surgeon's experience and modern surgical facilities.

[373]

**TÍTULO / TITLE:** - Endothelial PKCalpha-MAPK/ERK-phospholipase A pathway activation as a response of glioma in a triple culture model. A new role for pericytes?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biochimie. 2013 Nov 25. pii: S0300-9084(13)00422-7. doi: 10.1016/j.biochi.2013.11.013.

●● Enlace al texto completo (gratis o de pago) [1016/j.biochi.2013.11.013](#)

**AUTORES / AUTHORS:** - Anfuso CD; Motta C; Giurdanella G; Arena V; Alberghina M; Lupo G

**INSTITUCIÓN / INSTITUTION:** - Dept. Biomedicina Clinica e Molecolare, University of Catania, Catania, Italy.

**RESUMEN / SUMMARY:** - In view of understanding the molecular mechanisms through which angiogenic switch on happens in the early phases of reciprocal interaction between tumor and cells constituting microvessel, a triple culture model in which endothelial cells (EC), pericytes (PC) and glioma C6 cells were cultured together. In the present work, we observed that C6 enhanced EC proliferation. This effect was reduced by cytosolic and Ca<sup>2+</sup>-independent phospholipase A2 (cPLA2 and iPLA2), cyclooxygenase-2 (COX-2), PI3-K, MEK-1, and ERK1/2 inhibitors and by siRNAs against both PLA2s. In EC, C6 induced an increase in iPLA2, cPLA2 and COX-2 total protein expression. Moreover, the increase in endothelial cPLA2 phosphorylation was attenuated by kinase inhibitors. Both EC proliferation and signal protein phosphorylation were attenuated when PC were in triple culture. In EC/C6 supernatants, and, in a lesser extent, in EC/PC co-cultures, an enhancement in prostaglandins E2 (PGE2) was found. The presence of PC in triple-cultures caused a decrease in production of PGE2 respect to EC/C6 double-cultures. In all systems, AACOCF3 and BEL significantly reduced PGE2 secretion. In Matrigel-based assays, emerging branch points from EC cell bodies and tubule-like structures were observed. C6 conditioned EC/PC co-cultures in constituting poorly organized tubules. Transfection of EC with c- and iPLA2 siRNA strongly reduced in vitro tubulogenesis. Data here reported indicate that PKCalpha, ERK kinase phosphorylation, PLA2s and COX-2 activation, and PGE2 production in EC stimulated by tumor cells are coincident phenomena and could represent therapeutic targets in chemoprevention of glioma. Moreover, PC exhibited an important "modulating" role in the initial stages of angiogenesis driven by a brain tumor.

[374]

**TÍTULO / TITLE:** - The association between dural arterio-venous fistulas (DAVFs) and meningeal-based tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1949-9](#)

**AUTORES / AUTHORS:** - Cunha E Sa M; Gradil C

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hospital Garcia de Orta, Almada, Portugal, [mcunhaesa@gmail.com](mailto:mcunhaesa@gmail.com).

[375]

**TÍTULO / TITLE:** - Effects of tetrandrine on glioma cell malignant phenotype via inhibition of ADAM17.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Nov 3.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1293-y](#)

**AUTORES / AUTHORS:** - Wu Z; Wang G; Xu S; Li Y; Tian Y; Niu H; Yuan F; Zhou F; Hao Z; Zheng Y; Li Q; Wang J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The 2<sup>nd</sup> Affiliated Hospital, Harbin Medical University, Harbin, 150086, China.

**RESUMEN / SUMMARY:** - Tetrandrine (TET), a bisbenzylisoquinoline alkaloid isolated from the root of Hang-Fang-Chi (*Stephania tetrandra* S. Moore), exhibits broad pharmacological effects, including antitumor activity in various malignant neoplasms. Recently, the beneficial effects of TET on cytotoxicity towards tumor cells, radiosensitization, circumventing multidrug resistance, normal tissue radioprotection, and antiangiogenesis have been examined extensively. However, the potential molecular mechanisms of the effect on glioma of TET are yet unknown. This study is explored to evaluate whether TET can inhibit cell proliferation, invasion, and the possible underlying mechanisms in glioma U87 cell. In the present study, cell proliferation was determined by using the Cell Counting Kit-8 (CCK-8) viability assay. The invasion and migration were evaluated by means of wound-scratch assay and Matrigel-Transwell methods. The mRNA expression and protein expression of ADAM metalloproteinase domain 17 (ADAM17) in glioma cell lines and glioma samples were determined by reverse transcription-polymerase chain reaction (RT-PCR) and Western blotting, respectively. Moreover, the expression of epidermal growth factor receptor (EGFR)/p-EGFR and AKT/p-AKT was studied to clarify the molecular mechanism. Our results suggested that TET inhibited cell proliferation in a dose- and time-dependent manner, and cell migration and invasion in vitro. In addition, our results indicated that ADAM17 expression significantly increased in glioma compared to nontumored human brain tissue and according to the histopathological grade of glioma. Western blot analysis showed that protein expressions of ADAM17, p-EGFR, and p-AKT were inhibited by TET in U87 cells. These data also suggest that suppression of ADAM17 and downregulation of EGFR-phosphoinositide-3-kinase (PI3K)-AKT signaling pathways may contribute to TET-induced decrease of proliferation, migration, and invasiveness.

[376]

**TÍTULO / TITLE:** - Voltage-gated and ATP-sensitive K<sup>+</sup> channels are associated with cell proliferation and tumorigenesis of human glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Nov 27. doi: 10.3892/or.2013.2875.

●● [Enlace al texto completo \(gratis o de pago\) 3892/or.2013.2875](#)

**AUTORES / AUTHORS:** - Ru Q; Tian X; Wu YX; Wu RH; Pi MS; Li CY

**INSTITUCIÓN / INSTITUTION:** - Wuhan Institutes of Biomedical Sciences, Jiangnan University, Wuhan, Hubei 430056, P.R. China.

**RESUMEN / SUMMARY:** - Increasing evidence indicates that potassium (K<sup>+</sup>) channels play important roles in the growth and development of human cancer. In the present study, we investigated the contribution of and the mechanism by which K<sup>+</sup> channels control the proliferation and tumor development of U87-MG human glioma cells. A variety of K<sup>+</sup> channel blockers and openers were used to differentiate the critical subtype of K<sup>+</sup> channels involved. The in vitro data demonstrated that selective blockers of voltage-gated K<sup>+</sup> (KV) channels or ATP-sensitive K<sup>+</sup> (KATP) channels significantly inhibited the proliferation of U87-MG cells, blocked the cell cycle at the G<sub>0</sub>/G<sub>1</sub> phase and induced apoptosis. In the U87-MG xenograft model in nude mice, KV or KATP channel blockers markedly suppressed tumor growth in vivo. Furthermore,

electrophysiological results showed that KV or KATP channel blockers inhibited KV/KATP channel currents as well as cell proliferation and tumor growth over the same concentration range. In contrast, iberiotoxin, a selective blocker of calcium-activated K<sup>+</sup> channels, had no apparent effect on the cell proliferation, cell cycle or apoptosis of U87-MG cells. In addition, the results of fluorescence assays indicated that blockers of KV or KATP channels attenuated intracellular Ca<sup>2+</sup> signaling by blocking Ca<sup>2+</sup> influx in U87-MG cells. Taken together, these data suggest that KV and KATP channels play important roles in the proliferation of U87-MG cells and that the influence of KV and KATP channels may be mediated by a Ca<sup>2+</sup>-dependent mechanism.

[377]

**TÍTULO / TITLE:** - Intracerebral injection of oil cyst content of human craniopharyngioma (oil machinery fluid) as a toxic model in the rat brain.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Histochem. 2013 Nov 2. pii: S0065-1281(13)00188-8. doi: 10.1016/j.acthis.2013.10.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.acthis.2013.10.002](#)

**AUTORES / AUTHORS:** - Tena-Suck ML; Hernandez-Campos ME; Ortiz-Plata A; Salinas-Lara C; Colin-Gonzalez AL; Santamaria A

**INSTITUCIÓN / INSTITUTION:** - Sección de Estudios de Posgrado e Investigación de la Escuela Superior de Medicina, Instituto Politécnico Nacional, México City, México; Departamento de Neuropatología, Instituto Nacional de Neurología y Neurocirugía. México City, México.

**RESUMEN / SUMMARY:** - Craniopharyngiomas (CPs) are benign epithelial cystic tumors of the sellar and suprasellar region with a high survival rate and high recurrence in children. CPs contain dense oily fluid, but little is known yet about this content and its contribution to tissue damage and tumoral growth. In this study, we developed a simple experimental model produced by intracortical injection to rats of the cyst fluid content collected from human CPs to explore its possible contribution to brain tissue damage. The cyst fluid of the CPs ("oil machinery fluid") was collected during surgical removal, briefly preserved and further tested in rats through intracortical infusion. The group receiving "oil machinery fluid" presented increased reactive oxygen species formation, oxidative damage to lipids and reactive gliosis accompanied by augmented immunoreactivity to peroxiredoxin and thioredoxin reductase 1 at 15, 30 and 45 days post-injection. Other markers of inflammation and cell damage were stimulated at all post-lesion days tested. There was also a body weight gain. The persistence of tissue damage and oxidative stress suggests that "oil machinery fluid" exerts progressive alterations similar to those observed in patients with CPs, supporting the concept that some components of cyst fluid may contribute to brain tissue damage in these patients.

[378]

**TÍTULO / TITLE:** - Study of chromosome 9q gain, Notch pathway regulators and Tenascin-C in ependymomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 1.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1287-z](#)

**AUTORES / AUTHORS:** - Gupta RK; Sharma MC; Suri V; Kakkar A; Singh M; Sarkar C  
**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, All India Institute of Medical Sciences, New Delhi, 110029, India.

**RESUMEN / SUMMARY:** - Ependymomas are relatively uncommon tumours of the central nervous system which arise from the ependymal lining of the ventricles and spinal canal. The molecular changes leading to ependymal oncogenesis are not completely understood. We examined chromosome 9q33-34 locus for gain, potential oncogenes at this locus (Notch-1 and Tenascin-C) and Notch pathway target genes (Hes-1, Hey-2 & C-myc) in ependymomas by fluorescent in situ hybridization (FISH) and immunohistochemistry (IHC), respectively, to assess if they have any correlation with clinical characteristics. We analyzed 50 cases of ependymomas by FISH for 9q gain and by IHC for Notch-1 and its target gene proteins (Hes-1, Hey-2 and C-myc) expression. We also performed IHC for Tenascin-C to rule out any correlation with aggressiveness/grade of tumour. FISH study revealed significant chromosome 9q gain in ependymomas of adult onset (age > 18 years) and spinal cord origin. Notch-1 showed significantly more frequent immunohistochemical expression in supratentorial and anaplastic ependymomas. Tenascin-C (TN-C) expression was significant in intracranial, childhood (age <= 18 years) and anaplastic ependymomas. Of the three Notch pathway target gene proteins (Hes-1, Hey-2 and C-myc), Hes-1 and C-myc expression showed significant correlation with anaplastic and adult onset ependymomas, respectively. Genetic alterations are independent prognostic markers in ependymomas. A clinicopathological correlation with various molecular signatures may be helpful in the development of new therapeutic targets.

[379]

**TÍTULO / TITLE:** - Ultrahigh resolution mass spectrometry-based metabolic characterization reveals cerebellum as a disturbed region in two animal models.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Talanta. 2014 Jan 15;118:45-53. doi: 10.1016/j.talanta.2013.09.019. Epub 2013 Oct 5.

●● Enlace al texto completo (gratis o de pago) [1016/j.talanta.2013.09.019](#)

**AUTORES / AUTHORS:** - Lin S; Kanawati B; Liu L; Witting M; Li M; Huang J; Schmitt-Kopplin P; Cai Z

**INSTITUCIÓN / INSTITUTION:** - Department of Chemistry, Hong Kong Baptist University, Hong Kong SAR, China.

**RESUMEN / SUMMARY:** - In the previous reports about cognitive dysfunction, cerebellum was thought to be a less affected tissue by genetic or environmental alterations in comparison to other tissues in the brain including hippocampus under the same conditions. In this work, we investigated two types of metabolomic alterations inside the cerebellum tissue. The first one addressed the differences in the metabolomics profiles between Transgenic (Tg) CRND8 of Alzheimer's disease mice and non-transgenic (non-Tg) littermates. The second one addressed the metabolic differences between wild type mice exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and wild type mice which are not exposed to this toxic compound. For these two investigations, ultrahigh resolution Fourier transform ion cyclotron resonance mass spectrometry (FT-ICR/MS) was implemented. As a result, the significant changes of each comparison were tentatively annotated by the high mass accuracy generated

from the measurements in the negative ion mode. The biosynthesis of amino acids was also enhanced pronouncedly, and perturbation of purine metabolism was also observed in Tg mice compared to non-Tg littermates. In another animal model, the reduced levels of amino acids were found whereas the intermediate levels in purine metabolism and fatty acids including fatty acid conjugated metabolites were elevated in cerebellar tissues of mice exposed to TCDD compared to control group. Collectively, it was demonstrated that FT-ICR/MS was a powerful tool for interpretation of the elemental compositions of the peaks, revealing that the metabolic perturbations in cerebellar tissues of mice were induced by either genetic manipulation or environmental factor. Therefore, the non-targeted approach, alternatively, provides various metabolic phenotypes for the systems-level mirror of the complex etiology of neurotoxicity in the cerebellum.

[380]

**TÍTULO / TITLE:** - Intracranial germinoma in the pineal region arising after subtotal resection of epidermoid cyst: case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Nov 13.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2317-z](#)

**AUTORES / AUTHORS:** - Walker AJ; Huynh-Le MP; Nauen D; Malayeri AA; Jallo G; Terezakis SA

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology and Molecular Radiation Sciences, Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine, 401 N. Broadway, Suite 1440, Baltimore, MD, 21231, USA.

**RESUMEN / SUMMARY:** - We present an unusual case of a germinoma of the pineal region arising adjacent to an epidermoid cyst in a 16-year-old male. Initial imaging findings were classic for epidermoid cyst. The patient underwent two partial resections at an outside institution, each specimen demonstrating pure epidermoid cyst. Follow-up imaging over a period of 24 months showed an area of progressive contrast enhancement adjacent to the initial lesion, suggesting the development of a neoplasm. Given the area of contrast enhancement in addition to worsening headaches and visual changes, he underwent a third and final resection at our institution. Pathology revealed a mixed germ cell tumor with prominent germinoma component in addition to a well-differentiated epidermoid cyst. Details of his imaging and pathologic findings are presented, and possible explanations for these findings are explored, the most likely of which is lack of complete resection at the onset failed to identify the whole of the neoplasm. We conclude that pediatric epidermoid cysts of the pineal region should always receive close follow-up, particularly when total resection is not performed.

[381]

**TÍTULO / TITLE:** - Cerebellopontine angle epidermoid cyst.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Otorrinolaringol Esp. 2013 Oct 1. pii: S0001-6519(13)00139-8. doi: 10.1016/j.otorri.2013.05.008.

●● Enlace al texto completo (gratis o de pago) [1016/j.otorri.2013.05.008](#)

**AUTORES / AUTHORS:** - Pont E; Mazon M; Ferrer AR

**INSTITUCIÓN / INSTITUTION:** - Servicio de Otorrinolaringología, Hospital Francesc de Borja, Gandia, Valencia, España. Electronic address: [elenapont@hotmail.com](mailto:elenapont@hotmail.com).

[382]

**TÍTULO / TITLE:** - Tumor progression and transformation of low-grade glial tumors associated with pregnancy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Sep 28.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1261-9](#)

**AUTORES / AUTHORS:** - Daras M; Cone C; Peters KB

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY, 10065, USA.

**RESUMEN / SUMMARY:** - Brain tumor growth or progression has been shown to occur in low-grade glial tumors and meningiomas. While progression has been documented in this population, transformation to a more aggressive high-grade glial tumor that can lead to increased morbidity and mortality has not been identified. In this case series, we document transformation from low-grade gliomas to high-grade gliomas (WHO grade III and IV) in young women during pregnancy. We further discuss the possible etiologies of this phenomenon.

[383]

**TÍTULO / TITLE:** - Activation of EGFR signaling from pilocytic astrocytomas to glioblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Biol Markers. 2013 Sep 27:0. doi: 10.5301/JBM.5000045.

●● Enlace al texto completo (gratis o de pago) [5301/JBM.5000045](#)

**AUTORES / AUTHORS:** - Carvalho PO; Uno M; Oba-Shinjo SM; Rosemberg S; Wakamatsu A; da Silva CC; Teixeira MJ; Marie SK

**INSTITUCIÓN / INSTITUTION:** - 1Department of Neurology, School of Medicine, University of Sao Paulo - Brazil.

**RESUMEN / SUMMARY:** - <sec

id="st1"><title>ABSTRACT</title><p><b>Introduction:</b><i>EGFR</i> analyses allow for better correlation between genotype and phenotype in astrocytomas and represent an attractive therapeutic target. Most studies emphasize analyses of <i>EGFR</i> in glioblastomas (GBMs) but do not analyze all grades of astrocytomas (from pilocytic to GBM). The purpose of our study was to evaluate the status of <i>EGFR</i> (expression, deletion, and amplification) and EGFR protein expression in all grades of astrocytomas.</p><p><b>Patients and methods:</b> We analyzed a total of 145 surgical tumor specimens that included: 22 pilocytic astrocytomas, 22 grade II astrocytomas, 17 grade III astrocytomas and 84 GBMs. The specimens were compared to 17 non-neoplastic brain tissues obtained from epilepsy surgery. <i>EGFR</i> expression, <i>EGFR</i> amplification and EGFRvIII analyses were performed by quantitative real-time PCR, and protein expression was evaluated by immunohistochemistry.</p><p><b>Results:</b><i>EGFR</i> relative

overexpression and *EGFR* amplification were observed, respectively, in 50% and 20% of astrocytomas, while EGFRvIII was only found in GBMs (34.5%,  $p=0.005$ ). Amongst *EGFR*-amplified GBM cases, 59% also presented EGFRvIII ( $p<0.001$ ). Cytoplasmic accumulation of EGFR protein was detected in 75% of astrocytomas, and 21% of the astrocytomas showed nuclear localization ( $p=0.003$ ).

**Conclusions:** EGFR alterations were found in all grades of astrocytomas, from pilocytic to GBMs, while EGFRvIII was exclusively found in GBMs. These findings provide important information on the mechanisms involved in the progression of astrocytomas for determining whether EGFR status can be used for effective and specific therapy.

[384]

**TÍTULO / TITLE:** - Juvenile parkinsonism as an initial manifestation of gliomatosis cerebri.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol. 2013 Dec;260(12):3161-3. doi: 10.1007/s00415-013-7162-1. Epub 2013 Oct 25.

●● Enlace al texto completo (gratis o de pago) [1007/s00415-013-7162-1](#)

**AUTORES / AUTHORS:** - Jang W; Ha SH; Khang SK; Kim J; Kim SH; Kim HJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Gangneung Asan Hospital, College of Medicine, University of Ulsan, Gangneung, Republic of Korea.

[385]

**TÍTULO / TITLE:** - Imaging characteristics of primary intracranial teratoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Radiol. 2013 Oct 8.

●● Enlace al texto completo (gratis o de pago) [1177/0284185113507824](#)

**AUTORES / AUTHORS:** - Liu Z; Lv X; Wang W; An J; Duan F; Feng X; Chen X; Ouyang B; Li S; Singh S; Qiu S

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Imaging Center, Nanfang Hospital, Southern Medical University, Guangzhou, People's Republic of China.

**RESUMEN / SUMMARY:** - BACKGROUND: Primary intracranial teratomas are rare intracranial neoplasms, and are subdivided into mature, immature, and those with malignant transformation. To date, only a few studies of teratoma imaging have been reported. PURPOSE: To describe and characterize the magnetic resonance imaging (MRI) findings in a series of 18 patients (16 men/boys and 2 women/girls; mean age, 14.5 years) with pathologically proven teratomas. MATERIAL AND METHODS: Findings from medical records and imaging examinations in 18 patients with pathologically confirmed intracranial teratomas from 2001 to 2011 were retrospectively reviewed at our two institutions. Two radiologists evaluated the lesion location, shape, size, number, edge, homogeneous or heterogeneous appearance, attenuation, signal intensity, and degree of enhancement. RESULTS: All tumors were located within the pineal ( $n = 13$ ), parasellar ( $n = 2$ ), or suprasellar ( $n = 3$ ) regions. The lesions appeared of mixed intensity on MRI, reflecting the histologic heterogeneity, including fibrosis, fatty tissue, calcification, cysts, and keratinocytes. In mature teratomas ( $n = 9$ ), seven of nine tumors showed non-enhanced multilocularity or heterogeneous enhancement of

the cyst wall on contrast-enhanced T1-weighted (T1W) images. Two of nine tumors showed moderate, heterogeneous enhancement in the solid portion of the lesion; whereas in immature (n = 7) or malignant transformation (n = 2) teratomas, heterogeneous, ring-like, intratumoral patchy enhancement was noted on T1W images with contrast. CONCLUSION: Primary intracranial teratomas are usually localized in the pineal and the suprasellar regions, and often present an ovoid or lobulated mass with or without multilocularity on MRI. Marked enhancement of the solid portion or the thick wall of the tumor was the key feature for distinguishing mature teratoma and malignant teratoma.

[386]

**TÍTULO / TITLE:** - Infiltrative patterns of glioblastoma: Identification of tumor progress using apparent diffusion coefficient histograms.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Magn Reson Imaging. 2013 Sep 30. doi: 10.1002/jmri.24258.

●● Enlace al texto completo (gratis o de pago) [1002/jmri.24258](#)

**AUTORES / AUTHORS:** - Lutz K; Wiestler B; Graf M; Baumer P; Floca R; Schlemmer HP; Heiland S; Wick W; Bendszus M; Radbruch A

**INSTITUCIÓN / INSTITUTION:** - Department of Neuroradiology, University of Heidelberg, Medical Center, Heidelberg, Germany.

**RESUMEN / SUMMARY:** - PURPOSE: To investigate whether apparent diffusion coefficient (ADC) histogram analysis can differentiate between patients presenting T2-progress and patients presenting stable T2-signal in glioblastoma. MATERIALS AND METHODS: Fourteen patients presenting an isolated T2-progress and a matched control group exhibiting stable disease were included. Relative ADC value distribution within tumoral and peritumoral FLAIR hyperintensities were evaluated using ADC-histogram analysis. Severity and frequency of ADC shift between baseline, T2-progress, and subsequent T1-progress were analyzed using the Wilcoxon test. RESULTS: The shift of ADC histograms either to higher or to lower values in case of T2-progress was significantly more severe than in the control group (P value 0.05). Furthermore, a significant shift toward lower ADC values (P value 0.02) was detected when comparing ADC histograms of patients with T2-progress and subsequent T1-progress. CONCLUSION: The basis for the observed ADC shift in isolated T2-progress may be time dependent: Initially, formation of peritumoral edema may cause an increase of ADC values that is followed by tumor cells infiltrating the surrounding tissue, causing a subsequent decrease of ADC values. The shift toward lower ADC values in case of subsequent T1-progress confirms this hypothesis and provides further evidence for T2-progress being an intermediate step between stable disease (SD) and T1-progress. J. Magn. Reson. Imaging 2013. © 2013 Wiley Periodicals, Inc.

[387]

**TÍTULO / TITLE:** - A case of prolactinoma with chordoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Sep 23. pii: S0303-8467(13)00364-8. doi: 10.1016/j.clineuro.2013.09.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.09.010](#)

**AUTORES / AUTHORS:** - Hattori Y; Tahara S; Ishii Y; Kitamura T; Inomoto C; Osamura RY; Teramoto A; Morita A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Nippon Medical School, Tokyo, Japan. Electronic address: [yujiro@nms.ac.jp](mailto:yujiro@nms.ac.jp).

[388]

**TÍTULO / TITLE:** - Differentiation between low-grade and high-grade glioma using combined diffusion tensor imaging metrics.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Oct 16. pii: S0303-8467(13)00409-5. doi: 10.1016/j.clineuro.2013.10.003.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.10.003](http://1016/j.clineuro.2013.10.003)

**AUTORES / AUTHORS:** - Ma L; Song ZJ

**INSTITUCIÓN / INSTITUTION:** - Digital Medical Research Center, Fudan University, Shanghai, China; Shanghai Key Lab of Medical Image Computing and Computer Assisted Intervention, Shanghai, China. Electronic address: [linma1206@gmail.com](mailto:linma1206@gmail.com).

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To ascertain whether diffusion tensor imaging (DTI) metrics including tensor shape measures such as planar and spherical isotropy coefficients (CP and CS) can be used to distinguish high-grade from low-grade gliomas. **METHODS:** Twenty-five patients with histologically proved brain gliomas (10 low-grade and 15 high-grade) were included in this study. Contrast-enhanced T1-weighted images, non-diffusion weighted b=0 (b0) images, fractional anisotropy (FA), apparent diffusion coefficient (ADC), CS and CP maps were co-registered and each lesion was divided into two regions of interest (ROI): enhancing and immediate peritumoral edema (edema adjacent to tumor). Univariate and multivariate logistic regression analyses were applied to determine the best classification model. **RESULTS:** There was a statistically significant difference in the multivariate logistic regression analysis. The best logistic regression model for classification combined three parameters (CS, FA and CP) from the immediate peritumoral part (p=0.02), resulting in 86% sensitivity, 80% specificity and area under the curve of 0.81. **CONCLUSION:** Our study revealed that combined DTI metrics can function in effect as a non-invasive measure to distinguish between low-grade and high-grade gliomas.

[389]

**TÍTULO / TITLE:** - Response of Subependymal Giant Cell Astrocytoma With Spinal Cord Metastasis to Everolimus.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Hematol Oncol. 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago)

[1097/MPH.0000000000000005](http://1097/MPH.0000000000000005)

**AUTORES / AUTHORS:** - Aguilera D; Flamini R; Mazewski C; Schniederjan M; Hayes L; Boydston W; Castellino RC; Macdonald TJ

**INSTITUCIÓN / INSTITUTION:** - \*Aflac Cancer and Blood Disorders Center double daggerDepartment of Pathology, Children's Healthcare of Atlanta, Emory University School of Medicine Departments of daggerNeurology section signRadiology parallelNeurosurgery, Children's Healthcare of Atlanta, Atlanta, GA.

**RESUMEN / SUMMARY:** - BACKGROUND:: Brain subependymal giant cell astrocytomas (SEGAs) in patients with tuberous sclerosis have been reported to respond to everolimus. METHODS:: A 15-year-old male patient with intractable seizures and multiple SEGAs of the brain developed leptomeningeal enhancement and multiple metastatic, histologically confirmed SEGAs of the spinal cord. He received daily everolimus at a dose of 3 mg/m for 6 weeks, which was then increased to 6 mg/m. RESULTS:: Magnetic resonance image of the brain and spine showed significant reduction in the size of SEGAs after 6 weeks of treatment. The patient has remained free of progression for 24 months. Additional benefits included: excellent seizure control, decrease in the size of cardiac rhabdomyomas, and improved quality of life. CONCLUSIONS:: We describe a rare case of metastatic SEGA, which was successfully treated with everolimus.

[390]

**TÍTULO / TITLE:** - TTF-1 Expressing Sellar Neoplasm with Ependymal Rosettes and Oncocytic Change: Mixed Ependymal and Oncocytic Variant Pituicytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocr Pathol. 2013 Nov 16.

●● Enlace al texto completo (gratis o de pago) [1007/s12022-013-9279-2](#)

**AUTORES / AUTHORS:** - Saeed Kamil Z; Sinson G; Gucer H; Asa SL; Mete O

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, University Health Network, 200 Elizabeth Street, 11<sup>th</sup> floor, Toronto, ON, M5G 2C4, Canada.

[391]

**TÍTULO / TITLE:** - Intracerebral schwannoma mimicking parasagittal meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 Nov;24(6):e541-3. doi: 10.1097/SCS.0b013e31828601bf.

●● Enlace al texto completo (gratis o de pago) [1097/SCS.0b013e31828601bf](#)

**AUTORES / AUTHORS:** - Ma L; Yang SX; Wang YR

**INSTITUCIÓN / INSTITUTION:** - From the Department of Neurosurgery, Sir Run Run Shao Hospital, College of Medicine, Zhejiang University, Hangzhou, China.

**RESUMEN / SUMMARY:** - A 24-year-old female patient presented to the neurological department after a seizure that lasted for 10 minutes. Magnetic resonance imaging revealed a cystic and heterogeneously enhanced giant mass in the right frontal lobe mimicking parasagittal meningioma. Surgery via a single frontal craniotomy confirmed the tumor was attached to the falx cerebri and sagittal sinus. The histological diagnosis was schwannoma. Since total resection of the tumor, the patient was seizure free. Twelve months of follow-up revealed good outcome.

[392]

**TÍTULO / TITLE:** - Isolated myxoma of the external auditory canal.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Laryngoscope. 2013 Sep 23. doi: 10.1002/lary.24392.

●● Enlace al texto completo (gratis o de pago) [1002/lary.24392](#)

**AUTORES / AUTHORS:** - Shadfar S; Scanga L; Dodd L; Buchman CA

**INSTITUCIÓN / INSTITUTION:** - University of North Carolina Hospitals, Department of Otolaryngology Head and Neck Surgery.

**RESUMEN / SUMMARY:** - The majority of neoplasms within the external auditory canal are benign. Management of these primary tumors and their local recurrences are discussed herein. We present a case of an isolated myxoma of the external auditory canal with review of the common histopathological and radiographic features. While rare, this highlights the possibility of encountering benign tumor types that carry associated morbidity or mortality due to manifestations outside of the head neck.

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[393]

**TÍTULO / TITLE:** - Characteristics of girls with pituitary hyperplasia and sexual precocity secondary to primary hypothyroidism.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Paediatr. 2013 Oct 4. doi: 10.1111/apa.12444.

●● Enlace al texto completo (gratis o de pago) [1111/apa.12444](#)

**AUTORES / AUTHORS:** - Hu YY; Li GM; Hu WW; Wang Y

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Provincial Hospital Affiliated to Shandong University, Jinan, China.

**RESUMEN / SUMMARY:** - AIM: To investigate the different characteristics of girls with pituitary hyperplasia secondary to primary hypothyroidism (PPH), with, and without, sexual precocity. METHODS: PPH girls were divided into two groups: group A, with sexual precocity (n=8) and group B, without sexual precocity (n=14). The following values were measured before, and after, three months levothyroxine therapy: free triiodothyronine (FT3), free thyroxine (FT4), thyrotropin (TSH), follicle-stimulating hormone (FSH), luteinizing hormone (LH), prolactin (PRL), estradiol (E2), testosterone (T), pituitary height, uterine volume (UV), ovarian volume (OV) and follicular diameter (FD). RESULTS: TSH, FSH, PRL, E2, T, pituitary height, UV, OV, and FD were higher in group A than group B (all  $p < 0.05$ ); FT3, FT4 but LH levels were not different (all  $p > 0.05$ ). In all of the PPH girls, pituitary height was correlated with FT3, FT4, and PRL ( $r = -0.545$ ,  $p = 0.009$ ,  $r = -0.567$ ,  $p = 0.006$ , and  $r = 0.666$ ,  $p = 0.001$ , respectively), PRL was positively correlated with UV, FD, and FSH ( $r = 0.581$ ,  $p = 0.005$ ,  $r = 0.482$ ,  $p = 0.031$ , and  $r = 0.667$ ,  $p = 0.001$ , respectively) and FSH was positively correlated with OV ( $r = 0.522$ ,  $p = 0.013$ ). These abnormalities regressed after therapy. CONCLUSION: PPH girls with sexual precocity have increased plasma TSH, FSH, PRL, E2 and T levels, pituitary height and uterine, ovarian and follicular size. This article is protected by copyright. All rights reserved.

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[394]

**TÍTULO / TITLE:** - Visual and auditory hallucinations revealing cerebellar extraventricular neurocytoma: uncommon presentation for uncommon tumor in uncommon location.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Gen Hosp Psychiatry. 2013 Nov-Dec;35(6):680.e1-3. doi: 10.1016/j.genhosppsych.2013.03.011. Epub 2013 May 8.

- Enlace al texto completo (gratis o de pago)

[1016/j.genhosppsy.2013.03.011](http://1016/j.genhosppsy.2013.03.011)

**AUTORES / AUTHORS:** - Kaloshi G; Alikaj V; Rroji A; Vreto G; Petrela M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, School of Medicine, University of Tirana, Albania. Electronic address: [g\\_kaloshi@yahoo.com](mailto:g_kaloshi@yahoo.com).

**RESUMEN / SUMMARY:** - OBJECTIVE: Visual and auditory hallucinations in relation to a cerebellar tumor are rarely reported in children. Primary origin of extraventricular neurocytoma (EVN) in the cerebellum is very rare. CLINICAL PRESENTATION: We report on a case of a cerebellar EVN in a 13-year-old girl with the initial symptoms of psychiatric manifestations for more than 2 months. Magnetic resonance imaging of the brain revealed a patchy enhanced tumor in the paramedian left cerebellar region. No obstructive hydrocephalus was noted. INTERVENTION: Total surgical removal of the tumor was performed. The tumor was initially diagnosed as an oligodendroglioma. After special immunohistochemical studies, the final definitive diagnosis was an EVN without isocitrate dehydrogenase mutation. CONCLUSION: EVNs located in the cerebellum are extremely rare. We discuss the clinical symptoms and histological-immunohistochemical features of this rare tumor in that rare location.

[395]

**TÍTULO / TITLE:** - Contemporary neurosurgical techniques for pituitary tumor resection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 22.

- Enlace al texto completo (gratis o de pago) [1007/s11060-013-1315-z](http://1007/s11060-013-1315-z)

**AUTORES / AUTHORS:** - Lee JY; Bohman LE; Bergsneider M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Pennsylvania, Washington Square West Building, 235 S. 8<sup>th</sup> Street, Philadelphia, PA, 19106, USA, [leejohn@uphs.upenn.edu](mailto:leejohn@uphs.upenn.edu).

**RESUMEN / SUMMARY:** - Approximately 5,000 trans-sphenoidal surgeries are performed for resection of pituitary tumors each year in the United States. The rise in popularity of the trans-sphenoidal approach, though described nearly a century ago, has been facilitated over the last decades by advances in technique and technology. In this review, we discuss the relative strengths of microscopic and endoscopic techniques for pituitary tumor resection. However, despite being the standard of care for patients with most pituitary tumors, cure rates for many subtypes of pituitary lesions, such as secretory macroadenomas or tumors with significant cavernous sinus invasion, remain unsatisfactory. We also describe two more recent advances in neurosurgical technique which may offer promise of increased rates of surgical cure: pseudocapsular resection and cavernous sinus approaches.

[396]

**TÍTULO / TITLE:** - Psychiatric features in gelastic epilepsy and hypothalamic hamartoma: long-term psychodiagnostic observations.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Sci. 2013 Oct 12.

- Enlace al texto completo (gratis o de pago) [1007/s10072-013-1559-6](http://1007/s10072-013-1559-6)

**AUTORES / AUTHORS:** - Errichiello L; Striano P; Galletta D; Striano S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, Section of Psychiatry, Section of Psychotherapy, "Federico II" University, via Pansini 5, 80131, Naples, Italy, [luca.errichiello@gmail.com](mailto:luca.errichiello@gmail.com).

[397]

**TÍTULO / TITLE:** - Primary Central Nervous System Lymphoma and Meningioma in DOTATATE PET/CT.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Dec;38(12):994-5. doi: 10.1097/RLU.0000000000000244.

●● Enlace al texto completo (gratis o de pago)

[1097/RLU.0000000000000244](http://1097/RLU.0000000000000244)

**AUTORES / AUTHORS:** - Lapa C; Lohr M; Bluemel C; Monoranu CM; Herrmann K

**INSTITUCIÓN / INSTITUTION:** - From the Departments of \*Nuclear Medicine, daggerNeurosurgery, and double daggerNeuropathology, Universitätsklinikum Würzburg, Würzburg, Germany.

**RESUMEN / SUMMARY:** - Although meningiomas are among the most frequent intracranial tumors, primary central nervous system lymphoma represents a rare variant of extranodal non-Hodgkin-type lymphoma. Here, we report on a 73-year-old man with 2 suspicious intracerebral lesions. Combined DOTATATE PET/CT identified 1 lesion as meningioma, whereas the second lesion could not be further specified although a different meningioma was felt very unlikely. Open biopsy of this lesion confirmed the diagnosis of primary central nervous system lymphoma.

[398]

**TÍTULO / TITLE:** - Incidental finding of anterior cranial fossa meningioma on 18F-fluoride PET/CT.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Nov;38(11):913-5. doi: 10.1097/RLU.0b013e3182a77c49.

●● Enlace al texto completo (gratis o de pago)

[1097/RLU.0b013e3182a77c49](http://1097/RLU.0b013e3182a77c49)

**AUTORES / AUTHORS:** - Zacchi SR; Duarte PS; Coura Filho GB; Sapienza MT; Buchpiguel CA

**INSTITUCIÓN / INSTITUTION:** - From the Division of Nuclear Medicine, Sao Paulo Cancer Institute, Sao Paulo, Brazil.

**RESUMEN / SUMMARY:** - The association of breast carcinoma and meningioma has been described. We report a case of anterior cranial fossa meningioma in a woman with breast cancer detected by (18)F-fluoride PET/CT. The whole-body (18)F-fluoride PET images demonstrate an intense intracranial focal radiotracer accumulation in the skull base. Simultaneous CT showed a corresponding calcified space-occupying lesion consistent with meningioma. Follow-up CT image obtained 8 months later demonstrated the persistence and stable appearance of the lesion.

[399]

**TÍTULO / TITLE:** - Hippocampal-sparing radiotherapy: The new standard of care for World Health Organization grade II and III gliomas?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Sep 30. pii: S0967-5868(13)00255-5. doi: 10.1016/j.jocn.2013.04.005.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.04.005](#)

**AUTORES / AUTHORS:** - Pinkham MB; Bertrand KC; Olson S; Zarate D; Oram J; Pullar A; Foote MC

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Princess Alexandra Hospital, 199 Ipswich Road, Woolloongabba, QLD 4102, Australia; University of Queensland, Brisbane, QLD, Australia. Electronic address: [mark\\_pinkham@health.qld.gov.au](mailto:mark_pinkham@health.qld.gov.au).

**RESUMEN / SUMMARY:** - The neurocognitive effects of cranial radiotherapy in patients with gliomas are well-recognized and may be related to the dose delivered to the hippocampi. Intensity modulated radiotherapy (IMRT) is a radiotherapy technique that can be used to selectively spare the hippocampi without compromising the dose delivered to the tumour. This study aimed to evaluate if hippocampal-sparing IMRT is achievable in patients with World Health Organization (WHO) grade II and III gliomas. A retrospective review of consecutive patients with WHO grade II and III gliomas treated with IMRT at our institution between January 2009 and August 2012 was performed. Hippocampal-sparing was defined as a mean dose to at least one hippocampus of less than 30Gy. The dose delivered to the tumour was never compromised to achieve the hippocampal dose constraint. Logistic regression analyses were performed to identify predictive factors for achieving hippocampal-sparing treatment. Eighteen patients were identified and hippocampal-sparing was achieved in 14 (78%). The median dose prescribed was 59.4Gy in 33 fractions and 11 patients had WHO grade III gliomas. The mean dose to the contralateral hippocampus was 24.9Gy. Planning target volumes less than 420.5cm<sup>3</sup> were more likely to enable hippocampal-sparing treatment to be given (hazard ratio 1.7, p=0.03) and there was a trend with oligodendrogliomas and anaplastic oligodendrogliomas. Hippocampal-sparing radiotherapy is feasible in patients with WHO grade II and III gliomas. Oncologic outcomes are yet to be assessed prospectively. The relationship between hippocampal dose and neurocognitive function in adults is currently under investigation.

[400]

**TÍTULO / TITLE:** - From above or below: The controversy and historical evolution of tuberculum sellae meningioma resection from open to endoscopic skull base approaches.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Aug 12. pii: S0967-5868(13)00435-9. doi: 10.1016/j.jocn.2013.03.043.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.03.043](#)

**AUTORES / AUTHORS:** - Soni RS; Patel SK; Husain Q; Dahodwala MQ; Eloy JA; Liu JK

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology - Head & Neck Surgery, Rutgers University, New Jersey Medical School, Newark, NJ, USA.

**RESUMEN / SUMMARY:** - In the early 20<sup>th</sup> century, the first successful surgical removal of a tuberculoma sellae meningioma (TSM) was performed and described by Harvey Cushing. It soon became recognized that TSM pose a formidable challenge for skull base surgeons because of their deep and sensitive location, proximity to critical neurovascular elements, and often dense and fibrous nature. Because of this, over the next several decades controversy transpired regarding their optimal method of resection. Early attempts involved utilization of open transcranial routes. This included classic bilateral and unilateral frontal approaches, followed by pterional or frontotemporal approaches, which have evolved to incorporate skull base modifications, such as the supraorbital, orbitozygomatic, and orbitopterional approaches. Minimally invasive supraorbital keyhole approaches through eyebrow incisions have also been adopted. Over the past 25 years, the microsurgical transsphenoidal approach, classically used for pituitary and parasellar tumors, was modified to resect suprasellar TSM via the extended transsphenoidal approach. More recently, with the evolution of endoscopic techniques, resection of TSM has been achieved using purely endoscopic endonasal transplanum transtuberulum approaches. Although each of these techniques has been successfully described for the treatment of TSM, the question still remains: is it better to access and operate on these lesions via a traditional, transcranial avenue, or are they better treated via endoscopic endonasal techniques? We outline the surgical management of TSM through history, from early transcranial and transsphenoidal approaches to modern extended endoscopic endonasal procedures. We briefly explore the arguments favoring each of the methods and the advancements which have emerged to further optimize surgical resection.

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[401]

**TÍTULO / TITLE:** - Hematoidin (Crystallized Bilirubin) Crystals in an Atypical Meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Surg Pathol. 2013 Nov 25.

●● Enlace al texto completo (gratis o de pago) [1177/1066896913510028](#)

**AUTORES / AUTHORS:** - Stueck AE; Easton A

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[402]

**TÍTULO / TITLE:** - Predictive biomarkers in adult gliomas: the present and the future.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Oncol. 2013 Nov;25(6):689-94. doi: 10.1097/CCO.0000000000000002.

●● Enlace al texto completo (gratis o de pago)

[1097/CCO.0000000000000002](#)

**AUTORES / AUTHORS:** - Thomas L; Di Stefano AL; Ducray F

**INSTITUCIÓN / INSTITUTION:** - aService de Neuro-Oncologie, Hopital Neurologique, Hospices Civils de Lyon bUniversite Pierre et Marie Curie-Paris 6, Centre de Recherche de l'Institut du Cerveau et de la Moelle epiniere (CRICM), UMR-S975, Paris cINSERM, U1028; CNRS, UMR5292; Lyon Neuroscience Research Center, Neuro-

Oncology and Neuro-Inflammation Team, Universite Claude Bernard Lyon 1, Lyon, France.

**RESUMEN / SUMMARY:** - PURPOSE OF REVIEW: This review summarizes recent studies on the predictive value of molecular markers in adult gliomas, including 1p/19q codeletion, MGMT methylation, IDH mutation and markers identified using omics and next-generation sequencing studies. RECENT FINDINGS: The long-term results of the Radiation Therapy Oncology Group and European Organization for Research and Treatment of Cancer trials in anaplastic oligodendroglial glioma have shown that the 1p/19q codeletion predicts an overall survival benefit from early PCV (procarbazine CCNU vincristine) chemotherapy. This benefit can also be predicted using gene expression-based molecular subtypes of gliomas while the predictive value of the IDH mutation in this context requires further study. In elderly patients with glioblastoma, the analysis of MGMT methylation status in two phase III trials suggests that this alteration may guide treatment decisions; however, this finding still needs confirmation in prospective studies. Omics and next-generation sequencing studies have identified additional potential predictive markers. In particular, IDH mutations, BRAF V600E mutations and FGFR gene fusions might predict efficacy of therapies targeted against these alterations. SUMMARY: Currently, the 1p/19q codeletion is the only well established predictive marker with clinical utility. However, it is likely that other molecular markers such as MGMT methylation, IDH mutation and those identified using omics and next-generation sequencing studies will further guide treatment decisions in adult gliomas.

[403]

**TÍTULO / TITLE:** - Patterns of failure after radiosurgery to two different target volumes of enhancing lesions with and without FLAIR abnormalities in recurrent glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1290-4](#)

**AUTORES / AUTHORS:** - Kim EY; Yechieli R; Kim JK; Mikkelsen T; Kalkanis SN; Rock J; Rosenblum M; Ryu S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Gachon University Gil Hospital, Incheon, Korea.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) invades beyond enhancing boundaries, and tumor cells are believed to exist in edematous peritumoral regions. We hypothesize that the concomitant treatment of both enhancing and FLAIR abnormalities on MRI by fractionated radiosurgery (FRS) would reduce local and regional recurrence. The purpose of this study was to demonstrate patterns of failure after FRS with simultaneous differential doses to two different target volumes of contrast enhancing lesions with/without FLAIR abnormality in recurrent GBM. Fifty-three patients with recurrent GBM were treated with FRS between 2008 and 2012. FRS was offered for the patients who had progressive tumors after the initial surgical resection followed by chemoradiation, and second-line chemotherapy. Radiosurgery Regimen A was 32 Gy (8 Gy x 4 treatments) to the contrast enhancing lesion only. Regimen B was 32 Gy (8 Gy x 4) to the contrast enhancing lesion and 24 Gy (6 Gy x 4) to the FLAIR abnormality delivered concomitantly. The study endpoint was radiographic failure on MRI at 2

months after FRS. Median survival after FRS was 7.5 months, and median progression-free survival after FRS was 4 months. Overall 82.4 % (42/51 lesions) recurred during follow-up. The local and regional failure rate was significantly lower in Regimen B (52 %) than in Regimen A (86.7 %) ( $p = 0.003$ ). No sign of tumor progression in 10 % of Regimen A versus 28.6 % of Regimen B was shown during followup ( $p = 0.04$ ). Instead, distant failure rate was higher in Regimen B. In conclusions, FRS was found to be a safe and effective salvage therapy for recurrent GBM. FRS to both contrast enhancing and FLAIR abnormalities appeared to improve local tumor control, and reduce regional tumor progression.

[404]

**TÍTULO / TITLE:** - Misinterpretation of statistical results and recurrent intracranial hemangiopericytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1297-x](#)

**AUTORES / AUTHORS:** - Li D; Zhang JT

**INSTITUCIÓN / INSTITUTION:** - Beijing Tiantan Hospital, Capital Medical University, Beijing, China.

[405]

**TÍTULO / TITLE:** - Altered functional connectivity of the default mode network in diffuse gliomas measured with pseudo-resting state fMRI.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Nov 14.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1304-2](#)

**AUTORES / AUTHORS:** - Harris RJ; Bookheimer SY; Cloughesy TF; Kim HJ; Pope WB; Lai A; Nghiemphu PL; Liao LM; Ellingson BM

**INSTITUCIÓN / INSTITUTION:** - UCLA Brain Tumor Imaging Laboratory, Department of Radiological Sciences, David Geffen School of Medicine, University of California, Los Angeles, 924 Westwood Blvd, Suite 615, Los Angeles, CA, 90024, USA.

**RESUMEN / SUMMARY:** - The purpose of the current study was to explore whether brain tumors disrupt the integrity of the default mode network (DMN), a well-characterized resting-state fMRI network. We evaluated whether tumor grade, volume, post-surgical/clinical status, or location decreased the functional connectivity within the DMN in patients with gliomas. Task-based fMRI data was obtained from 68 diffuse glioma patients and 12 healthy volunteers. Pseudo-resting state fMRI data was calculated from task-based fMRI data using standard techniques. Data was preprocessed and DMN integrity was compared across WHO grade, tumor volume surgical status (new vs. recurrent tumors), age, and KPS using univariate and multivariate linear models. WHO grade was the most significant predictor of DMN integrity ( $P = 0.004$ ), whereas T2 hyperintense lesion volume was not a predictor ( $P = 0.154$ ). DMN integrity was lower in high-grade (WHO III-IV) compared with low-grade (WHO II) patients ( $P = 0.020$ ). Tumors in the left parietal lobe showed a more impaired DMN compared with tumors in the frontal lobe, while tumors within and outside the network nodes did not differ significantly. Results suggest higher tumor grade along

with prior surgery and/or treatment cause the largest reduction in DMN functional connectivity in patients with primary gliomas, and that tumor location has an impact on connectivity.

[406]

**TÍTULO / TITLE:** - PTEN status mediates 2ME2 anti-tumor efficacy in preclinical glioblastoma models: role of HIF1alpha suppression.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 27.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1283-3](#)

**AUTORES / AUTHORS:** - Muh CR; Joshi S; Singh AR; Kesari S; Durden DL; Makale MT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery and Pediatrics, Duke University Medical Center, Durham, NC, USA.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most common brain cancer and is highly lethal in both adults and children. 2-methoxyestradiol (2ME2) is a microtubule inhibitor that potently inhibits HIF1alpha, GBM angiogenesis and tumor growth in preclinical models. In patients, 2ME2 exhibits low toxicity and promising but inconsistent efficacy. Given its preclinical potency and its tolerability in patients, we sought to determine whether 2ME2 therapy could be enhanced by addressing resistance via combination therapy, and with biomarkers to identify responsive glioma subgroups. We demonstrate that the PTEN-PI3K axis regulates HIF1alpha in glioma models. We utilized isogenic-pairs of glioma cell lines, deficient in PTEN or stably reconstituted with PTEN, to determine the role of PTEN in 2ME2 sensitivity in vitro and in vivo. Chou-Talalay synergy studies reveal significant synergy when a pan-PI3K inhibitor is combined with 2ME2. This synergistic activity was correlated with a synergistic suppression of HIF1alpha accumulation under hypoxic conditions in glioma models. In vivo, 2ME2 markedly inhibited tumor-induced angiogenesis and significantly reduced tumor growth only in a PTEN reconstituted GBM models in both subcutaneous and orthotopic intracranial mouse models. Collectively, these results: (1) suggest that PTEN status predicts sensitivity to 2ME2 and (2) justify exploration of 2ME2 combined with pan-PI3K inhibitors for the treatment of this intractable brain cancer.

[407]

**TÍTULO / TITLE:** - Low levels of PRB3 mRNA are associated with dopamine-agonist resistance and tumor recurrence in prolactinomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Oct 18.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1276-2](#)

**AUTORES / AUTHORS:** - Wang F; Gao H; Li C; Bai J; Lu R; Cao L; Wu Y; Hong L; Wu Y; Lan X; Zhang Y

**INSTITUCIÓN / INSTITUTION:** - Beijing Neurosurgical Institute, Capital Medical University, Beijing, China.

**RESUMEN / SUMMARY:** - Prolactinomas, or prolactin-secreting adenomas, constitute the most common type of hyperfunctioning pituitary adenoma. Dopamine agonists are

used as first-line medication for prolactinomas, but the tumors are resistant to the therapy in 5-18 % of patients. To explore potential mechanisms of resistance to bromocriptine (a dopamine agonist), we analyzed six responsive prolactinomas and six resistant prolactinomas by whole-exome sequencing. We identified ten genes with sequence variants that were differentially found in the two groups of tumors. The expression of these genes was then quantified by real-time reverse-transcription PCR (RT-qPCR) in the 12 prolactinomas and in six normal pituitary glands. The mRNA levels of one of the genes, PRB3, were about fourfold lower in resistant prolactinomas than in the responsive tumors ( $p = 0.02$ ). Furthermore, low PRB3 expression was also associated with tumor recurrence. Our results suggest that low levels of PRB3 mRNA may have a role in dopamine-agonist resistance and tumor recurrence of prolactinomas.

[408]

**TÍTULO / TITLE:** - Non-functioning pituitary macro-incidentalomas benefit from early surgery before becoming symptomatic.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Oct 22. pii: S0303-8467(13)00415-0. doi: 10.1016/j.clineuro.2013.10.007.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.clineuro.2013.10.007](#)

**AUTORES / AUTHORS:** - Messerer M; Dubourg J; Raverot G; Bervini D; Berhouma M; George I; Chacko AG; Perrin G; Levivier M; Daniel RT; Trouillas J; Jouanneau E

**INSTITUCIÓN / INSTITUTION:** - Departement de Neurochirurgie, Centre Hospitalier Universitaire Vaudois, Universite de Lausanne, Lausanne, Switzerland. Electronic address: [m.messerer@laposte.net](mailto:m.messerer@laposte.net).

**RESUMEN / SUMMARY:** - **OBJECTIVE:** Pituitary incidentalomas (PIs) constitute an increasingly clinical problem. While the therapeutic management is well defined for symptomatic non-functioning PIs (NFPIs), a controversy still exists for asymptomatic macro-NFPIs between surgery and a “wait and see” approach. The aim of this study is to compare surgical results between symptomatic and asymptomatic macro-NFPIs. **METHODS:** We conducted a retrospective study on 76 patients with newly diagnosed symptomatic and asymptomatic macro-NFPIs operated on between 2001 and 2010. We compared age, tumor size and surgical results between these two patient groups. **RESULTS:** After the initial evaluation, 48 patients were found to be symptomatic. Gross total removal (GTR) rate was significantly higher in asymptomatic (82%) than in symptomatic patients (58%;  $p=0.03$ ). Gross total removal was strongly associated with Knosp’s classification ( $p=0.01$ ). Postoperative endocrinological impairment was significantly associated with the existence of preoperative symptoms ( $p=0.03$ ). It was 10 times less frequent in the asymptomatic group. In symptomatic patients, postoperative visual and endocrinological impairment were present in 49% and 78% versus 0% and 14% in asymptomatic patients respectively. **CONCLUSIONS:** The endocrinological and visual outcome was better in those patients who underwent surgery for asymptomatic tumors. The extent of tumor resection was also significantly greater in smaller tumors. It would therefore be appropriate to offer surgery to patients with asymptomatic macro-NFPIs.

[409]

**TÍTULO / TITLE:** - Activity of LaSOM 65, a monastrol-derived compound, against glioblastoma multiforme cell lines.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Anticancer Res. 2013 Oct;33(10):4463-8.

**AUTORES / AUTHORS:** - Stuepp CS; Figueiro F; Mendes FB; Braganhol E; Bernardi A; Frozza RL; Salbego CG; Canto RF; Russowsky D; Eifler-Lima VL; Battastini AM

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**RESUMEN / SUMMARY:** - BACKGROUND/AIM: Despite recent progress in glioblastoma treatment, prognosis is still poor. Monastrol is a kinesin spindle protein (KSP) inhibitor and anticancer effects for this molecule have been reported. Here we describe the effect of LaSOM 65, a monastrol derivated compound, against glioma cell lines. MATERIALS AND METHODS: Cell counting, viability assay, lactate dehydrogenase (LDH) activity, cell-cycle analysis, immunofluorescence and organotypic hippocampal slice cultures were performed. RESULTS: LaSOM 65 reduced cell number and cell viability of gliomas cells, but did not cause arrest in the cell cycle at the G2/M phase. Measurement of LDH activity showed that LaSOM 65 induces necrosis after 48 h of treatment. CONCLUSION: LaSOM 65 appears to a be promising new molecule to treat glioblastoma since it promotes a decrease of cell growth and cell viability of glioma cells in vitro and does not induces the neurotoxic characteristics of the anti-mitotic drugs currently used.

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[410]

**TÍTULO / TITLE:** - Access to neuropsychologic services after pediatric brain tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatr Neurol. 2013 Dec;49(6):420-3. doi: 10.1016/j.pediatrneurol.2013.07.002. Epub 2013 Oct 2.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1016/j.pediatrneurol.2013.07.002](http://1016/j.pediatrneurol.2013.07.002)

**AUTORES / AUTHORS:** - Tønning Olsson I; Perrin S; Lundgren J; Hjorth L; Johanson A

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**RESUMEN / SUMMARY:** - BACKGROUND: Increasing survival rates for children with brain tumors creates a greater need for neuropsychologic follow-up and intervention. The aim of this study was to evaluate rates of referral by medical doctors to neuropsychologic services and patient and treatment factors that differentiated referred and nonreferred patients. METHODS: Data were retrieved from medical records of all pediatric brain tumor patients in southern Sweden diagnosed between 1993 and 2004 who survived more than 1 year (n = 132). Characteristics of the patients, the cancer, and treatment received were then compared for patients who were and were not referred for neuropsychologic examination during that period. RESULTS: Sixty-four (48%) of the pediatric brain tumor patients were referred for neuropsychologic evaluation. These patients had significantly larger tumors, more recurrences of cancer, and increased intracranial pressure at diagnosis when compared with the nonreferred group (n = 68). However, most of the patients in the nonreferred group either had

significant risk factors for cognitive impairment or were reporting impairments that would suggest a referral was warranted. CONCLUSIONS: Given the high rates of cognitive impairment in children with brain tumors, referral to neuropsychologic services should be considered in all survivors. In addition to improving long-term adjustment, systematic referral can provide data on cognitive impairments, making it possible to evaluate different cancer treatment protocols not only in terms of survival but also in terms of quality of survival. Greater efforts are needed to disseminate and raise awareness about published guidelines on the long-term care of pediatric brain tumor patients.

[411]

**TÍTULO / TITLE:** - A new der(1;7)(q10;p10) leading to a singular 1p loss in a case of glioblastoma with oligodendroglioma component.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuropathology. 2013 Sep 30. doi: 10.1111/neup.12060.

●● Enlace al texto completo (gratis o de pago) [1111/neup.12060](#)

**AUTORES / AUTHORS:** - Gadji M; Crous-Tsanaclis AM; Mathieu D; Mai S; Fortin D; Drouin R

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**RESUMEN / SUMMARY:** - The combined 1p-/19q- deletions in oligodendrogliomas originate from translocation between both chromosomes. In the few cases of oligoastrocytomas and glioblastomas with an oligodendroglioma component (GBMO) where only 1p deletion was described, the origin remains unknown. We report the first case of GBMO, in which a single 1p deletion was detected and was linked to a translocation between chromosomes 1 and 7. Fresh surgical specimens were collected during surgery and the samples were used for cell culture, touch preparation smear slides (TP slides) and DNA extraction. Peripheral venous blood was also collected from the patient. G-banding using Trypsin and stained with Giemsa (GTG) banding and karyotyping were performed and 1p-/19q-, TP53, PTEN and c-MYC were analyzed by fluorescent in situ hybridization (FISH). Multicolor FISH (mFISH) and microsatellites analyses were also performed to complete the investigation. Three-dimensional quantitative FISH (3D-QFISH) of telomeres was performed on nuclei from TP slides and analyzed using TeloView™ to determine whether the 3D telomere profile as an assessment of telomere dysfunction and a characterization of genomic instability could predict the disease aggressiveness. An unbalanced chromosomal translocation was found in all metaphases and confirmed by mFISH. The karyotype of the case is: 50 approximately 99,XXX, +der(1;7)(q10;p10),inc[47] The derivative chromosome was found in all 47 analyzed cells, but the number of derivatives varied from one to four. There was neither imbalance in copy number for genes TP53 and PTEN, nor amplification of c-MYC gene. We did not find loss of heterozygosity with analysis of microsatellite markers for chromosomes 1p and 19q in tumor cells. The 3D-telomere

profile predicted a very poor prognostic and short-term survival of the patient and highlights the potential clinical power of telomere signatures as a solid biomarker of GBMO. Furthermore, this translocation between chromosomes 1 and 7 led to a singular 1p deletion in this GBMO and may generate the 1p and 7q deletions.

[412]

**TÍTULO / TITLE:** - Fluorescein sodium in brain tumor surgery - Response.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Dec;155(12):2253-4. doi: 10.1007/s00701-013-1893-8. Epub 2013 Oct 1.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1893-8](#)

**AUTORES / AUTHORS:** - Schebesch KM; Proescholdt M; Brawanski A

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[413]

**TÍTULO / TITLE:** - Meningioma associated with Gorlin's syndrome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Oct 4. pii: S0967-5868(13)00252-X. doi: 10.1016/j.jocn.2013.02.033.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.02.033](#)

**AUTORES / AUTHORS:** - Lee CW; Tan TC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Queen Elizabeth Hospital, 30 Gascoigne Road, Kowloon, Hong Kong.

**RESUMEN / SUMMARY:** - Gorlin's syndrome or naevoid basal cell carcinoma syndrome is a rare autosomal dominant condition characterised by a variety of congenital anomalies and various malignancies. The chief manifestations include multiple basal cell naevi, mandibular cysts, plantar and palmar pits, vertebral and rib abnormalities and intracranial calcifications. We report a patient with Gorlin's syndrome associated with meningioma treated at our institution. The clinical and radiological features together with the management strategies of this unusual disease entity are discussed.

[414]

**TÍTULO / TITLE:** - Early response to chemotherapy as an indicator for the management of germinoma-like tumors of the pineal and/or suprasellar regions.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Nov 12. pii: S0967-5868(13)00398-6. doi: 10.1016/j.jocn.2013.05.014.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.05.014](#)

**AUTORES / AUTHORS:** - Saito R; Kumabe T; Kanamori M; Sonoda Y; Watanabe M; Mugikura S; Takahashi S; Tominaga T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tohoku University Graduate School of Medicine, Sendai, Japan.

**RESUMEN / SUMMARY:** - Recent advances in diagnostic imaging and experience with germinomas may allow for the differentiation of central nervous system germinomas from other tumors based on clinical information, without histological verification. We retrospectively analyzed clinically diagnosed germinoma-like tumors of the pineal and/or suprasellar regions. This was done to evaluate the efficacy of our strategy of defining germinoma-compatible tumors based on good responses to initial chemotherapy. The responses to chemotherapy and survival of 34 consecutive patients with germinoma-like tumors who underwent initial treatment from July 2001 to October 2010 were analyzed. The minimum apparent diffusion coefficient (minADC) value and proton magnetic resonance spectroscopy (MRS) were evaluated in recent patients. Twelve patients with histologically verified germinomas and 18 with germinoma-compatible tumors showed early logarithmic decreases in tumor volume in response to initial chemotherapy, typical low minADC values and typical MRS characteristics, including increased choline/creatine ratios, decreased N-acetylaspartate/creatine ratios, and large lipid peaks. These patients had good progression-free survival. The other four patients, with histologically verified non-germinomas, showed no response to chemotherapy, and one patient with a pineoblastoma showed a similar minADC value and MRS characteristics to those of patients with germinomas. The response to initial chemotherapy can be used to distinguish germinoma-compatible tumors from non-germinoma in patients with germinoma-like tumors of the pineal and/or suprasellar regions. The evaluation of minADC and proton MRS are useful for distinguishing germinomas from other tumors. However, a subset of non-germinomas may show similar characteristics to germinomas. The benefit of bypassing unnecessary surgical intervention can be achieved, at least in Asian populations with a high incidence of germinomas.

[415]

**TÍTULO / TITLE:** - Association of Metabolite Concentrations and Water Diffusivity in Normal Appearing Brain Tissue with Glioma Grade.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuroimaging. 2013 Nov 19. doi: 10.1111/jon.12063.

●● [Enlace al texto completo \(gratis o de pago\) 1111/jon.12063](#)

**AUTORES / AUTHORS:** - Maudsley AA; Roy B; Gupta RK; Sheriff S; Awasthi R; Gu M; Husain N; Mohakud S; Behari S; Spielman DM

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, University of Miami, Florida.

**RESUMEN / SUMMARY:** - **BACKGROUND AND PURPOSE:** Studies of brain tumors have identified altered tissue metabolism and water diffusion in MRI normal appearing tissue regions. In this retrospective study the relationship of these imaging measures with tumor grade in gliomas was investigated. **METHODS:** MR spectroscopic imaging of whole brain and mean diffusivity (MD) measurements were obtained in subjects with untreated glioma and from normal control subjects. Mean metabolite values for N-acetylaspartate (NAA), total creatine (Cre), and total choline (Cho) were obtained in gray- and white-matter regions for the hemisphere contralateral to the tumor location, and MD values were obtained from contralateral normal-appearing white matter. Analyses tested for differences in mean values between subject groups while accounting for age. **RESULTS:** Analysis demonstrated increased NAA/Cre and MD, and decreased Cho/NAA for all tumor grades relative to control values. Differences

between tumor grades were also observed for NAA, NAA/Cre, and Cho/NAA. Abnormal values of water diffusion were also observed, but with only a weak association between alterations in diffusion and tissue metabolites. CONCLUSIONS: This study supports previous observations of altered tissue metabolism and water diffusion in normal-appearing white matter while additionally finding differences of metabolite values in gray matter and an association with tumor grade.

[416]

**TÍTULO / TITLE:** - Modulation of Mcl-1 sensitizes glioblastoma to TRAIL-induced apoptosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Apoptosis. 2013 Nov 9.

●● Enlace al texto completo (gratis o de pago) [1007/s10495-013-0935-2](#)

**AUTORES / AUTHORS:** - Murphy AC; Weyhenmeyer B; Noonan J; Kilbride SM; Schimansky S; Loh KP; Kogel D; Letai AG; Prehn JH; Murphy BM

**INSTITUCIÓN / INSTITUTION:** - Centre for Systems Medicine, Department of Physiology and Medical Physics, Royal College of Surgeons in Ireland, York House, St. Stephen's Green, Dublin, 2, Ireland.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most aggressive form of primary brain tumour, with dismal patient outcome. Treatment failure is associated with intrinsic or acquired apoptosis resistance and the presence of a highly tumorigenic subpopulation of cancer cells called GBM stem cells. Tumour necrosis factor-related apoptosis-inducing ligand (TRAIL) has emerged as a promising novel therapy for some treatment-resistant tumours but unfortunately GBM can be completely resistant to TRAIL monotherapy. In this study, we identified Mcl-1, an anti-apoptotic Bcl-2 family member, as a critical player involved in determining the sensitivity of GBM to TRAIL-induced apoptosis. Effective targeting of Mcl-1 in TRAIL resistant GBM cells, either by gene silencing technology or by treatment with R-roscovitine, a cyclin-dependent kinase inhibitor that targets Mcl-1, was demonstrated to augment sensitivity to TRAIL, both within GBM cells grown as monolayers and in a 3D tumour model. Finally, we highlight that two separate pathways are activated during the apoptotic death of GBM cells treated with a combination of TRAIL and R-roscovitine, one which leads to caspase-8 and caspase-3 activation and a second pathway, involving a Mcl-1:Noxa axis. In conclusion, our study demonstrates that R-roscovitine in combination with TRAIL presents a promising novel strategy to trigger cell death pathways in glioblastoma.

[417]

**TÍTULO / TITLE:** - Relationship of regional cerebral blood flow and kinetic behaviour of O-(2-18F-fluoroethyl)-L-tyrosine uptake in cerebral gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nucl Med Commun. 2013 Nov 14.

●● Enlace al texto completo (gratis o de pago)

[1097/MNM.0000000000000036](#)

**AUTORES / AUTHORS:** - Zhang K; Langen KJ; Neuner I; Stoffels G; Filss C; Galldiks N; Tellmann L; Rota Kops E; Coenen HH; Herzog H; Shah NJ

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**RESUMEN / SUMMARY:** - OBJECTIVES: O-(2-F-fluoroethyl)-L-tyrosine (F-FET) is an established tracer for brain tumour imaging. F-FET kinetics in gliomas appear to have potential for tumour grading, but the mechanisms remain unclear. The aim of this study was to explore the relationship between regional cerebral blood flow (rCBF) as measured by arterial spin labelling MRI and the kinetic behaviour of F-FET PET in cerebral gliomas. MATERIALS AND METHODS: Twenty patients with cerebral gliomas were investigated using arterial spin labelling MRI and dynamic F-FET PET. Time-activity curves (TACs) of F-FET uptake were analysed in 33 different tumour regions. The slopes of TAC during the early (0-5 min; slopeup) and late phases of tracer uptake (17-50 min; slopedown) were fitted using linear regression lines. In addition, TACs of each lesion were assigned to different curve patterns. Furthermore, we calculated tumour-to-brain ratios of F-FET uptake. The relationship between F-FET parameters and rCBF was determined. RESULTS: F-FET uptake in the early phase (slopeup) showed a significant correlation with rCBF ( $r=0.4$ ;  $P=0.02$ ). In contrast, both slopedown and TAC patterns showed no significant correlation with rCBF. Furthermore, a significant correlation was found between rCBF and tumour-to-brain ratio ( $r=0.53$ ;  $P=0.002$ ). CONCLUSION: There is a relationship between rCBF and F-FET uptake in cerebral gliomas in the initial uptake phase, but the kinetic behaviour of F-FET uptake in the late phase is not significantly influenced by rCBF. Thus, the differential kinetic pattern of F-FET uptake in high-grade and low-grade gliomas appears to be determined by factors other than rCBF.

[418]

**TÍTULO / TITLE:** - The safe zone of posterior semicircular canal resection in suboccipital retrosigmoid sinus approach for acoustic neuroma surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 Nov;24(6):2103-5. doi: 10.1097/SCS.0b013e31829ad5cc.

●● Enlace al texto completo (gratis o de pago)

[1097/SCS.0b013e31829ad5cc](#)

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**RESUMEN / SUMMARY:** - The aim of the study was to find the safe zone of posterior semicircular canal resection that can avoid structure damage in suboccipital retrosigmoid sinus approach for acoustic neuroma. One hundred twenty subjects (72 male and 48 female subjects) were involved in this study anonymously. Five parameters are measured in computed tomography: L1 is the line that goes through the common bony crus and parallel to the plane that contains posterior semicircular

canal at axial plane. L2 is the middle sagittal line at axial plane. A is the point of posterior wall of the internal auditory canal at the level of the common bony crus. B is the intersection point of L1 and posterior wall of auditory canal. L3 is the line that goes through the plane that contains posterior semicircular canal at coronary plane. L4 is the middle sagittal line at coronary plane. C is the common bony crus. D is the ampulla. E is the most posterior point of posterior wall of auditory canal at the plane that goes through the posterior semicircular canal. The angle between L1 and L2 was 41.76 (SD, 5.64) degrees on the right and 43.40 (SD, 5.25) degrees on the left (P = 0.003). The distance between A and B was 0.59 (SD, 0.13) cm. The angle between L3 and L4 was 16.57 (SD, 6.51) degrees on the right and 17.57 (SD, 6.98) degrees on the left (P = 0.017). The distance between C and D was 0.60 (SD, 0.05) cm. The distance between E and line CD was 0.48 (SD, 0.09).

[419]

**TÍTULO / TITLE:** - Stereotactic radiosurgery of intracranial chordomas, chondrosarcomas, and glomus tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Clin N Am. 2013 Oct;24(4):553-60. doi: 10.1016/j.nec.2013.05.009. Epub 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [1016/j.nec.2013.05.009](#)

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**RESUMEN / SUMMARY:** - Chordomas and chondrosarcomas are rare, slow-growing, locally aggressive tumors with high recurrence rates. Stereotactic radiosurgery (SRS) is an important management option for patients with recurrent or residual chordomas and chondrosarcomas. Glomus jugulare tumor are rare highly vascularized tumors that arise from the paraganglionic structures of the glossopharyngeal and vagal nerves. Because of their highly vascular nature and surgically formidable anatomic location, curative resection often proves challenging. SRS can be used as an up-front treatment or as an additional treatment for patients with recurrent or residual glomus jugulare tumor after surgical resection.

[420]

**TÍTULO / TITLE:** - Multi-session radiosurgery of benign intracranial tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Clin N Am. 2013 Oct;24(4):543-51. doi: 10.1016/j.nec.2013.06.003. Epub 2013 Aug 21.

●● Enlace al texto completo (gratis o de pago) [1016/j.nec.2013.06.003](#)

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**RESUMEN / SUMMARY:** - Multi-session stereotactic radiosurgery (SRS) enables a high dose per fraction to be delivered to the tumor bed with rapid dose falloff that allows for

sparing of critical structures, resulting in less radiation-associated toxicity. In this article, the authors review the basic concepts and techniques of multi-session SRS, indications for this technique, outcomes from single-session and multi-session SRS using 3 commonly treated benign intracranial tumors (meningiomas, vestibular schwannomas, pituitary adenomas), and discuss why multi-session SRS is an attractive approach for the treatment of these tumors.

[421]

**TÍTULO / TITLE:** - Stereotactic radiosurgery of pituitary adenomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Clin N Am. 2013 Oct;24(4):509-19. doi: 10.1016/j.nec.2013.05.005. Epub 2013 Jul 1.

●● Enlace al texto completo (gratis o de pago) [1016/j.nec.2013.05.005](#)

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**RESUMEN / SUMMARY:** - The goal of pituitary adenoma radiosurgery is to halt tumor growth, normalize hormonal hypersecretion if present, maintain normal pituitary function, and preserve important structures around the sella. The radiation dose necessary to stop tumor growth is lower than the dose necessary to achieve normalization of hormonal hypersecretion. The minimum distance required between the irradiated target and the optic pathway should be 2 mm for secreting adenomas, but in cases of nonsecreting adenomas this distance is even lower. The current role of radiosurgery in most cases is as an adjuvant treatment of residual or recurrent adenomas after previous microsurgery.

[422]

**TÍTULO / TITLE:** - Focal cortical dysplasia IIb presenting as slowly progressive aphasia mimicking a brain tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Seizure. 2013 Oct 1. pii: S1059-1311(13)00274-4. doi: 10.1016/j.seizure.2013.09.013.

●● Enlace al texto completo (gratis o de pago) [1016/j.seizure.2013.09.013](#)

**AUTORES / AUTHORS:** - Forgacs PB; Sarkis R; Folkerth R; Golby A; Hsu L; Bubrick EJ; Dworetzky BA

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[423]

**TÍTULO / TITLE:** - Stereotactic radiosurgery for intracranial gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Clin N Am. 2013 Oct;24(4):605-12. doi: 10.1016/j.nec.2013.05.010. Epub 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [1016/j.nec.2013.05.010](#)

**AUTORES / AUTHORS:** - Tanaka S; Shin M; Mukasa A; Hanakita S; Saito K; Koga T; Saito N

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The University of Tokyo Hospital, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8655, Japan. Electronic address: [tanakas-ky@alumni.mayo.edu](mailto:tanakas-ky@alumni.mayo.edu).

**RESUMEN / SUMMARY:** - This article presents an overview of stereotactic radiosurgery for intracranial glioma. It assists readers in reviewing up-to-date literature on this topic and determining indications of radiosurgery in the treatment of glioma. Discussion also includes its recent advances and future perspectives.

[424]

**TÍTULO / TITLE:** - The Relationship Between Palisaded Encapsulated Neuroma and the Mucocutaneous Neuroma Seen in Multiple Endocrine Neoplasia 2b Syndrome: A Histopathologic and Immunohistochemical Study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am J Dermatopathol. 2013 Nov 15.

●● Enlace al texto completo (gratis o de pago)

[1097/DAD.0000000000000021](#)

**AUTORES / AUTHORS:** - Misago N; Toda S; Narisawa Y

**INSTITUCIÓN / INSTITUTION:** - \*Division of Dermatology, Department of Internal Medicine, Saga University, Saga, Japan; and daggerDepartment of Pathology, Faculty of Medicine, Saga University, Saga, Japan.

**RESUMEN / SUMMARY:** - : A relationship between the palisaded encapsulated neuroma (PEN) and the mucocutaneous neuroma seen in multiple endocrine neoplasia (MEN) 2b syndrome has been noted. We experienced a case of multiple mucocutaneous neuromas including both MEN 2b type neuromas and PENs. We evaluated the histopathologic and immunohistochemical features of 48 lesions in this patient. The lesions were histopathologically classified into 3 groups: (1) MEN 2b type neuroma (18 lesions), (2) PEN (22 lesions), and (3) an intermediate form of the 2 conditions (8 lesions). The intermediate form was classified into 2 subtypes: 1 type characterized by PEN nodules made up of assembled neuroma fascicles neighboring MEN 2b type neuroma fascicles and the other type characterized by more broad nerve fascicles than those seen in typical MEN 2b type neuroma. The idea that PEN is a progressive form of MEN 2b type neuroma may be speculative. Instead, the present study suggests that the observation of hybrid MEN 2b type neuroma/PEN in association with MEN 2b type neuroma and PEN may be a characteristic finding in cases of multiple mucocutaneous neuromas. The view that MEN 2b type neuroma and PEN lie within a spectrum of the same disease entity may be an overstatement; however, the present study suggests that PEN is basically a neural hamartoma/benign neoplasm, like MEN 2b type neuroma, and that there is a close relationship between the 2 conditions in terms of their histogenesis.

[425]

**TÍTULO / TITLE:** - Pediatric spinal neoplasia: a practical imaging overview of intramedullary, intradural, and osseous tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Probl Diagn Radiol. 2013 Nov-Dec;42(6):249-65. doi: 10.1067/j.cpradiol.2013.05.003.

●● Enlace al texto completo (gratis o de pago) [1067/j.cpradiol.2013.05.003](#)

**AUTORES / AUTHORS:** - Menashe SJ; Iyer RS

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Seattle Children's Hospital, Seattle, WA.

**RESUMEN / SUMMARY:** - Imaging of the pediatric spine can be a daunting task for pediatric radiologists, neuroradiologists, and musculoskeletal imagers alike. This is in large part consequent to multiple differential considerations that are frequently specific to this patient population. Though a definitive diagnosis is not always possible through imaging, determining an appropriate anatomical compartment facilitates a more focused differential list, and therefore provides value to the treating providers. This is typically achieved with magnetic resonance imaging and computed tomography. The purpose of this paper is to equip the radiologist with a useful approach to the imaging of, and creating a practical differential for tumors of the pediatric spine. This includes intramedullary, intradural, and osseous pathology. We focus on the most commonly encountered lesions in each of the above compartments. We discuss less common lesions where appropriate owing to their incidence in the adult spine or pediatric extraspinal locations, and are often included in imaging reports or tumor board discussions. As such, this review offers the radiologist a reasonable and reproducible framework for imaging and diagnosing the vast majority of lesions encountered in the pediatric spine.

[426]

**TÍTULO / TITLE:** - Evaluation of post-operative complications associated with repeat resection and BCNU wafer implantation in recurrent glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Nov 28.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1931-6](#)

**AUTORES / AUTHORS:** - Samis Zella MA; Wallocha M; Slotty PJ; Isik G; Hanggi D; Schroeteler J; Ewelt C; Steiger HJ; Sabel M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Heinrich Heine University Hospital Dusseldorf, Medical Faculty, Moorenstrasse 5, 40225, Dusseldorf, Germany, [samis.zella@med.uni-duesseldorf.de](mailto:samis.zella@med.uni-duesseldorf.de).

**RESUMEN / SUMMARY:** - BACKGROUND: Patients with glioblastoma treated with BCNU wafer implantation for recurrence frequently receive frontline chemoradiotherapy with temozolomide as part of the Stupp protocol. A retrospective investigation was conducted of surgical complications in a cohort of these patients treated at a single institution. METHODS: We searched our institutional database for patients treated between January 2006 and October 2012 who had recurrent glioblastoma previously treated with open surgery followed by the Stupp protocol and then underwent repeat resection with or without BCNU wafers for recurrent disease. Rates of select post-operative complications within 3 months of surgery were estimated. RESULTS: We identified 95 patients with glioblastoma who underwent resection followed by the Stupp protocol as frontline treatment. At disease recurrence (first and second recurrence), 63 patients underwent repeat resection with BCNU wafer implantation and 32 without

implantation. Generally, BCNU wafer use was associated with minor to moderate increases in rates of select complications versus non-implantation-wound healing abnormalities (14.2 vs. 6.2 %), cerebrospinal fluid leak (7.9 vs. 3.1 %), hydrocephalus requiring ventriculoperitoneal shunt (6.3 vs. 9.3 %), chemical meningitis (3.1 vs. 0 %), cerebral infections (3.1 vs. 0 %), cyst formation (3.1 vs. 3.1 %), cerebral edema (4.7 vs. 0 %), and empyema formations (1.5 vs. 0 %). Performance status was well maintained post-operatively in both groups. Median progression-free survival from the time of first recurrence was 6.0 and 5.0 months, respectively. CONCLUSIONS: The use of the Stupp protocol as frontline therapy in patients with glioblastoma does not preclude the use of BCNU wafers at the time of progression.

[427]

**TÍTULO / TITLE:** - Glial cell line-derived neurotrophic factor sensitized the mechanical response of muscular thin-fibre afferents in rats.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eur J Pain. 2013 Oct 31. doi: 10.1002/j.1532-2149.2013.00411.x.

●● [Enlace al texto completo \(gratis o de pago\) 1002/j.1532-](#)

[2149.2013.00411.x](#)

**AUTORES / AUTHORS:** - Murase S; Kato K; Taguchi T; Mizumura K

**INSTITUCIÓN / INSTITUTION:** - Department of Physical Therapy, College of Life and Health Sciences, Chubu University, Kasugai, Japan; Department of Neuroscience II, Research Institute of Environmental Medicine, Nagoya University, Japan.

**RESUMEN / SUMMARY:** - BACKGROUND: The role of glial cell line-derived neurotrophic factor (GDNF) in pain and muscular nociceptor activities is not well understood. We examined pain-related behaviour and mechanical response of muscular thin-fibre afferents after intramuscular injection of GDNF in rats. METHODS: GDNF and antagonist to transient receptor potential V1 or acid-sensing ion channels were injected into rat gastrocnemius muscle and muscular mechanical hyperalgesia was assessed with a Randall-Selitto analgesiometer. Activities of single C- (conduction velocity < 2.0 m/s) and Adelta-fibres (conduction velocity 2.0-12.0 m/s) were recorded from extensor digitorum longus muscle-nerve preparations in vitro. The changes in the responses to mechanical stimuli before and after GDNF injection were recorded. RESULTS: Mechanical hyperalgesia was observed from 1 h to 1 day after GDNF (0.03 muM, 20 muL) injection. The decreased withdrawal threshold was temporarily reversed after intramuscular injection of amiloride (50 mM, 20 muL), but not capsazepine (50 muM, 20 muL). In single-fibre recordings, both phosphate buffered saline (PBS) and GDNF failed to induce any significant discharges. GDNF significantly enhanced the mechanical response when compared with the PBS group, but only in Adelta-fibre afferents. C-fibres were not affected. Significantly lowered threshold and increased response magnitude to mechanical stimuli were observed 30 or 60-120 min after injection. These times are compatible with the timing of the onset of the hyperalgesic effect of GDNF. CONCLUSIONS: These results suggest that GDNF increased the response of muscular Adelta-fibre afferents to mechanical stimuli, resulting in muscular mechanical hyperalgesia.

[428]

**TÍTULO / TITLE:** - A learning curve of endoscopic transsphenoidal surgery for pituitary adenoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 Nov;24(6):2064-7. doi: 10.1097/SCS.0b013e3182a24328.

●● Enlace al texto completo (gratis o de pago)

[1097/SCS.0b013e3182a24328](#)

**AUTORES / AUTHORS:** - Chi F; Wang Y; Lin Y; Ge J; Qiu Y; Guo L

**INSTITUCIÓN / INSTITUTION:** - From the \*Department of Neurosurgery, Shanghai Seventh People's Hospital; and daggerDepartment of Neurosurgery, Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China.

**RESUMEN / SUMMARY:** - Experience is an important point in the effectiveness of the surgical procedure and in the reduction of complications in pituitary surgery.

Endoscopic pituitary surgery differs from microscopic surgery because it requires a steep learning curve for endoscopic skills. In this study, we investigated the learning curve of endoscopic transsphenoidal pituitary surgery in our department. Endoscopic transsphenoidal operations were performed on 80 patients, who were retrospectively examined and grouped as the early and late experience groups to evaluate the learning curve. The patients' characteristics, gross total resection, endocrinological cure, visual field improvement, duration of surgery, postoperative hospital stay, and complications were noted. After examining our patients of the 2 groups of period, our experience showed that as the effectiveness of endoscopic surgery increases, the duration of surgery and postoperative hospital stay decrease. In this study, we identified a learning curve in endoscopic pituitary surgery.

[429]

**TÍTULO / TITLE:** - Combination of Chondroitinase ABC, Glial Cell Line-Derived Neurotrophic Factor and Nogo A Antibody Delayed-Release Microspheres Promotes the Functional Recovery of Spinal Cord Injury.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 Nov;24(6):2153-7. doi: 10.1097/01.SCS.0000436700.65891.3b.

●● Enlace al texto completo (gratis o de pago)

[1097/01.SCS.0000436700.65891.3b](#)

**AUTORES / AUTHORS:** - Zhang Y; Gu Z; Qiu G; Song Y

**INSTITUCIÓN / INSTITUTION:** - From the \*Department of Orthopaedics, Peking Union Medical College Hospital, Beijing; daggerDepartment of Orthopaedics, The First People's Hospital of Chengdu; and double daggerDepartment of Orthopaedics, West China Hospital, Sichuan University, Chengdu, China.

**RESUMEN / SUMMARY:** - Spinal cord injury (SCI) is one of the most devastating injuries for patients. Glial cell line-derived neurotrophic factor (GDNF) is an important neurotrophic factor for the regeneration of the spinal neuraxial bundle, but GDNF would degrade rapidly if the protein was injected into the site of injury; thus, it cannot exert its fullest effects. Therefore, we introduced a delivery system of GDNF, poly(lactide-co-glycolic acid) (PLGA) delayed-release microspheres, in the current study and observed the effect of PLGA-GDNF and the combination of PLGA-GDNF and another

2 agents PLGA-chondroitinase ABC (ChABC) and PLGA-Nogo A antibody in the treatment of SCI rats. Our results showed that PLGA-GDNF and the combination of chABC, GDNF, and Nogo A antibody microspheres could elevate the locomotor scores of SCI rats. The effect of PLGA-GDNF was much better than that of GDNF. The cortical somatosensory evoked potential was also improved by PLGA-GDNF and the combination of chABC, GDNF, and Nogo A antibody microspheres. Our results suggest that PLGA delayed-release microsphere may be a useful and effective tool in delivering protein agents into the injury sites of patients with SCI. This novel combination therapy may provide a new idea in promoting the functional recovery of the damaged spinal cord.

[430]

**TÍTULO / TITLE:** - Locating of the pituitary stalk for craniopharyngioma surgery of transfrontobasal interhemispheric approach.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 Nov;24(6):2106-9. doi: 10.1097/SCS.0b013e31829ad5e8.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1097/SCS.0b013e31829ad5e8](#)

**AUTORES / AUTHORS:** - Sui M; Liu S; Liu M; Li Y; Tian Y

**INSTITUCIÓN / INSTITUTION:** - From the \*Department of Anatomy, Norman Bethune Medical College, Jilin University; and daggerDepartment of Ultrasound, Changchun University of Chinese Medicine, Changchun, Jilin Province, People's Republic of China.

**RESUMEN / SUMMARY:** - The aim of this study was to provide a relatively safe operation range for the protection of the pituitary stalk in transfrontobasal interhemispheric approach for craniopharyngioma surgery by measuring the related parameters of the pituitary stalk. Based on the whole-head magnetic resonance imaging scans of 119 healthy subjects (57 men and 62 women) anonymously, three-dimensional reconstructions were rebuilt. The results of the study are as follows: M is the common midpoint of anterior and inferior border of anterior commissure. O and P are the midpoint of the anterior border of the pituitary stalk's superior and inferior extremity, respectively. The distance between M and O (D1) was 12.42 (SD, 2.35) mm. The distance between M and P (D2) was 22.47 (SD, 2.57) mm. The length of the pituitary stalk (D3) was 10.68 (SD, 2.34) mm. The widest diameter of the pituitary stalk (D4) was 2.78 (SD, 0.50) mm. The inclination of the pituitary stalk at the coronal plane (A1) was 2.73 (SD, 2.60) degrees. Of the 119 pituitary stalks involved in this study, 14.29% were centered, 47.06% inclined to the left with the value (A1L) of 3.41 (SD, 2.58) degrees and 38.66% inclined to the right with the value (A1R) of 2.93 (SD, 2.49) degrees. The angle between MO and MP(A2) was 11.81 (SD, 4.76) degrees. No statistical difference was found between male and female subjects for all the measurements ( $P > 0.05$ ). With the parameters measured in this study, we can locate the pituitary stalk by anterior commissure; thus, it is relatively safe to do the craniopharyngioma surgery through frontobasal interhemispheric approach when the pituitary stalk cannot be seen clearly because of the shelter of tumor, which will reduce both the unnecessary damage to the pituitary stalk and the probability of postoperative complications.

[431]

**TÍTULO / TITLE:** - Nocturnal headaches and pulsatile cranial mass: the tip of an iceberg.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Pediatr Neurol.* 2013 Nov;49(5):358-60. doi: 10.1016/j.pediatrneurol.2013.05.010.

●● Enlace al texto completo (gratis o de pago)

[1016/j.pediatrneurol.2013.05.010](#)

**AUTORES / AUTHORS:** - Smith AR; Carpenter J; Pergami P

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, West Virginia University, Morgantown, West Virginia.

**RESUMEN / SUMMARY:** - BACKGROUND: Capillary malformation-arteriovenous malformation (CM-AVM) disorder is a newly defined hereditary disorder of the vasculature with typical defining features that include cutaneous capillary malformations associated with high-flow lesions in various other organ systems. Mutations on the RASA1 gene are reported to be associated with a variety of vascular malformations and present with a widely varying phenotype. PATIENT: A healthy 3 year old presented with acute onset of severe nocturnal headaches, nausea, and vomiting associated with a 2-cm pulsatile mass and prominent superficial veins on her forehead. Neuroimaging demonstrated a complex vascular malformation with multiple arteriovenous fistulae and cavernous angiomas present in multiple locations in the brain, but not in any other organ system. RESULTS: The patient was found to have a mutation of the RASA1 gene, which has not been previously described in the literature. CONCLUSIONS: This case describes a new RASA1 mutation with a phenotype that has not been previously described with a combination of pial fistulae and intracranial AV fistula in the absence of arteriovenous malformations.

[432]

**TÍTULO / TITLE:** - Rheumatoid arthritis mimicking an intracranial malignancy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Acta Neurochir (Wien).* 2013 Nov 20.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1936-1](#)

**AUTORES / AUTHORS:** - Rijkers K; Postma A; Riedl R; Schijns O

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Maastricht University Medical Center, PO BOX 5800, 6202 AZ, Maastricht, The Netherlands, [kimrijkers@gmail.com](mailto:kimrijkers@gmail.com).

[433]

**TÍTULO / TITLE:** - Malignant teratoid ciliary body medulloepithelioma in a neonate.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *J Pediatr Ophthalmol Strabismus.* 2013 Aug 6;50:e37-40. doi: 10.3928/01913913-20130730-01.

●● Enlace al texto completo (gratis o de pago) [3928/01913913-20130730-01](#)

**AUTORES / AUTHORS:** - Manjandavida FP; Honavar SG; Mulay K; Reddy VA; Vemuganti GK

**RESUMEN / SUMMARY:** - Ciliary body medulloepithelioma is an intraocular tumor manifesting in early childhood, rarely at birth. A unique case of intraocular malignant teratoid ciliary body medulloepithelioma in a neonate presenting as buphthalmos at birth is reported. There was rapid progression with extraocular extension within 2 months and developed regional lymph node metastasis despite enucleation. The child underwent lymph node dissection and local radiotherapy with complete remission. [J Pediatr Ophthalmol Strabismus 2013;50:e37-e40].

[434]

**TÍTULO / TITLE:** - Cellular Neurothekeoma of the Eyelid: A Unique Internal Palpebral Presentation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ophthal Plast Reconstr Surg. 2013 Nov 5.

●● Enlace al texto completo (gratis o de pago) [1097/IOP.0b013e3182a22aea](#)

**AUTORES / AUTHORS:** - Lefebvre DR; Robinson-Bostom L; Migliori ME

**INSTITUCIÓN / INSTITUTION:** - \*Division of Ophthalmic Plastic Surgery, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, Massachusetts; daggerDivision of Ophthalmology and double daggerDepartment of Dermatology, Division of Dermatopathology, Rhode Island Hospital, The Warren Alpert Medical School at Brown University, Providence, Rhode Island, U.S.A.

**RESUMEN / SUMMARY:** - A 50-year-old woman presented with a mass lesion of the inferolateral palpebral conjunctiva similar in appearance to a chalazion, but unusual enough in presentation that excisional biopsy was initially performed. Histopathologic analysis revealed a dermal fibrohistiocytic neoplasm consistent with cellular neurothekeoma. Neurothekeoma is a benign tumor; the cellular variant is rare and of unclear histogenesis. Completely internal eyelid location is particularly rare, with other identifiable case reports of cellular neurothekeoma palpebrae referring to external or unspecified eyelid location. This case provides an example of the chalazion as masquerader and re-emphasizes the importance of maintaining a broad differential diagnosis and high index of suspicion regarding atypically appearing chalazia.

[435]

**TÍTULO / TITLE:** - Endoscopic endonasal transsphenoidal approach for sellar tumors beyond the sellar turcica.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Otolaryngol. 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago) [3109/00016489.2013.857785](#)

**AUTORES / AUTHORS:** - Song Y; Li H; Liu H; Li W; Zhang X; Guo L; Tan G

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology-Head Neck Surgery, Third Xiangya Hospital of Central South University, Changsha, Hunan.

**RESUMEN / SUMMARY:** - Abstract Conclusions: The endoscopic endonasal transsphenoidal approach can be a choice for sellar tumors beyond the sellar turcica, but it is necessary to make the choice carefully because of the severe surgical risks.

Objectives: To summarize our experience of removal of sellar tumors beyond the sellar turcica via the endoscopic endonasal transsphenoidal approach and to evaluate the surgical efficacy and complications. Methods: Between January 2007 and January 2012, 30 patients with sellar tumors beyond the sellar turcica underwent surgery using the endoscopic endonasal transsphenoidal approach. Results: Postoperative pathological examination demonstrated that pituitary adenoma occurred in 22 patients, craniopharyngioma in 5, and meningioma in 3. Total removal was achieved in 21 patients (70.0%) and subtotal removal was achieved in 8 patients (26.7%). After the surgery, cerebrospinal fluid leakage occurred in 3 patients, temporary diabetes insipidus occurred in 25 patients and persistent diabetes insipidus in 4 patients, intracranial infection occurred in 1 patient, frontal subdural effusion occurred in 1 patient, sinusitis occurred in 2 patients, epistaxis occurred in 3 patients, and 1 patient with a huge pituitary adenoma died of hypothalamic failure related to the operation.

[436]

**TÍTULO / TITLE:** - Lymphomatosis cerebri with intramedullary spinal cord involvement.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Intern Med. 2013;52(22):2561-5.

**AUTORES / AUTHORS:** - Sato H; Takahashi Y; Wada M; Shiono Y; Suzuki I; Kohno K; Kato Y; Kawanami T; Sakurada K; Kayama T; Kato T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Hematology, Metabolism, Endocrinology and Diabetology, Yamagata University Faculty of Medicine, Japan.

**RESUMEN / SUMMARY:** - Lymphomatosis cerebri (LC) is a rare form of primary central nervous system lymphoma (PCNSL). Little is known about cases of LC with spinal cord involvement. Among the 11 PCNSL patients treated in our hospital during a four-year period, we identified two cases of LC with spinal cord lesions. One showed a spinal cord lesion followed by leukoencephalopathy. The other showed a spinal cord lesion after LC. In both cases, the histopathology was diffuse large B-cell lymphoma. It is possible that LC may affect the entire central nerve system, and tumor infiltration to the brain and spinal cord in LC may occur more frequently than has been previously considered.

[437]

**TÍTULO / TITLE:** - Lumbosacral Abortive Hemangioma with Intradural Extension.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatr Dermatol. 2013 Oct 11. doi: 10.1111/pde.12234.

●● Enlace al texto completo (gratis o de pago) [1111/pde.12234](#)

**AUTORES / AUTHORS:** - Martinez-Criado Y; Fernandez-Pineda I; Merchante E; Bernabeu-Wittel J

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Surgery, Virgen del Rocio Children's Hospital, Sevilla, España.

**RESUMEN / SUMMARY:** - Abortive hemangioma (AH) is a true hemangioma of infancy that expresses glucose transporter-1 protein in the endothelial cells, with an arrested growth cycle. We present the rare case of a lumbosacral AH with intramedullary extension.

[438]

**TÍTULO / TITLE:** - The silent phase of diffuse low-grade gliomas. Is it when we missed the action?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Dec;155(12):2237-42. doi: 10.1007/s00701-013-1886-7. Epub 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1886-7](#)

**AUTORES / AUTHORS:** - Pallud J; Capelle L; Taillandier L; Badoual M; Duffau H; Mandonnet E

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Saint-Anne Hospital, Paris, France.

**RESUMEN / SUMMARY:** - BACKGROUND: It is commonly believed that, before being diagnosed after onset of symptoms, diffuse low-grade glioma evolve silently for a long time. The present study aimed to estimate for the first time the exact duration of this silent phase, during which the glioma is radiologically visible but undiscovered. METHODS: We retrospectively reviewed our French national database of diffuse low-grade glioma, searching for patients with an MRI-based assessment of their velocity of diameter growth at diagnosis and before any treatment (at least three MRIs over more than 6 months). For each patient, the duration of the silent phase was estimated by the formula: duration = initial diameter / initial velocity of growth. RESULTS: A total of 148 patients were included in the study. The mean lead-time duration (i.e., duration of the silent phase) was 14.0 +/- 7.8 years (median, 11.6 ; range, 1.6-39.4). The lead-time is statistically not correlated to the tumor volume. It is markedly decreasing with the velocity of diameter expansion. CONCLUSIONS: Diffuse low-grade glioma are radiologically detectable but clinically silent for more than a decade. Such a long period of silent evolution could explain our current failure to cure these tumors. It can also be viewed as a window of opportunity to detect these tumors earlier, suggesting the need to set up a screening program.

[439]

**TÍTULO / TITLE:** - Calcified Rock-Like Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatr Neurosurg. 2013 Oct 29.

●● Enlace al texto completo (gratis o de pago) [1159/000355564](#)

**AUTORES / AUTHORS:** - Futane S; Salunke P; Kapoor A; Veiphei K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

[440]

**TÍTULO / TITLE:** - Ganglioglioma of the Spinal Cord in Neurofibromatosis Type 1.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatr Neurosurg. 2013 Oct 25.

●● Enlace al texto completo (gratis o de pago) [1159/000355249](#)

**AUTORES / AUTHORS:** - Giussani C; Isimbaldi G; Massimino M; Trezza A; Cianci P; Canonico F; Sganzerla EP

**INSTITUCIÓN / INSTITUTION:** - Clinica Neurochirurgica, Universita degli Studi Milano-Bicocca, Ospedale San Gerardo, Monza, Italy.

**RESUMEN / SUMMARY:** - The oncologic involvement of the spinal cord in neurofibromatosis type 1 (NF1) is not a typical feature of the disease. Here, we present a case of ganglioglioma of the spinal cord in a child with NF1 and try to define if this tumor can be considered coincidental or not. A 4-year-old boy affected by NF1 was diagnosed with a spinal cord-enhancing tumor extending from C4 to D3, with a disappearance in the T2 MRI sequences of the cerebrospinal fluid signal. The patient underwent a subtotal resection. The pathological exam revealed a ganglioglioma. To the best of our knowledge, only 1 other case of spinal cord ganglioglioma has been described in an NF1 patient. We suggest considering ganglioglioma in the differential diagnosis of an NF1 patient with a spinal cord tumor due to its favorable survival rate, especially in relation to the anatomical and surgical issues of this tumor that do not always entail a gross total resection. © 2013 S. Karger AG, Basel.

[441]

**TÍTULO / TITLE:** - Glutamate transporters in the biology of malignant gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Mol Life Sci. 2013 Nov 27.

●● Enlace al texto completo (gratis o de pago) [1007/s00018-013-1521-z](#)

**AUTORES / AUTHORS:** - Robert SM; Sontheimer H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurobiology, Center for Glial Biology in Medicine, University of Alabama at Birmingham, CIRC 425, 1719 6<sup>th</sup> Ave S, Birmingham, AL, 35294, USA, [srobe25@uab.edu](mailto:srobe25@uab.edu).

**RESUMEN / SUMMARY:** - Malignant gliomas are relentless tumors that offer a dismal clinical prognosis. They develop many biological advantages that allow them to grow and survive in the unique environment of the brain. The glutamate transporters system x<sub>c</sub>- and excitatory amino acid transporters (EAAT) are emerging as key players in the biology and malignancy of these tumors. Gliomas manipulate glutamate transporter expression and function to alter glutamate homeostasis in the brain, which supports their own growth, invasion, and survival. As a consequence, malignant cells are able to quickly destroy and invade surrounding normal brain. Recent findings are painting a larger picture of these transporters in glioma biology, and as such are providing opportunities for clinical intervention for patients. This review will detail the current understanding of glutamate transporters in the biology of malignant gliomas and highlight some of the unique aspects of these tumors that make them so devastating and difficult to treat.

[442]

**TÍTULO / TITLE:** - Molecular biomarkers in pediatric glial tumors: a needed wind of change.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Oncol. 2013 Nov;25(6):665-73. doi: 10.1097/CCO.0000000000000007.

●● Enlace al texto completo (gratis o de pago)

[1097/CCO.0000000000000007](#)

**AUTORES / AUTHORS:** - Fontebasso AM; Bechet D; Jabado N

**INSTITUCIÓN / INSTITUTION:** - aDivision of Experimental Medicine bDepartments of Pediatrics and Human Genetics, McGill University and McGill University Health Centre, Montreal, Quebec, Canada.

**RESUMEN / SUMMARY:** - PURPOSE OF REVIEW: Glial tumors of the central nervous system (CNS) are the leading cause of cancer-related death and morbidity in children. Their diagnosis/prognosis relies mainly on clinical and histopathological factors. However, pathological grading is particularly challenging as there is substantial molecular heterogeneity in pediatric CNS tumors, which results in variable biological behavior in tumors with potentially identical histological diagnoses or limited reliable measures of classification for given subgroups. Novel molecular markers/pathways identified by integrated genomic/transcriptomic/epigenomic studies of cohorts of pediatric gliomas are revolutionizing this field and are summarized herein. RECENT FINDINGS: Studies of pediatric gliomas have identified unexpected oncogenic pathways implicated in gliomagenesis. These range from a single pathway/molecule defect such as abnormalities of the mitogen-activated-protein-kinase pathway considered to be a hallmark of pilocytic astrocytomas, to alterations in epigenomic modulators in higher-grade tumors. Importantly, the type, timing, and spatial clustering of these molecular alterations provide a better understanding of the pathogenesis of gliomas and critical markers for therapy that will help refine pathological grading. SUMMARY: Reappraisal of glioma classification using these novel biomarkers will likely change practice toward molecular pathology and their integration into clinical trials will enable personalized therapies based on the molecular fingerprint of individual tumors.

[443]

**TÍTULO / TITLE:** - Contralateral hearing loss after acoustic neuroma surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Aug 31. pii: S0967-5868(13)00458-X. doi: 10.1016/j.jocn.2013.06.019.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.06.019](#)

**AUTORES / AUTHORS:** - Togashi S; Maruya J; Nerome C; Nishimaki K; Kimura H; Minakawa T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Akita Red Cross Hospital, 222-1 Nawashirosawa, Saruta, Kamikitate, Akita 010-1495, Japan.

**RESUMEN / SUMMARY:** - A 74-year-old man suffered contralateral hearing loss after left acoustic neuroma surgery. Steroid therapy was administered, but no improvement was observed. Contralateral hearing loss is an extremely rare and distressing complication that can occur following acoustic neuroma surgery. Although the mechanism of this rare phenomenon remains unclear, we speculate that in this patient the loss of cerebrospinal fluid or internal auditory artery thrombosis may be involved.

[444]

**TÍTULO / TITLE:** - Targeting DUSPs in glioblastomas - wielding a double-edged sword?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Biol Int. 2013 Oct 23. doi: 10.1002/cbin.10201.

●● Enlace al texto completo (gratis o de pago) [1002/cbin.10201](https://doi.org/10.1002/cbin.10201)

**AUTORES / AUTHORS:** - Prabhakar S; Asuthkar S; Lee W; Chigurupati S; Zakharian E; Tsung AJ; Velpula KK

**INSTITUCIÓN / INSTITUTION:** - Department of Natural and Health Sciences, Southeastern University, Lakeland, Florida, 33801, USA.

**RESUMEN / SUMMARY:** - Several dual-specificity phosphatases (DUSPs) that play key roles in the direct or indirect inactivation of different MAP kinases (MAPKs) have been implicated in human cancers over the past decade. This has led to a growing interest in identifying DUSPs and their specific inhibitors for further testing and validation as therapeutic targets in human cancers. However, the lack of understanding of the complex regulatory mechanisms and cross-talks between MAPK signaling pathways, combined with the fact that DUSPs can act as a double-edged sword in cancer progression, calls for a more careful and thorough investigation. Among the various types of brain cancer, glioblastoma multiforme (GBM) is notorious for its aggressiveness and resistance to current treatment modalities. This has led to the search for new molecular targets, particularly those involving various signaling pathways. DUSPs appear to be a promising target, but much more information on DUSP targets and their effects on GBM is needed before potential therapies can be developed, tested, and validated. This review identifies and summarizes the specific roles of DUSP1, DUSP4, DUSP6 and DUSP26 that have been implicated in GBM.

[445]

**TÍTULO / TITLE:** - Rearrangement of motor centers and its relationship to the neurological status of low-grade glioma examined on pre- and postoperative fMRI.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Oct 11. pii: S0303-8467(13)00388-0. doi: 10.1016/j.clineuro.2013.09.034.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.09.034](https://doi.org/10.1016/j.clineuro.2013.09.034)

**AUTORES / AUTHORS:** - Bryszewski B; Tybor K; Ormezowska EA; Jaskolski DJ; Majos A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Medical University of Lodz, Barlicki University Hospital No. 1, Lodz, Poland. Electronic address: [bartoszby@wp.pl](mailto:bartoszby@wp.pl).

**RESUMEN / SUMMARY:** - **OBJECTIVE:** Well-developed compensatory mechanisms, based on the phenomenon of brain plasticity, exist in patients with neuroepithelial tumors, especially with highly differentiated gliomas (WHO grade II). We studied phenomenon of rearrangement of sensorimotor cortex using functional magnetic resonance imaging (fMRI), and verified relationship between observed changes and results of neurological and neuropsychological assessment. **METHODS:** Study group included 20 patients with WHO grade II gliomas located within motor or sensory cortex. fMRI examination, as well as clinical, neurological (Karnofsky performance score [KPS] and Lovett's scale [Lo]), and neuropsychological assessment (Digit Coding Symbol Test and Digit Span Test) were performed pre-operatively and 3 months post-surgery. **RESULTS:** There were no significant differences in pre- and postoperative performance status of patients. Although statistically insignificant, an increase in frequency of activation of primary and secondary cortical motor centers was observed postoperatively ( $p > 0.05$ ). Prior to surgery, motor centers were characterized by lower

values of t-statistics than in postoperative period ( $p > 0.05$ ). In contrast, values of parameters describing the size of examined centers, i.e. mean number of clusters, were lower, but not statistically significant on postoperative examination ( $p > 0.05$ ). Compared to individuals without motor deficit, patients with preoperative Lo3/Lo4 paralysis showed significantly higher mean values of t-statistics in the accessory motor area on postoperative examination ( $p < 0.05$ ). CONCLUSIONS: The processes of motor cortex rearrangement seemed to be associated with the pre- and postoperative neurological and neuropsychological status of patients. After contralateral primary motor cortex, accessory motor area was the second most frequently activated center, both pre- and postoperatively.

[446]

**TÍTULO / TITLE:** - Impact of Cranial Irradiation and Brain Tumor Location on Fertility: a Survey.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Klin Padiatr. 2013 Nov;225(6):320-324. Epub 2013 Oct 24.

●● Enlace al texto completo (gratis o de pago) [1055/s-0033-1353206](#)

**AUTORES / AUTHORS:** - Koustenis E; Pfitzer C; Balcerak M; Reinmuth S; Zynda A; Stromberger C; Hohmann C; Keil T; Borgmann-Staudt A

**INSTITUCIÓN / INSTITUTION:** - Paediatric Oncology/Haematology, Charite - Universitätsmedizin Berlin, Germany.

**RESUMEN / SUMMARY:** - As survival rates of patients with childhood brain tumors have increased to 75%, treatment related side effects are of particular importance. The present study evaluated questionnaire-based fertility characteristics in cancer survivors treated with irradiation to the hypo-thalamic-pituitary-axis. A nationwide survey was conducted in collaboration with the German Childhood Cancer Registry. Questionnaire and treatment data could be retrieved for 1110 former childhood cancer patients with cranial irradiation and/or chemotherapy. Survivors receiving  $\geq 30$  gray vs. 18-29 gray and 0-17 gray to the pituitary gland reported less pregnancies or less with their partners (7.4% vs. 32.8% vs. 12.4%;  $p < 0.001$ ), were more often infertile (40% vs. 9.4% vs. 12.5%;  $p < 0.001$ ) and the female participants, had a higher frequency of permanent amenorrhea (16.7% vs. 1.7% vs. 0%;  $p < 0.001$ ). Irradiation of the pituitary gland  $\geq 30$  gray seemed to be associated with less pregnancies and increased permanent amenorrhea in women. Future studies need to be conducted to confirm these results. Increased knowledge of treatment related side effects might help brain tumor patients to improve their family planning if necessary by gonadotropine replacement.

[447]

**TÍTULO / TITLE:** - Giant intradiploic epidermoid cyst presenting as solitary skull mass with intracranial extension.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 Nov;24(6):2169-71. doi: 10.1097/SCS.0b013e3182a2d820.

●● Enlace al texto completo (gratis o de pago)

[1097/SCS.0b013e3182a2d820](#)

**AUTORES / AUTHORS:** - Hasturk AE; Basmaci M; Yilmaz ER; Kertmen H; Gurer B; Atilgan AO

**INSTITUCIÓN / INSTITUTION:** - From the \*Department of Neurosurgery, Oncology Training and Research Hospital; daggerDepartment of Neurosurgery, Diskapi Yildirim Beyazit Training and Research Hospital; and double daggerDepartment of Pathology, Baskent University Hospital, Ankara, Turkey.

**RESUMEN / SUMMARY:** - Epidermoid cysts are rare benign tumors that constitute 0.3% to 1.8% of all intracranial tumors. They are inclusion tumors that include epidermoid elements and are most commonly located in the cerebellopontine angle cistern and the parasellar region, and their location in the diploic space is very rare. These lesions slowly grow and usually do not involve the intracranial compartment. In this article, a case of giant epidermoid cyst located in the left frontal intradiploic space is presented with clinical, radiologic features and surgical treatment.

[448]

**TÍTULO / TITLE:** - Orbital Malign Trichilemmal Tumor With Cerebral Involvement.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago)

[1097/SCS.0b013e3182a2ed5a](https://doi.org/10.1097/SCS.0b013e3182a2ed5a)

**AUTORES / AUTHORS:** - Ogul H; Keles S; Yildirim K; Bassorgun CI; Eren S; Kantarci M

**INSTITUCIÓN / INSTITUTION:** - From the \*Departments of Radiology and daggerOphthalmology, Faculty of Medicine, Ataturk University, Erzurum; and double daggerDepartment of Pathology, Faculty of Medicine, Akdeniz University, Antalya, Turkey.

**RESUMEN / SUMMARY:** - Proliferating trichilemmal tumor is a rare encountered neoplasm. This neoplasm is usually benign, but it may be locally aggressive. To the best of our knowledge, magnetic resonance (MR) imaging features of cerebral involvement of this unusual neoplasm have not been described. We report the MR imaging findings of a case of malignant proliferating trichilemmal tumor, with cerebral involvement.

[449]

**TÍTULO / TITLE:** - First Experience With Image-guided Resection of Paraganglioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago)

[1097/RLU.0000000000000239](https://doi.org/10.1097/RLU.0000000000000239)

**AUTORES / AUTHORS:** - Einspieler I; Novotny A; Okur A; Essler M; Martignoni ME

**INSTITUCIÓN / INSTITUTION:** - From the Departments of \*Nuclear Medicine and daggerSurgery, Klinikum rechts der Isar, Technische Universität München, Munich, Germany.

**RESUMEN / SUMMARY:** - A 32-year-old male patient showed 2 focal uptakes of I-MIBG next to the left renal vein in a diagnostic scan, corresponding to paragangliomas. An operation was indicated, and to guide resection during surgery we used the freehand SPECT system. In the operating room, using freehand SPECT, both lesions were

found. The system was of additional value in planning the operative access to the region of interest and in determining the depth of 1 lesion for precise and more rapid extirpation. Furthermore, it confirmed no residues in the operating field after resection of the tumors.

[450]

**TÍTULO / TITLE:** - Intradiploic dermoid cyst: a rare cause of intracranial hypertension.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Neurosurg. 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.841846](#)

**AUTORES / AUTHORS:** - Ramak Hashemi SM; Raei Hedayat M; Alghasi M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Firoozgar Hospital, Tehran University of Medical Sciences , Tehran , Iran.

**RESUMEN / SUMMARY:** - In this study, we report a rare case of intradiploic dermoid cyst in a patient who developed rapid symptoms of intracranial hypertension (ICH) that mimicked Pseudotumor cerebri syndrome clinically. A 25-year-old female presented with a history of headache, nausea, vertigo and blurred vision in the past 4 months. Images revealed a small supratentorial extradural intradiploic tumor. A midline occipital craniotomy was performed and total removal of the dermoid cyst was accomplished. Present case demonstrated that dermoid cysts can be considered an exceptionally rare basic cause of ICH.

[451]

**TÍTULO / TITLE:** - Primary cerebral myxopapillary ependymoma presenting with intratumoral hemorrhage.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Neurosurg. 2013 Nov 14.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.859656](#)

**AUTORES / AUTHORS:** - Khalatbari MR; Moharamzad Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Arad Hospital , Tehran , Iran.

**RESUMEN / SUMMARY:** - Myxopapillary ependymoma (MPE), a benign histological variant of ependymoma, is found most commonly in the cauda equina region. Primary intracranial MPE is very rare, and most cases are a metastatic deposit from a spinal lesion. Primary cerebral MPEs are usually well-defined solid or cystic lesions without hemorrhage. We report the first case of primary cerebral MPE with intratumoral hemorrhage.

[452]

**TÍTULO / TITLE:** - Mowat-Wilson syndrome: the first report of an association with central nervous system tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Dec;29(12):2151-5. doi: 10.1007/s00381-013-2283-5. Epub 2013 Oct 3.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2283-5](#)

**AUTORES / AUTHORS:** - Valera ET; Ferraz ST; Brassesco MS; Zhen X; Shen Y; Dos Santos AC; Neder L; Oliveira RS; Scrideli CA; Tone LG

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Oncology, Department of Pediatrics; Faculty of Medicine of Ribeirao Preto, University of Sao Paulo, Sao Paulo, Brazil, [elvisvalera@hotmail.com](mailto:elvisvalera@hotmail.com).

**RESUMEN / SUMMARY:** - Mowat-Wilson syndrome (MWS) is a rare genetic condition where variable and multiple congenital anomalies including Hirschsprung's disease, intellectual disability, and prominent facial features are present. At molecular level, MWS is characterized by many different described mutations in the zinc finger E-box protein 2 (ZEB2) gene, ultimately leading to loss of gene function. This report is the first to describe the association of MWS with two different asynchronous malignant brain tumors (medulloblastoma and glioblastoma) occurring in a child.

[453]

**TÍTULO / TITLE:** - Torsional nystagmus in hypothalamic hamartoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Epileptic Disord. 2013 Oct 29.

●● [Enlace al texto completo \(gratis o de pago\) 1684/epd.2013.0611](#)

**AUTORES / AUTHORS:** - Shaikh AG

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Case Western Reserve University, Cleveland, OH, USA.

**RESUMEN / SUMMARY:** - Torsional nystagmus was noted in a patient with hypothalamic hamartoma. Magnetic resonance imaging revealed an exophytic hypothalamic mass extending into the pre-pontine cistern and abutting ventral mesencephalon. The quickphase of the torsional nystagmus was directed towards the left side, ipsilateral to the side of compression by the hamartoma. Ipsi-lesionally directed pure torsional nystagmus in this case is attributed to the compressive lesion of ocular motor structures responsible for the neural integration of torsional and vertical eye movements, namely the interstitial nucleus of Cajal. [Published with video sequences].

[454]

**TÍTULO / TITLE:** - Palisaded encapsulated neuroma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cutis. 2013 Oct;92(4):167;177;178.

**AUTORES / AUTHORS:** - Hall LD; Ferringer T

**INSTITUCIÓN / INSTITUTION:** - Ackerman Academy of Dermatopathology, 145 E 32<sup>nd</sup> St, Floor 10, New York, NY 10016, USA. [lawrence.hall@downstate.edu](mailto:lawrence.hall@downstate.edu).

[455]

**TÍTULO / TITLE:** - 68Ga DOTATATE PET/CT in a Rare Coexistence of Pituitary Macroadenoma and Multiple Paragangliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Oct 22.

- Enlace al texto completo (gratis o de pago)

[1097/RLU.0b013e3182a77b78](https://doi.org/10.1097/RLU.0b013e3182a77b78)

**AUTORES / AUTHORS:** - Parghane RV; Agrawal K; Mittal BR; Shukla J; Bhattacharya A; Mukherjee KK

**INSTITUCIÓN / INSTITUTION:** - From the Departments of \*Nuclear Medicine & PET, and daggerNeurosurgery, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

**RESUMEN / SUMMARY:** - The coexistence of a pituitary neoplasm and pheochromocytoma is a rare condition, which may be another undefined variant of Multiple endocrine neoplasia (MEN) syndrome. Moreover, the coexistence of pituitary macroadenoma and multiple paragangliomas is more uncommon and only few authors have reported these findings. We are reporting the use of Ga DOTATATE PET/CT in a rare case of coexisting pituitary macroadenoma and multiple paragangliomas.

[456]

**TÍTULO / TITLE:** - Reactive Pituitary Enlargement Mimicking a Sellar Mass.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Klin Padiatr. 2013 Oct 24.

- Enlace al texto completo (gratis o de pago) [1055/s-0033-1354389](https://doi.org/10.555/s-0033-1354389)

**AUTORES / AUTHORS:** - Sterkenburg AS; Niekrens C; Hoffmann A; Warmuth-Metz M; Flitsch J; Muller HL

**INSTITUCIÓN / INSTITUTION:** - University Medical Center (UMCG), University of Groningen, Netherlands.

[457]

**TÍTULO / TITLE:** - Genomic Approaches to Problems in Pituitary Neoplasia.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocr Pathol. 2013 Nov 23.

- Enlace al texto completo (gratis o de pago) [1007/s12022-013-9276-5](https://doi.org/10.1007/s12022-013-9276-5)

**AUTORES / AUTHORS:** - Asa SL; Ezzat S

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, University Health Network, 200 Elizabeth Street, 11<sup>th</sup> floor, Toronto, Ontario, Canada, M5G 2C4, [sylvia.asa@uhn.ca](mailto:sylvia.asa@uhn.ca).

**RESUMEN / SUMMARY:** - The genetic mutations underlying familial syndromes that include pituitary tumors are rarely noted in the majority of sporadic adenohypophyseal adenomas. In contrast, epigenetic dysregulation is common, resulting in differential expression of cell cycle and apoptosis regulators, adhesion molecules, growth factors, and metabolic determinants of cell function. Here, we discuss the diagnostic and therapeutic implications of these findings as the landscape of pituitary tumor defects unfolds.

[458]

**TÍTULO / TITLE:** - Neuro-Ophthalmologic Features of Chordoid Glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuroophthalmol. 2013 Oct 9.

- Enlace al texto completo (gratis o de pago)

[1097/WNO.0b013e3182a595b7](https://doi.org/10.1097/WNO.0b013e3182a595b7)

**AUTORES / AUTHORS:** - Al-Zubidi N; McGlynn MM; Chevez-Barrios P; Yalamanchili S; Lee AG

**INSTITUCIÓN / INSTITUTION:** - Departments of Ophthalmology (NA-Z, SY, AGL) and Pathology and Genomic Medicine (PC-B), Houston Methodist Hospital, Houston, Texas; Weill Cornell Medical College (MMM, PC-B) and Departments of Ophthalmology, Neurology, and Neurosurgery (AGL), Weill Cornell Medical College, Houston, Texas; Department of Ophthalmology, Baylor College of Medicine (PC-B, AGL), Houston, Texas; and the Department of Ophthalmology (AGL), The University of Texas Medical Branch, Galveston, Texas and the University of Texas M.D. Anderson Cancer Center (AGL), Houston, Texas.

**RESUMEN / SUMMARY:** - : Chordoid glioma is a rare intracranial tumor typically arising in the third ventricle, particularly along the anterior aspect of the hypothalamic wall. We describe the clinical, neuroimaging, and pathologic factors of this neoplasm in a patient presenting with a chiasmal syndrome.

[459]

**TÍTULO / TITLE:** - Bibrachial amyotrophy and ventral spinal cyst associated with myelomalacia and intracranial hypertension.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Oct 4. pii: S0967-5868(13)00359-7. doi: 10.1016/j.jocn.2013.04.026.

- Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.04.026](https://doi.org/10.1016/j.jocn.2013.04.026)

**AUTORES / AUTHORS:** - Child N; McGuinness B; Kilfoyle D

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Auckland City Hospital, Park Road, Grafton, Auckland, New Zealand.

**RESUMEN / SUMMARY:** - It has been recently recognised that patients with ventral intraspinal fluid collections secondary to cerebrospinal fluid leaks can present with bibrachial amyotrophy or mimic Hirayama disease. Here we present two further patients that expand the clinical spectrum of this disorder to include association with myelomalacia and intracranial hypertension.

[460]

**TÍTULO / TITLE:** - Fractionated stereotactic radiosurgery using the Novalis system for the management of pituitary adenomas close to the optic apparatus.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Sep 28. pii: S0967-5868(13)00272-5. doi: 10.1016/j.jocn.2013.03.024.

- Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.03.024](https://doi.org/10.1016/j.jocn.2013.03.024)

**AUTORES / AUTHORS:** - Liao HI; Wang CC; Wei KC; Chang CN; Hsu YH; Lee ST; Huang YC; Chen HC; Hsu PW

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Chang Gung Memorial Hospital at Linkou, Chang Gung University, No. 5, Fu-Hsing Street, Kweishan, Taoyuan 333, Taiwan.

**RESUMEN / SUMMARY:** - Radiosurgery has been proven to be an effective treatment for residual or recurrent pituitary adenomas after surgery. However, it causes severe complications when the optic apparatus is irradiated over the tolerance dose. In this study, we analyzed the feasibility of fractionated stereotactic radiosurgery to treat pituitary tumors close to the optic apparatus. Thirty-four patients from June 2006 to June 2011 with recurrent or residual pituitary adenomas close to (<3mm) the optic apparatus were treated with fractionated stereotactic radiosurgery. Three fractions with a total dose of 2100cGy were applied to the tumors. Imaging, examination of vision, and estimation of hormone level were regularly performed before and after radiosurgery. The mean tumor volume before fractionated stereotactic radiosurgery was 5.06+/-3.08cm<sup>3</sup> (range: 0.82-12.69cm<sup>3</sup>). After a mean follow up of 36.8+/-15.7months (range: 16-72months), tumor size was reduced in seven (20.6%) patients and remained the same in the other 27 (79.4%) patients. Vision was improved in one patient and remained stable in the rest. Only one patient developed transient post-treatment diplopia. This study suggests that fractionated stereotactic radiosurgery is safe for treating pituitary adenomas close to the optic apparatus. Studies with more patients and longer follow-up are required to draw definite conclusions.

[461]

**TÍTULO / TITLE:** - Sorafenib tosylate as a radiosensitizer in malignant astrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Oct 17. pii: S0967-5868(13)00284-1. doi: 10.1016/j.jocn.2013.04.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.04.010](http://1016/j.jocn.2013.04.010)

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**RESUMEN / SUMMARY:** - Progress in research on the molecular aspects of glioblastoma has yet to provide a medical therapy that significantly improves prognosis. Glioblastoma invariably progress through current treatment regimens with radiotherapy as a key component. Activation of several signaling pathways is thought to be associated with this resistance to radiotherapy. Ras activity is exceptionally high in glioblastoma and may regulate sensitivity to radiotherapy. Raf-1, a downstream effector of Ras, demonstrates a high amount of activity in glioblastoma. Therefore, Raf-1 inhibition should be considered as a mechanism to increase the effectiveness of radiotherapy in treatment regimen. In vitro analysis was performed with a novel Raf-1 kinase inhibitor (BAY 54-9085) in culture with the glioblastoma cell line U1242. The cell line was treated in serum-containing media and analyzed for the effect of the BAY 54-9085 alone and BAY 54-9085 combined with radiation on cell death. BAY 54-9085 displayed a cytotoxic effect on glioblastoma cells following a 3day incubation with the drug in serum-containing media. A dose of 2.5µM displayed moderate cell death which significantly increased with a dose of 5.0µM. In addition, glioblastoma cells treated with both the BAY 54-9085 and gamma radiation displayed a significant increase in cell death (85.5%) as compared to either BAY 54-9085 (73.1%) or radiation (34.4%) alone. Radiation therapy is a key component of treatment for glioblastoma. A

novel Raf-1 inhibitor displayed in vitro evidence of synergistically increasing cell death of glioblastoma cells in combination with radiation.

[462]

**TÍTULO / TITLE:** - Wnt4 is overexpressed in human pituitary adenomas and is associated with tumor invasion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Nov 4. pii: S0967-5868(13)00389-5. doi: 10.1016/j.jocn.2013.04.034.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.04.034](#)

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**RESUMEN / SUMMARY:** - The Wnt4 molecule is a secretory glycoprotein implicated in proliferation and differentiation of both normal and malignant cells. Despite extensive investigation of Wnt4 expression in various cancers, little is known about its expression pattern in different types of pituitary tumors. In this study, we examined the expression of Wnt4 and its downstream molecule beta-catenin in pituitary adenoma specimens. Pituitary adenoma tissues were collected from 43 patients and four normal pituitary tissue samples were obtained at autopsy. Quantitative real-time reverse transcription polymerase chain reaction (RT-PCR), immunohistochemistry and western blot were performed to detect the expression of Wnt4 and beta-catenin mRNA and protein, respectively. Tumor invasion grade (Knosp grade) was determined on MRI images and was correlated to beta-catenin expression. Immunohistochemistry demonstrated elevated Wnt4 expression in follicle-stimulating hormone-producing adenomas, growth hormone-producing adenomas, prolactin-producing adenomas, thyroid-stimulating hormone-producing adenomas and non-functioning adenomas, while adrenocorticotrophic hormone-producing adenomas showed a low level of Wnt4 expression that was comparable to normal pituitary tissue. These results were confirmed by real-time RT-PCR and western blot analyses. The expression pattern of beta-catenin was similar to that of Wnt4 and was inversely correlated to the Knosp grade of tumor invasion. These data indicate that Wnt4 signaling is deregulated in most pituitary adenomas and its excessive activation may inhibit pituitary tumor invasion.

[463]

**TÍTULO / TITLE:** - Unusual patterns of recurrence in low grade gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Oct 15. pii: S0967-5868(13)00397-4. doi: 10.1016/j.jocn.2013.05.013.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.05.013](#)

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**RESUMEN / SUMMARY:** - Some of the more unusual patterns of recurrence in previously treated low grade gliomas are demonstrated. As treatment choices develop and life expectancy is prolonged, patterns of tumour recurrence are likely to change within such a heterogeneous group of tumours, including metastatic spread via cerebrospinal fluid pathways.

[464]

**TÍTULO / TITLE:** - Parasagittal cranial fasciitis following infratemporal fossa rhabdomyosarcoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuropathology. 2013 Nov 28. doi: 10.1111/neup.12082.

●● Enlace al texto completo (gratis o de pago) [1111/neup.12082](#)

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**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Laboratory Medicine, Indiana University School of Medicine, Indianapolis, Indiana; Department of Neurological Surgery, Indiana University School of Medicine, Indianapolis, Indiana.

**RESUMEN / SUMMARY:** - Cranial fasciitis is a rare lesion of young children characterized by proliferation of fibroblastic spindle cells. Most are scalp masses and are only rarely intracranial, where an association with radiation therapy is exceptional. We report a 32-month-old toddler with a facial rhabdomyosarcoma, diagnosed at 3 months of age, and treated with surgery, chemotherapy and brachytherapy. Brain MRI at 28 months revealed a large, left parasagittal, dural-based, T2 hyperintense and T1 hypointense enhancing mass with superior sagittal sinus compression and bony hyperostosis. The mass was completely resected during an open craniotomy. Histologically, the lesion was comprised of loosely and haphazardly arranged bland spindle cells embedded in a myxoid background. Thick hyalinized collagen bundles were especially prominent. The spindle cells reacted for vimentin but not SMA, myogenin, MyoD1 or EMA. A diagnosis of cranial fasciitis was rendered. The role of radiation therapy in the pathogenesis of intracranial cranial fasciitis is discussed.

[465]

**TÍTULO / TITLE:** - Clinical trials of viral therapy for malignant gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Anticancer Ther. 2013 Nov;13(11):1297-305. doi: 10.1586/14737140.2013.851160. Epub 2013 Oct 21.

●● Enlace al texto completo (gratis o de pago) [1586/14737140.2013.851160](#)

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**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, Moores Cancer Center, Translational Neuro-Oncology Laboratories, 3855 Health Sciences Dr. #0819, UC San Diego, La Jolla, CA, USA.

**RESUMEN / SUMMARY:** - Despite recent scientific advances in the understanding of the biology of malignant gliomas, there has been little change in the overall survival for this devastating disease. New and innovative treatments are under constant

investigation. Starting in the 1990s, there was an interest in using viral therapeutics for the treatment of malignant gliomas. Multiple strategies were pursued, including oncolytic viral therapy, enzyme/pro-drug combinations and gene transfer with viral vectors. Multiple Phase I and II trials demonstrated the safety of these techniques, but clinically showed limited efficacy. However, this led to a better understanding of the pitfalls of viral therapy and encouraged the development of new approaches and improved delivery methods. Here we review the prior and ongoing clinical trials of viral therapy for gliomas, and discuss how novel strategies are currently being utilized in clinical trials.

[466]

**TÍTULO / TITLE:** - The potential impact of delayed radiation therapy on patients with glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 Nov;40(6):790-4.

**AUTORES / AUTHORS:** - Alnaami I; Vanderpluym J; Murtha A; Walling S; Mehta V; Gourishankar S; Senthilselvan A

[467]

**TÍTULO / TITLE:** - Dendritic cell-based immunotherapy for glioma: multiple regimens and implications in clinical trials.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 25;53(11):741-54. Epub 2013 Oct 21.

**AUTORES / AUTHORS:** - Mineharu Y; Castro MG; Lowenstein PR; Sakai N; Miyamoto S

**INSTITUCIÓN / INSTITUTION:** - Division of Neuroendovascular Therapy, Institute of Biomedical Research and Innovation.

**RESUMEN / SUMMARY:** - High grade glioma is a highly invasive brain tumor and recurrence is almost inevitable, even after radical resection of the tumor mass. Cytotoxic immune responses and immunological memory induced by immunotherapy might prevent tumor recurrence. Dendritic cells (DCs) are professional antigen-presenting cells of the innate immune system with the potential to generate robust antigen-specific T cell immune responses. DC-based immunotherapeutic strategies have been intensively studied in both preclinical and clinical settings. Although advances have been made in the experimental use of DCs, there are still considerable challenges that need to be addressed for clinical translation. In this review, we describe the variability of regimens currently available for DC-based immunotherapy and then review strategies to optimize DC therapeutic efficacy against glioma.

[468]

**TÍTULO / TITLE:** - Neuropsychological functions and quality of life in survived patients with intracranial germ cell tumors after treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov;15(11):1543-51. doi: 10.1093/neuonc/not127. Epub 2013 Oct 6.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not127](http://1093/neuonc/not127)

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**RESUMEN / SUMMARY:** - Background The notable survival chances of intracranial germ cell tumors (icGCTs) lead to a rising concern over long-term neurocognitive outcome. Yet, prior evidence related to this issue fails to provide a comprehensive examination of the effects of tumor location and radiotherapy. We attempt to explore their impacts on the neuropsychological functions and life quality in children with icGCT after multimodality treatments. Methods A retrospective review of 56 patients diagnosed with icGCTs at age <20 and treated at the Taipei Veterans General Hospital was provided. Intelligence, memory, visual organization, attention, and executive function were assessed by neurocognitive tests; adaptation to life, emotional and behavioral changes, interpersonal relationships, and impact on the family were evaluated by parent-report instruments. Effects of tumor locations (germinomas and nongerminomatous malignant germ cell tumors in the pineal, suprasellar, and basal ganglia) and irradiation on these measurements were examined. Results Patients with tumors in the basal ganglia region had lower full-scale IQs than those with tumors in the pineal or suprasellar regions. Subscores of intelligence scale and short-term retention of verbal and visual stimuli showed evident group differences, as did the quality of life and adaptive skills, particularly in psychosocial domains. Patients treated with whole-ventricular irradiation had better outcomes. Extensive irradiation field and high irradiation dosage influenced intellectual functions, concept crystallization, executive function, and memory. Conclusions Tumor location and irradiation field/dosage appear to be the crucial factors related to certain neuropsychological, emotional, and behavioral dysfunctions that in turn alter the quality of life in children with icGCTs who survive after treatment.

[469]

**TÍTULO / TITLE:** - Transsphenoidal surgical treatment of pituitary adenomas in patients aged 80 years or older.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Rev. 2013 Nov 15.

●● Enlace al texto completo (gratis o de pago) [1007/s10143-013-0509-3](http://1007/s10143-013-0509-3)

**AUTORES / AUTHORS:** - Yunoue S; Tokimura H; Tominaga A; Fujio S; Karki P; Usui S; Kinoshita Y; Habu M; Moinuddin F; Hirano H; Arita K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School of Medical and Dental Sciences, Kagoshima University, 8-35-1, Sakuragaoka, Kagoshima, 890-8520, Japan.

**RESUMEN / SUMMARY:** - To know the clinical characteristics of pituitary adenomas in the elderly patients aged 80 years or older who were surgically treated. From 1995 through 2012, 907 patients underwent surgery for the pituitary adenomas at Kagoshima- and Hiroshima University hospitals in Japan. Ten (1.1 %) patients were

aged 80 years or older. We retrospectively assessed the clinical characteristics including preoperative comorbidities, manifestations, neuroimaging findings, and endocrinologic features of these ten patients. The subjects included eight males and two females. Their ages ranged from 80 to 86 with mean of 83.1 years. Of these, besides one case of growth hormone-producing adenoma, others were clinically nonfunctioning adenoma. Six patients had modest comorbidities such as hypertension, cardiovascular diseases, diabetes mellitus, or chronic kidney dysfunction, and all patients were classified into grade 2-3 on American Society of Anesthesiologists' Physical Status grading. Transsphenoidal surgery was performed in all due to visual disturbance in eight, diabetes mellitus as an intercurrent illness of acromegaly in one, and for the purpose of preventing visual disturbance in one patient who had an adenoma impinging optic chiasm but still had normal visual field. The surgeries provided sufficient decompression of the optic pathways and improved visual disorder in all. In an acromegalic male, his comorbidities considerably improved. No permanent surgical morbidity ensued. More than three axes of anterior pituitary hormones were preoperatively impaired in all, which were rarely recovered. Transsphenoidal surgery is safe and efficient treatment way for patients aged 80 years or older with pituitary adenomas with chiasmatic symptoms when the patients' general condition is well preserved and pituitary hormonal deficiency is adequately replaced.

[470]

**TÍTULO / TITLE:** - O-(2-[F]fluoroethyl)-L-tyrosine uptake is an independent prognostic determinant in patients with glioma referred for radiation therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Nucl Med. 2013 Nov 24.

●● Enlace al texto completo (gratis o de pago) [1007/s12149-013-0792-7](#)

**AUTORES / AUTHORS:** - Sweeney R; Polat B; Samnick S; Reiners C; Flentje M; Verburg FA

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, University of Wurzburg, Wurzburg, Germany.

**RESUMEN / SUMMARY:** - AIM: To evaluate the prognostic value of O-(2-[18F]fluoroethyl)-L-tyrosine positron emission tomography (FET-PET) uptake intensity in World Health Organisation (WHO) tumor grade II-IV gliomas. METHODS: We studied 28 patients with WHO tumor grade II-IV gliomas who were referred to our department for radiation therapy. We acquired a FET-PET in all patients, as well as magnetic resonance imaging (MRI) of the brain consisting of at least T2-weighted imaging, flair and pre- and post-contrast T1-weighted imaging. SUVmax was measured and the tumor-to-brain uptake ratio (TBR) of all lesions was calculated based on the SUVmax (TBRmax) or SUVmean (TBRmean) of the contralateral healthy tissue. For this study, volumes were calculated using MRI alone, MRI + the volume with a SUVmax on FET-PET  $\geq 2.2$  as well as MRI + the volume with an uptake of at least 40 % of the SUVmax. RESULTS: Tumor volumes were a median (range) of 88.6 (2.6-467.4) ml (MRI alone), 84.2 (2.8-474.4) ml (MRI + SUVmax on FET-PET  $\geq 2.2$ ) and 101.5 (4.0-512.1) ml (MRI + FET-PET uptake  $\geq 40$  % SUVmax), respectively. TBR-SUVmean was 2.36 (1.46-4.08); TBR-SUVmax was 1.71 (0.97-2.85). During a follow-up of 18.7 (2.5-36.1) months after FET-PET, 12 patients died of malignant glioma. Patients with a SUVmax  $\geq 2.6$  had a significantly worse tumor-related

mortality ( $p = 0.005$ ) and progression-free survival ( $p = 0.038$ ) than those with a lower SUVmax. Multivariate analysis showed that WHO tumor grade ( $p = 0.001$ ) and SUVmax  $\geq 2.6$  ( $p < 0.001$ ) were independent predictors for tumor-related mortality, but not tumor volume or TBRmax or TBRmean. SUVmax  $\geq 2.6$  ( $p = 0.007$ ) and being treated for a recurrence rather than for a primary tumor manifestation ( $p = 0.014$ ) were predictors for progression-free survival, but not TBRmax or TBRmean. CONCLUSION: In this heterogeneous patient population, higher tracer uptake in FET-PET appears to be associated with a worse tumor-related mortality and a shorter duration of the disease-free interval.

[471]

**TÍTULO / TITLE:** - Proton radiotherapy for pediatric central nervous system ependymoma: clinical outcomes for 70 patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov;15(11):1552-9. doi: 10.1093/neuonc/not121. Epub 2013 Oct 6.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not121](#)

**AUTORES / AUTHORS:** - Macdonald SM; Sethi R; Lavally B; Yeap BY; Marcus KJ; Caruso P; Pulsifer M; Huang M; Ebb D; Tarbell NJ; Yock TI

**INSTITUCIÓN / INSTITUTION:** - This paper was presented at the International Symposium on Pediatric Neuro-Oncology on June 24, 2012, in Toronto, Canada. Corresponding Author: Shannon MacDonald, MD, Massachusetts General Hospital, Department of Radiation Oncology, Yawkey 112, 30 Fruit Street, Boston, MA 02114. [smacdonald@partners.org](mailto:smacdonald@partners.org).

**RESUMEN / SUMMARY:** - Background Ependymoma is treated with maximal surgical resection and localized radiotherapy. Minimizing unnecessary exposure to radiation is of paramount importance for young children. Proton radiotherapy (PRT) spares healthy tissues outside the target region, but reports of clinical outcomes are scarce. We report outcomes for 70 patients treated with PRT for intracranial ependymoma. Methods Seventy patients with localized ependymoma treated with involved-field PRT at the Massachusetts General Hospital between October 2000 and February 2011 were included. Results Median age at diagnosis was 38 months (range, 3 mo-20 y). Nineteen (27%) patients had supratentorial ependymoma and 51(73%) had infratentorial ependymoma. Forty-six (66%) had gross total resection (GTR), and 24 (34%) had subtotal resection (STR). At a median follow-up of 46 months, 3-year local control, progression-free survival, and overall survival were 83%, 76%, and 95%, respectively. STR was significantly associated with worse progression-free survival (54% vs 88%,  $P = .001$ ) and overall survival (90% vs 97% for GTR,  $P = .001$ ). In a subset of patients ( $n = 14$ ), mean intelligence was 108.5 at baseline and 111.3 after mean 2.05 years of follow-up. In a larger group of patients ( $n = 28$ ), overall adaptive skills were 100.1 at baseline and 100.8 after 2.21 years of follow-up. Few patients developed evidence of growth hormone deficiency, hypothyroidism, or hearing loss. Conclusion Outcomes for children treated with PRT compare favorably with the literature. STR correlated with inferior outcome. The young age at diagnosis and the proximity of critical structures in patients with ependymoma make PRT an ideal radiation modality.

[472]

**TÍTULO / TITLE:** - Current uses of radiation therapy in patients with primary CNS lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Anticancer Ther. 2013 Nov;13(11):1327-37. doi: 10.1586/14737140.2013.851007. Epub 2013 Oct 23.

●● Enlace al texto completo (gratis o de pago) [1586/14737140.2013.851007](https://doi.org/10.1586/14737140.2013.851007)

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**RESUMEN / SUMMARY:** - High-dose methotrexate (HD-MTX)-based chemotherapy is the current first-line therapy for primary CNS lymphoma. Whole-brain radiotherapy (WBRT) plays an important role in the management of primary CNS lymphoma and is indicated in patients with contraindication to chemotherapy, in patients with unusual histologic subtypes as curative treatment, as complementary therapy for patients failing to achieve complete remission after systemic chemotherapy and as salvage therapy for refractory or relapsing patients when systemic chemotherapy is no longer advisable. The two major pitfalls in WBRT use are transitory efficacy and neurotoxicity with deterioration of quality of life. Accordingly, WBRT administration as consolidation therapy in complete remission patients after first-line chemotherapy is controversial. In the present review, indications of WBRT will be outlined with emphasis on consolidation therapy, treatment-related neurotoxicity and efforts aimed at reducing toxicity.

[473]

**TÍTULO / TITLE:** - Non-pheochromocytoma (PCC)/paraganglioma (PGL) tumors in patients with succinate dehydrogenase-related PCC-PGL syndromes: a clinicopathological and molecular analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eur J Endocrinol. 2013 Nov 22;170(1):1-12. doi: 10.1530/EJE-13-0623. Print 2014.

●● Enlace al texto completo (gratis o de pago) [1530/EJE-13-0623](https://doi.org/10.1530/EJE-13-0623)

**AUTORES / AUTHORS:** - Papathomas TG; Gaal J; Corssmit EP; Oudijk L; Korpershoek E; Heimdal K; Bayley JP; Morreau H; van Dooren M; Papaspyrou K; Schreiner T; Hansen T; Andresen PA; Restuccia DF; van Kessel I; van Leenders GJ; Kros JM; Looijenga LH; Hofland LJ; Mann W; van Nederveen FH; Mete O; Asa SL; de Krijger RR; Dinjens WN

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**RESUMEN / SUMMARY:** - OBJECTIVE: Although the succinate dehydrogenase (SDH)-related tumor spectrum has been recently expanded, there are only rare reports of non-pheochromocytoma/paraganglioma tumors in SDHx-mutated patients. Therefore, questions still remain unresolved concerning the aforementioned tumors with regard to their pathogenesis, clinicopathological phenotype, and even causal relatedness to SDHx mutations. Absence of SDHB expression in tumors derived from tissues

susceptible to SDH deficiency is not fully elucidated. DESIGN AND METHODS: Three unrelated SDHD patients, two with pituitary adenoma (PA) and one with papillary thyroid carcinoma (PTC), and three SDHB patients affected by renal cell carcinomas (RCCs) were identified from four European centers. SDHA/SDHB immunohistochemistry (IHC), SDHx mutation analysis, and loss of heterozygosity analysis of the involved SDHx gene were performed on all tumors. A cohort of 348 tumors of unknown SDHx mutational status, including renal tumors, PTCs, PAs, neuroblastic tumors, seminomas, and adenomatoid tumors, was investigated by SDHB IHC. RESULTS: Of the six index patients, all RCCs and one PA displayed SDHB immunonegativity in contrast to the other PA and PTC. All immunonegative tumors demonstrated loss of the WT allele, indicating bi-allelic inactivation of the germline mutated gene. Of 348 tumors, one clear cell RCC exhibited partial loss of SDHB expression. CONCLUSIONS: These findings strengthen the etiological association of SDHx genes with pituitary neoplasia and provide evidence against a link between PTC and SDHx mutations. Somatic deletions seem to constitute the second hit in SDHB-related renal neoplasia, while SDHx alterations do not appear to be primary drivers in sporadic tumorigenesis from tissues affected by SDH deficiency.

[474]

**TÍTULO / TITLE:** - Establishing percent resection and residual volume thresholds affecting survival and recurrence for patients with newly diagnosed intracranial glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov 26.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not137](#)

**AUTORES / AUTHORS:** - Chaichana KL; Jusue-Torres I; Navarro-Ramirez R; Raza SM; Pascual-Gallego M; Ibrahim A; Hernandez-Hermann M; Gomez L; Ye X; Weingart JD; Olivi A; Blakeley J; Gallia GL; Lim M; Brem H; Quinones-Hinojosa A

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**RESUMEN / SUMMARY:** - Introduction Surgery is first-line therapy for glioblastoma, and there is evidence that gross total resection is associated with improved survival. Gross total resection, however, is not always possible, and relationships among extent (percent) of resection (EOR), residual volume (RV), and survival are unknown. The goals were to evaluate whether there is an association between EOR and RV with survival and recurrence and to establish minimum EOR and maximum RV thresholds. Methods Adult patients who underwent primary glioblastoma surgery from 2007 to 2011 were retrospectively reviewed. Three-dimensional volumetric tumor measurements were made. Multivariate proportional hazards regression analysis was used to evaluate the relationship between EOR and RV with survival and recurrence. Results Of 259 patients, 203 (78%) died and 156 (60%) had tumor recurrence. The median survival and progression-free survival were 13.4 and 8.9 months, respectively. The median (interquartile range) pre- and postoperative tumor volumes were 32.2 (14.0-56.3) and 2.1 (0.0-7.9) cm<sup>3</sup>, respectively. EOR was independently associated with survival (hazard ratio [HR], 0.995; 95% confidence

interval [CI]: 0.990-0.998; P = .008) and recurrence (HR [95% CI], 0.992 [0.983-0.998], P = .005). The minimum EOR threshold for survival (P = .0006) and recurrence (P = .005) was 70%. RV was also associated with survival (HR [95% CI], 1.019 [1.006-1.030], P = .004) and recurrence (HR [95% CI], 1.024 [1.001-1.044], P = .03). The maximum RV threshold for survival (P = .01) and recurrence (P = .01) was 5 cm<sup>3</sup>. Conclusion This study shows for the first time that both EOR and RV are significantly associated with survival and recurrence, where the thresholds are 70% and 5 cm<sup>3</sup>, respectively. These findings may help guide surgical and adjuvant therapies aimed at optimizing outcomes for glioblastoma patients.

[475]

**TÍTULO / TITLE:** - Ligand-dependent EphB1 signaling suppresses glioma invasion and correlates with patient survival.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1710-20. doi: 10.1093/neuonc/not128. Epub 2013 Oct 11.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not128](#)

**AUTORES / AUTHORS:** - Teng L; Nakada M; Furuyama N; Sabit H; Furuta T; Hayashi Y; Takino T; Dong Y; Sato H; Sai Y; Miyamoto K; Berens ME; Zhao SG; Hamada J

**INSTITUCIÓN / INSTITUTION:** - Corresponding Authors: Mitsutoshi Nakada, MD, PhD, Department of Neurosurgery, Division of Neuroscience, Graduate School of Medical Science, Kanazawa University, 13-1 Takara-machi, Kanazawa, Ishikawa 920-8641, Japan. [mnakada@med.kanazawa-u.ac.jp](mailto:mnakada@med.kanazawa-u.ac.jp); Shi-Guang Zhao, MD, PhD, Department of Neurosurgery, The First Affiliated Hospital of Harbin Medical University, Harbin, People's Republic of China ([guangsz@hotmail.com](mailto:guangsz@hotmail.com)).

**RESUMEN / SUMMARY:** - Background Extensive evidence implicates the Eph receptor family of tyrosine kinases and its ligand, ephrin, in glioma invasion, but it remains incompletely understood how these receptors affect chemotactic behavior of glioma. We sought to identify the Eph family members that correlate with patients' survival and to reveal the function of Eph in glioma invasion. Methods Clinical relevance of EphB genes was confirmed in a clinically annotated expression data set of 195 brain biopsy specimens. The function of EphB was analyzed in vitro and in vivo. Results Levels of mRNA of certain EphB members were significantly different in histological grades of glioma. According to Kaplan-Meier analysis, only the EphB1 level among 5 members of EphB emerged to be a powerful predictor of favorable survival in malignant glioma (n = 97, P = .0048), although the levels of EphB1 expression did not vary across the tumor grades. Immunoprecipitation showed that tyrosine phosphorylated EphB1 was not detected in all glioma cells tested. Forced overexpression and autophosphorylation of EphB1 in low expressor cell lines (U251, U87) did not affect cell migration or invasion in vitro, whereas EphB1 phosphorylation induced by ephrin-B2/Fc significantly decreased migration and invasion. Cells expressing ephrin-B2 showed noteworthy morphological changes consistent with migration induction; this alteration was negated by EphB1 overexpression. Concomitantly, overexpression of EphB1 abrogated the increased migration and invasion induced by ephrin-B2 in vitro and in vivo. Conclusions These data suggest that ligand-dependent EphB1 signaling negatively regulates glioma cell invasion, identifying EphB1 as a favorable prognostic factor in malignant glioma.

[476]

**TÍTULO / TITLE:** - H3F3A K27M mutations in thalamic gliomas from young adult patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not144](#)

**AUTORES / AUTHORS:** - Aihara K; Mukasa A; Gotoh K; Saito K; Nagae G; Tsuji S; Tatuno K; Yamamoto S; Takayanagi S; Narita Y; Shibui S; Aburatani H; Saito N

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School and Faculty of Medicine, The University of Tokyo, Tokyo, Japan (K.A., A.M., K.S., S.T.\*, N.S.); Genome Science Division, Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan (K.A., K.G., G.N., S.T., K.T., S.Y., H.A.); Department of Neurosurgery and Neuro-Oncology, National Cancer Center Hospital, Tokyo, Japan (Y.N., S.S.).

**RESUMEN / SUMMARY:** - Introduction Mutations in H3F3A, which encodes histone H3.3, commonly occur in pediatric glioblastoma. Additionally, H3F3A K27M substitutions occur in gliomas that arise at midline locations (eg, pons, thalamus, spine); moreover, this substitution occurs mainly in tumors in children and adolescents. Here, we sought to determine the association between H3F3A mutations and adult thalamic glioma. Methods Genomic H3F3A was sequenced from 20 separate thalamic gliomas. Additionally, for 14 of the 20 gliomas, 639 genes-including cancer-related genes and chromatin-modifier genes-were sequenced, and the Infinium Human Methylation 450K BeadChip was used to examine DNA methylation across the genome. Results Of the 20 tumors, 18 were high-grade thalamic gliomas, and of these 18, 11 were from patients under 50 years of age (median age, 38 y; range, 17-46), and 7 were from patients over 50 years of age. The H3F3A K27M mutation was present in 10 of the 11 (91%) younger patients and absent from all 7 older patients. Additionally, H3F3A K27M was not detected in the 2 diffuse astrocytomas. Further sequencing revealed recurrent mutations in TP53, ATRX, NF1, and EGFR. Gliomas with H3F3A K27M from pediatric or young adult patients had similar, characteristic DNA methylation profiles. In contrast, thalamic gliomas with wild-type H3F3A had DNA methylation profiles similar to those of hemispheric glioblastomas. Conclusion We found that high-grade thalamic gliomas from young adults, like those from children and adolescents, frequently had H3F3A K27M.

[477]

**TÍTULO / TITLE:** - Toxicity and Outcome of Radiotherapy with Concomitant and Adjuvant Temozolomide in Elderly Patients with Glioblastoma: A Retrospective Study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 20.

**AUTORES / AUTHORS:** - Saito K; Mukasa A; Narita Y; Tabei Y; Shinoura N; Shibui S; Saito N

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The University of Tokyo Hospital.

**RESUMEN / SUMMARY:** - Radiation therapy with concomitant and adjuvant temozolomide (TMZ) is the standard therapy for nonelderly patients with glioblastoma.

However, TMZ-based chemoradiotherapy for elderly patients with glioblastoma is controversial. The aim of this study was to investigate the benefits and adverse effects of this combined therapy in elderly patients with glioblastoma. Of the 76 newly diagnosed glioblastoma patients who were treated with standard radiotherapy (60 Gy/30 fractions) and TMZ, treatment toxicity and therapeutic outcome were evaluated in 27 elderly patients (age 65 years or older) and compared with those of 49 nonelderly counterparts (age younger than 65 years). The incidence of common toxicity criteria Grade 4 adverse events during the concomitant course was higher in the elderly group than that in the nonelderly group (26% versus 8%;  $p = 0.046$ ). Cognitive dysfunction was observed only in the elderly group ( $p = 0.042$ ). The median overall survival (OS) and median progression-free survival in the elderly group were 15.2 months (95% confidence interval [CI]; 12.9-18.5) and 8.4 months (95% CI; 5.1-11.7), respectively. OS was significantly shorter in the elderly group than in the nonelderly group ( $p = 0.021$ ). The recursive partitioning analysis score was a prognostic factor for OS. TMZ-based chemoradiotherapy was associated with an increased risk of Grade 4 adverse events in the elderly patients during concomitant use. Thus, elderly patients who undergo a concomitant course of TMZ must be closely monitored for adverse events. Treatment of glioblastoma in elderly patients must be optimized to reduce toxicity to acceptable levels and to maintain efficacy.

[478]

**TÍTULO / TITLE:** - Tailored central nervous system-directed treatment strategy for isolated CNS recurrence of adult acute myeloid leukemia.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Hematology. 2013 Sep 7.

- Enlace al texto completo (gratis o de pago)

[1179/1607845413Y.0000000117](#)

**AUTORES / AUTHORS:** - Zheng C; Liu X; Zhu W; Cai X; Wu J; Sun Z

**RESUMEN / SUMMARY:** - **OBJECTIVES:** The aim of this report was to investigate the tailored treatment strategies for isolated central nervous system (CNS) recurrence in adult patients with acute myeloid leukemia (AML). **METHODS:** Isolated CNS recurrence was documented in 34 patients: there were 18, 6, and 10 patients with meningeal involvement type (type A), cranial nerve palsy type (type B), and myeloid sarcoma type (type C), respectively. For patients with type A, intrathecal chemotherapy was the predominant strategy. For type B, systemic HD-Ara-C with four cycles was the main treatment. For type C, cranial irradiation or craniospinal irradiation was adopted and two cycles of HD-Ara-C were given after the irradiation. **RESULTS:** The 5-year cumulative incidence of CNS recurrence was 12.8%. There was a significantly higher WBC count (32.6 approximately 60.8 x 10<sup>9</sup>/l) in patients at first diagnosis who developed CNS recurrence (all of the three types) compared with patients with no CNS recurrence (10.1 x 10<sup>9</sup>/l) ( $P = 0.005$ ). We found that a significantly more patients with AML-M5 and 11q23 abnormalities developed CNS recurrence in type A ( $P < 0.001$ , 0.005). Twenty-four out of 34 patients (70.6%) with CNS recurrence achieved CNS complete remission at a median of 58 days (range, 30-120). The 3-year disease-free survival and overall survival estimates for all CNS recurrence patients were 21.6 and 25.3%, respectively. **DISCUSSION:** This report indicates that the tailored CNS-directed

strategy is an effective modality to treat CNS recurrence in adult AML, but further studies are needed to improve the long-term survival.

[479]

**TÍTULO / TITLE:** - Establishing standard performance measures for adult brain tumor patients: a nationwide inpatient sample database study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov;15(11):1580-8. doi: 10.1093/neuonc/not108. Epub 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not108](#)

**AUTORES / AUTHORS:** - Rahman M; Neal D; Fargen KM; Hoh BL

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: Maryam Rahman, MD, MS, Department of Neurosurgery, University of Florida, PO Box 100265, Gainesville, FL 32610. [mrahman@ufl.edu](mailto:mrahman@ufl.edu).

**RESUMEN / SUMMARY:** - Background The Agency for Healthcare Research and Quality (AHRQ) patient safety indicators (PSIs) and the Centers for Medicare and Medicaid Services (CMS) hospital acquired conditions (HACs) are used to evaluate the safety and quality of health care. We determined the incidence rates of PSIs and HACs among brain tumor patients in the Nationwide Inpatient Sample database (NIS). Methods We queried the NIS for all hospitalizations involving a brain tumor. We determined the incidence rates of various PSIs and HACs among these patients by searching the hospital records for codes in the International Classification of Diseases, 9<sup>th</sup> Revision indicating each PSI or HAC. Results Among the 501 908 hospitalizations involving a brain tumor in the NIS, there were 102 046 occurrences of an AHRQ PSI, with 16% of patients experiencing one or more AHRQ PSI. Among brain tumor patients treated without surgery, 17.2% experienced  $\geq 1$  PSI. Among brain tumor patients treated with surgery, 9.8% experienced  $\geq 1$  PSI. The most common PSIs were postoperative respiratory failure, deep vein thrombosis, and sepsis. The total number of HACs associated with brain tumor patients was 13 778, with 2.63% of patients experiencing  $\geq 1$  HAC. Among brain tumor patients treated without surgery, 3.0% experienced  $\geq 1$  HAC. Among brain tumor patients treated with surgery, 7.4% experienced  $\geq 1$  HAC. The most common HACs were falls and trauma and pressure ulcers. Increasing comorbidity score was associated with increased likelihood of almost all PSIs and HACs. Conclusion These data may be used to determine individual institutional improvements or success by comparison.

[480]

**TÍTULO / TITLE:** - Pulmonary outcomes in survivors of childhood central nervous system malignancies: A report from The Childhood Cancer Survivor Study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatr Blood Cancer. 2013 Oct 11. doi: 10.1002/pbc.24819.

●● Enlace al texto completo (gratis o de pago) [1002/pbc.24819](#)

**AUTORES / AUTHORS:** - Huang TT; Chen Y; Dietz AC; Yasui Y; Donaldson SS; Stokes DC; Stovall M; Leisenring WM; Sklar CA; Diller LR; Mertens AC; Armstrong GT; Green DM; Robison LL; Ness KK

**INSTITUCIÓN / INSTITUTION:** - Department of Epidemiology and Cancer Control, St Jude Children's Research Hospital, Memphis, Tennessee.

**RESUMEN / SUMMARY:** - BACKGROUND: Adult survivors of childhood central nervous system (CNS) tumors may be at risk for pulmonary dysfunction. This study enumerates the incidence of pulmonary dysfunction and explores associations between craniospinal irradiation (CSI) and pulmonary dysfunction among survivors of childhood CNS tumors. METHODS: Participants included Childhood Cancer Survivor Study (CCSS) cohort members treated for CNS malignancies when <age 21, who survived 5+ years, and sibling comparisons. Medical records were abstracted and participants completed questionnaires that asked about the nature and timing of pulmonary dysfunction. Incidence rates were calculated, and Poisson regression, adjusted for chemotherapy exposures, was used to evaluate associations between CSI and pulmonary dysfunction. RESULTS: Survivor participants (N = 1,653) were 54.7% male, median age at diagnosis 7.6 (range 0-21), and median time from cohort entry 18.5 (range 3.3-33.9) years. The incidence of pulmonary dysfunction (per 1,000 person years) was 9.1 (95% CI 7.8-10.6) for emphysema/obliterative bronchiolitis and >3.0 for asthma, chronic cough and need for extra oxygen. Rates of fibrosis (RR 2.0, 95% CI 1.0-3.9), chest wall abnormalities (RR 19.0, 95% CI 4.2-85.7), chronic cough (RR 1.6, 95% CI 1.2-2.1) and need for supplemental oxygen (RR 2.5, 95% CI 1.9-3.3) were higher among survivors than among siblings. Survivors treated with CSI were 10.4 (95% CI 7.6-14.4) times more likely than those not exposed to report chest wall deformity. CONCLUSION: Adult survivors of CNS malignancy have high rates of pulmonary dysfunction 5+ years after diagnosis. Survivors treated with CSI should be monitored for pulmonary disease to permit early interventions. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[481]

**TÍTULO / TITLE:** - An R132H Mutation in Isocitrate Dehydrogenase 1 Enhances p21 Expression and Inhibits Phosphorylation of Retinoblastoma Protein in Glioma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Neurol Med Chir (Tokyo)*. 2013 Oct 25;53(10):645-54. Epub 2013 Sep 27.

**AUTORES / AUTHORS:** - Miyata S; Urabe M; Gomi A; Nagai M; Yamaguchi T; Tsukahara T; Mizukami H; Kume A; Ozawa K; Watanabe E

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Center for Molecular Medicine, Jichi Medical University.

**RESUMEN / SUMMARY:** - Cytosolic isocitrate dehydrogenase 1 (IDH1) with an R132H mutation in brain tumors loses its enzymatic activity for catalyzing isocitrate to alpha-ketoglutarate (alpha-KG) and acquires new activity whereby it converts alpha-KG to 2-hydroxyglutarate. The IDH1 mutation induces down-regulation of tricarboxylic acid cycle intermediates and up-regulation of lipid metabolism. Sterol regulatory element-binding proteins (SREBPs) regulate not only the synthesis of cholesterol and fatty acids but also acylin-dependent kinase inhibitor p21 that halts the cell cycle at G1. Here we show that SREBPs were up-regulated in U87 human glioblastoma cells transfected with an IDH1(R132H)-expression plasmid. Small interfering ribonucleic acid (siRNA) for SREBP1 specifically decreased p21 messenger RNA (mRNA) levels independent of the p53 pathway. In IDH1(R132H)-expressing U87 cells, phosphorylation of

Retinoblastoma (Rb) protein also decreased. We propose that metabolic changes induced by the IDH1 mutation enhance p21 expression via SREBP1 and inhibit phosphorylation of Rb, which slows progression of the cell cycle and may be associated with non-aggressive features of gliomas with an IDH1 mutation.

[482]

**TÍTULO / TITLE:** - Impact of MACC1 on human malignant glioma progression and patients' unfavorable prognosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1696-709. doi: 10.1093/neuonc/not136. Epub 2013 Nov 11.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not136](#)

**AUTORES / AUTHORS:** - Hagemann C; Fuchs S; Monoranu CM; Herrmann P; Smith J; Hohmann T; Grabiec U; Kessler AF; Dehghani F; Lohr M; Ernestus RI; Vince GH; Stein U

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: Ulrike Stein, PhD, Experimental and Clinical Research Center, Charite University Medicine Berlin and the Max-Delbrück-Center for Molecular Medicine, Robert-Rossle-Strasse 10, 13125 Berlin, Germany. [ustein@mdc-berlin.de](mailto:ustein@mdc-berlin.de).

**RESUMEN / SUMMARY:** - Background Metastasis-associated in colon cancer 1 (MACC1) has been established as an independent prognostic indicator of metastasis formation and metastasis-free survival for patients with colon cancer and other solid tumors. However, no data are available concerning MACC1 expression in human astrocytic tumors. Glioblastoma multiforme (GBM) is the most prevalent primary brain tumor of adulthood, and due to its invasive and rapid growth, patients have unfavorable prognoses. Although these tumors rarely metastasize, their invasive and migratory behavior is similar to those of metastatic cells of tumors of different origin. Thus, we hypothesized that MACC1 may be involved in progression of human gliomas. Methods We performed real-time measurements of proliferation and migration in MACC1-transfected GBM cell lines (U138, U251) and evaluated tumor formation in organotypic hippocampal slice cultures of mice. Semiquantitative and quantitative real-time reverse transcription PCR analyses were performed for MACC1 and for its transcriptional target c-Met in human astrocytoma of World Health Organization grade II (low-grade astrocytoma) and GBM biopsies. Data were validated by MACC1 immunohistochemistry in independent matched samples of low-grade astrocytoma and GBM. Results MACC1 increases the proliferative, migratory, and tumor-formation abilities of GBM cells. The c-Met inhibitor crizotinib reduced MACC1-induced migration and tumor formation in organotypic hippocampal slice cultures of mice. Analyzing patients' biopsies, MACC1 expression increased concomitantly with increasing World Health Organization grade. Moreover, MACC1 expression levels allowed discrimination of dormant and recurrent low-grade astrocytomas and of primary and secondary GBM. Strong MACC1 expression correlated with reduced patient survival. Conclusions MACC1 may represent a promising biomarker for prognostication and a new target for treatment of human gliomas.

[483]

**TÍTULO / TITLE:** - Expanding the spectrum of megalencephalic leukoencephalopathy with subcortical cysts in two patients with GLIALCAM mutations.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurogenetics. 2013 Nov 8.

●● Enlace al texto completo (gratis o de pago) [1007/s10048-013-0381-x](#)

**AUTORES / AUTHORS:** - Arnedo T; Aiello C; Jeworutzki E; Dentici ML; Uziel G; Simonati A; Pusch M; Bertini E; Estevez R

**INSTITUCIÓN / INSTITUTION:** - Sección de Fisiología, Departamento de Ciencias Fisiológicas II, Universidad de Barcelona, Barcelona, España.

**RESUMEN / SUMMARY:** - Megalencephalic leukoencephalopathy with subcortical cysts (MLC) is a heterogeneous neurodegenerative leukodystrophy caused by recessive mutations in MLC1 or GLIALCAM (types MLC1 and MLC2A) or by dominant mutations in GLIALCAM (MLC2B). GlialCAM functions as an auxiliary subunit of both MLC1 and CIC-2 chloride channel, increasing and modifying the function of the latter. Dominant mutations in GLIALCAM cause transient features of MLC but lacks clinical deterioration. Most recessive and dominant mutations in GLIALCAM studied so far affect the targeting of GlialCAM and its associated subunits. Here, we have investigated two patients with MLC2. The first patient has MLC2B disease, as shown by the improvement in MRI and clinical parameters. In this case, we identified a novel GLIALCAM mutation (p.Q56P) which affected the localization of GlialCAM and its associated subunits, however activating CIC-2 function as the wild-type protein. The second patient has MLC2A disease, as indicated by the lack of clinical improvement, even though, interestingly, the MRI of this patient shows a partial improvement. In this case, we found a recessive mode of inheritance, as the patient harbors two compound heterozygous mutations in GLIALCAM. One of them introduces a stop codon (p.Q56X), whereas the second mutation is a missense mutation (p.R73W), for which we could not identify any trafficking defect or an altered functional effect on CIC-2 in vitro.

[484]

**TÍTULO / TITLE:** - A founder SDHB mutation in Portuguese paraganglioma patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocr Relat Cancer. 2013 Nov 4;20(6):L23-6. doi: 10.1530/ERC-12-0399. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1530/ERC-12-0399](#)

**AUTORES / AUTHORS:** - Martins RG; Nunes JB; Maximo V; Soares P; Peixoto J; Catarino T; Rito T; Soares P; Pereira L; Sobrinho-Simoes M; Santos AP; Couto J; Henrique R; Matos-Loureiro J; Dias P; Torres I; Lima J

**INSTITUCIÓN / INSTITUTION:** - IPATIMUP (Institute of Pathology and Molecular Immunology of the University of Porto), Rua Dr Roberto Frias s/n, 4200-465, Porto, Portugal Medical Faculty of the University of Porto, Porto, Portugal Department of Endocrinology, Portuguese Oncology Institute, Porto, Portugal Department of Pathology, Hospital S. Joao, Porto, Portugal Department of Pathology, Portuguese Oncology Institute, Porto, Portugal.

[485]

**TÍTULO / TITLE:** - Tumor-associated edema in brain cancer patients: pathogenesis and management.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Anticancer Ther. 2013 Nov;13(11):1319-25. doi: 10.1586/14737140.2013.852473. Epub 2013 Oct 23.

●● Enlace al texto completo (gratis o de pago) [1586/14737140.2013.852473](#)

**AUTORES / AUTHORS:** - Roth P; Regli L; Tonder M; Weller M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University Hospital Zurich, Switzerland.

**RESUMEN / SUMMARY:** - The long-term treatment of peritumoral edema remains a major challenge in clinical neuro-oncology. Steroids have been and will remain the backbone of any anti-edematous therapy because of their striking activity, convenient oral administration and also because of their cost-effectiveness. Their side effects, however, can compromise quality of life, particularly upon continuous administration. Therapeutic alternatives which may replace or - at least - help to reduce the steroid dose are limited. However, with the development of new agents such as corticorelin acetate, there is a hope that steroid-induced side effects can be delayed and reduced. The administration of anti-angiogenic agents with steroid-sparing effects, for example, bevacizumab, is limited due to their costs. Increased knowledge on boswellic acids and cyclooxygenase-2 inhibitors which are available for clinical application may help to exploit their anti-edema activity more efficiently in the future.

[486]

**TÍTULO / TITLE:** - Retrospective analysis of bevacizumab in combination with Ifosfamide, Carboplatin, and Etoposide in patients with second recurrence of glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 25;53(11):779-85. Epub 2013 Oct 21.

**AUTORES / AUTHORS:** - Arakawa Y; Mizowaki T; Murata D; Fujimoto K; Kikuchi T; Kunieda T; Takahashi JC; Takagi Y; Miyamoto S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Kyoto University Graduate School of Medicine.

**RESUMEN / SUMMARY:** - Bevacizumab has been reported to be effective for recurrent glioblastoma. In our hospital, ifosfamide, carboplatin, etoposide (ICE) is the second-line chemotherapy for first recurrence of glioblastoma after temozolomide failure. In the present analysis, we retrospectively investigated the feasibility and effectiveness of bevacizumab combined with ICE in patients with glioblastoma at second relapse during ICE treatment. Between 2010 and 2012, tumor progressions were diagnosed in consecutive 8 patients who were treated with ICE for the first recurrence of glioblastoma. These patients were administered 3 cycles of 10 mg/kg bevacizumab every two weeks in combination with ICE treatment. The objective response rate of bevacizumab combination was 75% in Neuro-Oncology Working Group (RANO criteria), including complete response and partial response. Median progression free survival (PFS) and median overall survival (OS) after second relapse were 3.7 months (95% confidence interval [CI], 2.5-18.5 months) and 6.0 months (95% CI, 3.2-19.7 months), respectively. The 6-month PFS rates were 25% (95% CI, 0-55.0%). The

median OS after initial diagnosis was 23.3 months (95% CI, 16.2-55.8 months). The grade 2 or 3 hematologic adverse events were identified in 7 of 8 patients, most of which might be due to ICE chemotherapy. The results of our retrospective analysis suggest that combination treatment with bevacizumab and ICE may be safe and beneficial in patients with recurrent glioblastoma.

[487]

**TÍTULO / TITLE:** - Multivoxel 1H MR spectroscopy is superior to contrast-enhanced MRI for response assessment after anti-angiogenic treatment of orthotopic human glioma xenografts and provides handles for metabolic targeting.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1615-24. doi: 10.1093/neuonc/not129. Epub 2013 Oct 24.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not129](#)

**AUTORES / AUTHORS:** - Hamans B; Navis AC; Wright A; Wesseling P; Heerschap A; Leenders W

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: William Leenders, PhD, Dept of Pathology, Radboud University Nijmegen Medical Centre, PO Box 9101, 6500 HB Nijmegen, the Netherlands. [w.leenders@pathol.umcn.nl](mailto:w.leenders@pathol.umcn.nl).

**RESUMEN / SUMMARY:** - Background Anti-angiogenic treatment of glioblastoma characteristically results in therapy resistance and tumor progression via diffuse infiltration. Monitoring tumor progression in these patients is thwarted because therapy results in tumor invisibility in contrast-enhanced (CE) MRI. To address this problem, we examined whether tumor progression could be monitored by metabolic mapping using (1)H MR spectroscopic imaging (MRSI). Methods We treated groups of BALB/c nu/nu mice carrying different orthotopic diffuse-infiltrative glioblastoma xenografts with bevacizumab (anti-vascular endothelial growth factor [VEGF] antibody, n = 13), cabozantinib (combined VEGF receptor 2/c-Met tyrosine kinase inhibitor, n = 11), or placebo (n = 15) and compared CE-MRI with MRS-derived metabolic maps before, during, and after treatment. Metabolic maps and CE-MRIs were subsequently correlated to histology and immunohistochemistry. Results In vivo imaging of choline/n-acetyl aspartate ratios via multivoxel MRS is better able to evaluate response to therapy than CE-MRI. Lactate imaging revealed that diffuse infiltrative areas in glioblastoma xenografts did not present with excessive glycolysis. In contrast, glycolysis was observed in hypoxic areas in angiogenesis-dependent compact regions of glioma only, especially after anti-angiogenic treatment. Conclusion Our data present MRSI as a powerful and feasible approach that is superior to CE-MRI and may provide handles for optimizing treatment of glioma. Furthermore, we show that glycolysis is more prominent in hypoxic areas than in areas of diffuse infiltrative growth. The Warburg hypothesis of persisting glycolysis in tumors under normoxic conditions may thus not be valid for diffuse glioma.

[488]

**TÍTULO / TITLE:** - New treatment strategies to eradicate cancer stem cells and niches in glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 25;53(11):764-72. Epub 2013 Oct 21.

**AUTORES / AUTHORS:** - Hide T; Makino K; Nakamura H; Yano S; Anai S; Takezaki T; Kuroda J; Shinojima N; Ueda Y; Kuratsu J

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) harbors are not only rapidly dividing cells but also small populations of slowly dividing and dormant cells with tumorigenesity, self-renewal, and multi-lineage differentiation capabilities. Known as glioblastoma stem cells (GSCs), they are resistant to conventional chemo- and radiotherapy and may be a causative factor in recurrence. The treatment outcome in patients with GBM remains unsatisfactory and their mean survival time has not improved sufficiently. We studied clinical evidence and basic research findings to assess the possibility of new treatment strategies that target GSCs and their specific microenvironments (GBM niches) and raise the possibility of adding new treatments to eradicate GSCs and GBM niches.

[489]

**TÍTULO / TITLE:** - Neuro-ophthalmologic complications of neoplastic leptomeningeal disease.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Neurol Neurosci Rep. 2013 Dec;13(12):404. doi: 10.1007/s11910-013-0404-x.

●● Enlace al texto completo (gratis o de pago) [1007/s11910-013-0404-x](#)

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**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Neuro-Ophthalmology Unit, Hattiesburg Clinic PA, 415 South 28<sup>th</sup> Avenue, Hattiesburg, MS, 39401, USA, [gszatmary@yahoo.com](mailto:gszatmary@yahoo.com).

**RESUMEN / SUMMARY:** - Neoplastic leptomeningeal disease (NLD), which encompasses both primary and secondary leptomeningeal tumors, has a devastating impact on the life of cancer patients. The present diagnostic technical armamentarium is insufficient for early diagnosis of NLD. However, NLD may present with subtle neuro-ophthalmic features at a time of relatively small tumor burden, which gives the provider first encountering these patients the window of opportunity for early diagnosis and consequently improved life expectancy and quality of life of these patients. Therefore, familiarity with early, often subtle neuro-ophthalmic features is an essential tool for diagnosing these patients prior to the development of fixed deficits, which usually portend a dismal prognosis. Future evolving laboratory and neuroimaging technologies are expected to advance our understanding of underlying pathophysiology and early detection of NLD. This paper provides an up-to-date review and synthesis of the current literature with focus on neuro-ophthalmic features and their underlying pathophysiology.

[490]

**TÍTULO / TITLE:** - Timing of adjuvant radiotherapy and treatment outcome in childhood ependymoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatr Blood Cancer. 2013 Oct 26. doi: 10.1002/pbc.24820.

●● Enlace al texto completo (gratis o de pago) [1002/psc.24820](https://pubs.onco.org/doi/10.1002/psc.24820)

**AUTORES / AUTHORS:** - Liu AP; Shing MM; Yuen HL; Li CH; Ling SC; Luk CW; Ha SY; Li CK; Kwong DL; Chan GC

**INSTITUCIÓN / INSTITUTION:** - Department of Paediatrics and Adolescent Medicine, Queen Mary Hospital, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong Special Administrative Region, China.

**RESUMEN / SUMMARY:** - BACKGROUND: Several trials incorporating adjuvant focal RT for treatment of young children with ependymoma have demonstrated improved survival with acceptable adverse effects. The optimal timing of RT administration is, however, unknown. PROCEDURE: A retrospective review of territory-wide database was performed to identify pediatric patients with ependymoma diagnosed between 1995 and 2011. OS and EFS were compared between patients receiving upfront RT (<150 days of diagnosis), delayed RT (>=150 days of diagnosis), or no RT. RESULTS: Thirty-one patients with intracranial ependymoma were identified. Median age was 3.5 years and 14 (45%) were male. Primary tumor was supratentorial in 10 (32%) and infratentorial in 21 (68%). All patients underwent initial surgery, with gross-total resection (GTR) in 27 (87%). Twelve (39%) received upfront RT, 10 (32%) had delayed RT and 9 (29%) had no RT. During the study period, there were 11 relapses (35%) and 10 deaths (32%). Five-year OS was 69.9% and 5yr-EFS was 49.3%. In univariate analysis, GTR led to improved OS ( $P < 0.001$ ) and EFS ( $P = 0.004$ ); superior OS and EFS was observed in patients who received RT when compared with those without ( $P = 0.018$  and  $0.011$ , respectively). Upfront RT also resulted in better OS and EFS than delayed RT ( $P = 0.049$  and  $0.014$ , respectively). No significant effect on survival was observed with age, sex, tumor location, RT dosage, and protocol used. In multivariate analysis, GTR significantly improved OS ( $P = 0.002$ ) and EFS ( $P = 0.004$ ). CONCLUSIONS: Our results support the early initiation of adjuvant RT in the multimodal management of pediatric ependymomas. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[491]

**TÍTULO / TITLE:** - Real-time PCR assay based on the differential expression of microRNAs and protein-coding genes for molecular classification of formalin-fixed paraffin embedded medulloblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Neuro Oncol.* 2013 Dec;15(12):1644-51. doi: 10.1093/neuonc/not123. Epub 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not123](https://pubs.onco.org/doi/10.1093/neuonc/not123)

**AUTORES / AUTHORS:** - Kunder R; Jalali R; Sridhar E; Moiyadi A; Goel N; Goel A; Gupta T; Krishnatry R; Kannan S; Kurkure P; Deopujari C; Shetty P; Biyani N; Korshunov A; Pfister SM; Northcott PA; Shirsat NV

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: Dr Neelam Vishwanath Shirsat, PhD, Advanced Centre for Treatment, Research & Education in Cancer, Tata Memorial Centre, Kharghar, Navi Mumbai 410210 India. [nshirsat@actrec.gov.in](mailto:nshirsat@actrec.gov.in).

**RESUMEN / SUMMARY:** - Background Medulloblastoma has recently been found to consist of 4 molecularly and clinically distinct subgroups: WNT, Shh, Group 3, and Group 4. Deregulated microRNA expression is known to contribute to pathogenesis and has been shown to have diagnostic and prognostic

potential in the classification of various cancers. Methods Molecular subgrouping and microRNA expression analysis of 44 frozen and 59 formalin-fixed paraffin embedded medulloblastomas from an Indian cohort were carried out by real-time RT-PCR assay. Results The differential expression of 9 microRNAs in the 4 molecular subgroups was validated in a set of 101 medulloblastomas. The tumors in the WNT subgroup showed significant ( $P < .0001$ ) overexpression of miR-193a-3p, miR-224, miR-148a, miR-23b, and miR-365. Reliable classification of medulloblastomas into the 4 molecular subgroups was obtained using a set of 12 protein-coding genes and 9 microRNAs as markers in a real-time RT-PCR assay with an accuracy of 97% as judged by the Prediction Analysis of Microarrays. Age at diagnosis, histology, gender-related incidence, and the relative survival rates of the 4 molecular subgroups in the present Indian cohort were found to be similar to those reported for medulloblastomas from the American and European subcontinent. Non-WNT, non-SHH medulloblastomas underexpressing miR-592 or overexpressing miR-182 were found to have significantly inferior survival rates, indicating utility of these miRNAs as markers for risk stratification. Conclusions The microRNA based real-time PCR assay is rapid, simple, inexpensive, and useful for molecular classification and risk stratification of medulloblastomas, in particular formalin-fixed paraffin embedded tissues, wherein the expression profile of protein-coding genes is often less reliable due to RNA fragmentation.

[492]

**TÍTULO / TITLE:** - Intramedullary medullocervical ependymoma-surgical treatment, functional recovery, and long-term outcome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Oct 25;53(10):663-75. Epub 2013 Sep 27.

**AUTORES / AUTHORS:** - Li D; Hao SY; Wu Z; Jia GJ; Zhang LW; Zhang JT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University.

**RESUMEN / SUMMARY:** - To evaluate the long-term outcome and functional recovery of intramedullary medullocervical ependymoma (IME), the clinical charts of 38 surgically treated consecutive cases of IME were reviewed. Follow-up was obtained prospectively. The mean age of the patients (19 male and 19 female) was 35.3 years (range: 11-60 years). Complete resection was achieved in 33 (86.8%) patients. Fourteen patients worsened postoperatively; five and seven of these improved to their baseline levels within 1 and 3 months, respectively. By 1 year postoperatively, 17 patients returned to work. After a mean follow-up duration of 81.5 months, 31 patients improved or stabilized, and 3 had recurrence. The means of the modified McCormick grade (mMG) scores before the operation, at discharge, 1 year after the operation, and at the most recent evaluation were 1.76, 2.13, 1.82, and 1.84, respectively. A favorable long-term outcome of the mMG was associated with a good preoperative status (mMG I) (odds ratio [OR] = 9.956,  $p = 0.008$ ) and well-defined tumor boundary (OR = 7.829,  $p = 0.035$ ). Improvements in the postoperative walking dysfunction and paresthesia over time were associated with the absence of preoperative walking dysfunction ( $p = 0.047$ ) and paresthesia ( $p = 0.028$ ), respectively. The 12-year progression/recurrence-free survival and overall survival rates were 92.0% and 93.7%, respectively. The study

suggests that the goal of surgery is to stabilize the preoperative neurological function and that a favorable outcome may be achieved in patients with good preoperative statuses and well-defined tumor boundaries. Surgery should be performed as soon as possible after the diagnoses and before the neurological functions deteriorate.

[493]

**TÍTULO / TITLE:** - SPARC and Vav3 Expression in Meningioma: Factors Related to Prognosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 Nov;40(6):814-8.

**AUTORES / AUTHORS:** - Jiang J; Song Y; Liu N; Lin C; Zhao S; Sun Y; Zhang Z; Fang X; Qi J

[494]

**TÍTULO / TITLE:** - Salvage radiosurgery for high grade glioma in the era of modern systemic therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 Nov;40(6):761-2.

**AUTORES / AUTHORS:** - Chung C; Mason W

[495]

**TÍTULO / TITLE:** - Progression of Intracranial Meningioma during Luteinizing Hormone-Releasing Hormone Agonist Treatment for Prostate Cancer: Case Report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 8.

**AUTORES / AUTHORS:** - Anda T; Honda M; Ishihara T; Kamei T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Shunan Memorial Hospital.

**RESUMEN / SUMMARY:** - The authors describe a male patient who developed a large intracranial meningioma during the hormone therapy for pre-existing prostate cancer. A 70-year-old man received a brain check-up, and no intracranial abnormality was detected. Five months later, prostate cancer was diagnosed, and he underwent prostatectomy. Leuprorelin acetate, a luteinizing hormone-releasing hormone (LH-RH) agonist, was subsequently administered to the patient once a month for 3 years. After that he presented with a large parasagittal mass, which was excised. The tumor was histologically diagnosed as meningothelial meningioma, and LH-RH receptors were verified immunohistochemically in the cytoplasm of the tumor cells. Leuprorelin acetate may accelerate the rapid growth of meningioma in this patient.

[496]

**TÍTULO / TITLE:** - Intracerebral schwannoma mimicking meningioma: case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 Nov;40(6):881-4.

**AUTORES / AUTHORS:** - Li M; Mei J; Li Y; Tao X; Hong T

[497]

**TÍTULO / TITLE:** - Primary glioblastoma with oligodendroglial differentiation has better clinical outcome but no difference in common biological markers compared with other types of glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1635-43. doi: 10.1093/neuonc/not125. Epub 2013 Oct 24.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not125](#)

**AUTORES / AUTHORS:** - Laxton RC; Popov S; Doey L; Jury A; Bhangoo R; Gullan R; Chandler C; Brazil L; Sadler G; Beaney R; Sibtain N; King A; Bodi I; Jones C; Ashkan K; Al-Sarraj S

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: Ross Laxton, PhD, Department of Clinical Neuropathology, King's College Hospital, Denmark Hill, London SE5 9RS, UK. [ross.laxton@nhs.net](mailto:ross.laxton@nhs.net).

**RESUMEN / SUMMARY:** - Background Glioblastoma multiforme with an oligodendroglial component (GBMO) has been recognized in the World Health Organization classification-however, the diagnostic criteria, molecular biology, and clinical outcome of primary GBMO remain unclear. Our aim was to investigate whether primary GBMO is a distinct clinicopathological subgroup of GBM and to determine the relative frequency of prognostic markers such as loss of heterozygosity (LOH) on 1p and/or 19q, O(6)-methylguanine-DNA methyltransferase (MGMT) promoter methylation, and isocitrate dehydrogenase 1 (IDH1) mutation. Methods We examined 288 cases of primary GBM and assessed the molecular markers in 57 GBMO and 50 cases of other primary GBM, correlating the data with clinical parameters and outcome. Results GBMO comprised 21.5% of our GBM specimens and showed significantly longer survival compared with our other GBM (12 mo vs 5.8 mo, P = .006); there was also a strong correlation with younger age at diagnosis (56.4 y vs 60.6 y, P = .005). Singular LOH of 19q (P = .04) conferred a 1.9-fold increased hazard of shorter survival. There was no difference in the frequencies of 1p or 19q deletion, MGMT promoter methylation, or IDH1 mutation (P = .8, P = 1.0, P = 1.0, respectively). Conclusions Primary GBMO is a subgroup of GBM associated with longer survival and a younger age group but shows no difference in the frequency of LOH of 1p/19q, MGMT, and IDH1 mutation compared with other primary GBM.

[498]

**TÍTULO / TITLE:** - Clinicopathological significance of expression of nestin, a neural stem/progenitor cell marker, in human glioma tissue.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 Nov 8.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0169-6](#)

**AUTORES / AUTHORS:** - Tomita T; Akimoto J; Haraoka J; Kudo M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tokyo Medical University, 6-7-1 Nishishinjuku, Shinjuku-ku, Tokyo, 160-0023, Japan.

**RESUMEN / SUMMARY:** - The purpose of the study was to investigate the pathological and clinical significance of the expression of nestin, a type-VI intermediate filament

transiently expressed during brain development, in glioma tissue. This study was conducted in 70 patients with newly diagnosed adult supratentorial gliomas who underwent multimodality treatment in our department, including surgery. The pathological diagnosis was grade II in 6 patients, grade III in 21 patients, and grade IV in 43 patients. Two specimen sections, one from the bulk of the removed tumor and one from the border between the tumor and normal brain tissue, were subjected to immunostaining with a mouse anti-human nestin monoclonal antibody. Analyses were performed to investigate possible correlation with pathological features, the relationship between nestin expression and the continuity of tumor with the subventricular zone (SVZ), correlation with the therapeutic prognosis, etc. Nestin was expressed specifically in astrocytoma lineage cells. In oligodendroglial tumors, nestin was expressed only in less-differentiated cells and cells suggestive of the presence of astrocytoma. In astrocytic tumors, the rate and level of nestin expression increased as the degree of malignancy increased. There was no significant correlation between the expression level of nestin and the continuity of tumor with the SVZ in the contrast-enhanced imaging before surgery. In addition, no correlation with the therapeutic prognosis was observed. Nestin, a neural stem cell marker, was specifically expressed in astrocytoma lineage cells in glioma tissue. A positive correlation was observed between the degree of malignancy and the level of nestin expression. However, the level of nestin expression was not related to the tumor localization in the SVZ and was not correlated with the therapeutic prognosis.

[499]

**TÍTULO / TITLE:** - Hypoxia upregulates aldehyde dehydrogenase isoform 1 (ALDH1) expression and induces functional stem cell characteristics in human glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 Nov 6.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10014-013-0170-0](#)

**AUTORES / AUTHORS:** - Soehngen E; Schaefer A; Koeritzer J; Huelsmeyer V; Zimmer C; Ringel F; Gempt J; Schlegel J

**INSTITUCIÓN / INSTITUTION:** - Division of Neuropathology, Institute of Pathology, Technical University of Munich, Ismaninger Strasse 22, 81675, Munich, Germany, [soehngen@mac.com](mailto:soehngen@mac.com).

**RESUMEN / SUMMARY:** - Aldehyde dehydrogenase 1 (ALDH1) has been used to isolate tumorigenic stem-like cells in a large number of tumors, including glioblastoma multiforme (GBM). We recently showed that human glioblastoma cells with high ALDH1 (ALDH1high) activity contain stem-cell-like characteristics. In the study reported here, we isolated established and primary human glioblastoma cells based on their ALDH1 expression. When tested for asymmetric division, only cells with ALDH1high expression were able to restore heterogeneous populations after a few days, whereas cells with ALDH1low levels could not. Most interestingly, the capacity of cells with ALDH1low levels to divide asymmetrically into cells with either ALDH1high or ALDH1low expression could be restored after exposure to hypoxic culture conditions. Consequently, we found neurosphere formation reinstated in posthypoxic, formerly ALDH1low, cells. The direct involvement of ALDH1 could be confirmed by ALDH1 small hairpin ribonucleic acid (shRNA) knockdown, suggesting ALDH1 as an

intracellular marker for the identification and isolation of stem-like glioblastoma cells. In summary, we show that ALDH1 expression correlates well with asymmetric division capacity and tumor sphere formation. Furthermore, we demonstrated that hypoxic culture conditions induce and/or upregulate ALDH1 expression in established and primary GBM cell lines.

[500]

**TÍTULO / TITLE:** - Reduced H3K27me3 and DNA Hypomethylation Are Major Drivers of Gene Expression in K27M Mutant Pediatric High-Grade Gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Cell. 2013 Nov 11;24(5):660-72. doi: 10.1016/j.ccr.2013.10.006. Epub 2013 Oct 31.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.ccr.2013.10.006](#)

**AUTORES / AUTHORS:** - Bender S; Tang Y; Lindroth AM; Hovestadt V; Jones DT; Kool M; Zapatka M; Northcott PA; Sturm D; Wang W; Radlwimmer B; Hojfeldt JW; Truffaux N; Castel D; Schubert S; Ryzhova M; Seker-Cin H; Gronych J; Johann PD; Stark S; Meyer J; Milde T; Schuhmann M; Ebinger M; Monoranu CM; Ponnuswami A; Chen S; Jones C; Witt O; Collins VP; von Deimling A; Jabado N; Puget S; Grill J; Helin K; Korshunov A; Lichter P; Monje M; Plass C; Cho YJ; Pfister SM

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Neurooncology, German Cancer Research Center (DKFZ), 69120 Heidelberg, Germany; Department of Pediatric Oncology, Hematology, and Immunology, Heidelberg University Hospital, 69120 Heidelberg, Germany.

**RESUMEN / SUMMARY:** - Two recurrent mutations, K27M and G34R/V, within histone variant H3.3 were recently identified in approximately 50% of pHGGs. Both mutations define clinically and biologically distinct subgroups of pHGGs. Here, we provide further insight about the dominant-negative effect of K27M mutant H3.3, leading to a global reduction of the repressive histone mark H3K27me3. We demonstrate that this is caused by aberrant recruitment of the PRC2 complex to K27M mutant H3.3 and enzymatic inhibition of the H3K27me3-establishing methyltransferase EZH2. By performing chromatin immunoprecipitation followed by next-generation sequencing and whole-genome bisulfite sequencing in primary pHGGs, we show that reduced H3K27me3 levels and DNA hypomethylation act in concert to activate gene expression in K27M mutant pHGGs.

[501]

**TÍTULO / TITLE:** - Trilateral retinoblastoma. Correlation between the genetic anomalies of the RB1 gene and the presence of pineal gland cysts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Arch Soc Esp Oftalmol. 2013 Oct 5. pii: S0365-6691(13)00282-7. doi: 10.1016/j.oftal.2013.07.006.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.oftal.2013.07.006](#)

**AUTORES / AUTHORS:** - Ruiz Del Rio N; Abelairas Gomez JM; Alonso Garcia de la Rosa FJ; Peralta Calvo JM; de Las Heras Martin A

**INSTITUCIÓN / INSTITUTION:** - Hospital Manises, Valencia, España. Electronic address: [noeruidelrio@yahoo.es](mailto:noeruidelrio@yahoo.es).

**RESUMEN / SUMMARY:** - **OBJETIVE:** To determine the correlation between the presence of genetic anomalies identified in the RB1 gene and the development of trilateral retinoblastoma. **METHOD:** No patients with primitive neuroectodermal tumour (PNET) were identified out of a total of 206 patients, but there were 17 cases of pineal cysts, of which 11 had a genetic study. **RESULTS:** Of the 11 patients who had a genetic study performed, the anomaly in the germinal line was identified in 8 cases, which was equivalent to 100% of the bilateral retinoblastomas, and 25% of the unilateral ones. It is more common to find a germinal mutation in patients with bilateral disease ( $P=.024$ ). There are no significant differences in the type of anomaly identified, although the nonsense-frameshift type is more frequent in cases with bilateral involvement. Identification of the genetic anomaly is more frequent in patients who have pineal cysts (Fisher test;  $P=.490$ ). Nine of the 17 patients received systemic chemotherapy (52.29% of the cases), which could be able to prevent the development of PNET. Although a certain trend was observed in all the mentioned parameters, there was a relationship between, the presence of pineal cysts and bilateral disease (Pearson Chi X2:  $P=.191$ ), a known family history (Fisher test;  $P=.114$ ) and age of early diagnosis (Fisher test;  $P=.114$ ). There were no significant differences in the mutation type identified. **CONCLUSIONS:** Considering pineal cysts as a pre-malignant form of pinealoblastoma, we found a relationship between the germinal line mutation of the RB1 gene and the cases with bilateral or unilateral retinoblastoma.

[502]

**TÍTULO / TITLE:** - Frontal meningioma mimicking relapse of schizophrenia.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Aust N Z J Psychiatry. 2013 Nov 12.

●● [Enlace al texto completo \(gratis o de pago\) 1177/0004867413511998](#)

**AUTORES / AUTHORS:** - Velakoulis D; Gleason A; Hayhow B; McNeil P; Gaillard F

**INSTITUCIÓN / INSTITUTION:** - 1Neuropsychiatry Unit, Royal Melbourne Hospital, Parkville, Australia.

[503]

**TÍTULO / TITLE:** - Feasibility and outcome of re-irradiation in the treatment of multiply recurrent pituitary adenomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pituitary. 2013 Nov 23.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11102-013-0541-x](#)

**AUTORES / AUTHORS:** - Verma J; McCutcheon IE; Waguespack SG; Mahajan A

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, University of Miami, Miami, FL, USA.

**RESUMEN / SUMMARY:** - **PURPOSE:** This study evaluates the toxicity and outcomes of re-irradiation to the sella for pituitary adenomas. **METHODS:** Patients diagnosed with a pituitary adenoma and treated with two or more courses of radiation treatment (RT) to the sella were retrospectively analyzed for: initial diagnosis, including histological type and functional status; RT modality, technique, dose, and fractionation; treatment with surgery, endocrine agents, and chemotherapy; toxicity of RT including radiation-induced optic neuropathy, radionecrosis, and radiation-induced neoplasms;

and outcomes including local control, distant metastasis, biochemical control of functional tumors, and vital status at last follow-up. RESULTS: We identified 15 patients with non-functioning pituitary adenoma (n = 6), Cushing's disease (CD) (n = 5), acromegaly (n = 3), and prolactinoma (n = 1). Initial RT was delivered using opposed lateral fields in 8 (53 %), intensity-modulated radiation therapy (IMRT) in 4 (27 %), fractionated stereotactic radiation therapy (FSRT) in 1 (6.7 %), and stereotactic radiosurgery (SRS) in 2. The median dose was 49.5 Gy for fractionated RT and 15-25 Gy for SRS. Re-irradiation was performed a median of 5.8 years after initial RT, and delivered using lateral opposed beams (n = 1), IMRT (n = 4), linear-accelerator based SRS (n = 3), FSRT (n = 3), gamma knife surgery (n = 2), and yttrium-90 brachytherapy (n = 1). The median dose of re-irradiation was 45 Gy (range 27.9-54 Gy) for fractionated RT and 18 Gy for SRS. Radiation-induced optic neuropathy (RION) was observed in 2 (13.3 %) patients, 6 months and 14 years after re-irradiation; the 5-year rate of RION was 9 %. Temporal lobe necrosis (TLN) occurred in two patients (13.3 %), both of whom had received SRS. The 2- and 5-year rates of TLN were 10 and 28 %. Actuarial local control rates at 2 and 5 years were 80 and 58 %, respectively. Biochemical remission occurred in one of three patients with CD. Four patients (27 %) ultimately developed pituitary carcinoma. CONCLUSIONS: Re-irradiation is a feasible treatment option for local control in patients with recalcitrant pituitary adenomas, with acceptable rates of RION and TLN given the lack of options that may be available otherwise. Re-irradiation, however, did not control hormonal hypersecretion.

[504]

**TÍTULO / TITLE:** - Preservation of the Long Insular Artery to Prevent Postoperative Motor Deficits After Resection of Insulo-opercular Glioma: Technical Case Reports.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Oct 21.

**AUTORES / AUTHORS:** - Iwasaki M; Kumabe T; Saito R; Kanamori M; Yamashita Y; Sonoda Y; Tominaga T

**RESUMEN / SUMMARY:** - Resection of insulo-opercular gliomas carries the risk of postoperative hemiparesis caused by ischemia of the corona radiata resulting from injury to the long insular arteries. However, intraoperative identification of these perforating arteries is challenging. We attempted intra-operative motor evoked potential (MEP) monitoring under temporary occlusion of the suspected long insular artery arising from the opercular portion of middle cerebral artery in two patients with insulo-opercular gliomas. Temporary occlusion of the artery caused decrease in MEP amplitude, which recovered after release in one patient, who had no postoperative motor deficits or ischemic lesion in the corona radiata. Temporary occlusion of the artery caused no changes in MEP amplitude, so that the artery was sacrificed for tumor removal in the other patient, who had no motor deficits but ischemic lesion was present in the corona radiata in the territory of the long insular artery sparing the descending motor pathway. These cases show that great care should be taken during surgical manipulations near the posterior part of the superior limiting sulcus to preserve the perforating branches to the corona radiata, and temporary occlusion of the branches under MEP monitoring is useful to identify the arteries supplying the pyramidal tract.

[505]

**TÍTULO / TITLE:** - The role of TLR2/JNK/NF-kappaB pathway in amyloid beta peptide-induced inflammatory response in mouse NG108-15 neural cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int Immunopharmacol. 2013 Nov;17(3):880-4. doi: 10.1016/j.intimp.2013.09.016. Epub 2013 Oct 12.

●● Enlace al texto completo (gratis o de pago) [1016/j.intimp.2013.09.016](#)

**AUTORES / AUTHORS:** - Lin W; Ding M; Xue J; Leng W

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Jintan People's Hospital, Jiangsu, Jintan 213200, PR China.

**RESUMEN / SUMMARY:** - The TLR2-mediated neuroinflammatory activation has been involved in the pathogenesis of Alzheimer's disease (AD) associated with amyloid beta (Aβ) deposition. In neuronal damage, JNK and NF-kappaB pathways contribute to TLR2-dependent secretion of proinflammatory cytokines. However, the role of TLR2/JNK/NF-kappaB pathway on Aβ-induced inflammatory response in nerve cell damage remains unclear. In the present study, Aβ<sub>1-42</sub> was used to induce mouse NG108-15 neural cell injury. The cell viability was detected by methylthiazolyldiphenyl-tetrazolium bromide (MTT). The levels of tumor necrosis factor (TNF)-α, monocyte chemoattractant protein (MCP)-1 and interleukin (IL)-10 in culture supernatant were measured by ELISA. Western blot analysis was performed to detect the expressions of JNK and p-65 NF-kappaB proteins. Immunofluorescence assay was also performed to examine the p-JNK and p-65 NF-kappaB activation. As a result, Aβ<sub>1-42</sub> incubation for 36h inhibited remarkably the cell viability of NG108-15, and increased significantly the levels of inflammatory cytokines TNF-α, MCP-1 and IL-10, as well as enhanced the expressions of JNK and p-65 NF-kappaB in western blot analysis and immunofluorescence assay. However, the pre-incubation with anti-TLR2 (OPN301, 1 μg/ml) or JNK inhibitor SP600125 (10 μg/ml) prior to Aβ<sub>1-42</sub> administration, these upregulation events were all reduced. These results suggested that the induction of Aβ<sub>1-42</sub> on proinflammatory cytokine generation might be associated with TLR2-dependent JNK/NF-kappaB signal pathway, at least partially. Our findings indicated that blockade of TLR2/JNK/NF-kappaB pathway could be beneficial in the pathogenesis of AD.

[506]

**TÍTULO / TITLE:** - Angiogenesis and Angiogenic Tyrosine Kinase Receptor Expression in Pediatric Brain Tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pathol Oncol Res. 2013 Nov 5.

●● Enlace al texto completo (gratis o de pago) [1007/s12253-013-9711-4](#)

**AUTORES / AUTHORS:** - Virag J; Kenessey I; Haberler C; Piurko V; Balint K; Dome B; Timar J; Garami M; Hegedus B

**INSTITUCIÓN / INSTITUTION:** - 2<sup>nd</sup> Department of Pediatrics, Semmelweis University, Budapest, Hungary.

**RESUMEN / SUMMARY:** - Tumor angiogenesis and receptor tyrosine kinases (RTK) are major novel targets in anticancer molecular therapy. Accordingly, we characterized the vascular network and the expression pattern of angiogenic RTK in the most frequent pediatric brain tumors. In a retrospective collection of 44 cases (14 astrocytoma, 16

ependymoma and 14 medulloblastoma), immunohistochemistry for VEGFR1, VEGFR2, PDGFRalpha, PDGFRbeta, and c-Kit as well as microvessel labeling with CD34 and SMA were conducted on surgical specimens. We found a significantly higher vascular density in ependymoma. Glomeruloid formations were abundant in medulloblastoma but rare or almost absent in astrocytoma and ependymoma, respectively. C-Kit and VEGFR2 labeled blood vessels were more abundant in ependymoma than in the other two types of tumors. In contrast, medulloblastoma contained higher number of PDGFRalpha expressing vessels. In tumor cells, we found no VEGFR2 but VEGFR1 expression in all three tumor types. PDGFRalpha was strongly expressed on the tumor cells in all three malignancies, while PDGFRbeta tumor cell expression was present in the majority of medulloblastoma cases. Interestingly, small populations of c-Kit expressing cancer cells were found in a number of medulloblastoma and ependymoma cases. Our study suggests that different angiogenic mechanisms are present in ependymoma and medulloblastoma. Furthermore ependymoma patients may benefit from anti-angiogenic therapies based on the high vascularization as well as the endothelial expression of c-kit and VEGFR2. The expression pattern of the receptors on tumor cells also suggests the targeting of specific angiogenic tyrosine kinase receptors may have direct antitumor activity. Further preclinical and biomarker driven clinical investigations are needed to establish the application of tyrosine kinase inhibitors in the treatment of pediatric brain tumors.

[507]

**TÍTULO / TITLE:** - Punicalagin induces apoptotic and autophagic cell death in human U87MG glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Pharmacol Sin. 2013 Nov 5;34(11):1411-9. doi: 10.1038/aps.2013.98. Epub 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [1038/aps.2013.98](#)

**AUTORES / AUTHORS:** - Wang SG; Huang MH; Li JH; Lai FI; Lee HM; Hsu YN

**INSTITUCIÓN / INSTITUTION:** - 1] Institute of Pharmaceutical Science and Technology, Central Taiwan University of Science and Technology, Taichung, Taiwan, China [2] Department of Medical Laboratory Science and Biotechnology, Central Taiwan University of Science and Technology, Taichung, Taiwan, China.

**RESUMEN / SUMMARY:** - Aim: To investigate the effects of punicalagin, a polyphenol isolated from Punica granatum, on human U87MG glioma cells in vitro. Methods: The viability of human U87MG glioma cells was evaluated using MTT assay. Cell cycle was detected with flow cytometry analysis. The levels of Bcl-2, cleaved caspase-9, cleaved poly(ADP-ribose) polymerase (PARP), phosphor-AMPK and phosphor-p27 at Thr198 were measured using immunoblot analyses. Caspase-3 activity was determined with spectrophotometer. To determine autophagy, LC3 cleavage and punctate patterns were examined. Results: Punicalagin (1-30 µg/mL) dose-dependently inhibited the cell viability in association with increased cyclin E level and decreased cyclin B and cyclin A levels. The treatment also induced apoptosis as shown by the cleavage of PARP, activation of caspase-9, and increase of caspase-3 activity in the cells. However, pretreatment of the cells with the pan-caspase inhibitor z-DEVD-fmk (50 µmol/L) did not completely prevent the cell death. On the other hand, punicalagin treatment increased LC3-II cleavage and caused GFP-LC3-II-stained punctate pattern in the

cells. Suppressing autophagy of cells with chloroquine (1-10  $\mu\text{mol/L}$ ) dose-dependently alleviated the cell death caused by punicalagin. Punicalagin (1-30  $\mu\text{g/mL}$ ) also increased the levels phosphor-AMPK and phosphor-p27 at Thr198 in the cells, which were correlated with the induction of autophagic cell death. Conclusion: Punicalagin induces human U87MG glioma cell death through both apoptotic and autophagic pathways.

[508]

**TÍTULO / TITLE:** - Opposing Signaling of ROCK1 and ROCK2 Determines the Switching of Substrate Specificity and the Mode of Migration of Glioblastoma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Neurobiol. 2013 Oct 30.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s12035-013-8568-6](#)

**AUTORES / AUTHORS:** - Mertsch S; Thanos S

**INSTITUCIÓN / INSTITUTION:** - Institute for Experimental Ophthalmology, School of Medicine, Westfalian-Wilhelms-University Munster, Albert-Schweitzer-Campus 1, D15, 48149, Munster, Germany, [sonja.mertsch@ukmuenster.de](mailto:sonja.mertsch@ukmuenster.de).

**RESUMEN / SUMMARY:** - Despite current advances in therapy, the prognosis of patients with glioblastoma has not improved sufficiently in recent decades. This is due mainly to the highly invasive capacity of glioma cells. Little is known about the mechanisms underlying this particular characteristic. While the Rho-kinase (ROCK)-dependent signaling pathways involved in glioma migration have yet to be determined, they show promise as one of the candidates in targeted glioblastoma therapy. There are two ROCK isoforms: ROCK1, which is upregulated in glioblastoma tissue compared to normal brain tissue, and ROCK2, which is also expressed in normal brain tissue. Blockage of both of these ROCK isoforms with pharmacologic inhibitors regulates the migration process. We examined the activities of ROCK1 and ROCK2 using knockdown cell lines and the newly developed stripe assay. Selective knockdown of either ROCK1 or ROCK2 exerted antidromic effects on glioma migration: while ROCK1 deletion altered the substrate-dependent migration, deletion of ROCK2 did not. Furthermore, ROCK1 knockdown reduced cell proliferation, whereas ROCK2 knockdown enhanced it. Along the signaling pathways, key regulators of the ROCK pathway are differentially affected by ROCK1 and ROCK2. These data suggest that the balanced activation of ROCKs is responsible for the substrate-specific migration and the proliferation of glioblastoma cells.

[509]

**TÍTULO / TITLE:** - Imaging changes following stereotactic radiosurgery for metastatic intracranial tumors: differentiating pseudoprogression from tumor progression and its effect on clinical practice.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Rev. 2013 Nov 15.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10143-013-0504-8](#)

**AUTORES / AUTHORS:** - Ruzevick J; Kleinberg L; Rigamonti D

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**RESUMEN / SUMMARY:** - Stereotactic radiosurgery has become standard adjuvant treatment for patients with metastatic intracranial lesions. There has been a growing appreciation for benign imaging changes following radiation that are difficult to distinguish from true tumor progression. These imaging changes, termed pseudoprogression, carry significant implications for patient management. In this review, we discuss the current understanding of pseudoprogression in metastatic brain lesions, research to differentiate pseudoprogression from true progression, and clinical implications of pseudoprogression on treatment decisions.

[510]

**TÍTULO / TITLE:** - Activation of mTORC1/mTORC2 signaling in pediatric low-grade glioma and pilocytic astrocytoma reveals mTOR as a therapeutic target.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1604-14. doi: 10.1093/neuonc/not132. Epub 2013 Nov 6.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not132](#)

**AUTORES / AUTHORS:** - Hutt-Cabezas M; Karajannis MA; Zagzag D; Shah S; Horkayne-Szakaly I; Rushing EJ; Cameron JD; Jain D; Eberhart CG; Raabe EH; Rodriguez FJ

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**RESUMEN / SUMMARY:** - Background Previous studies support a role for mitogen-activated protein kinase pathway signaling, and more recently Akt/mammalian target of rapamycin (mTOR), in pediatric low-grade glioma (PLGG), including pilocytic astrocytoma (PA). Here we further evaluate the role of the mTORC1/mTORC2 pathway in order to better direct pharmacologic blockade in these common childhood tumors. Methods We studied 177 PLGGs and PAs using immunohistochemistry and tested the effect of mTOR blockade on 2 PLGG cell lines (Res186 and Res259) in vitro. Results Moderate (2+) to strong (3+) immunostaining was observed for pS6 in 107/177 (59%) PAs and other PLGGs, while p4EBP1 was observed in 35/115 (30%), pEIF4G in 66/112 (59%), mTOR (total) in 53/113 (47%), RAPTOR (mTORC1 component) in 64/102 (63%), RICTOR (mTORC2 component) in 48/101 (48%), and pAkt (S473) in 63/103 (61%). Complete phosphatase and tensin homolog protein loss was identified in only 7/101 (7%) of cases. In PA of the optic pathways, compared with other anatomic sites, there was increased immunoreactivity for pS6, pEIF4G, mTOR (total), RICTOR, and pAkt ( $P < .05$ ). We also observed increased pS6 ( $P = .01$ ), p4EBP1 ( $P = .029$ ), and RICTOR ( $P = .05$ ) in neurofibromatosis type 1 compared with sporadic tumors. Treatment of the PLGG cell lines Res186 (PA derived) and Res259 (diffuse astrocytoma derived) with the rapalog MK8669 (ridaforolimus) led to decreased mTOR pathway activation and growth. Conclusions These findings suggest that the mTOR pathway is active in PLGG but varies by clinicopathologic subtype.

Additionally, our data suggest that mTORC2 is differentially active in optic pathway and neurofibromatosis type 1-associated gliomas. MTOR represents a potential therapeutic target in PLGG that merits further investigation.

[511]

**TÍTULO / TITLE:** - Can Behenic Acid (C22:0) Levels be a Prognostic Factor in Glial Tumors?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 Nov;40(6):854-6.

**AUTORES / AUTHORS:** - Kaplan M; Koparan M; Sari A; Ozturk S; Kaplan SK; Erol FS

[512]

**TÍTULO / TITLE:** - Molecular pathways and potential therapeutic targets in glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Anticancer Ther. 2013 Nov;13(11):1307-18. doi: 10.1586/14737140.2013.852472.

●● [Enlace al texto completo \(gratis o de pago\) 1586/14737140.2013.852472](#)

**AUTORES / AUTHORS:** - Wardak Z; Choe KS

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, University of Texas Southwestern Medical Center, Dallas, TX, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common primary brain malignancy. The current standard of therapy consists of surgical resection followed by concurrent chemoradiotherapy with temozolomide. Despite steady advances in all therapeutic modalities, clinical improvements have been slow and the prognosis remains poor. Utilizing powerful large-scale molecular techniques, several key pathways implicated in gliomagenesis have recently been identified and confirmed. These represent potential therapeutic targets, and by developing novel methods to specifically manipulate these pathways, we may achieve a meaningful and substantial improvement in the way we treat GBM. Here, we present and discuss the current status of research into the molecular pathways and potential therapeutic targets in GBM.

[513]

**TÍTULO / TITLE:** - HOTAIR, a cell cycle-associated long noncoding RNA and a strong predictor of survival, is preferentially expressed in classical and mesenchymal glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1595-603. doi: 10.1093/neuonc/not131. Epub 2013 Nov 7.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not131](#)

**AUTORES / AUTHORS:** - Zhang JX; Han L; Bao ZS; Wang YY; Chen LY; Yan W; Yu SZ; Pu PY; Liu N; You YP; Jiang T; Kang CS

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Jiang, PhD, Beijing Neurosurgical Institute, Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, China, ([jiangtao369@sohu.com](mailto:jiangtao369@sohu.com)); Chun-Sheng Kang, PhD, Department of Neurosurgery, Tianjin Medical University General Hospital, Tianjin, China ([kang97061@gmail.com](mailto:kang97061@gmail.com)).

**RESUMEN / SUMMARY:** - Background Long noncoding RNA Hox transcript antisense intergenic RNA (HOTAIR) has been characterized as a negative prognostic factor in breast and colon cancer patients. The clinical significance and function of HOTAIR in glioma remains unclear. Methods We analyzed the clinical significance of HOTAIR in 3 different glioma cohorts with gene expression data, including correlation with tumor grade, prognosis, and molecular subtype. The function of HOTAIR in glioma was explored by performing gene set enrichment analysis and in vitro and in vivo experiments. Results HOTAIR expression was closely associated with glioma grade and poor prognosis. Multivariate Cox regression analysis revealed that HOTAIR was an independent prognostic factor in glioblastoma multiforme patients. HOTAIR expression correlated with glioma molecular subtype, including those of The Cancer Genome Atlas. HOTAIR was preferentially expressed in the classical and mesenchymal subtypes compared with the neural and proneural subtypes. A gene set enrichment analysis designed to show gene set differences between patients with high and low HOTAIR expression indicated that HOTAIR expression was associated with gene sets involved in cell cycle progression. HOTAIR reduction induced colony formation suppression, cell cycle G0/G1 arrest, and orthotopic tumor growth inhibition. Conclusion Our data establish that HOTAIR is an important long noncoding RNA that primarily serves as a prognostic factor for glioma patient survival, as well as a biomarker for identifying glioma molecular subtypes, a critical regulator of cell cycle progression.

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[514]

**TÍTULO / TITLE:** - Mechanisms of Tumor Development and Anti-angiogenic Therapy in Glioblastoma Multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 25;53(11):755-63. Epub 2013 Oct 25.

**AUTORES / AUTHORS:** - Onishi M; Kurozumi K; Ichikawa T; Date I

**RESUMEN / SUMMARY:** - Despite advances in surgical and medical therapy, glioblastoma multiforme (GBM) remains a fatal disease. There has been no significant increase in survival for patients with this disease over the last 20 years. Tumor vasculature formation and glioma cell invasion along the white matter tracts both play a pivotal role in glioma development. Angiogenesis and invasion are the major factors believed to be responsible for treatment resistance in tumors, and a better understanding of the glioma invasion and angiogenesis mechanisms will lead to the development of potential new treatments. In this review, we focus on the molecular characteristics of angiogenesis and invasion in human malignant glioma. We discuss bevacizumab and cilengitide, which are used to inhibit angiogenesis in GBM.

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[515]

**TÍTULO / TITLE:** - AZA-Deoxycytidine stimulates proopiomelanocortin gene expression and ACTH secretion in human pituitary ACTH-secreting tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pituitary. 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11102-013-0527-8](#)

**AUTORES / AUTHORS:** - Cassarino MF; Sesta A; Pagliardini L; Losa M; Lasio G; Cavagnini F; Pecori Giraldi F

**INSTITUCIÓN / INSTITUTION:** - Neuroendocrinology Research Laboratory, Istituto Auxologico Italiano IRCCS, Piazzale Brescia 20, Milan, Italy.

**RESUMEN / SUMMARY:** - PURPOSE: It is well known that methylation plays an important role in regulating tissue expression of proopiomelanocortin (POMC) and recent studies have shown that demethylation can occur also in vitro in neuroendocrine tumors. Aim of the present study was to evaluate whether inhibition of methylation modulates POMC expression and ACTH secretion by human corticotrope tumors. METHODS: Twenty two ACTH-secreting pituitary tumors were incubated with 5-AZA-2'-deoxycytidine (AZA), an inhibitor of DNA-methyltransferases, with or without 10 nM corticotropin-releasing hormone (CRH). Both dose response (100 nM-10 μM AZA) and time course (4-96 h) experiments were carried out for measurement of ACTH secretion and POMC gene expression. RESULTS: Incubation with AZA increased constitutive POMC expression and ACTH secretion by human corticotrope adenomas. The effect appeared most notable at 24 and 48 h with 1 μM AZA. Incubation with AZA did not exert an additional stimulatory effect on CRH-stimulated POMC and ACTH. CONCLUSIONS: The present study shows that AZA increases POMC gene expression and ACTH secretion in human pituitary ACTH-secreting tumors. This can be taken to indicate that mechanisms set into motion by AZA play a role in the regulation of ACTH secretion/POMC expression in tumoral corticotropes and paves the way to further studies in Cushing's disease.

[516]

**TÍTULO / TITLE:** - TERT promoter mutations rather than methylation are the main mechanism for TERT upregulation in adult gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Dec;126(6):939-41. doi: 10.1007/s00401-013-1203-9. Epub 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1203-9](#)

**AUTORES / AUTHORS:** - Arita H; Narita Y; Takami H; Fukushima S; Matsushita Y; Yoshida A; Miyakita Y; Ohno M; Shibui S; Ichimura K

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[517]

**TÍTULO / TITLE:** - Treatment results of glioblastoma during the last 30 years in a single institute.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 25;53(11):786-96. Epub 2013 Oct 21.

**AUTORES / AUTHORS:** - Kumabe T; Saito R; Kanamori M; Chonan M; Mano Y; Shibahara I; Kawaguchi T; Kato H; Yamashita Y; Sonoda Y; Kawagishi J; Jokura H; Watanabe M; Katakura R; Kayama T; Tominaga T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tohoku University Graduate School of Medicine.

**RESUMEN / SUMMARY:** - Treatment results of glioblastoma (GB) during the last 30 years in Tohoku University were analyzed to identify any improvements in patient outcome in all 332 histologically proven cases of newly diagnosed GB treated consecutively in our department between 1982 and 2011. These 30 years was divided into 5 treatment eras, Group 1 (1982-1988, without preoperative evaluation by magnetic resonance [MR] imaging, n = 46), Group 2 (1989-1996, with preoperative MR imaging, n = 41), Group 3 (1997-1999, additionally underwent intraoperative functional brain mapping and neuronavigation system, n = 38), Group 4 (2000-August 2006, underwent 30 Gy of whole brain radiation followed by 30 Gy of extended local accelerated hyperfractionated radiation therapy, n = 96), and Group 5 (September 2006-2011, adjuvant usage of temozolomide [TMZ], n = 111). Overall survival (OS) was calculated from the date of surgery to the death from any cause. The median survival time/2-year OS/5-year OS of Groups 1 to 5 were 10.7 months/10.9%/0%, 17.3 months/26.2%/6.9%, 15.9 months/23.7%/5.3%, 20.1 months/34.8%/15.5%, and 20.9 months/45.5%/19.7%. The prognosis for patients with GB improved significantly after the introduction of MR imaging. Younger GB, defined as patients aged below 60 years, or total tumor resection with all ages in Group 5 had 5-year OS of 31.0% and 30.1%, respectively. The prognosis of GB was improved significantly after the introduction of TMZ for elderly GB, recursive partitioning analysis class 5, or totally resected GB. Introduction of MR imaging and TMZ, and total resection of the tumor were important in the improvement of outcome for patients with GB.

[518]

**TÍTULO / TITLE:** - The role of Gliadel wafers in the treatment of high-grade gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Anticancer Ther. 2013 Dec;13(12):1453-61. doi: 10.1586/14737140.2013.840090.

●● Enlace al texto completo (gratis o de pago) [1586/14737140.2013.840090](#)

**AUTORES / AUTHORS:** - Bregy A; Shah AH; Diaz MV; Pierce HE; Ames PL; Diaz D; Komotar RJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of Miami, Miller School of Medicine, 1095 NW 14<sup>th</sup> Terrace, 2<sup>nd</sup> Floor, Miami, FL, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most aggressive brain tumor. Standard treatment includes surgery, radiation and chemotherapy. Prognosis is dismal with an average survival of approximately 1 year. Gliadel wafers are one treatment option, working as a source for local chemotherapy delivery. Their use is controversial with questionable survival benefit and potential side effects. We reviewed the literature in an effort to clarify their role in the treatment of high-grade gliomas. A systematic PubMed search was performed using the keywords 'Gliadel', 'carmustine' or 'BCNU wafers' in newly diagnosed high-grade glioma patients. Treatment regimen, and median survival were analyzed. Adverse event ratio was calculated by computing the number of adverse events in a study per patient receiving carmustine wafers. Nineteen

studies with 795 patients were included in our review. Survival was 8.7-22.6 months with a mean overall survival (OS) of 16.2 months (control survival is approximately 14 months with surgery and adjuvant chemoradiotherapy). Adverse event ratio using Gliadel wafers in control group. Complication rate was 42.7%. Gliadel wafers may marginally increase survival and local control in newly diagnosed GBM patients but are associated with a high complication rate; therefore, we do not recommend using Gliadel wafers in patients with GBM. Further research may be warranted once a safer alternative to Gliadel wafers has been introduced.

[519]

**TÍTULO / TITLE:** - Combination therapy targeting integrins reduces glioblastoma tumor growth through antiangiogenic and direct antitumor activity and leads to activation of the pro-proliferative prolactin pathway.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cancer. 2013 Nov 20;12(1):144.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1476-4598-12-144](#)

**AUTORES / AUTHORS:** - Oliveira-Ferrer L; Wellbrock J; Bartsch U; Murga Penas EM; Hauschild J; Klokow M; Bokemeyer C; Fiedler W; Schuch G

**RESUMEN / SUMMARY:** - BACKGROUND: Tumors may develop resistance to specific angiogenic inhibitors via activation of alternative pathways. Therefore, multiple angiogenic pathways should be targeted to achieve significant angiogenic blockade. In this study we investigated the effects of a combined application of the angiogenic inhibitors endostatin and tumstatin in a model of human glioblastoma multiforme. RESULTS: Inhibitors released by stably transfected porcine aortic endothelial cells (PAE) showed anti-angiogenic activity in proliferation and wound-healing assays with endothelial cells (EC). Interestingly, combination of endostatin and tumstatin (ES + Tum) also reduced proliferation of glioma cells and additionally induced morphological changes and apoptosis in vitro. Microencapsulated PAE-cells producing these inhibitors were applied for local therapy in a subcutaneous glioblastoma model. When endostatin or tumstatin were applied separately, in vivo tumor growth was inhibited by 58% and 50%, respectively. Combined application of ES + Tum, in comparison, resulted in a significantly more pronounced inhibition of tumor growth (83%). cDNA microarrays of tumors treated with ES + Tum revealed an up-regulation of prolactin receptor (PRLR). ES + Tum-induced up-regulation of PRLR in glioma cells was also found in in vitro. Moreover, exogenous PRLR overexpression in vitro led to up-regulation of its ligand prolactin and increased proliferation suggesting a functional autocrine growth loop in these cells. CONCLUSION: Our data indicate that integrin-targeting factors endostatin and tumstatin act additively by inhibiting glioblastoma growth via reduction of vessel density but also directly by affecting proliferation and viability of tumor cells. Treatment with the ES + Tum-combination activates the PRLR pro-proliferative pathway in glioblastoma. Future work will show whether the prolactin signaling pathway represents an additional target to improve therapeutic strategies in this entity.

[520]

**TÍTULO / TITLE:** - Cardiorespiratory crisis at the end of pregnancy: a case of pheochromocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Middle East J Anesthesiol. 2013 Jun;22(2):195-202.

**AUTORES / AUTHORS:** - Haddad S; Al-Raiy B; Madkhali A; Al-Qahtani S; Al-Sultan M; Arabi Y

**INSTITUCIÓN / INSTITUTION:** - Intensive Care Department, MC 1425, Surgical Intensive Care Unit, King Abdulaziz Medical City, Riyadh, Kingdom of Saudi Arabia. [haddads55@yahoo.com](mailto:haddads55@yahoo.com)

**RESUMEN / SUMMARY:** - Pheochromocytoma during pregnancy is extremely rare. Its clinical manifestation includes hypertension with various clinical presentations, possibly resembling those of pregnancy-induced hypertension. The real challenge for clinicians is differentiating pheochromocytoma from other causes of hypertension (preeclampsia, gestational hypertension, and pre-existing or essential hypertension), from other cause of pulmonary edema (preeclampsia, peripartum cardiomyopathy, stress or Takotsubo cardiomyopathy, pre-existing cardiac disease [mitral stenosis], and high doses betamimetics), and from other causes of cardiovascular collapse (pulmonary embolism, and amniotic fluid embolism). Although, several cases of pheochromocytoma during pregnancy have been published, fetal and maternal mortalities due to undiagnosed cases are still reported. We report a case of a patient whose delivery by cesarean section was complicated by severe hemodynamic instability resulting in a cardiac arrest. Later on, pheochromocytoma was suspected based on computed tomography (CT) scan findings. Diagnosis was confirmed with special biochemical investigations that showed markedly elevated catecholamines in urine and metanephrines in serum, and later by histopathology of the excised left adrenal mass. This case illustrates the difficulty of diagnosing pheochromocytoma in pregnancy and raises the awareness to when this rare disease should be suspected.

[521]

**TÍTULO / TITLE:** - Systems biology of primary CNS lymphoma: from genetic aberrations to modeling in mice.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Nov 16.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00401-013-1202-x](#)

**AUTORES / AUTHORS:** - Deckert M; Montesinos-Rongen M; Brunn A; Siebert R

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**RESUMEN / SUMMARY:** - Primary lymphoma of the central nervous system (CNS, PCNSL) is a specific diffuse large B cell lymphoma entity arising in and confined to the CNS. Despite extensive research since many decades, the pathogenetic mechanisms underlying the remarkable tropism of this peculiar malignant hematopoietic tumor remain still to be elucidated. In the present review, we summarize the present knowledge on the genotypic and phenotypic characteristics of the tumor cells of PCNSL, give an overview over deregulated molecular pathways in PCNSL and present recent progress in the field of preclinical modeling of PCNSL in mice. With regard to the phenotype, PCNSL cells resemble late germinal center exit IgM+IgD+ B cells with blocked terminal B cell differentiation. They show continued BCL6 activity in line with

ongoing activity of the germinal center program. This together with the pathways deregulated by genetic alterations may foster B cell activation and brisk proliferation, which correlated with the simultaneous MYC and BCL2 overexpression characteristic for PCNSL. On the genetic level, PCNSL are characterized by ongoing aberrant somatic hypermutation that, besides the IG locus, targets the PAX5, TTF, MYC, and PIM1 genes. Moreover, PCNSL cells show impaired IG class switch due to smu region deletions, and PRDM1 mutations. Several important pathways, i.e., the B cell receptor (BCR), the toll-like receptor, and the nuclear factor-kappaB pathway, are activated frequently due to genetic changes affecting genes like CD79B, SHIP, CBL, BLNK, CARD11, MALT1, BCL2, and MYD88. These changes likely foster tumor cell survival. Nevertheless, many of these features are also present in subsets of systemic DLBCL and might not be the only reasons for the peculiar tropism of PCNSL. Here, preclinical animal models that closely mimic the clinical course and neuropathology of human PCNSL may provide further insight and we discuss recent advances in this field. Such models enable us to understand the pathogenetic interaction between the malignant B cells, resident cell populations of the CNS, and the associated inflammatory infiltrate. Indeed, the immunophenotype of the CNS as well as tumor cell characteristics and intracerebral interactions may create a microenvironment particularly conducive to PCNSL that may foster aggressiveness of tumor cells and accelerate the fatal course of disease. Suitable animal models may also serve as a well-defined preclinical system and may provide a useful tool for developing new specific therapeutic strategies.

[522]

**TÍTULO / TITLE:** - A case and a series of published cases of esthesioneuroblastoma (ENB) in which long-standing paraneoplastic SIADH had preceded ENB diagnosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ear Nose Throat J. 2013 Oct-Nov;92(10-11):E6-9.

**AUTORES / AUTHORS:** - Gabbay U; Leider-Trejo L; Marshak G; Gabbay M; Fliss DM

**INSTITUCIÓN / INSTITUTION:** - Section of Epidemiology, Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Tel Aviv 69978, Israel. [ugabai@post.tau.ac.il](mailto:ugabai@post.tau.ac.il).

**RESUMEN / SUMMARY:** - Esthesioneuroblastoma (ENB) is a rare tumor of the olfactory mucosa. We treated a 50-year-old man with an ENB in the right ethmoid sinus who had been diagnosed 16 years earlier with syndrome of inappropriate antidiuretic hormone secretion (SIADH) of unknown cause. When the ENB was surgically removed, the patient's osmoregulation returned to normal—that is, his SIADH resolved completely, which suggested that the SIADH was paraneoplastic in nature. These events prompted us to review the literature to determine if there is an association between our patient's ENB and his SIADH in general and between long-standing SIADH that precedes ENB in particular. Based on our review and an extrapolation of data, we have estimated that 1,300 cases of ENB have occurred since it was first described in 1924. Of these cases, SIADH was reported in 26 cases, including ours, which represents an estimated prevalence of 2% (although we believe this is actually an underestimation of the true prevalence). Of the 26 cases, SIADH had already been present in 14 patients (54%) prior to their diagnosis of EBN for a median duration of 3.5 years. We recommend that patients with newly diagnosed EBN be evaluated for SIADH. In those who are SIADH-positive, a resolution of SIADH should be expected once the ENB has been removed. If this does not occur, one should suspect that the ENB was not completely removed. If

SIADH resolves but later recurs during follow-up, then a relapse should be suspected. In long-standing SIADH of unknown etiology, nasal sinus imaging should be considered.

[523]

**TÍTULO / TITLE:** - Clinical use of C-methionine and F-FDG-PET for germinoma in central nervous system.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Nucl Med. 2013 Nov 24.

●● Enlace al texto completo (gratis o de pago) [1007/s12149-013-0787-4](#)

**AUTORES / AUTHORS:** - Okochi Y; Nihashi T; Fujii M; Kato K; Okada Y; Ando Y; Maesawa S; Takebayashi S; Wakabayashi T; Naganawa S

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**RESUMEN / SUMMARY:** - **OBJECTIVE:** The purpose of this study was to examine the <sup>11</sup>C-methionine (MET) and <sup>18</sup>F-fluorodeoxyglucose (FDG) positron emission tomography (PET) findings of central nervous system (CNS) germinoma and the diagnostic utility of these findings. **METHODS:** We retrospectively evaluated the cases of 10 patients who were diagnosed with CNS germinoma according to their histopathological or clinical findings. All the patients underwent pretreatment MET and/or FDG-PET scans, and the resultant images were assessed qualitatively and quantitatively. In the qualitative assessments, we used 3- and 5-grade visual scoring systems for the MET- and FDG-PET images, respectively. In the quantitative assessments, the maximal standardized uptake value (SUVmax) and the ratio of the SUVmax of the tumor (T) divided by the mean SUV for the normal white or gray matter [T/N (WM), T/N (GM)], was calculated. **RESULTS:** The mean and SD values of SUVmax, T/N (WM), and T/N (GM) were 1.9 +/- 1.4, 2.5 +/- 1.3, and 1.7 +/- 0.9 on MET-PET and 5.8 +/- 2.2, 1.6 +/- 0.5, and 0.8 +/- 0.2 on FDG-PET, respectively. On MET-PET, only one lesion was not detected. On the other hand, on FDG-PET all of the lesions exhibited uptake values that were intermediate between those of the normal white matter and gray matter. **CONCLUSION:** In terms of its tumor-contouring ability, MET is a good tracer for diagnosing CNS germinomas; therefore, MET-PET is considered to be useful for planning biopsies or surgery. Although FDG-PET is capable of detecting CNS germinomas, it produced insufficient image contrast in the present study. Further studies are needed before FDG-PET can be used in clinical examinations of CNS germinoma.

[524]

**TÍTULO / TITLE:** - Clinical Course of Central Neurocytoma with Malignant Transformation-An Indication for Craniospinal Irradiation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pathol Oncol Res. 2013 Oct 12.

●● Enlace al texto completo (gratis o de pago) [1007/s12253-013-9697-y](#)

**AUTORES / AUTHORS:** - Mozes P; Szanto E; Tiszlavicz L; Barzo P; Cserhati A; Fodor E; Hideghety K

**INSTITUCIÓN / INSTITUTION:** - Department of Oncotherapy, University of Szeged, Albert Szent-Gyorgyi Clinical Center, 6720, Szeged, Koranyi fasor 12, Hungary, [mozespetra@gmail.com](mailto:mozespetra@gmail.com).

**RESUMEN / SUMMARY:** - Central neurocytoma is generally considered to be a benign tumor and the literature suggests that a cure may be attained by surgery +/- adjuvant focal irradiation. However, there is a need for change in the therapeutic strategy for the subgroup of patients with aggressive central neurocytoma. An example case is presented and the literature on central neurocytoma cases with malignant features and dissemination via the cerebrospinal fluid is reviewed and the radiotherapeutic strategies available for central neurocytoma treatment is discussed. Nineteen cases including the present report with a malignant course and cerebrospinal fluid dissemination have been described to date, most of them involving an elevated MIB-1 labeling index. Our case exhibited atypical central neurocytoma with an initially elevated MIB-1 labeling index (25-30 %). The primary treatment included surgery and focal radiotherapy. Three years later the disease had disseminated throughout the craniospinal axis. A good tumor response and symptom relief were achieved with repeated radiation and temozolomide chemotherapy. Central neurocytoma with an initially high proliferation activity has a high tendency to spread via the cerebrospinal fluid. The chemo- and radiosensitivity of the tumor suggest a more aggressive adjuvant therapy approach. Cases with a potential for malignant transformation should be identified and treated appropriately, including irradiation of the entire neuroaxis and adjuvant chemotherapy may be considered.

[525]

**TÍTULO / TITLE:** - Rosette-forming Glioneuronal Tumors in the Posterior Third Ventricle.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 Nov;40(6):885-8.

**AUTORES / AUTHORS:** - Alnaami I; Aronyk K; Lu JQ; Johnson ES; O'Kelly C

[526]

**TÍTULO / TITLE:** - Gamma knife radiosurgery for high grade glial neoplasms: a canadian experience.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 Nov;40(6):783-9.

**AUTORES / AUTHORS:** - Zeiler FA; Kaufmann AM; McDonald PJ; Fewer D; Butler J; Schroeder G; West M

[527]

**TÍTULO / TITLE:** - Multifocal cerebellar liponeurocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 Nov;40(6):870-2.

**AUTORES / AUTHORS:** - Pelz D; Khezri N; Mainprize T; Phan N; Keith J; Bilbao J; Aviv RI; Tsao M; Symons SP

[528]

**TÍTULO / TITLE:** - Craniopharyngioma in children: importance of a multidisciplinary approach and therapeutic strategies in the treatment of relapsing.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Minerva Pediatr. 2013 Dec;65(6):673-6.

**AUTORES / AUTHORS:** - Fiorito CM; Giglione E; Bellone S; Peretta P; Bertin D; Basso ME; Bona G

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**RESUMEN / SUMMARY:** - The craniopharyngioma is a benign intracranial nonglial tumor derived from a malformation of the embryonic tissue. Represents approximately 6-9% of brain tumors in children. It grows close to the optic nerve, hypothalamus and pituitary. The most frequent histological variety in children is adamantinomatous. The initial symptoms of intracranial hypertension is headache and nausea, followed by visual disturbances, impaired hormonal changes such as the secretion of GH, gonadotropins, TSH and ACTH and central diabetes insipidus. We present the clinical case of MD, 5yrs at age, which shows signs of intracranial hypertension syndrome: neuroradiological findings raise the diagnosis of adamantinomatous craniopharyngioma for which the child underwent to sub-total surgical removal of the lesion and radiosurgery treatment. During the disease develops visual impairment, and secondary diabetes insipidus, hypothyroidism hipocotisolism that takes therapy with desmopressin (Minirin), Cortone acetate and L-tiroxine. For the failure of previous therapies, the child has performed chemotherapy with cisplatin (30 mg/sqm/day) and Etoposide (150 mg/mq/day). A year after the end of the last cycle of chemotherapy was detected new progression of the lesion with the appearance of worsening headache and vomiting in the upright position. TC notes the expansion of the third ventricle and the patient undergoes surgery craniotomy. This clinical case underlines the difficulties in treatment of recurrent craniopharyngioma in situations where the anatomical location do not permit aggressive radical surgery. Anyway, new studies are needed to evaluate the effectiveness of systemic chemotherapy as a method of experimental treatment that could reduce the progression of disease.

[529]

**TÍTULO / TITLE:** - AKT1E17K mutations cluster with meningotheial and transitional meningiomas and can be detected by SFRP1 immunohistochemistry.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Nov;126(5):757-62. doi: 10.1007/s00401-013-1187-5. Epub 2013 Oct 6.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1187-5](#)

**AUTORES / AUTHORS:** - Sahm F; Bissel J; Koelsche C; Schweizer L; Capper D; Reuss D; Bohmer K; Lass U; Gock T; Kalis K; Meyer J; Habel A; Brehmer S; Mittelbronn M; Jones DT; Schittenhelm J; Urbschat S; Ketter R; Heim S; Mawrin C; Hainfellner JA; Berghoff AS; Preusser M; Becker A; Herold-Mende C; Unterberg A; Hartmann C; Kickingeder P; Collins VP; Pfister SM; von Deimling A

**INSTITUCIÓN / INSTITUTION:** - Department of Neuropathology, Institute of Pathology, Ruprecht-Karls-University Heidelberg, INF 224, 69120, Heidelberg, Germany.

**RESUMEN / SUMMARY:** - The activating E17K mutation in the AKT1 gene has been detected in several tumor entities. Currently several clinical studies with specific AKT1 inhibitors are under way. To determine whether AKT1 mutations are involved in human tumors of the nervous system, we examined a series of 1,437 tumors including 391 primary intracranial brain tumors and 1,046 tumors of the coverings of the central and peripheral nervous system. AKT1E17K mutations were exclusively seen in meningiomas and occurred in 65 of 958 of these tumors. A strong preponderance was seen in the variant of meningothelial meningioma WHO grade I of basal and spinal localization. In contrast, AKT1E17K mutations were rare in WHO grade II and absent in WHO grade III meningiomas. In order to more effectively detect this mutation, we tested for immunohistochemical markers associated with this alteration. We observed strong up-regulation of SFRP1 expression in all meningiomas with AKT1E17K mutation and in HEK293 cells after transfection with mutant AKT1E17K, but not in meningiomas and HEK293 cells lacking this mutation.

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[530]

**TÍTULO / TITLE:** - Alpha-internexin and altered CIC expression as a supportive diagnostic marker for oligodendroglial tumors with the 1p/19q co-deletion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0168-7](#)

**AUTORES / AUTHORS:** - Nagaishi M; Suzuki A; Nobusawa S; Yokoo H; Nakazato Y

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**RESUMEN / SUMMARY:** - alpha-Internexin (INA) has been proposed as a biomarker of oligodendroglial tumors with the 1p/19q co-deletion. On the other hand, sequence studies have recently linked the CIC mutation and subsequent altered CIC expression to the 1p/19q co-deletion in oligodendroglial tumors. We assessed the usability of combination immunohistochemical analysis using CIC and INA as a surrogate tool for the 1p/19q status in 39 cases of oligodendroglial tumors. The positive expression of INA was observed in 10 cases (52 %) of oligodendroglial tumors with the 1p/19q co-deletion, and in only 3 cases of oligodendroglial tumors without the 1p/19q co-deletion (15 %, P = 0.012). The lack of CIC expression was detected in 13 cases (68 %) of oligodendroglial tumors with the 1p/19q co-deletion, and in only 1 case of oligodendroglial tumors without the 1p/19q co-deletion (5 %, P < 0.0001). Combined immunohistochemical analysis assessed by INA expression and/or the lack of CIC expression was strongly associated with the 1p/19q co-deletion in oligodendroglial tumors, indicating a potential surrogate marker of the 1p/19q state. Although combined immunohistochemical analysis cannot be totally replaced by molecular genetic analysis as a definitive diagnostic technique, it may contribute to a steady morphological diagnosis by predicting the 1p/19q state in oligodendroglial tumors.

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[531]

**TÍTULO / TITLE:** - Using the Hill viewpoints from 1965 for evaluating strengths of evidence of the risk for brain tumors associated with use of mobile and cordless phones1).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rev Environ Health. 2013;28(2-3):97-106. doi: 10.1515/reveh-2013-0006.

●● Enlace al texto completo (gratis o de pago) [1515/reveh-2013-0006](#)

**AUTORES / AUTHORS:** - Hardell L; Carlberg M

**RESUMEN / SUMMARY:** - Abstract Background: Wireless phones, i.e., mobile phones and cordless phones, emit radiofrequency electromagnetic fields (RF-EMF) when used. An increased risk of brain tumors is a major concern. The International Agency for Research on Cancer (IARC) at the World Health Organization (WHO) evaluated the carcinogenic effect to humans from RF-EMF in May 2011. It was concluded that RF-EMF is a group 2B, i.e., a “possible”, human carcinogen. Bradford Hill gave a presidential address at the British Royal Society of Medicine in 1965 on the association or causation that provides a helpful framework for evaluation of the brain tumor risk from RF-EMF. Methods: All nine issues on causation according to Hill were evaluated. Regarding wireless phones, only studies with long-term use were included. In addition, laboratory studies and data on the incidence of brain tumors were considered. Results: The criteria on strength, consistency, specificity, temporality, and biologic gradient for evidence of increased risk for glioma and acoustic neuroma were fulfilled. Additional evidence came from plausibility and analogy based on laboratory studies. Regarding coherence, several studies show increasing incidence of brain tumors, especially in the most exposed area. Support for the experiment came from antioxidants that can alleviate the generation of reactive oxygen species involved in biologic effects, although a direct mechanism for brain tumor carcinogenesis has not been shown. In addition, the finding of no increased risk for brain tumors in subjects using the mobile phone only in a car with an external antenna is supportive evidence. Hill did not consider all the needed nine viewpoints to be essential requirements. Conclusion: Based on the Hill criteria, glioma and acoustic neuroma should be considered to be caused by RF-EMF emissions from wireless phones and regarded as carcinogenic to humans, classifying it as group 1 according to the IARC classification. Current guidelines for exposure need to be urgently revised.

[532]

**TÍTULO / TITLE:** - Codeletions at 1p and 19q predict a lower risk of pseudoprogression in oligodendrogliomas and mixed oligoastrocytomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not142](#)

**AUTORES / AUTHORS:** - Lin AL; Liu J; Evans J; Leuthardt EC; Rich KM; Dacey RG; Dowling JL; Kim AH; Zipfel GJ; Grubb RL; Huang J; Robinson CG; Simpson JR; Linette GP; Chicoine MR; Tran DD

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology (A.L.L., D.D.T.); Division of Biostatistics (J.L.); Department of Neurosurgery (J.E., E.C.L., K.M.R., R.G.D., J.L.D., A.H.K., G.J.Z., R.L.G., M.R.C.); Department of Radiation Oncology (J.H., C.G.R.,

J.R.S.); and Department of Medicine (G.P.L.), Washington University in St. Louis School of Medicine, Saint Louis, Missouri.

**RESUMEN / SUMMARY:** - BackgroundPseudoprogression (PsP) occurs at a higher rate in glioblastoma multiforme with a methylated MGMT promoter-a subset with increased sensitivity to chemoradiotherapy and better overall prognosis. In oligodendroglioma (OG) and oligoastrocytoma (OA), presence of 1p/19q codeletions is highly predictive of response to treatment and is often associated with the methylated MGMT promoter; hence, this study queries whether the presence of 1p/19q codeletions in OG/OA correlates with a higher rate of PsP following therapy.MethodsA retrospective analysis was performed on all OG/OA in a database of patients with brain tumors who underwent resection of their tumor since 1998. Eighty-eight cases (37 with and 51 without 1p/19q codeletions) met inclusion criteria, and their patient data were analyzed to determine whether the presence of 1p/19q codeletions was associated with PsP and survival.ResultsOG/OA (World Health Organization grades II and III) with 1p/19q codeletions had a significantly improved survival ( $P = .041$ ). Multivariate analysis found that PsP occurred less frequently in OG/OA with 1p/19q codeletions compared with tumors without codeletions (odds ratio, 0.047; 95% confidence interval, 0.005-0.426;  $P = .0066$ ). The rate of PsP was 19% for the entire cohort, 31% for tumors without codeletions, and 3% for tumors with codeletions. When early posttreatment contrast enhancement developed in tumors with 1p/19q codeletions, it occurred exclusively in tumors that were histologically OA and not OG.ConclusionCodeletions of 1p/19q are a marker of good prognosis but are unexpectedly associated with a lower likelihood of PsP. PsP does not correlate with sensitivity to treatment and improved survival in OG/OA.

[533]

**TÍTULO / TITLE:** - Systematic Review of Protein Biomarkers of Invasive Behavior in Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Neurobiol. 2013 Nov 24.

●● Enlace al texto completo (gratis o de pago) [1007/s12035-013-8593-5](#)

**AUTORES / AUTHORS:** - Sayegh ET; Kaur G; Bloch O; Parsa AT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Northwestern University Feinberg School of Medicine, 676 N. St. Clair Street, Suite 2210, Chicago, IL, 60611-2911, USA.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is an aggressive and incurable brain tumor with a grave prognosis. Recurrence is inevitable even with maximal surgical resection, in large part because GBM is a highly invasive tumor. Invasiveness also contributes to the failure of multiple cornerstones of GBM therapy, including radiotherapy, temozolomide chemotherapy, and vascular endothelial growth factor blockade. In recent years there has been significant progress in the identification of protein biomarkers of invasive phenotype in GBM. In this article, we comprehensively review the literature and survey a broad spectrum of biomarkers, including proteolytic enzymes, extracellular matrix proteins, cell adhesion molecules, neurodevelopmental factors, cell signaling and transcription factors, angiogenic effectors, metabolic proteins, membrane channels, and cytokines and chemokines. In light of the marked variation seen in outcomes in GBM patients, the systematic use of these biomarkers

could be used to form a framework for better prediction, prognostication, and treatment selection, as well as the identification of molecular targets for further laboratory investigation and development of nascent, directed therapies.

[534]

**TÍTULO / TITLE:** - Glioblastomas are composed of genetically divergent clones with distinct tumourigenic potential and variable stem cell-associated phenotypes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Oct 24.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1196-4](#)

**AUTORES / AUTHORS:** - Stieber D; Golebiewska A; Evers L; Lenkiewicz E; Brons NH; Nicot N; Oudin A; Bougnaud S; Hertel F; Bjerkvig R; Vallar L; Barrett MT; Niclou SP

**INSTITUCIÓN / INSTITUTION:** - NorLux Neuro-Oncology Laboratory, Department of Oncology, Centre de Recherche Public de la Sante (CRP-Sante), 84, Val Fleuri, 1526, Luxembourg, Luxembourg.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is known to be a heterogeneous disease; however, the genetic composition of the cells within a given tumour is only poorly explored. In the advent of personalised medicine the understanding of intra-tumoural heterogeneity at the cellular and the genetic level is mandatory to improve treatment and clinical outcome. By combining ploidy-based flow sorting with array-comparative genomic hybridization we show that primary GBMs present as either mono- or polygenomic tumours (64 versus 36 %, respectively). Monogenomic tumours were limited to a pseudodiploid tumour clone admixed with normal stromal cells, whereas polygenomic tumours contained multiple tumour clones, yet always including a pseudodiploid population. Interestingly, pseudodiploid and aneuploid fractions carried the same aberrations as defined by identical chromosomal breakpoints, suggesting that evolution towards aneuploidy is a late event in GBM development. Interestingly, while clonal heterogeneity could be recapitulated in spheroid-based xenografts, we find that genetically distinct clones displayed different tumourigenic potential. Moreover, we show that putative cancer stem cell markers including CD133, CD15, A2B5 and CD44 were present on genetically distinct tumour cell populations. These data reveal the clonal heterogeneity of GBMs at the level of DNA content, tumourigenic potential and stem cell marker expression, which is likely to impact glioma progression and treatment response. The combined knowledge of intra-tumour heterogeneity at the genetic, cellular and functional level is crucial to assess treatment responses and to design personalized treatment strategies for primary GBM.

[535]

**TÍTULO / TITLE:** - Expression of somatostatin receptors, angiogenesis and proliferation markers in pituitary adenomas: an immunohistochemical study with diagnostic and therapeutic implications.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Swiss Med Wkly. 2013 Nov 12;143:w13895. doi: 10.4414/smw.2013.13895.

●● Enlace al texto completo (gratis o de pago) [4414/smw.2013.13895](#)

**AUTORES / AUTHORS:** - Magagna-Poveda A; Leske H; Schmid C; Bernays R; Rushing E

**INSTITUCIÓN / INSTITUTION:** - Institute of Neuropathology, University Hospital of Zurich, Switzerland; [alejandra.magagna@gmail.com](mailto:alejandra.magagna@gmail.com).

**RESUMEN / SUMMARY:** - PRINCIPLES: Pituitary adenomas are common intracranial neoplasms that generate symptoms as a result of either mass effect or the increased production of pituitary hormones. Although mostly benign, these tumours can be associated with considerable morbidity. We investigated a panel of immunohistochemical preparations to identify potential therapeutic targets and surrogate markers of clinical outcome. METHODS: Tumour tissue from 25 patients was evaluated for immunohistochemical expression of somatostatin receptors 15, von Willebrand-factor (vWF), interleukin-8 (IL-8), vascular endothelial growth factor receptor 2 (VEGFR-2), kinesin spindle protein (Eg5) and MIB-1 (Ki-67), and its relationship with clinical features was analysed. RESULTS: The proliferation marker MIB-1 (Ki-67) was the only marker predictive of adenoma recurrence. Of note, 67% of all relapses were associated with tumours showing luteinising hormone expression. All pituitary adenomas showed variable somatostatin receptor, IL-8, Eg5, vWF and VEGFR-2 expression; a relationship between these parameters and clinical outcome could not be demonstrated in this cohort. CONCLUSIONS: This study validates MIB-1 (Ki-67) as a reliable marker of tumour recurrence in pituitary adenomas. Considering the consistently increased expression of Eg5, IL-8, VEGFR-2, somatostatin receptors and vWF in these tumours, further investigation as potential therapeutic targets is warranted.

[536]

**TÍTULO / TITLE:** - A case report on obsessive-compulsive disorder and low-grade astrocytomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Clin Psychiatry. 2013 Nov;25(4):309-10.

**AUTORES / AUTHORS:** - Wu MS; Horng B; Storch EA

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, University of South Florida Morsani College of Medicine, Department of Psychology, University of South Florida, Tampa, FL, USA. E-mail: [MonicaWu@mail.usf.edu](mailto:MonicaWu@mail.usf.edu).

[537]

**TÍTULO / TITLE:** - Identification of Differentially Coexpressed Genes in Gonadotrope Tumors and Normal Pituitary Using Bioinformatics Methods.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pathol Oncol Res. 2013 Nov 7.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s12253-013-9706-1](#)

**AUTORES / AUTHORS:** - Cai T; Xiao J; Wang ZF; Liu Q; Wu H; Qiu YZ

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology, The First Xiangya Hospital of Central South University, Changsha, Hunan Province, China.

**RESUMEN / SUMMARY:** - To investigate the underlying molecular mechanisms of pituitary tumor by using the microarray expression profiles of pituitary tumor and normal tissue samples. The gene expression profile of GSE26966 was downloaded from

Gene Expression Omnibus, including nine normal samples and 14 pituitary tumor samples. The differentially coexpressed genes (DEGs) were identified by Affy package in R Software. The functional and pathway enrichment analysis of the screened DEGs were performed by DAVID. Then, differential coexpression networks were constructed and further analyzed. Functional and pathway enrichment analysis of the 1220 identified DEGs revealed that phosphatidylinositol signaling system, p53 signaling pathway and inositol phosphate metabolism were disturbed in pituitary tumors. The degree of DLK1, CDKN2A and ITGA4 in the constructed differential coexpression network was 46, 45 and 44, respectively. In addition, MPP2 and ASAP2 were the obvious hub genes in the constructed differential coexpression network. Through exploring genes in the differential coexpression networks, the results suggested that DLK1, CDKN2A, ITGA4, MPP2 and ASAP2 may potentially be used as biomarkers for pituitary tumor.

[538]

**TÍTULO / TITLE:** - Convexity en plaque meningioma manifesting as subcutaneous mass: case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Oct 25;53(10):727-9. Epub 2013 Sep 27.

**AUTORES / AUTHORS:** - Tsutsumi S; Izumi H; Yasumoto Y; Ito M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Juntendo University Urayasu Hospital.

**RESUMEN / SUMMARY:** - A 67-year-old woman sensed a slowly growing, painless hard mass in the left parietal region. Cranial computed tomography showed focal bony erosion and homogeneous sclerotic change at the affected site. Magnetic resonance (MR) imaging revealed an enhanced subcutaneous mass and irregularly thickened dura mater. Intraoperatively, the subcutaneous tumor was found to be strongly adhered to the temporalis muscle. The outer table was eroded adjacent to the subcutaneous tumor, whereas the bony structures of the inner table were intact. The dura mater underneath had irregular-shaped, yellowish convolutions both on the outer and inner surfaces. The patient underwent total tumor resection with sufficient normal margins. The histological diagnosis was World Health Organization (WHO) grade I meningioma, with finger-like outward extensions through the dura mater and overlying skull, and infiltration among into the temporalis muscle fibers. Meningiomas may form a subcutaneous mass without intracranial growth.

[539]

**TÍTULO / TITLE:** - A miR-297/hypoxia/DGK-alpha axis regulating glioblastoma survival.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1652-63. doi: 10.1093/neuonc/not118. Epub 2013 Oct 24.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not118](#)

**AUTORES / AUTHORS:** - Kefas B; Floyd DH; Comeau L; Frisbee A; Dominguez C; Dipierro CG; Guessous F; Abounader R; Purow B

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**RESUMEN / SUMMARY:** - Background Despite advances in the treatment of the most aggressive form of brain tumor, glioblastoma, patient prognosis remains disappointing. This failure in treatment has been attributed to dysregulated oncogenic pathways, as observed in other tumors. We and others have suggested the use of microRNAs (miRs) as therapeutic tools able to target multiple pathways in glioblastoma. Methods This work features PCR quantification of miRs and transient transfection of many glioblastoma cell lines with miRs, followed by cell number analysis, trypan blue staining, alamarBlue assay of cell viability, caspase-3/-7 activity assay, immunoblot of cleaved poly(ADP-ribose) polymerase and fluorescence activated cell sorting and imaging of apoptotic nuclei, cell invasion assays, MRIs of glioblastoma xenografts in mice using transiently transfected cells as well as posttumor treatment with lentiviral vector encoding miR-297, and analysis of miR-297 target diacylglycerol kinase (DGK)-alpha including immunoblot, 3'UTR luciferase activity, and rescue with DGK-alpha overexpression. Cell counts and DGK-alpha immunoblot were also analyzed in the context of hypoxia and with overexpression of heterogeneous ribonucleoprotein L (hnRNPL). Results We identified miR-297 as a highly cytotoxic microRNA in glioblastoma, with minimal cytotoxicity to normal astrocytes. miR-297 overexpression reduced in vitro invasiveness and in vivo tumor formation. DGK-alpha is shown to be a miR-297 target with a critical role in miR-297 toxicity. In addition, hypoxia and its mediator hnRNPL upregulated DGK-alpha and buffered the cytotoxic effects of miR-297. Conclusion This work shows miR-297 as a novel and physiologic regulator of cancer cell survival, largely through targeting of DGK-alpha, and also indicates that hypoxia ameliorates miR-297 toxicity to cancer cells.

[540]

**TÍTULO / TITLE:** - Molecular sub-group-specific immunophenotypic changes are associated with outcome in recurrent posterior fossa ependymoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Nov 17.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1212-8](#)

**AUTORES / AUTHORS:** - Hoffman LM; Donson AM; Nakachi I; Griesinger AM; Birks DK; Amani V; Hemenway MS; Liu AK; Wang M; Hankinson TC; Handler MH; Foreman NK

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, University of Colorado Denver, 12800 East 19<sup>th</sup> Avenue, Aurora, CO, 80045, USA, [lindsey.hoffman@childrenscolorado.org](mailto:lindsey.hoffman@childrenscolorado.org).

**RESUMEN / SUMMARY:** - Better understanding of ependymoma (EPN) biology at relapse is needed to improve therapy at this critical event. Convincing data exist defining transcriptionally distinct posterior fossa (PF) sub-groups A and B at diagnosis. The clinical and biological consequence of these sub-groups at recurrence has not yet been defined. Genome and transcriptome microarray profiles and clinical variables of matched primary and first recurrent PF EPN pairs were used to identify biologically

distinct patterns of progression between EPN sub-groups at recurrence. Key findings were validated by histology and immune function assays. Transcriptomic profiles were partially conserved at recurrence. However, 4 of 14 paired samples changed sub-groups at recurrence, and significant sub-group-specific transcriptomic changes between primary and recurrent tumors were identified, which were predominantly immune-related. Further examination revealed that Group A primary tumors harbor an immune gene signature and cellular functionality consistent with an immunosuppressive phenotype associated with tissue remodeling and wound healing. Conversely, Group B tumors develop an adaptive, antigen-specific immune response signature and increased T-cell infiltration at recurrence. Clinical distinctions between sub-groups become more apparent after first recurrence. Group A tumors were more often sub-totally resected and had a significantly shorter time to subsequent progression and worse overall survival. Minimal tumor-specific genomic changes were observed for either PF Groups A or B at recurrence. Molecular sub-groups of PF EPN convey distinct immunobiologic signatures at diagnosis and recurrence, providing potential biologic rationale to their disparate clinical outcomes. Immunotherapeutic approaches may be warranted, particularly in Group A PF EPN.

[541]

**TÍTULO / TITLE:** - Decompressive Surgery for Malignant Cerebral Venous Sinus Thrombosis: A Retrospective Case Series from Pakistan and Comparative Literature Review.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Stroke Cerebrovasc Dis. 2013 Oct 9. pii: S1052-3057(13)00328-5. doi: 10.1016/j.jstrokecerebrovasdis.2013.07.045.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1016/j.jstrokecerebrovasdis.2013.07.045](http://1016/j.jstrokecerebrovasdis.2013.07.045)

**AUTORES / AUTHORS:** - Raza E; Shamim MS; Wadiwala MF; Ahmed B; Kamal AK

**INSTITUCIÓN / INSTITUTION:** - Medical College, Aga Khan University, Karachi, Pakistan.

**RESUMEN / SUMMARY:** - BACKGROUND: Cerebral venous sinus thrombosis (CVST) is a rare cause of stroke in the West; however, it is prevalent in Asia and the Middle East. CVST is treated with dose-adjusted heparin or heparinoid followed by warfarin to facilitate recanalization of venous sinuses. For those with progressive malignant cerebral edema, the role of decompressive surgery has been reported from developed countries. We present data on decompressive craniectomy from a tertiary care stroke center in a developing country and compare our results and population with that described in the international literature. METHODS: We retrospectively analyzed data of all patients who underwent a decompressive hemicraniectomy for CVST at the Aga Khan University Hospital, Karachi, Pakistan from 1999 till 2011. A record review of the Aga Khan University Hospital was performed as decompressive hemicraniectomy for malignant CVST is not being performed elsewhere in the country and the hospital is a major referral center. Using the International Classification of Diseases, Ninth Edition codes for CVST, we identified a total of 7 patients. Patients are presented along with descriptions of their presentation, neuroimaging, intraoperative findings, and long-term outcomes. Pearson chi-square test was done to identify features that predicted survival. A comparative literature review was also done through PubMed to identify all

other reports of surgery for CVST. RESULTS: During a 12-year review, 134 patients were diagnosed with CVST. Of these, 7 received intervention. The age range of the patients was 15-60 years. Four of the 7 patients had an excellent outcome, 2 of 7 died, and 1 of 7 left against medical advice (in a comatose state) and was lost to follow-up. Patients presented alert but progressively deteriorated preoperatively. All those patients who had preoperative reactive pupils with low Glasgow Coma Scale scores made a complete neurologic recovery, and patients with fixed, dilated, and nonreactive pupils preoperatively died in the first postoperative week (P = .05). CONCLUSIONS: Patients who received decompressive hemicraniectomy in Pakistan for CVST had excellent outcomes in all cases when intervention was performed with intact preoperative pupillary reflexes. Of the data reviewed, most reported (two-third) patients show the same prognosticators; however, one third show that even with nonreactive pupils complete recovery is possible.

[542]

**TÍTULO / TITLE:** - Promoting a new brain tumor mutation: TERT promoter mutations in CNS tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Dec;126(6):789-92. doi: 10.1007/s00401-013-1207-5.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1207-5](#)

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**INSTITUCIÓN / INSTITUTION:** - The Department of Pathology and The Preston Robert Tisch Brain Tumor Center at Duke, Duke University Medical Center, Durham, NC, 27710, USA.

[543]

**TÍTULO / TITLE:** - Treatment of astrocytoma grade III with Photofrin II as a radiosensitizer : A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Strahlenther Onkol. 2013 Nov;189(11):972-976. Epub 2013 Oct 26.

●● Enlace al texto completo (gratis o de pago) [1007/s00066-013-0430-2](#)

**AUTORES / AUTHORS:** - Schaffer M; Hofstetter A; Ertl-Wagner B; Batash R; Poschl J; Schaffer PM

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**RESUMEN / SUMMARY:** - INTRODUCTION: Astrocytomas are neoplasms that originate from glial cells. Anaplastic astrocytoma is classified as WHO III, with 27 % of the individuals with grade III astrocytoma living for at least 5 years even after treatment (radiation and chemotherapy). Photofrin II has been demonstrated to serve as a specific and selective radiosensitizing agent in both in vitro and in vivo tumor models. MATERIAL AND METHODS: This case report presents a woman suffering from an inoperable astrocytoma WHO III since 2004. The patient was treated with radiation therapy and Photofrin II as a radiosensitizer. The patient underwent irradiation with 40 + 20 Gy boost. The patient was given a single intravenous dose of 1 mg/kg Photofrin II

24 h prior to the initiation of radiation therapy. RESULTS: The patient is still alive without any significant side effect with a follow up of 106 months. MRI shows no evidence of disease. CONCLUSION: The follow-up results are encouraging regarding the application of Photofrin II as an effective radiosensitizing agent in the treatment of inoperable WHO III astrocytoma.

[544]

**TÍTULO / TITLE:** - Feasibility of cervical intramedullary diffuse glioma resection using intraoperative magnetic resonance imaging.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Rev. 2013 Nov 15.

●● Enlace al texto completo (gratis o de pago) [1007/s10143-013-0510-x](#)

**AUTORES / AUTHORS:** - Giordano M; Gerganov VM; Metwali H; Fahlbusch R; Samii A; Samii M; Bertalanffy H

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**RESUMEN / SUMMARY:** - Intraoperative magnetic resonance imaging (iopMRI) actually has an important role in the surgery of brain tumors, especially gliomas and pituitary adenomas. The aim of our work was to describe the advantages and drawbacks of this tool for the surgical treatment of cervical intramedullary gliomas. We describe two explicative cases including the setup, positioning, and the complete workflow of the surgical approach with intraoperative imaging. Even if the configuration of iopMRI equipment was originally designed for cranial surgery, we have demonstrated the feasibility of cervical intramedullary glioma resection with the aid of high-field iopMRI. This tool was extremely useful to evaluate the extent of tumor removal and to obtain a higher resection rate, but still need some enhancement in the configuration of the headrest coil and surgical table to allow better patient positioning.

[545]

**TÍTULO / TITLE:** - alpha5-GABAA receptors negatively regulate MYC-amplified medulloblastoma growth.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Nov 7.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1205-7](#)

**AUTORES / AUTHORS:** - Sengupta S; Weeraratne SD; Sun H; Phallen J; Rallapalli SK; Teider N; Kosaras B; Amani V; Pierre-Francois J; Tang Y; Nguyen B; Yu F; Schubert S; Balansay B; Mathios D; Lechpammer M; Archer TC; Tran P; Reimer RJ; Cook JM; Lim M; Jensen FE; Pomeroy SL; Cho YJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Boston Children's Hospital, Boston, MA, USA.

**RESUMEN / SUMMARY:** - Neural tumors often express neurotransmitter receptors as markers of their developmental lineage. Although these receptors have been well characterized in electrophysiological, developmental and pharmacological settings, their importance in the maintenance and progression of brain tumors and, importantly, the effect of their targeting in brain cancers remains obscure. Here, we demonstrate

high levels of GABRA5, which encodes the alpha5-subunit of the GABAA receptor complex, in aggressive MYC-driven, "Group 3" medulloblastomas. We hypothesized that modulation of alpha5-GABAA receptors alters medulloblastoma cell survival and monitored biological and electrophysiological responses of GABRA5-expressing medulloblastoma cells upon pharmacological targeting of the GABAA receptor. While antagonists, inverse agonists and non-specific positive allosteric modulators had limited effects on medulloblastoma cells, a highly specific and potent alpha5-GABAA receptor agonist, QHii066, resulted in marked membrane depolarization and a significant decrease in cell survival. This effect was GABRA5 dependent and mediated through the induction of apoptosis as well as accumulation of cells in S and G2 phases of the cell cycle. Chemical genomic profiling of QHii066-treated medulloblastoma cells confirmed inhibition of MYC-related transcriptional activity and revealed an enrichment of HOXA5 target gene expression. siRNA-mediated knockdown of HOXA5 markedly blunted the response of medulloblastoma cells to QHii066. Furthermore, QHii066 sensitized GABRA5 positive medulloblastoma cells to radiation and chemotherapy consistent with the role of HOXA5 in directly regulating p53 expression and inducing apoptosis. Thus, our results provide novel insights into the synthetic lethal nature of alpha5-GABAA receptor activation in MYC-driven/Group 3 medulloblastomas and propose its targeting as a novel strategy for the management of this highly aggressive tumor.

[546]

**TÍTULO / TITLE:** - Letter to the Editor: Hydrocephalus after meningioma surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Focus. 2013 Nov;35(5):E8. doi: 10.3171/2012.12.FOCUS12214.

●● Enlace al texto completo (gratis o de pago) [3171/2012.12.FOCUS12214](#)

**AUTORES / AUTHORS:** - Rossetto M; Persano L; Scienza R; Della Puppa A

**INSTITUCIÓN / INSTITUTION:** - Padua University Hospital, Padua, Italy.

[547]

**TÍTULO / TITLE:** - Presacral ganglioneuroma with abnormal FDG uptake: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Chir Belg. 2013 Jul-Aug;113(4):298-300.

**AUTORES / AUTHORS:** - Holz S; Keyzer C; Van Stadt J; Willemart S; Chasse E

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**RESUMEN / SUMMARY:** - Ganglioneuromas are rare, benign, well-differentiated, slowgrowing tumors of the sympathetic nervous system, composed of large, mature neurons in a stroma composed of Schwann cells. Ganglioneuromas are derived from the neural crest cells and can arise anywhere from the base of the skull to the pelvis. The pre-sacral area is a very rare location for ganglioneuromas to develop. We describe the case of a 31 year old woman, who was incidentally found to have an abnormal pre-sacral mass. The following work-up, revealed the mass to be growing on imagery (computed tomography and magnetic resonance imagery) and fluorine-18 fluorodeoxyglucose avid. The mass was removed by assisted laparoscopy and was

found to be a benign ganglioneuroma. This is the first described case of fluorine-18 fluorodeoxyglucose avid, pre-sacral, benign ganglioneuroma.

[548]

**TÍTULO / TITLE:** - Intravenous Thrombolysis for Ischemic Stroke in Recurrent Oligodendroglioma: A Case Report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Stroke Cerebrovasc Dis. 2013 Oct 5. pii: S1052-3057(13)00311-X. doi: 10.1016/j.jstrokecerebrovasdis.2013.07.031.

●● Enlace al texto completo (gratis o de pago)

[1016/j.jstrokecerebrovasdis.2013.07.031](#)

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**RESUMEN / SUMMARY:** - Data on efficacy and safety of intravenous (IV) thrombolysis with recombinant tissue plasminogen activator (rtPA) in patients with acute ischemic stroke (AIS) and intracranial neoplasm are lacking. To date, only a handful of case reports have been published in the literature addressing the administration of IV rtPA to patients with AIS and coexisting brain neoplasms. We present the case of successful IV thrombolysis with rtPA for AIS in a patient with oligodendroglioma on bevacizumab without hemorrhagic complications. We summarize the published cases of thrombolysis in AIS in patients with intracranial neoplasms.

[549]

**TÍTULO / TITLE:** - Controversies in Radiotherapy for Meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Oncol (R Coll Radiol). 2013 Oct 24. pii: S0936-6555(13)00399-3. doi: 10.1016/j.clon.2013.10.001.

●● Enlace al texto completo (gratis o de pago) [1016/j.clon.2013.10.001](#)

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**RESUMEN / SUMMARY:** - Meningiomas are the most common primary intracranial tumour. Although external beam radiotherapy and radiosurgery are well-established treatments, affording local control rates of 85-95% at 10 years, the evidence base is mainly limited to single institution case series. This has resulted in inconsistent practices. It is generally agreed that radiotherapy is an established primary therapy in patients requiring treatment for surgically inaccessible disease and postoperatively for grade 3 tumours. Controversy exists surrounding whether radiotherapy should be upfront or reserved for progression for incompletely excised and grade 2 tumours. External beam radiotherapy and radiosurgery have not been directly compared, but seem to offer comparable rates of control for benign disease. Target volume definition remains contentious, including the inclusion of hyperostotic bone, dural tail and surrounding brain, but pathological studies are shedding some light. Most agree that doses around 50-54 Gy are appropriate for benign meningiomas and ongoing

European Organization for Research and Treatment of Cancer and Radiation Therapy Oncology Group studies are evaluating dose escalation for higher risk disease. Here we address the 'who, when and how' of radiotherapy for meningioma.

[550]

**TÍTULO / TITLE:** - 5-Aminolevulinic acid-guided resection of bone-invasive meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosurg Focus. 2013 Oct;35(4):E6. doi: 10.3171/2012.6.FOCUS12236.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2012.6.FOCUS12236](#)

**AUTORES / AUTHORS:** - Della Puppa A; Scienza R

**INSTITUCIÓN / INSTITUTION:** - University Hospital of Padova, Padova, Italy.

[551]

**TÍTULO / TITLE:** - Primary Spinal Neurocytoma Involving the Medulla Oblongata: Two Case Reports and a Literature Review.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 20.

**AUTORES / AUTHORS:** - Wu L; Deng X; Yang C; Zhao L; Yang T; Xu Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University.

**RESUMEN / SUMMARY:** - Central neurocytoma is a rare neuroectodermal tumor found in young adults. These tumors are generally located in the lateral or third ventricles. Extraventricular neurocytoma in the spinal cord is extremely rare. We report on two patients with primary spinal neurocytomas who presented with progressive numbness and weakness in the limbs. Both patients had intramedullary masses between the medulla and the upper thoracic levels. The clinical, radiological, surgical, and pathological features of this abnormality are discussed, and all 20 reported cases were reviewed. In conclusion, neurocytoma should be included in the differential diagnosis of a spinal intramedullary tumor, and subtotal resection is acceptable for a relatively favorable prognosis if gross total removal is unachievable. The efficacy of adjuvant radiochemotherapy to control tumor recurrence is unknown.

[552]

**TÍTULO / TITLE:** - Atypical hemorrhagic presentation of a fourth ventricle subependymoma: case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Nov 25;53(11):828-31. Epub 2013 Oct 21.

**AUTORES / AUTHORS:** - Landriel F; Besada C; Migliaro M; Christiansen S; Goldschmidt E; Yampolsky C; Ajler P

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hospital Italiano de Buenos Aires.

**RESUMEN / SUMMARY:** - Objective: To present a case of a fourth ventricle subependymoma (SE) with a spontaneous acute subarachnoid intra-cisternal bleeding. Methods: A 33-year-old man was admitted with 5 days history of oppressive occipital headache and neck pain without additional neurological focus. Unenhanced computed tomography (CT) scan demonstrated an isointense mass located in the fourth ventricle with a spontaneously hyperdense acute extratumoral hemorrhage in the cisterna magna. Contrast-enhanced magnetic resonance imaging (MRI) revealed a well-delimited non-enhanced tumor, hypointense on T1-weighted and hyperintense on T2-weighted images, involving the floor of the fourth ventricle and extending caudally into the cervical spinal canal via foramen magnum. Results: Intraoperative, a large blood clot was removed and a macroscopically hypovascular lesion was completely excised from the right lateral recess and the floor of the fourth ventricle. Intra and postoperative immuno-histopathological examination revealed a SE. The patient has a normal postoperative course and was discharged in the fifth postoperative day. A 10-month postoperative MRI study confirmed a complete tumor resection. Conclusion: Symptomatic SEs should be surgically treated emphasizing the urgency in the presence of hemorrhage. The interest of this case is to demonstrate that infratentorial SEs although extremely rare, might present with acute subarachnoid bleeding.

[553]

**TÍTULO / TITLE:** - Interesting Case of Subependymoma of the Spinal Cord.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Spine J. 2013 Nov 19. pii: S1529-9430(13)01728-2. doi: 10.1016/j.spinee.2013.10.056.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.spinee.2013.10.056](#)

**AUTORES / AUTHORS:** - Cure LM; Hancock CR; Barrocas A; Sternau L; Hirzel A

**INSTITUCIÓN / INSTITUTION:** - Departments of Radiology, Neurosurgery, and Pathology, Mount Sinai Medical Center, Miami Beach, Florida.

**RESUMEN / SUMMARY:** - BACKGROUND CONTEXT: Subependymomas are rare, slow-growing, usually non-invasive/ non-aggressive WHO Grade I tumors which tend to occur in the ventricles. Their most common site of occurrence is the fourth ventricle followed by the lateral ventricles. Spinal cord subependymomas typically manifest as cervical and cervico-thoracic intramedullary or, rarely, extramedullary mass lesions. They often present clinically with pain and neurological symptoms including motor, sensory, urinary, and sexual dysfunction. Histologically, there are hypocellular areas with occasional clusters of cells and frequent microcystic changes, calcifications and hemorrhage. Radiologically, subependymomas generally manifest as eccentric well circumscribed nodular lesions with mild to moderate enhancement. PURPOSE: To highlight an interesting and rare presentation for subependymoma of the spinal cord. Study Design/ Setting: This is a case report of a single patient for whom a subependymoma was resected from his cervical spinal cord with return to normal functioning. METHODS: Clinical examination, MRI evaluation, surgical resection, and histological analysis were performed for diagnosis and treatment of this patient. RESULTS: The patient experiencing myelopathy symptoms underwent surgical resection of a cervical spinal cord subependymoma, which resulted in return to normal function. CONCLUSIONS: Subependymoma should be included in the differential

diagnosis of atypical presentations for myelopathy as discrete surgical resection can result in good outcome.

[554]

**TÍTULO / TITLE:** - Large completely calcified spinal meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Spine J. 2013 Oct;13(10):1408. doi: 10.1016/j.spinee.2013.07.455. Epub 2013 Oct 4.

●● Enlace al texto completo (gratis o de pago) [1016/j.spinee.2013.07.455](http://1016/j.spinee.2013.07.455)

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[555]

**TÍTULO / TITLE:** - Short communication: sclerosing meningioma in the deep sylvian fissure.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 Oct 19.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0167-8](http://1007/s10014-013-0167-8)

**AUTORES / AUTHORS:** - Fukushima S; Narita Y; Yonezawa M; Ohno M; Arita H; Miyakita Y; Ichimura K; Yoshida A; Shibui S

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**RESUMEN / SUMMARY:** - Sclerosing meningioma is a rare type of meningeal tumor with extensive collagen depositions. Deep sylvian meningioma, a tumor that is unattached to the dura mater, is also unusual. The biological activity of both is controversial, as are therapeutic strategies. A heterogeneous contrast-enhanced mass in the right sylvian fissure of a 10-year-old boy with a 3-year history of epilepsy was identified via magnetic resonance imaging. The patient underwent partial surgical resection because the tumor was hard and contained numerous perforators arising from the right middle cerebral artery. The tumor was histologically diagnosed as sclerosing meningioma. Twelve months after surgery, the patient was asymptomatic and did not require any additional therapies. This case is the first report of a sclerosing meningioma arising in the deep sylvian fissure. We discuss the therapeutic dilemma of this case with respect to the current literature.

[556]

**TÍTULO / TITLE:** - Giant prolactinomas in women.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eur J Endocrinol. 2013 Nov 22;170(1):31-8. doi: 10.1530/EJE-13-0503. Print 2014.

●● Enlace al texto completo (gratis o de pago) [1530/EJE-13-0503](http://1530/EJE-13-0503)

**AUTORES / AUTHORS:** - Delgrange E; Raverot G; Bex M; Burman P; Decoudier B; Devuyt F; Feldt-Rasmussen U; Andersen M; Maiter D

**INSTITUCIÓN / INSTITUTION:** - Service d'Endocrinologie, Centre Hospitalier Universitaire de Mont-Godinne, Université Catholique de Louvain, B-5530 Mont-sur-Meuse, Belgium.

**RESUMEN / SUMMARY:** - OBJECTIVE: To characterise distinctive clinical features of giant prolactinomas in women. DESIGN: A multicentre, retrospective case series and literature review. METHODS: We collected data from 15 female patients with a pituitary tumour larger than 4 cm and prolactin levels above 1000 mug/l and identified 19 similar cases from the literature; a gender-based comparison of the frequency and age distribution was obtained from a literature review. RESULTS: The initial PubMed search using the term 'giant prolactinomas' identified 125 patients (13 women) responding to the inclusion criteria. The female:male ratio was 1:9. Another six female patients were found by extending the literature search, while our own series added 15 patients. The median age at diagnosis was 44 years in women compared with 35 years in men ( $P < 0.05$ ). All cases diagnosed before the age of 15 years were boys. In women ( $n=34$ ), we observed a minor peak incidence during the third decade of life and a major peak during the fifth decade. Amenorrhoea was a constant feature with seven cases of primary amenorrhoea. In eight women with onset of secondary amenorrhoea before the age of 40 years, the diagnosis was made 2-31 years later (median 9 years) and in all but one because of tumour pressure symptoms. The prolactin levels were above 10 000 mug/l in 15/34 and misdiagnosis due to 'hook effect' occurred in two of them. Eighteen patients were treated with cabergoline; standard doses ( $< 2.0$  mg/week) were able to normalise prolactin in only 4/18 patients, and 7/18 patients were resistant to weekly doses ranging from 3.0 to 7.0 mg. CONCLUSION: Giant prolactinomas are rare in women, often resistant to dopamine agonists and seem to be distributed in two age groups, with a larger late-onset peak.

[557]

**TÍTULO / TITLE:** - Controversies over the diagnosis of oligodendroglioma: a report from the satellite workshop at the 4<sup>th</sup> international symposium of brain tumor pathology, Nagoya Congress Center, May 23, 2012.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 Oct;30(4):253-61. doi: 10.1007/s10014-013-0165-x.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0165-x](#)

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**RESUMEN / SUMMARY:** - With the goal of discussing how the neuropathology community should resolve the controversy over the diagnosis of oligodendroglioma, this Satellite Workshop reflects the collaboration between two invited keynote speakers: Dr. Johan M. Kros of the Erasmus Medical Center and Dr. Kenneth D. Aldape of the University of Texas MD Anderson Cancer Center and the Organizing Committee of the Japanese Society of Brain Tumor Pathology. In the first half of the

workshop, the keynote speakers reviewed the current status of the pathology and genetics of oligodendroglioma. In the second half, six debatable cases that exemplify the current controversies over the diagnosis of oligodendroglioma were presented. The consensus diagnoses in these six cases, which have been reviewed by members of the Society, were opened to discussion and comments by the speakers. These cases highlight unresolved issues in the WHO 2007 classification of oligodendrogliomas, particularly the discordance between morphology and genetics. To achieve synchronization between phenotypes and genotypes, the neuropathology diagnosis should focus on the classic features of oligodendrogliomas that are highly correlated with the genetic background.

[558]

**TÍTULO / TITLE:** - TERT promoter mutations are highly recurrent in SHH subgroup medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Dec;126(6):917-29. doi: 10.1007/s00401-013-1198-2. Epub 2013 Oct 31.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00401-013-1198-2](#)

**AUTORES / AUTHORS:** - Remke M; Ramaswamy V; Peacock J; Shih DJ; Koelsche C; Northcott PA; Hill N; Cavalli FM; Kool M; Wang X; Mack SC; Barszczyk M; Morrissy AS; Wu X; Agnihotri S; Luu B; Jones DT; Garzia L; Dubuc AM; Zhukova N; Vanner R; Kros JM; French PJ; Van Meir EG; Vibhakar R; Zitterbart K; Chan JA; Bogner L; Klekner A; Lach B; Jung S; Saad AG; Liau LM; Albrecht S; Zollo M; Cooper MK; Thompson RC; Delattre OO; Bourdeaut F; Doz FF; Garami M; Hauser P; Carlotti CG; Van Meter TE; Massimi L; Fults D; Pomeroy SL; Kumabe T; Ra YS; Leonard JR; Elbabaa SK; Mora J; Rubin JB; Cho YJ; McLendon RE; Bigner DD; Eberhart CG; Fouladi M; Wechsler-Reya RJ; Faria CC; Croul SE; Huang A; Bouffet E; Hawkins CE; Dirks PB; Weiss WA; Schuller U; Pollack IF; Rutkowski S; Meyronet D; Jouvett A; Fevre-Montange M; Jabado N; Perek-Polnik M; Grajkowska WA; Kim SK; Rutka JT; Malkin D; Tabori U; Pfister SM; Korshunov A; von Deimling A; Taylor MD

**INSTITUCIÓN / INSTITUTION:** - The Arthur and Sonia Labatt Brain Tumour Research Centre, The Hospital for Sick Children, Toronto, ON, Canada.

**RESUMEN / SUMMARY:** - Telomerase reverse transcriptase (TERT) promoter mutations were recently shown to drive telomerase activity in various cancer types, including medulloblastoma. However, the clinical and biological implications of TERT mutations in medulloblastoma have not been described. Hence, we sought to describe these mutations and their impact in a subgroup-specific manner. We analyzed the TERT promoter by direct sequencing and genotyping in 466 medulloblastomas. The mutational distributions were determined according to subgroup affiliation, demographics, and clinical, prognostic, and molecular features. Integrated genomics approaches were used to identify specific somatic copy number alterations in TERT promoter-mutated and wild-type tumors. Overall, TERT promoter mutations were identified in 21 % of medulloblastomas. Strikingly, the highest frequencies of TERT mutations were observed in SHH (83 %; 55/66) and WNT (31 %; 4/13) medulloblastomas derived from adult patients. Group 3 and Group 4 harbored this alteration in <5 % of cases and showed no association with increased patient age. The prognostic implications of these mutations were highly subgroup-specific. TERT

mutations identified a subset with good and poor prognosis in SHH and Group 4 tumors, respectively. Monosomy 6 was mostly restricted to WNT tumors without TERT mutations. Hallmark SHH focal copy number aberrations and chromosome 10q deletion were mutually exclusive with TERT mutations within SHH tumors. TERT promoter mutations are the most common recurrent somatic point mutation in medulloblastoma, and are very highly enriched in adult SHH and WNT tumors. TERT mutations define a subset of SHH medulloblastoma with distinct demographics, cytogenetics, and outcomes.

[559]

**TÍTULO / TITLE:** - Evidence of association of human papillomavirus with prognosis worsening in glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov 26.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not140](#)

**AUTORES / AUTHORS:** - Vidone M; Alessandrini F; Marucci G; Farnedi A; de Biase D; Ricceri F; Calabrese C; Kurelac I; Porcelli AM; Cricca M; Gasparre G

**INSTITUCIÓN / INSTITUTION:** - Dip. Scienze Mediche e Chirurgiche, Unita di Genetica Medica, Universita di Bologna, policlinico S.Orsola-Malpighi, Bologna, Italy (M.V., C.C., I.K., G.G.); Dip. Medicina Specialistica, Diagnostica e Sperimentale, Unita di Virologia, Universita di Bologna, policlinico S.Orsola-Malpighi, via Massarenti 9, Bologna, Italy (F.A., M.C.); Dip. Scienze Biomediche e Neuromotorie, Universita di Bologna, Sezione di Patologia "M.Malpighi" Ospedale Bellaria, Bologna, Italy (G.M., A.F.); Dip. Medicina Specialistica, Diagnostica e Sperimentale, Unita di Patologia, Universita di Bologna, Ospedale Bellaria, via Altura 3, Bologna, Italy (D.d.B.); AO Ordine Mauriziano di Torino, via Magellano 1, Torino, Italy (F.R.); Dip. Farmacia e Biotecnologie, Universita di Bologna, Bologna, Italy (A.M.P.); Centro Interdipartimentale di Ricerca Industriale, Scienze della Vita e Tecnologie per la Salute, Universita di Bologna, Bologna, Italy (A.M.P.).

**RESUMEN / SUMMARY:** - BackgroundGlioblastoma multiforme (GBM) is the most malignant brain tumor in adults, but its etiology still remains unknown. Recently, a role of viruses such as cytomegalovirus and JC virus in gliomagenesis has been suggested. Since human papillomavirus (HPV) is considered the most common oncogenic virus in humans, we evaluated its occurrence in GBM samples. Material and MethodsFifty-two formalin-fixed paraffin-embedded primary glioblastoma specimens were retrospectively analyzed. The presence of HPV genome on tumor DNA was assessed by MY/GP nested PCR. Confirmation of HPV detection was obtained by chromogenic in situ hybridization (CISH) and immunohistochemistry (IHC) with an antibody directed against the L1 capsidic protein. Finally, univariate and multivariate proportional-hazards models were used to compare the risk of death among HPV-positive and HPV-negative patients. ResultsStrikingly, viral DNA was detected after PCR in 12 cases (23%). HPV16 genome was present in 25% infected samples, whereas the remaining samples tested positive for HPV6. CISH confirmed positivity in all infected samples for which enough material was available. Moreover, IHC positivity suggested that production of viral proteins from HPV genome is an ongoing process in GBM cancer cells. Finally an association between HPV infection and a worse prognosis was found in patients upon age stratification with a univariate analysis (HR,

2.10; 95% CI, 1.00-4.44; log-rank P = .045). Conclusions HPV infection status may be considered an independent prognostic factor in GBM patients and suggests that prevention may be considered, should HPV be recognized as a causative agent in gliomagenesis.

[560]

**TÍTULO / TITLE:** - CBTRUS statistical report: Primary brain and central nervous system tumors diagnosed in the United States in 2006-2010.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov;15 Suppl 2:ii1-56. doi: 10.1093/neuonc/not151.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not151](#)

**AUTORES / AUTHORS:** - Ostrom QT; Gittleman H; Farah P; Ondracek A; Chen Y; Wolinsky Y; Stroup NE; Kruchko C; Barnholtz-Sloan JS

[561]

**TÍTULO / TITLE:** - Autophagy and oxidative stress in gliomas with IDH1 mutations.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Oct 23.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1194-6](#)

**AUTORES / AUTHORS:** - Gilbert MR; Liu Y; Neltner J; Pu H; Morris A; Sunkara M; Pittman T; Kyprianou N; Horbinski C

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Laboratory Medicine, University of Kentucky, 307 Combs Building, Lexington, KY, 40536, USA.

**RESUMEN / SUMMARY:** - IDH1 mutations in gliomas associate with longer survival. Prooxidant and antiproliferative effects of IDH1 mutations and its D-2-hydroxyglutarate (2-HG) product have been described in vitro, but inconsistently observed. It is also unclear whether overexpression of mutant IDH1 in wild-type cells accurately phenocopies the effects of endogenous IDH1-mutations on tumor apoptosis and autophagy. Herein we investigated the effects of 2-HG and mutant IDH1 overexpression on proliferation, apoptosis, oxidative stress, and autophagy in IDH1 wild-type glioma cells, and compared those results with patient-derived tumors. 2-HG reduced viability and proliferation of U87MG and LN18 cells, triggered apoptosis in LN18 cells, and autophagy in U87MG cells. In vitro studies and flank xenografts of U87MG cells overexpressing R132H IDH1 exhibited increased oxidative stress, including increases of both manganese superoxide dismutase (MnSOD) and p62. Patient-derived IDH1-mutant tumors showed no significant differences in apoptosis or autophagy, but showed p62 accumulation and actually trended toward reduced MnSOD expression. These data indicate that mutant IDH1 and 2-HG can induce oxidative stress, autophagy, and apoptosis, but these effects vary greatly according to cell type.

[562]

**TÍTULO / TITLE:** - Histologically defined central nervous system primitive neuro-ectodermal tumours (CNS-PNETs) display heterogeneous DNA methylation profiles and show relationships to other paediatric brain tumour types.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Dec;126(6):943-6. doi: 10.1007/s00401-013-1206-6. Epub 2013 Nov 9.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1206-6](#)

**AUTORES / AUTHORS:** - Schwalbe EC; Hayden JT; Rogers HA; Miller S; Lindsey JC; Hill RM; Nicholson SL; Kilday JP; Adamowicz-Brice M; Storer L; Jacques TS; Robson K; Lowe J; Williamson D; Grundy RG; Bailey S; Clifford SC

**INSTITUCIÓN / INSTITUTION:** - Northern Institute for Cancer Research, Newcastle University, Sir James Spence Institute Level 5, Royal Victoria Infirmary, Newcastle upon Tyne, NE1 4LP, UK.

[563]

**TÍTULO / TITLE:** - Genome-wide analysis of DNA copy number alterations and loss of heterozygosity in intracranial germ cell tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatr Blood Cancer. 2013 Nov 19. doi: 10.1002/pbc.24833.

●● Enlace al texto completo (gratis o de pago) [1002/pbc.24833](#)

**AUTORES / AUTHORS:** - Terashima K; Yu A; Chow WY; Hsu WC; Chen P; Wong S; Hung YS; Suzuki T; Nishikawa R; Matsutani M; Nakamura H; Ng HK; Allen JC; Aldape KD; Su JM; Adesina AM; Leung HC; Man TK; Lau CC

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Texas Children's Cancer and Hematology Centers, Baylor College of Medicine, Houston, Texas.

**RESUMEN / SUMMARY:** - **BACKGROUND:** Intracranial germ cell tumors (GCTs) are rare and heterogeneous with very little is known about their pathogenesis and underlying genetic abnormalities. **PROCEDURES:** In order to identify candidate genes and pathways which are involved in the pathogenesis of these tumors, we have profiled 62 intracranial GCTs for DNA copy number alterations (CNAs) and loss of heterozygosity (LOH) by using single nucleotide polymorphism (SNP) array and quantitative real time PCR (qPCR). **RESULTS:** Initially 27 cases of tumor tissues with matched blood samples were fully analyzed by SNP microarray and qPCR. Statistical analysis using the genomic identification of significant targets in cancer (GISTIC) tool identified 10 regions of significant copy number gain and 11 regions of significant copy number loss. While overall pattern of genomic aberration was similar between germinoma and nongerminomatous germ cell tumors (NGGCTs), a few subtype-specific peak regions were identified. Analysis by SNP array and qPCR was replicated using an independent cohort of 35 cases. **CONCLUSIONS:** Frequent aberrations of CCND2 (12p13) and RB1 (13q14) suggest that Cyclin/CDK-RB-E2F pathway might play a critical role in the pathogenesis of intracranial GCTs. Frequent gain of PRDM14 (8q13) implies that transcriptional regulation of primordial germ cell specification might be an important factor in the development of this tumor. Pediatr Blood Cancer © 2013 Wiley Periodicals, Inc.

[564]

**TÍTULO / TITLE:** - Post-traumatic Neuroma Following Breast Surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Breast J. 2013 Nov;19(6):671-2. doi: 10.1111/tbj.12186. Epub 2013 Sep 19.

●● Enlace al texto completo (gratis o de pago) [1111/tbj.12186](#)

**AUTORES / AUTHORS:** - Ashkar L; Omeroglu A; Halwani F; Alsharif S; Louffi A; Mesurole B

**INSTITUCIÓN / INSTITUTION:** - Cedar Breast Clinic, McGill University Health Center, Royal Victoria Hospital, Montreal, Quebec, Canada.

[565]

**TÍTULO / TITLE:** - Quinacrine synergistically enhances the antivasular and antitumor efficacy of cediranib in intracranial mouse glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1673-83. doi: 10.1093/neuonc/not119. Epub 2013 Oct 3.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not119](#)

**AUTORES / AUTHORS:** - Lobo MR; Green SC; Schabel MC; Gillespie GY; Woltjer RL; Pike MM

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: Martin M. Pike, PhD, Advanced Imaging Research Center, 3181SW Sam Jackson Park Rd, L452 Portland, OR 97239-3098. [pikema@ohsu.edu](mailto:pikema@ohsu.edu).

**RESUMEN / SUMMARY:** - Background Despite malignant glioma vascularity, anti-angiogenic therapy is largely ineffective. We hypothesize that efficacy of the antiangiogenic agent cediranib is synergistically enhanced in intracranial glioma via combination with the late-stage autophagy inhibitor quinacrine. Methods Relative cerebral blood flow and volume (rCBF, rCBV), vascular permeability (K(trans)), and tumor volume were assessed in intracranial 4C8 mouse glioma using a dual-bolus perfusion MRI approach. Tumor necrosis and tumor mean vessel density (MVD) were assessed immunohistologically. Autophagic vacuole accumulation and apoptosis were assessed via Western blot in 4C8 glioma in vitro. Results Cediranib or quinacrine treatment alone did not alter tumor growth. Survival was only marginally improved by cediranib and unchanged by quinacrine. In contrast, combined cediranib/quinacrine reduced tumor growth by >2-fold (P < .05) and increased median survival by >2-fold, compared with untreated controls (P < .05). Cediranib or quinacrine treatment alone did not significantly alter mean tumor rCBF or K(trans) compared with untreated controls, while combined cediranib/quinacrine substantially reduced both (P < .05), indicating potent tumor devascularization. MVD and necrosis were unchanged by cediranib or quinacrine treatment. In contrast, MVD was reduced by nearly 2-fold (P < .01), and necrosis increased by 3-fold (P < .05, one-tailed), in cediranib + quinacrine treated vs untreated groups. Autophagic vacuole accumulation was induced by cediranib and quinacrine in vitro. Combined cediranib/quinacrine treatment under hypoxic conditions induced further accumulation and apoptosis. Conclusion Combined cediranib/quinacrine treatment synergistically increased antivasular/antitumor efficacy in intracranial 4C8 mouse glioma, suggesting a promising and facile treatment strategy for malignant glioma. Modulations in the autophagic pathway may play a role in the increased efficacy.

[566]

**TÍTULO / TITLE:** - Acute visual loss in pregnancy caused by craniopharyngioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Arch Soc Esp Oftalmol. 2012 Dec 20. pii: S0365-6691(12)00451-0. doi: 10.1016/j.oftal.2012.09.016.

●● Enlace al texto completo (gratis o de pago) [1016/j.oftal.2012.09.016](#)

**AUTORES / AUTHORS:** - Grillo-Mallo E; Jimenez-Benito J; Diez-Feijoo E; Alonso Alonso I; Ferrero Collado A; Munoz Quinones S

**INSTITUCIÓN / INSTITUTION:** - Servicio de Oftalmología, Complejo Asistencial Universitario de Burgos, Burgos, España. Electronic address: [evangelinagrillo111111@yahoo.com.ar](mailto:evangelinagrillo111111@yahoo.com.ar).

**RESUMEN / SUMMARY:** - CASE REPORT: A 38-year-old female, at 20-weeks gestation, experienced a sudden visual loss and visual-field abnormalities. The neuroimaging tests showed a craniopharyngioma. Surgical removal was performed with a successful outcome as regards the pregnancy and visual function.

**DISCUSSION:** It is known that pituitary adenomas may grow during pregnancy; however this is unusual in craniopharyngiomas. They usually present with visual problems due to their suprasellar topography. Surgery is the treatment of choice, the outcome essentially depending on its complete resection.

[567]

**TÍTULO / TITLE:** - EGFR phosphorylates tumor-derived EGFRvIII driving STAT3/5 and progression in glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Cell. 2013 Oct 14;24(4):438-49. doi: 10.1016/j.ccr.2013.09.004.

●● Enlace al texto completo (gratis o de pago) [1016/j.ccr.2013.09.004](#)

**AUTORES / AUTHORS:** - Fan QW; Cheng CK; Gustafson WC; Charron E; Zipper P; Wong RA; Chen J; Lau J; Knobbe-Thomsen C; Weller M; Jura N; Reifemberger G; Shokat KM; Weiss WA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University of California, San Francisco, 1450 Third Street, MC0520, San Francisco, CA 94158-9001, USA; Helen Diller Family Comprehensive Cancer Center, University of California, San Francisco, 1450 Third Street, MC0520, San Francisco, CA 94158-9001, USA. Electronic address: [qiwen.fan@ucsf.edu](mailto:qiwen.fan@ucsf.edu).

**RESUMEN / SUMMARY:** - EGFRvIII, a frequently occurring mutation in primary glioblastoma, results in a protein product that cannot bind ligand, but signals constitutively. Deducing how EGFRvIII causes transformation has been difficult because of autocrine and paracrine loops triggered by EGFRvIII alone or in heterodimers with wild-type EGFR. Here, we document coexpression of EGFR and EGFRvIII in primary human glioblastoma that drives transformation and tumorigenesis in a cell-intrinsic manner. We demonstrate enhancement of downstream STAT signaling triggered by EGFR-catalyzed phosphorylation of EGFRvIII, implicating EGFRvIII as a substrate for EGFR. Subsequent phosphorylation of STAT3 requires nuclear entry of EGFRvIII and formation of an EGFRvIII-STAT3 nuclear complex. Our

findings clarify specific oncogenic signaling relationships between EGFR and EGFRVIII in glioblastoma.

[568]

**TÍTULO / TITLE:** - Intratemporal Traumatic Neuromas of the Facial Nerve: Evidence for Multiple Etiologies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Otol Neurotol. 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago)

[1097/MAO.000000000000136](#)

**AUTORES / AUTHORS:** - Allen KP; Hatanpaa KJ; Lemeshev Y; Isaacson B; Kutz JW

**INSTITUCIÓN / INSTITUTION:** - \*Department of Otolaryngology-Head and Neck Surgery, and daggerDepartment of Pathology, University of Texas Southwestern Medical Center, Dallas, Texas, U.S.A.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To describe 2 patients with traumatic neuromas of the intratemporal facial nerve in the absence of trauma. **STUDY DESIGN:** Retrospective case review. **SETTING:** Tertiary care referral center. **PATIENTS:** Patients included underwent resection of an intratemporal facial nerve mass. Upon pathologic evaluation, the patients were found to have traumatic neuromas of the facial nerve. **INTERVENTION(S):** Patients underwent resection of an intratemporal facial traumatic neuroma. Histopathologic evaluation was performed including an immunohistochemistry evaluation. **RESULTS:** Two patients were identified with intratemporal facial nerve traumatic neuromas. The patients had no significant history of trauma or chronic inflammatory process. Pathologic evaluations, including immunohistochemistry, of the excised masses were consistent with traumatic neuromas. All tumors were noted to have a disorganized collection of axons and were not consistent with the expected diagnosis of schwannoma. Tumors involved the tympanic and vertical segments of the facial nerve. A cavernous angioma was found within one mass and is thought to be the etiology of neuroma formation. **CONCLUSION:** Traumatic neuromas are possible in the intratemporal facial nerve in the absence of trauma. A cavernous angioma of the facial nerve is a newly described possible cause of traumatic neuroma formation.

[569]

**TÍTULO / TITLE:** - Characteristics of Intraoperative Abnormal Hemodynamics During Resection of an Intra-fourth Ventricular Tumor Located on the Dorsal Medulla Oblongata.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Oct 25;53(10):655-62. Epub 2013 Sep 27.

**AUTORES / AUTHORS:** - Ideguchi M; Kajiwara K; Yoshikawa K; Sadahiro H; Nomura S; Fujii M; Suzuki M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Yamaguchi University Graduate School of Medicine.

**RESUMEN / SUMMARY:** - Abnormal hemodynamics during extirpation of a paramedulla oblongata (MO) tumor is common and may be associated with direct vagal

stimulation of the medullary circuit. However, resection of tumors on the dorsal MO may also induce hemodynamic instability without direct vagal stimulus. The objective of this study was to examine the characteristics of hemodynamic instability unrelated to vagal stimulus during dissection of an intra-fourth ventricular tumor with attachment to the dorsal MO. A retrospective analysis was performed in 13 patients. Abnormal hemodynamics were defined as a > 20% change from the means of the intraoperative mean arterial pressure (MAP) and heart rate (HR). Relationships of intraoperative hemodynamics were evaluated with various parameters, including the volume of the MO. Six patients (46.2%) had intraoperative hypertension during separation of the tumor bulk from the dorsal MO. The maximum MAP and HR in these patients were significantly greater than those in patients with normal hemodynamics (116.0 +/- 18.0 mmHg versus 85.6 +/- 6.5 mmHg; 124.3 +/- 22.8 bpm versus 90.5 +/- 14.7 bpm). All six cases with abnormal hemodynamics showed hemodynamic fluctuation during separation of the tumor bulk from the dorsal MO. The preoperative volume of the MO in these patients was 1.11 cc less than that in patients with normal hemodynamics, but the volume after tumor resection was similar in the two groups (5.23 cc and 5.12 cc). This suggests that the MO was compressed by the conglutinate tumor bulk, with resultant fluctuation of hemodynamics. Recognition of and preparation for this phenomenon are important for surgery on a tumor located on the dorsal MO.

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[570]

**TÍTULO / TITLE:** - Suprasellar hemangioblastoma mimicking a craniopharyngioma: result of extended endoscopic transsphenoidal approach-case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Oct 25;53(10):735-9. Epub 2013 Sep 27.

**AUTORES / AUTHORS:** - Xie T; Zhang X; Hu F; Wang X; Wang J; Yu Y; Chen L

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Zhongshan Hospital, Fudan University.

**RESUMEN / SUMMARY:** - Hemangioblastoma in the suprasellar region is rare. We present a case of a suprasellar hemangioblastoma that underwent surgical resection using an extended endoscopic transsphenoidal approach. A 64-year-old female patient presented with headache and decreased visual acuity for the last four years, computed tomography (CT) and magnetic resonance imaging (MRI) revealed a 2.5 cm irregular lesion in the suprasellar region. Our preoperative presumptive diagnosis was craniopharyngioma. The patient underwent an extended endoscopic transsphenoidal approach, the mass was subtotally removed. An endoscopic endonasal repair was needed due to the cerebrospinal fluid (CSF) leak. However, 1 month later, the patient got disturbance of consciousness because of the hydrocephalus. Ventriculoperitoneal shunt was used to solve the problem. Pathological findings were compatible with hemangioblastoma. Suprasellar hemangioblastoma is very rare. Any highly vascular lesions located in the suprasellar region should alert the surgeon to the possibility of hemangioblastoma. Extended endoscopic transsphenoidal approach adopted by us should not be the first choice of the treatment procedure for this kind of large and vascular tumor.

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[571]

**TÍTULO / TITLE:** - Experimental validation of 5 in-silico predicted glioma biomarkers.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Dec;15(12):1625-34. doi: 10.1093/neuonc/not124. Epub 2013 Oct 24.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not124](#)

**AUTORES / AUTHORS:** - Towner RA; Jensen RL; Vaillant B; Colman H; Saunders D; Giles CB; Wren JD

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: Rheal A. Towner, PhD, Director, Advanced Magnetic Resonance Center, Oklahoma Medical Research Foundation, 825 N.E. 13<sup>th</sup> Street, Oklahoma City, OK 73104 USA. [Rheal-Towner@omrf.org](mailto:Rheal-Towner@omrf.org).

**RESUMEN / SUMMARY:** - Background Glioblastoma multiforme (GBM) is a high-grade glioma with poor prognosis. Identification of new biomarkers specific to GBM could help in disease diagnosis. We have developed and validated a bioinformatics method to predict proteins likely to be suitable as glioma biomarkers via a global microarray meta-analysis to identify uncharacterized genes consistently coexpressed with known glioma-associated genes. Methods A novel bioinformatics method was implemented called global microarray meta-analysis, using approximately 16 000 microarray experiments to identify uncharacterized genes consistently coexpressed with known glioma-associated genes. These novel biomarkers were validated as proteins highly expressed in human gliomas varying in tumor grades using immunohistochemistry. Glioma gene databases were used to assess delineation of expression of these markers in varying glioma grades and subtypes of GBM. Results We have identified 5 potential biomarkers-spondin1, Plexin-B2, SLIT3, fibulin-1, and LINGO1-that were validated as proteins highly expressed on the surface of human gliomas using immunohistochemistry. Expression of spondin1, Plexin-B2, and SLIT3 was significantly higher ( $P < .01$ ) in high-grade gliomas than in low-grade gliomas. These biomarkers were significant discriminators in grade IV gliomas compared with either grade III or II tumors and also distinguished between GBM subclasses. Conclusions This study strongly suggests that this type of bioinformatics approach has high translational potential to rapidly discern which poorly characterized proteins may be of clinical relevance.

[572]

**TÍTULO / TITLE:** - R-RAS2 overexpression in tumors of the human central nervous system.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cancer. 2013 Oct 23;12(1):127.

●● Enlace al texto completo (gratis o de pago) [1186/1476-4598-12-127](#)

**AUTORES / AUTHORS:** - Gutierrez-Erlandsson S; Herrero-Vidal P; Fernandez-Alfara M; Hernandez-Garcia S; Gonzalo-Flores S; Mudarra-Rubio A; Fresno M; Cubelos B

**RESUMEN / SUMMARY:** - Malignant tumors of the central nervous system (CNS) are the 10<sup>th</sup> most frequent cause of cancer mortality. Despite the strong malignancy of some such tumors, oncogenic mutations are rarely found in classic members of the RAS family of small GTPases. This raises the question as to whether other RAS family members may be affected in CNS tumors, excessively activating RAS pathways. The RAS-related subfamily of GTPases is that which is most closely related to classical Ras

and it currently contains 3 members: RRAS, RRAS2 and RRAS3. While R-RAS and R-RAS2 are expressed ubiquitously, R-RAS3 expression is restricted to the CNS. Significantly, both wild type and mutated RRAS2 (also known as TC21) are overexpressed in human carcinomas of the oral cavity, esophagus, stomach, skin and breast, as well as in lymphomas. Hence, we analyzed the expression of R-RAS2 mRNA and protein in a wide variety of human CNS tumors and we found the R-RAS2 protein to be overexpressed in all of the 90 CNS cancer samples studied, including glioblastomas, astrocytomas and oligodendrogliomas. However, R-Ras2 was more strongly expressed in low grade (World Health Organization grades I-II) rather than high grade (grades III-IV) tumors, suggesting that R-RAS2 is overexpressed in the early stages of malignancy. Indeed, R-RAS2 overexpression was evident in pre-malignant hyperplasias, both at the mRNA and protein levels. Nevertheless, such dramatic changes in expression were not evident for the other two subfamily members, which implies that RRAS2 is the main factor triggering neural transformation.

[573]

**TÍTULO / TITLE:** - Recurrent Pituitary Macroadenoma with Increased Plasma ACTH Precursors that Cross React in a Commonly Used ACTH Immunoassay.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocr Pract. 2013 Oct 14:1-7.

●● Enlace al texto completo (gratis o de pago) [4158/EP13299.CO](http://4158/EP13299.CO)

**AUTORES / AUTHORS:** - Woeber KA; White A; Kurtz TW

**INSTITUCIÓN / INSTITUTION:** - Department of Medicine, University of California San Francisco, USA.

[574]

**TÍTULO / TITLE:** - Phosphoinositide 3-kinases upregulate system xc- via eIF2alpha and ATF4 - a pathway active in glioblastomas and epilepsy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Antioxid Redox Signal. 2013 Nov 12.

●● Enlace al texto completo (gratis o de pago) [1089/ars.2013.5455](http://1089/ars.2013.5455)

**AUTORES / AUTHORS:** - Lewerenz J; Baxter P; Kassubek R; Albrecht P; Van Liefvering J; Westhoff MA; Halatsch ME; Meakin PJ; Karpel-Massler G; Hayes JD; Aronica E; Smolders I; Ludolph A; Methner A; Massie A; Hardingham GE; Maher P

**INSTITUCIÓN / INSTITUTION:** - University of Ulm, Neurology, Ulm, Germany ; [jan.lewerenz@googlemail.com](mailto:jan.lewerenz@googlemail.com).

**RESUMEN / SUMMARY:** - Aims: Phosphoinositide 3-kinases (PI3K) relay growth factor signaling and mediate cytoprotection and cell growth. The cystine/glutamate antiporter system xc- imports cystine while exporting glutamate thereby promoting glutathione synthesis while increasing extracellular cerebral glutamate. The aim of this study was to analyze the pathway through which growth factor and PI3K signaling induce the cystine/glutamate antiporter system xc- and demonstrate its biological significance for neuroprotection, cell growth and epilepsy. Results: PI3Ks induce system xc- through glycogen synthase kinase 3beta (GSK-3beta) inhibition, general control non-derepressible-2 (GCN2)-mediated eIF2alpha phosphorylation and subsequent translational upregulation of ATF4. This pathway is essential for PI3Ks to modulate

oxidative stress resistance of nerve cells and insulin-induced growth in fibroblasts. Moreover, the pathway is active in human glioblastoma cells. In addition, it is induced in primary cortical neurons in response to robust neuronal activity and in hippocampi from patients with temporal lobe epilepsy. Innovation: Our findings further extend the concepts of how growth factors and PI3Ks induce neuroprotection and cell growth by adding a new branch to the signaling network downstream of GSK3beta, which ultimately leads to the induction of the cystine/glutamate antiporter system xc-. Importantly, induction of this pathway by neuronal activity and in epileptic hippocampi points to a potential role in epilepsy. Conclusion: PI3K-regulated system xc- activity is not only involved in the stress resistance of neuronal cells and in cell growth by increasing the cysteine supply and glutathione synthesis, but also plays a role in the pathophysiology of tumor- and non-tumor-associated epilepsy by upregulating extracellular cerebral glutamate.

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[575]

**TÍTULO / TITLE:** - RESPONSE TO LETTER TO THE EDITOR: CEREBELLOPONTINE ANGLE LIPOMA WITH MILD BRAINSTEM COMPRESSION IN A 13-YEAR-OLD FEMALE.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Otol Neurotol. 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago)

[1097/MAO.0000000000000179](https://doi.org/10.1097/MAO.0000000000000179)

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[576]

**TÍTULO / TITLE:** - Cerebellopontine angle lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Otol Neurotol. 2013 Dec;34(9):e123-4. doi: 10.1097/MAO.0b013e318292fb3b.

●● Enlace al texto completo (gratis o de pago)

[1097/MAO.0b013e318292fb3b](https://doi.org/10.1097/MAO.0b013e318292fb3b)

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**INSTITUCIÓN / INSTITUTION:** - Loma Linda University, Loma Linda, California, U.S.A.

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[577]

**TÍTULO / TITLE:** - Second attempt to withdraw cabergoline in prolactinomas: a pilot study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pituitary. 2013 Sep 28.

●● Enlace al texto completo (gratis o de pago) [1007/s11102-013-0525-x](#)

**AUTORES / AUTHORS:** - Kwacharoen R; Auriemma RS; Yenokyan G; Wand GS; Colao A; Salvatori R

**INSTITUCIÓN / INSTITUTION:** - Division of Endocrinology and Metabolism, Department of Medicine, Pituitary Center, Johns Hopkins University School of Medicine, 1830 East Monument Street #333, Baltimore, MD, 21287, USA.

**RESUMEN / SUMMARY:** - **PURPOSE:** According to Pituitary and Endocrine Society recommendations, cabergoline (CAB) therapy can be discontinued after 2 years in hyperprolactinemic patients who fit certain criteria. Previous studies found recurrence rates ranging between 26 and 69 %. Whether CAB therapy can be successfully discontinued after one unsuccessful withdrawal is unknown. **METHODS:** We conducted a pilot prospective two-center study on a second attempt of CAB withdrawal. Inclusion criteria were: (1) recurrence of hyperprolactinemia after first withdrawal; (2) additional CAB therapy for at least 2 years; (3) normal serum prolactin; (4) CAB dose  $\leq 1$  mg/week. Prolactin level was monitored after discontinuing therapy. Median follow up for patients who are still in remission was 42 months (range = 24-60). **RESULTS:** A total of 17 patients were recruited. Mean age was 41.0  $\pm$  17.3 years. 65 % were female. Initial tumors were microadenoma in 64.7 %, and macroadenoma in 35.3 %. The average weekly CAB dose at second withdrawal was 0.38  $\pm$  0.20 mg (median = 0.25, range = 0.175-1). Eleven of 17 patients (64.7 %) recurred. Median time to recurrence was 6 months. The incidence of recurrence was 44 events per 100 person-years. The estimated cumulative hazard of recurrence was 40 and 82 % at 6 and 12 months respectively. The probability to be recurrence-free at 6 and 12 months was 65 and 41 %, respectively. **CONCLUSIONS:** Second attempt of CAB withdrawal after 2 additional years of therapy may be successful in some patients. A second withdrawal can be attempted with close monitoring of prolactin level. In this study, we could not identify any predictor of recurrence. Most of the recurrences occurred within the first 12 months after withdrawal.

[578]

**TÍTULO / TITLE:** - EGFR and EGFRvIII in glioblastoma: partners in crime.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Cell. 2013 Oct 14;24(4):403-4. doi: 10.1016/j.ccr.2013.09.017.

●● Enlace al texto completo (gratis o de pago) [1016/j.ccr.2013.09.017](#)

**AUTORES / AUTHORS:** - Zadeh G; Bhat KP; Aldape K

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Toronto Western Hospital, University of Toronto, Toronto, ON M5S 2J7, Canada.

**RESUMEN / SUMMARY:** - EGFRvIII, a mutated form of EGFR, plays a prominent role in tumorigenesis, but the underlying mechanisms have remained elusive. In this issue of Cancer Cell, Weiss and colleagues implicate phosphorylation of EGFRvIII by EGFR and the consequent phosphorylation of STAT3 as a signaling axis that drives transformation in glioblastoma.

[579]

**TÍTULO / TITLE:** - Cauda Equina Intradural Extramedullary Cavernous Haemangioma- Case Report and Review of the Literature.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013 Oct 7.

**AUTORES / AUTHORS:** - Popescu M; Titus Grigorean V; Julieta Sinescu C; Dumitru Lupascu C; Popescu G; Mihaela Sandu A; Emil Plesea I

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Emergency County Hospital.

**RESUMEN / SUMMARY:** - Cavernous haemangioma (cavernoma) is a benign vascular lesion, exceptionally located in cauda equina. We report a case, diagnosed and operated in the Department of Neurosurgery from Pitesti County Emergency Hospital, of a 60-year-old woman with history of lumbar region distress, who presented with low back pain, paravertebral muscle contracture, and bilateral lumbar radiculopathy, with sudden onset after lifting effort. The preoperative diagnosis was done using computed tomography (CT) and magnetic resonance imaging (MRI), and the patient underwent surgery-two level laminectomy, dural incision, and tumor dissection from the cauda equina nerve roots under operatory microscope. Histopathological examination confirmed the positive diagnosis of cavernoma of cauda equina. The patient's outcome was favorable, without postoperative neurological deficits.

[580]

**TÍTULO / TITLE:** - Medulloblastoma Down Under 2013: a report from the third annual meeting of the International Medulloblastoma Working Group.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Nov 22.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00401-013-1213-7](#)

**AUTORES / AUTHORS:** - Gottardo NG; Hansford JR; McGlade JP; Alvaro F; Ashley DM; Bailey S; Baker DL; Bourdeaut F; Cho YJ; Clay M; Clifford SC; Cohn RJ; Cole CH; Dallas PB; Downie P; Doz F; Ellison DW; Endersby R; Fisher PG; Hassall T; Heath JA; Hii HL; Jones DT; Junckerstorff R; Kellie S; Kool M; Kotecha RS; Lichter P; Laughton SJ; Lee S; McCowage G; Northcott PA; Olson JM; Packer RJ; Pfister SM; Pietsch T; Pizer B; Pomeroy SL; Remke M; Robinson GW; Rutkowski S; Schoep T; Shelat AA; Stewart CF; Sullivan M; Taylor MD; Wainwright B; Walwyn T; Weiss WA; Williamson D; Gajjar A

**INSTITUCIÓN / INSTITUTION:** - Department of Paediatric Oncology/Haematology, Princess Margaret Hospital for Children, Perth, WA, Australia, [nick.gottardo@health.wa.gov.au](mailto:nick.gottardo@health.wa.gov.au).

**RESUMEN / SUMMARY:** - Medulloblastoma is curable in approximately 70 % of patients. Over the past decade, progress in improving survival using conventional therapies has stalled, resulting in reduced quality of life due to treatment-related side effects, which are a major concern in survivors. The vast amount of genomic and molecular data generated over the last 5-10 years encourages optimism that improved risk stratification and new molecular targets will improve outcomes. It is now clear that medulloblastoma is not a single-disease entity, but instead consists of at least four distinct molecular subgroups: WNT/Wingless, Sonic Hedgehog, Group 3, and Group 4. The Medulloblastoma Down Under 2013 meeting, which convened at Bunker Bay,

Australia, brought together 50 leading clinicians and scientists. The 2-day agenda included focused sessions on pathology and molecular stratification, genomics and mouse models, high-throughput drug screening, and clinical trial design. The meeting established a global action plan to translate novel biologic insights and drug targeting into treatment regimens to improve outcomes. A consensus was reached in several key areas, with the most important being that a novel classification scheme for medulloblastoma based on the four molecular subgroups, as well as histopathologic features, should be presented for consideration in the upcoming fifth edition of the World Health Organization's classification of tumours of the central nervous system. Three other notable areas of agreement were as follows: (1) to establish a central repository of annotated mouse models that are readily accessible and freely available to the international research community; (2) to institute common eligibility criteria between the Children's Oncology Group and the International Society of Paediatric Oncology Europe and initiate joint or parallel clinical trials; (3) to share preliminary high-throughput screening data across discovery labs to hasten the development of novel therapeutics. Medulloblastoma Down Under 2013 was an effective forum for meaningful discussion, which resulted in enhancing international collaborative clinical and translational research of this rare disease. This template could be applied to other fields to devise global action plans addressing all aspects of a disease, from improved disease classification, treatment stratification, and drug targeting to superior treatment regimens to be assessed in cooperative international clinical trials.

[581]

**TÍTULO / TITLE:** - CEREBELLOPONTINE ANGLE LIPOMA WITH MILD BRAINSTEM COMPRESSION IN A 13-YEAR-OLD PATIENT.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Otol Neurotol. 2013 Nov 21.

●● Enlace al texto completo (gratis o de pago)

[1097/MAO.0000000000000178](#)

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[582]

**TÍTULO / TITLE:** - Overexpressed let-7a inhibits glioma cell malignancy by directly targeting K-ras, independently of PTEN.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov;15(11):1491-501. doi: 10.1093/neuonc/not107. Epub 2013 Oct 3.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not107](#)

**AUTORES / AUTHORS:** - Wang XR; Luo H; Li HL; Cao L; Wang XF; Yan W; Wang YY; Zhang JX; Jiang T; Kang CS; Liu N; You YP

**INSTITUCIÓN / INSTITUTION:** - Corresponding Authors: Yong-Ping You, PhD, Department of Neurosurgery, The First Affiliated Hospital of Nanjing Medical

University, Nanjing 210029, China. [YYPL9@njmu.edu.cn](mailto:YYPL9@njmu.edu.cn)); Ning Liu, PhD, Department of Neurosurgery, The First Affiliated Hospital of Nanjing Medical University, Nanjing 210029 China ([liuning0853@126.com](mailto:liuning0853@126.com)).

**RESUMEN / SUMMARY:** - Background Altered expression of micro(mi)RNAs has been shown to be associated with tumorigenesis and tumor progression. The expression of phosphatase and tensin homolog (PTEN) plays an important role in glioma and is regarded as a prognostic marker of glioma patients. The goal of this study was to investigate the function of lethal (let)-7a miRNA in glioma cell lines with different PTEN phenotypes. Methods One hundred ninety-eight glioma tissues were used to profile miRNA expression. Results Let-7a was shown to have lower expression in high-grade glioma than in low-grade glioma. Low expression of let-7a was correlated with poor prognosis of primary glioblastoma patients. We demonstrated that K-ras was a functional target for let-7a to induce cell cycle arrest, apoptosis, and inhibition of cell migration and invasion in vitro. Our further results showed no difference in malignancy inhibition induced by let-7a in 4 glioma cells, including U87 (PTEN null), U251 (PTEN mutant), LN229 (PTEN wild type), and LN229 (PTEN small interfering RNA). The phosphatidylinositol-3 kinase/Akt and mitogen-activated protein kinase/extracellular signal-regulated kinase pathways were inhibited by let-7a, and the inhibition effects had no difference in 4 glioma cells. We demonstrated that let-7a could induce suppression of glioma in vivo by generating a glioma xenograft model. Conclusion Our results indicated that let-7a suppresses its target transcript K-ras and inhibits glioma malignancy independent of PTEN expression.

[583]

**TÍTULO / TITLE:** - Comparative drug pair screening across multiple glioblastoma cell lines reveals novel drug-drug interactions.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov;15(11):1469-78. doi: 10.1093/neuonc/not111. Epub 2013 Oct 6.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not111](#)

**AUTORES / AUTHORS:** - Schmidt L; Kling T; Monsefi N; Olsson M; Hansson C; Baskaran S; Lundgren B; Martens U; Hagglad M; Westermark B; Forsberg Nilsson K; Uhrbom L; Karlsson-Lindahl L; Gerlee P; Nelander S

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: Sven Nelander, PhD, Immunology, Genetics and Pathology (IGP), Uppsala University; and Science for Life Laboratory, SE-751 85 Uppsala, Sweden. [sven.nelander@igp.uu.se](mailto:sven.nelander@igp.uu.se).

**RESUMEN / SUMMARY:** - Background Glioblastoma multiforme (GBM) is the most aggressive brain tumor in adults, and despite state-of-the-art treatment, survival remains poor and novel therapeutics are sorely needed. The aim of the present study was to identify new synergistic drug pairs for GBM. In addition, we aimed to explore differences in drug-drug interactions across multiple GBM-derived cell cultures and predict such differences by use of transcriptional biomarkers. Methods We performed a screen in which we quantified drug-drug interactions for 465 drug pairs in each of the 5 GBM cell lines U87MG, U343MG, U373MG, A172, and T98G. Selected interactions were further tested using isobole-based analysis and validated in 5 glioma-initiating cell cultures. Furthermore, drug interactions were predicted using microarray-based transcriptional profiling in combination with statistical modeling. Results Of the 5 x 465

drug pairs, we could define a subset of drug pairs with strong interaction in both standard cell lines and glioma-initiating cell cultures. In particular, a subset of pairs involving the pharmaceutical compounds rimcazole, sertraline, pterostilbene, and gefitinib showed a strong interaction in a majority of the cell cultures tested. Statistical modeling of microarray and interaction data using sparse canonical correlation analysis revealed several predictive biomarkers, which we propose could be of importance in regulating drug pair responses. Conclusion We identify novel candidate drug pairs for GBM and suggest possibilities to prospectively use transcriptional biomarkers to predict drug interactions in individual cases.

[584]

**TÍTULO / TITLE:** - Detection of tumor progression in optic pathway glioma with and without neurofibromatosis type 1.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Nov;15(11):1560-7. doi: 10.1093/neuonc/not120. Epub 2013 Oct 6.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not120](#)

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**RESUMEN / SUMMARY:** - Background We wanted to determine the sensitivity and specificity of serial changes in visual acuity and visual evoked potentials (VEPs) to detect radiological progression of tumor volume in children with optic pathway gliomas. Methods From a retrospective review of a cohort of 69 patients, 54 patients met inclusion criteria (31 with primary chemotherapy, 4 with primary radiotherapy, and 19 with stable tumor volume and no treatment). Age at presentation ranged from 0.3 to 13 years. Patients were serially followed by MRI, age-corrected visual acuity in log minimum angle of resolution (logMAR), and pattern VEP. Longitudinal data averaged 7.9 years (range 0.5-16 y). Visual assessments were aligned with MRI data within 6-month intervals. Tumor progression was defined by 25% or greater increase in volume. Results Visual acuity in the better eye had poor sensitivity and specificity for detecting tumor volume progression (0.5 and 0.5, respectively). Visual acuity in the worse eye showed worse sensitivity and specificity because false positives (visual decline without tumor progression) were more frequent than true positives (visual decline with tumor progression). VEPs showed slightly better sensitivity and specificity (0.69 and 0.58, respectively). In patients with stable tumors, visual acuity fluctuated +/- 0.55 logMAR (SD = 0.15) between examinations. VEP amplitude fluctuated -0.74 to 0.48 log units (SD = 0.19) between examinations. Conclusions Serial changes in visual function do not reliably detect tumor progression. Conversely, tumor progression does not reliably indicate decreased visual function. Objective visual function and serial MRIs are complementary in management of optic pathway gliomas.

[585]

**TÍTULO / TITLE:** - Rubinstein-Taybi syndrome predisposing to non-WNT, non-SHH, group 3 medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Pediatr Blood Cancer*. 2013 Sep 20. doi: 10.1002/pbc.24765.

●● Enlace al texto completo (gratis o de pago) [1002/pbc.24765](#)

**AUTORES / AUTHORS:** - Bourdeaut F; Miquel C; Richer W; Grill J; Zerah M; Grison C; Pierron G; Amiel J; Krucker C; Radvanyi F; Brugieres L; Delattre O

**INSTITUCIÓN / INSTITUTION:** - INSERMU830, Laboratoire de genetique et biologie des cancers, Institut Curie, Paris, France; Departement de pediatrie, Institut Curie, Paris, France.

**RESUMEN / SUMMARY:** - Medulloblastomas (MB) are classified in four subgroups: the well defined WNT and Sonic Hedgehog (SHH) subgroups, and the less defined groups 3 and 4. They occasionally occur in the context of a cancer predisposition syndrome. While germline APC mutations predispose to WNT MB, germline mutations in SUFU, PTCH1, and TP53 predispose to SHH tumors. We report on a child with a Rubinstein-Taybi syndrome (RTS) due to a germline deletion in CREBBP, who developed a MB. Biological profilings demonstrate that this tumor belongs to the group 3. RTS may therefore be the first predisposition syndrome identified for non-WNT/non-SHH MB. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[586]

**TÍTULO / TITLE:** - Usefulness of FMISO-PET for Glioma Analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Neurol Med Chir (Tokyo)*. 2013 Nov 25;53(11):773-8. Epub 2013 Oct 29.

**AUTORES / AUTHORS:** - Kobayashi H; Hirata K; Yamaguchi S; Terasaka S; Shiga T; Houkin K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School of Medicine, Hokkaido University.

**RESUMEN / SUMMARY:** - Glioma is one of the most common brain tumors in adults. Its diagnosis and management have been determined by histological classifications. It is difficult to establish new paradigms because the pathology has matured and a great deal of knowledge has accumulated. On the other hand, we understand that there are limitations to this gold-standard because of the heterogeneity of glioma. Thus, it is necessary to find new criteria independent of conventional morphological diagnosis. Molecular imaging such as positron emission tomography (PET) is one of the most promising approaches to this challenge. PET provides live information of metabolism through the behavior of single molecules. The advantage of PET is that its noninvasive analysis does not require tissue sample, therefore examination can be performed repeatedly. This is very useful for capturing changes in the biological nature of tumor without biopsy. In the present clinical practice for glioma, (18)F-fluorodeoxyglucose (FDG) PET is the most common tracer for predicting prognosis and differentiating other malignant brain tumors. Amino acid tracers such as (11)C-methionine (MET) are the most useful for detecting distribution of glioma, including low-grade. Tracers to image hypoxia are under investigation for potential clinical use, and recently, (18)F-fluoromisonidazole (FMISO) has been suggested as an effective tracer to distinguish glioblastoma multiforme from others.

[587]

**TÍTULO / TITLE:** - Carcinoid syndrome caused by a serotonin secreting pituitary tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eur J Endocrinol. 2013 Oct 30.

●● Enlace al texto completo (gratis o de pago) [1530/EJE-13-0622](#)

**AUTORES / AUTHORS:** - Lynggaard LA; Nielsen EH; Laurberg P

**INSTITUCIÓN / INSTITUTION:** - L Lynggaard, Department of Endocrinology and Medicine, Aalborg University Hospital, Aalborg, Denmark.

**RESUMEN / SUMMARY:** - NEUROENDOCRINE TUMOURS ARE MOST FREQUENTLY LOCATED IN THE GASTROINTESTINAL ORGAN SYSTEM OR IN THE LUNGS, BUT THEY MAY OCCASIONALLY BE FOUND IN OTHER ORGANS.CASE: We describe a 56-year old woman suffering from a carcinoid syndrome caused by a large serotonin secreting pituitary tumour. She had for years suffered from episodes of palpitations, dyspnoea and flushing. Cardiac disease had been suspected, which delayed the diagnosis, until blood tests revealed elevated serotonin and chromogranin A in plasma. Somatostatin receptor (SSR) scintigraphy showed a single positive focus in the region of the pituitary gland and MRI a corresponding intra- and suprasellar heterogeneous mass. After pre-treatment with octreotide leading to symptomatic improvement, the patient underwent trans-cranial surgery with removal of the tumour. This led to clinical improvement and to a normalisation of SSR scintigraphy, as well as serotonin and chromogranin A levels. CONCLUSION: To our knowledge, this is the first reported case of a serotonin secreting tumour with a primary location in the pituitary.

[588]

**TÍTULO / TITLE:** - Arachnoid cyst accompanied by proptosis and unilateral high myopia.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int Ophthalmol. 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [1007/s10792-013-9853-0](#)

**AUTORES / AUTHORS:** - Sung MS; Park SW; Heo H

**INSTITUCIÓN / INSTITUTION:** - Department of Ophthalmology, Chonnam National University Medical School and Hospital, 8 Hak-Dong, Dong-Gu, Kwangju, 501-757, Korea.

**RESUMEN / SUMMARY:** - An 8-year-old boy presented with proptosis of the left eye. On ophthalmic examination, unilateral axial elongation of the left eye was evident. Computed tomography and magnetic resonance imaging revealed an arachnoid cyst in the left middle cranial fossa, which expanded the bone and deformed the posterolateral wall of the left orbit. The lesion was observed with serial examinations and reviewed by a neurosurgeon and a radiologist. After 6 months of follow-up, there was no progression of the cyst. We believe this is the youngest reported case of an arachnoid cyst associated with isolated proptosis in the setting of unilateral high myopia. Neuroimaging should be considered in cases of prominent or progressive proptosis in the context of unilateral axial myopia in order to detect other possible etiologies.

[589]

**TÍTULO / TITLE:** - SECONDARY NEUTRON DOSES IN PROTON THERAPY TREATMENTS OF OCULAR MELANOMA AND CRANIOPHARYNGIOMA.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Radiat Prot Dosimetry. 2013 Nov 11.

●● Enlace al texto completo (gratis o de pago) [1093/rpd/nct283](#)

**AUTORES / AUTHORS:** - Farah J; Sayah R; Martinetti F; Donadille L; Lacoste V; Herault J; Delacroix S; Nauraye C; Vabre I; Lee C; Bolch WE; Clairand I

**INSTITUCIÓN / INSTITUTION:** - Institut de Radioprotection et de Surete Nucleaire (IRSN) - PRP-HOM/SDE - BP17, 92262 Fontenay-aux-Roses Cedex, France.

**RESUMEN / SUMMARY:** - Monte Carlo simulations were used to assess secondary neutron doses received by patients treated with proton therapy for ocular melanoma and craniopharyngioma. MCNPX calculations of out-of-field doses were done for approximately 20 different organs considering realistic treatment plans and using computational phantoms representative of an adult male individual. Simulations showed higher secondary neutron doses for intracranial treatments, approximately 14 mGy to the salivary glands, when compared with ocular treatments, approximately 0.6 mGy to the non-treated eye. This secondary dose increase is mainly due to the higher proton beam energy (178 vs. 75 MeV) as well as to the impact of the different beam parameters (modulation, collimation, field size etc.). Moreover, when compared with published data, the assessed secondary neutron doses showed similar trends, but sometimes with sensitive differences. This confirms secondary neutrons to be directly dependent on beam energy, modulation technique, treatment configuration and methodology.

[590]

**TÍTULO / TITLE:** - Anosmin-1 contributes to brain tumor malignancy through integrin signal pathways.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Endocr Relat Cancer. 2013 Nov 4.

●● Enlace al texto completo (gratis o de pago) [1530/ERC-13-0181](#)

**AUTORES / AUTHORS:** - Choy CT; Kim H; Lee JY; Williams DM; Palethorpe D; Fellows G; Wright AJ; Laing K; Bridges LR; Howe FA; Kim SH

**INSTITUCIÓN / INSTITUTION:** - C Choy, Biomedical Sciences, St. George's Medical School, University of London, London, United Kingdom.

**RESUMEN / SUMMARY:** - Anosmin-1, encoded by the KAL1 gene, is an extracellular matrix (ECM)-associated protein which plays essential roles in the establishment of olfactory and gonadotropin-releasing hormone (GnRH) neurons during early brain development. Loss-of-function mutations of KAL1 results in Kallmann syndrome with delayed puberty and anosmia. There is, however, little comprehension of its role in the developed brain. Since reactivation of developmental signal pathways often takes part in tumorigenesis, we investigated if anosmin-1-mediated cellular mechanisms associated with brain tumor. Our meta-analysis of gene expression profiles of patient samples and public microarray datasets indicated that KAL1 mRNA was significantly up-regulated in high grade primary brain tumors compared to the normal brain and low grade tumors. The tumour promoting capacity of anosmin-1 was demonstrated in glioblastoma cell lines where anosmin-1 enhanced cell motility and proliferation.

Notably, anosmin-1 formed a part of active ss1 integrin complex, inducing downstream signaling pathways. ShRNA-mediated knock-down of anosmin-1 attenuated motility and growth of tumor cells and induced apoptosis. Anosmin-1 may also enhance the invasion of tumor cells within the ECM by modulating cell adhesion and activating extracellular proteases. In a mouse xenograft model, anosmin-1-expressing tumors grew faster, indicating the role of anosmin-1 in tumor microenvironment in vivo. Combined, these data suggest that anosmin-1 can facilitate tumor cell proliferation, migration, invasion and survival. Therefore, although the normal function of anosmin-1 is required in the proper development of GnRH neurons, overexpression of anosmin-1 in the developed brain may be an underlying mechanism for some brain tumors.

[591]

**TÍTULO / TITLE:** - Can MGMT promoter methylation status be used as a prognostic and predictive marker for glioblastoma multiforme at the present time? : A word of caution.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Strahlenther Onkol. 2013 Dec;189(12):993-995. Epub 2013 Nov 2.

●● Enlace al texto completo (gratis o de pago) [1007/s00066-013-0459-2](#)

**AUTORES / AUTHORS:** - Fietkau R; Putz F; Lahmer G; Semrau S; Buslei R

**INSTITUCIÓN / INSTITUTION:** - Klinik für Strahlentherapie, Universitätsstr. 27, 91054, Erlangen, Germany, [sekretariat.strahlenklinik@uk-erlangen.de](mailto:sekretariat.strahlenklinik@uk-erlangen.de).

[592]

**TÍTULO / TITLE:** - Large and giant medial sphenoid wing meningiomas involving vascular structures: clinical features and management experience in 53 patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin Med J (Engl). 2013 Dec;126(23):4470-6.

**AUTORES / AUTHORS:** - Yang J; Ma SC; Liu YH; Wei L; Zhang CY; Qi JF; Yu CJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Fu Xing Hospital, Capital Medical University, Beijing 100038, China. Email: [yangjun6778@hotmail.com](mailto:yangjun6778@hotmail.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Large and giant medial sphenoid wing meningiomas that are located deeply in the skull base where they are closely bounded by cavernous sinus, optic nerve, and internal carotid artery make the gross resection hard to achieve. Also, this kind of meningiomas is often accompanied by a series of severe complications. Therefore, it was regarded as a formidable challenge to even the most experienced neurosurgeons. This study aimed to investigate the clinical features and management experience of patients with large and giant medial sphenoid wing meningiomas. METHODS: In this study, 53 patients (33 female and 20 male, mean age of 47.5 years) with large and giant medial sphenoid wing meningiomas were treated surgically between April 2004 to March 2012, with their clinical features analyzed, management experience collected, and treatment results investigated retrospectively. RESULTS: In this study, gross total resection (Simpson I and II) was applied in 44 patients (83%). Fifty-three patients had accepted the routine computed tomography scan and magnetic resonance imaging scan as postoperative neuroradiological evaluation. Their performance showed surgical complications of

vascular lesions and helped us evaluate patients' conditions, respectively. Meanwhile, the drugs resisting cerebral angiospasm, such as Nimodipine, were infused in every postoperative patient through vein as routine. As a result, 11 patients (21%) were found to have secondary injury of cranial nerves II, III, and IV, and nine patients got recovered during the long-term observing follow-up period. Temporary surgical complications of vascular lesions occurred after surgery, such as cerebral angiospasm, ischemia, and edema; 24 patients (45%) appeared to have infarction and dyskinesia of limbs. Overall, visual ability was improved in 41 patients (77%). No patient died during the process. CONCLUSIONS: Microsurgical treatment may be the most effective method for the large and giant medial sphenoid wing meningiomas. The surgical strategy should focus on survival and postoperative living quality.

[593]

**TÍTULO / TITLE:** - Postoperative treatment of glioblastoma multiforme with radiation therapy plus concomitant and adjuvant temozolomide : A mono-institutional experience of 215 patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cancer Res Ther. 2013 Jul-Sep;9(3):381-6. doi: 10.4103/0973-1482.119310.

●● Enlace al texto completo (gratis o de pago) [4103/0973-1482.119310](#)

**AUTORES / AUTHORS:** - Julka PK; Sharma DN; Mallick S; Gandhi AK; Joshi N; Rath GK

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, All India Institute of Medical Sciences, New Delhi, India.

**RESUMEN / SUMMARY:** - OBJECTIVE: To study the clinical results and prognostic factors of patients with glioblastoma multiforme (GBM) treated by postoperative radiation therapy (PORT) and concomitant temozolomide followed by adjuvant temozolomide. METHODS: From 2005 to 2008, 215 patients (median age 48 years) with GBM were treated with PORT plus temozolomide chemotherapy. Radiation therapy (RT) was employed with a dose of 60 Gy in 30 fractions over 6 weeks by conventional fractionation with concomitant temozolomide (75 mg/m<sup>2</sup>/day). Adjuvant therapy consisted of 6 cycles of temozolomide (150 mg/m<sup>2</sup>) for 5 days, 28 days cycle). The primary end point of the study was overall survival (OS), and the secondary end points were progression free survival (PFS) and toxicity. OS was determined with respect to different variables to study the prognostic significance. RESULTS: Median follow up was 11 months (range 2-50 months). Median OS and PFS were 13 months and 11 months respectively. The 1-year and 2-year OS was 44% and 18% respectively. There was no statistical significant impact of age, sex, KP score, anatomical location and extent of surgery. Presentation without seizures (on univariate analysis) and 6 cycles of adjuvant temozolomide therapy (on univariate as well as multivariate analysis) were found significant prognostic factors. Sixteen patients developed grade III-IV neutropenia/thrombocytopenia during the course of RT. CONCLUSION: Our results authenticate the role of concomitant and adjuvant temozolomide chemotherapy in combination with PORT for the management of GBM patients. We strongly recommend complete 6 cycle of adjuvant temozolomide since it significantly improved the survival in our study.

[594]

**TÍTULO / TITLE:** - Toward patient-specific, biologically optimized radiation therapy plans for the treatment of glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 12;8(11):e79115. doi: 10.1371/journal.pone.0079115.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0079115](#)

**AUTORES / AUTHORS:** - Corwin D; Holdsworth C; Rockne RC; Trister AD; Mrugala MM; Rockhill JK; Stewart RD; Phillips M; Swanson KR

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Feinberg School of Medicine, Northwestern University, Chicago, Illinois, United States of America.

**RESUMEN / SUMMARY:** - PURPOSE: To demonstrate a method of generating patient-specific, biologically-guided radiotherapy dose plans and compare them to the standard-of-care protocol. METHODS AND MATERIALS: We integrated a patient-specific biomathematical model of glioma proliferation, invasion and radiotherapy with a multiobjective evolutionary algorithm for intensity-modulated radiation therapy optimization to construct individualized, biologically-guided plans for 11 glioblastoma patients. Patient-individualized, spherically-symmetric simulations of the standard-of-care and optimized plans were compared in terms of several biological metrics. RESULTS: The integrated model generated spatially non-uniform doses that, when compared to the standard-of-care protocol, resulted in a 67% to 93% decrease in equivalent uniform dose to normal tissue, while the therapeutic ratio, the ratio of tumor equivalent uniform dose to that of normal tissue, increased between 50% to 265%. Applying a novel metric of treatment response (Days Gained) to the patient-individualized simulation results predicted that the optimized plans would have a significant impact on delaying tumor progression, with increases from 21% to 105% for 9 of 11 patients. CONCLUSIONS: Patient-individualized simulations using the combination of a biomathematical model with an optimization algorithm for radiation therapy generated biologically-guided doses that decreased normal tissue EUD and increased therapeutic ratio with the potential to improve survival outcomes for treatment of glioblastoma.

[595]

**TÍTULO / TITLE:** - Adrenal ganglioneuroma in a patient with polycystic ovarian disease (PCOD): a rare association.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://bmj.com/search.dtl>

●● Cita: British Medical J. (BMJ): <> Case Rep. 2013 Oct 21;2013. pii: bcr2013201211. doi: 10.1136/bcr-2013-201211.

●● Enlace al texto completo (gratis o de pago) [1136/bcr-2013-201211](#)

**AUTORES / AUTHORS:** - Kumar A; Singh V; Sankhwar S; Babu S

**INSTITUCIÓN / INSTITUTION:** - Department of Urology, King George Medical University, Lucknow, Uttar Pradesh, India.

**RESUMEN / SUMMARY:** - Adrenal ganglioneuromas are rare, benign incidentalomas of a neural crest origin. A majority of these tumours are clinically silent and discovered on imaging for unrelated reasons. Polycystic ovarian disease (PCOD) is an endocrine disorder characterised by bilateral polycystic ovaries, anovulation leading to infertility,

irregular menstrual cycles and features of androgen hormone excess. Herein we report a rare case of adrenal ganglioneuroma in a 14-year-old girl with PCOD. She was referred to us by the gynaecologist after incidental detection of adrenal mass on ultrasonography. Except for raised 24 h urinary metanephrines, rest of the hormones measured were in normal range. Transperitoneal adrenalectomy was performed and histopathology was suggestive of ganglioneuroma. Postoperative recovery was excellent and she is doing well. To our knowledge it is the first such type of case to be reported.

[596]

**TÍTULO / TITLE:** - Glioneuronal tumors and epilepsy in children: seizure outcome related to lesionectomy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Minerva Pediatr. 2013 Dec;65(6):609-16.

**AUTORES / AUTHORS:** - Consales A; Striano P; Nozza P; Morana G; Ravegnani M; Piatelli G; Pavanello M; Zoli ML; Baglietto MG; Cama A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery Giannina Gaslini Children's Hospital Genoa, Italy - [nchigg@libero.it](mailto:nchigg@libero.it).

**RESUMEN / SUMMARY:** - Aim: Glioneuronal tumors (especially gangliogliomas and dysembryoplastic neuroepithelial tumors) are an increasingly recognised cause of drug-resistant epilepsy in children. The optimal surgical strategy (lesionectomy vs. extended resection of epileptogenic peritumoral areas) to obtain seizure control has not been fully established. Our aim was to analyze the post-surgical seizure outcome in children with epileptogenic glioneuronal tumors related to lesionectomy. Methods: The clinical data were collected through a database. Video-EEG and MRI were performed in all patients pre-operatively and at the follow-up. Results: Our series included 22 patients. The age range at surgery was 10 months-16 years (mean: 6.5+/-4.5 years). Epilepsy duration ranged 1-78 months (mean: 11.6+/-17.0). There were complex partial seizures in 14 cases, simple partial seizures in 6 patients and generalized epilepsy in 2. Gross-total surgical removal was achieved in 15 (68.2%) patients. At the last follow-up (mean 4.7 years), 20 (90.9%) patients were seizure-free (Engel Class I) and two (9.1%) were Engel Class III. Six out of seven (85.7%) patients with subtotal removal were Engel Class I. Statistical analysis failed to detect any difference between seizure outcome (Engel Class) and tumor type (DNT vs. GG; P=1.00) or location (temporal vs. non temporal; P=0.51), and extension of the resection (total vs. subtotal; P=1.00). Conclusion: Primary aim of the surgery for epileptogenic glioneuronal tumors is to remove the lesion and to obtain a complete seizure control. However, if a complete tumor resection cannot be carried out, a subtotal removal of the lesion can equally provide satisfactory results.

[597]

**TÍTULO / TITLE:** - Immunotherapy for high-grade glioma: how to go beyond Phase I/II clinical trials.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Immunotherapy. 2013 Oct;5(10):1043-6. doi: 10.2217/imt.13.86.

- [Enlace al texto completo \(gratis o de pago\) 2217/imt.13.86](#)

**AUTORES / AUTHORS:** - van Gool S

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**RESUMEN / SUMMARY:** - Evaluation of: Lasky JL 3<sup>rd</sup>, Panosyan EH, Plant A et al. Autologous tumor lysate-pulsed dendritic cell immunotherapy for pediatric patients with newly diagnosed or recurrent high-grade gliomas. *Anticancer Res.* 33, 2047-2056 (2013). Immunotherapy for children and adults with high-grade glioma (HGG) is an emerging innovative treatment approach, which aims at stimulating the body's own immune system against HGG by using autologous dendritic cells pulsed with autologous tumor lysate as a therapeutic vaccine. This is the third report on immunotherapy for HGG in children, bringing additional knowledge and experience to the scientific community. However, at the same time, this and other manuscripts urge for the next step in treatment development.

[598]

**TÍTULO / TITLE:** - Plasma levels of tissue inhibitor of matrix metalloproteinase-1 correlate with diagnosis and prognosis of glioma patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Chin Med J (Engl)*. 2013 Nov;126(22):4295-300.

**AUTORES / AUTHORS:** - Lin Y; Wang JF; Gao GZ; Zhang GZ; Wang FL; Wang YJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, First Hospital of China Medical University, Shenyang, Liaoning 110001, China.

**RESUMEN / SUMMARY:** - **BACKGROUND:** There is no validated blood biomarker available for glioma management. Invasive growth is the key feature of glioma. We assessed the clinical usefulness of plasma tissue inhibitor of metalloproteinase 1 (TIMP-1), which has less molecular weight than metalloproteinases, as a potential blood biomarker for glioma. **METHODS:** A total of 285 patients and 59 normal subjects were studied. Plasma concentration of TIMP-1 was measured with enzyme-linked immunosorbent assay. Plasma TIMP-1 was compared between normal and glioma patients, between patients with different pathological grades, and between patients with different prognoses. Longitudinal changes in plasma TIMP-1 during treatment were also evaluated. Plasma matrix metalloproteinase (MMP)-9 level was also assayed and its clinical usefulness was compared with that of TIMP-1. **RESULTS:** Plasma TIMP-1 and MMP-9 were both increased in glioma patients compared with normal controls (TIMP-1:  $P < 0.001$ ; MMP-9:  $P = 0.007$ ). Plasma TIMP-1 increases with increased tumor grade. In Grade IV gliomas, plasma TIMP-1 significantly increased after "successful removal" of the tumor (paired samples t-test, before operation vs. during chemotherapy without recurrence,  $t = -2.131$ ,  $P = 0.038$ ), but did not change significantly at the time of tumor recurrence (during chemotherapy without recurrence vs. after tumor recurrence,  $t = -0.652$ ,  $P = 0.632$ ). High plasma TIMP-1 level correlated with better survival in Grade IV glioma patients (hazard ratio: 0.550, 95% CI: 0.101-1.000,  $P = 0.036$ ). In Grade IV gliomas, patients with higher plasma TIMP-1 had significantly longer survival time than those with lower plasma TIMP-1 level (25.23 vs. 18.95 months, log-rank  $P = 0.045$ ). Plasma MMP-9 did not show significant association with either the pathological grade or the prognosis of glioma patients. **CONCLUSIONS:** Plasma TIMP-1 is associated with the diagnosis and prognosis of glioma patients. It appears to have better usefulness for guiding clinical decision

making than plasma MMP-9. Further studies in an expanded patient population are needed to better define its clinical usefulness.

[599]

**TÍTULO / TITLE:** - Proteomic analysis of meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neurol Belg. 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [1007/s13760-013-0253-z](#)

**AUTORES / AUTHORS:** - Cui GQ; Jiao AH; Xiu CM; Wang YB; Sun P; Zhang LM; Li XG  
**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Qilu Hospital of Shandong University and Brain Science Research Institute, Shandong University, No. 107 Wenhua West Road, Jinan, 250012, Shandong Province, People's Republic of China.

**RESUMEN / SUMMARY:** - Meningiomas represent one-third of all primary brain tumors and cause 35,000 new cases each year. Because of this high incidence, we sought to determine if there are proteomic differences between meningiomas and neighboring tissues. Two-dimensional gel electrophoresis and mass spectrometry were used to detect differentially expressed proteins in tumor samples, using arachnoid tissue as a control. Western blot analysis was used to validate the identified candidate proteins. We obtained quantitative data on 112 proteins, 17 of which were down-regulated and 26 of which were up-regulated in meningiomas relative to normal arachnoid tissue. Our analysis showed that the expression of galectin-3, vimentin, and endoplasmic reticulum protein 70 was decreased significantly in meningiomas. The expression of 40S ribosomal protein S12, glutathione S-transferase P, and hypoxia up-regulated protein 1 was increased significantly ( $P < 0.05$ ). The six above-mentioned differentially expressed proteins might be closely involved with the development of meningiomas. The results of this study provide basic insights into the proteome of meningiomas and provide a preliminary database for further research to enhance understanding of meningioma development.

[600]

**TÍTULO / TITLE:** - Prospective study evaluating the radiosensitizing effect of reduced doses of temozolomide in the treatment of Egyptian patients with glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Manag Res. 2013 Oct 8;5:349-56. doi: 10.2147/CMAR.S52147.

●● Enlace al texto completo (gratis o de pago) [2147/CMAR.S52147](#)

**AUTORES / AUTHORS:** - Gaber M; Selim H; El-Nahas T

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Oncology, Cairo University, Cairo, Egypt.

**RESUMEN / SUMMARY:** - PURPOSE: In view of the documented toxicity of continuous daily radiosensitizer doses of temozolomide concomitant with radiation in the treatment of glioblastoma multiforme, we aimed to compare it with a different schedule of abbreviated radiosensitizer dosing. PATIENTS AND METHODS: This was a randomized prospective study comparing toxicity and survival in 60 Egyptian patients with glioblastoma multiforme. Patients in arm I received temozolomide at a dose of 75

mg/m<sup>2</sup>) daily with radiotherapy for 42 days, starting 4 weeks after surgery and reaching to a total radiation dose of 60 Gy/30 Fractions/6 weeks, while patients in arm II received temozolomide at a dose of 75 mg/m<sup>2</sup>) concomitantly with the same radiotherapy schedule daily in the first and last weeks of the same radiotherapy program. RESULTS: Common grade 1-2 adverse events were malaise in 28 patients (46.7%), followed by alopecia (40%) and nausea (26.7%). Grade 3-4 convulsion and decreased level of consciousness was seen in only four patients who were all from arm I. The median progression-free survival (PFS) for the entire study population was 10.6 months (95% confidence interval [CI] 7.3-14), and PFS at 12 months was 32%. The median PFS in arm I was 8.8 months (95% CI 5.9-11.7) and in arm II 11.5 months (95% CI 8.9-14.2), and PFS at 12 months for both arms was 32% and 30% respectively (P=0.571). The median overall survival (OS) of the whole group of patients was 14.2 months (95% CI 13-15.5), and OS was 70% at 12 months and 25% at 18 months. The median OS for patients in arm I was 12.3 months (95% CI 7.7-16.9), whereas in arm II it was 14.3 months (95% CI 14-14.7) (P=0.83). CONCLUSION: Reduced radiosensitizer dosing of temozolomide concomitant with radiotherapy in glioblastoma multiforme exhibited comparable efficacy with a classic continuous daily schedule, though with better tolerability.

[601]

**TÍTULO / TITLE:** - Long-term outcome of esthesioneuroblastoma: hyams grade predicts patient survival.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg B Skull Base. 2012 Oct;73(5):331-6. doi: 10.1055/s-0032-1321512.

●● [Enlace al texto completo \(gratis o de pago\) 1055/s-0032-1321512](#)

**AUTORES / AUTHORS:** - Van Gompel JJ; Giannini C; Olsen KD; Moore E; Piccirilli M; Foote RL; Buckner JC; Link MJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Mayo Clinic, Rochester, Minnesota, United States.

**RESUMEN / SUMMARY:** - Object Esthesioneuroblastoma (ENB) is a rare malignant neuroendocrine tumor originating from the olfactory neuroepithelium in the cribriform plate. Controversy still exists regarding the role of pathologic grading (Hyams grade) in prognostication. This study was undertaken to describe our experience with ENB and assess the role of pathologic grading in patient outcome. Methods This was a retrospective, single-institution experience, including 109 patients with ENB treated at our institution from 1962 to 2009. Multivariate analysis was performed utilizing Cox regression analysis models utilizing age, gender, modified Kadish stage, and Hyams grade. Results Mean age was 49 +/- 16 (median 50) years at presentation (range 12 to 90 years). Median follow up was 5.1 years. All-cause mortality was significantly influenced by Hyams grading in univariate (p = 0.04) and multivariate (p = 0.02) analysis, in addition to proven prognostic factors, Kadish staging, lymph node metastasis, and age. Median survival was 9.8 years compared with 6.9 years with low (grade 1 to 2) versus high (grade 3 to 4) Hyams grade. Median overall survival was 7.2 +/- 0.7 years. Conclusion ENB has a variable outcome, which is primarily prognosticated by the extent of involvement at presentation (Kadish stage and lymph node metastasis) and higher Hyams pathologic grade.

[602]

**TÍTULO / TITLE:** - Glioma IL13Ralpha2 Is Associated with Mesenchymal Signature Gene Expression and Poor Patient Prognosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 18;8(10):e77769. doi: 10.1371/journal.pone.0077769.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0077769](#)

**AUTORES / AUTHORS:** - Brown CE; Warden CD; Starr R; Deng X; Badie B; Yuan YC; Forman SJ; Barish ME

**INSTITUCIÓN / INSTITUTION:** - Department of Cancer Immunotherapy & Tumor Immunology and Hematology & Hematopoietic Cell Transplantation, Beckman Research Institute and City of Hope National Medical Center, Duarte, California, United States of America.

**RESUMEN / SUMMARY:** - A major challenge for successful immunotherapy against glioma is the identification and characterization of validated targets. We have taken a bioinformatics approach towards understanding the biological context of IL-13 receptor alpha2 (IL13Ralpha2) expression in brain tumors, and its functional significance for patient survival. Querying multiple gene expression databases, we show that IL13Ralpha2 expression increases with glioma malignancy grade, and expression for high-grade tumors is bimodal, with approximately 58% of WHO grade IV gliomas over-expressing this receptor. By several measures, IL13Ralpha2 expression in patient samples and low-passage primary glioma lines most consistently correlates with the expression of signature genes defining mesenchymal subclass tumors and negatively correlates with proneural signature genes as defined by two studies. Positive associations were also noted with proliferative signature genes, whereas no consistent associations were found with either classical or neural signature genes. Probing the potential functional consequences of this mesenchymal association through IPA analysis suggests that IL13Ralpha2 expression is associated with activation of proinflammatory and immune pathways characteristic of mesenchymal subclass tumors. In addition, survival analyses indicate that IL13Ralpha2 over-expression is associated with poor patient prognosis, a single gene correlation ranking IL13Ralpha2 in the top ~1% of total gene expression probes with regard to survival association with WHO IV gliomas. This study better defines the functional consequences of IL13Ralpha2 expression by demonstrating association with mesenchymal signature gene expression and poor patient prognosis. It thus highlights the utility of IL13Ralpha2 as a therapeutic target, and helps define patient populations most likely to respond to immunotherapy in present and future clinical trials.

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[603]

**TÍTULO / TITLE:** - Predictive value of tumor recurrence using urinary vascular endothelial factor levels in patients receiving radiation therapy for Glioblastoma Multiforme (GBM).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomark Res. 2013 Oct 31;1(1):29.

●● Enlace al texto completo (gratis o de pago) [1186/2050-7771-1-29](#)

**AUTORES / AUTHORS:** - Krauze AV; Won M; Graves C; Corn BW; Muanza TM; Howard SP; Mahadevan A; Schultz CJ; Haas ML; Mehta MP; Camphausen KA

**INSTITUCIÓN / INSTITUTION:** - National Cancer Institute/NIH, Bethesda, MD, USA.  
[camphauk@mail.nih.gov](mailto:camphauk@mail.nih.gov).

**RESUMEN / SUMMARY:** - BACKGROUND: Glioblastoma Multiforme (GBM) is the most common primary malignant tumor of the central nervous system. Standard of care includes maximal resection followed by chemoradiotherapy. Tumors need adequate perfusion and neovascularization to maintain oxygenation and for removal of wastes. Vascular endothelial growth factor (VEGF) is a well characterized pro-angiogenic factor. We hypothesized that the increases in urinary VEGF levels would occur early in the course of tumor recurrence or progression. We examine the feasibility of collecting and analyzing urinary VEGF levels in a prospective, multi-institutional trial (Radiation Therapy Oncology Group, RTOG, 0611) as well as the role of VEGF as a marker of tumor recurrence. METHOD: We evaluated VEGF levels in urine specimens collected post-operatively, at the conclusion of radiation therapy (RT) and one month following RT. Urinary VEGF levels were correlated with tumor progression at one year. VEGF levels were measured by enzyme-linked immunosorbant assay in urine specimens and normalized to urinary creatinine levels. Sample size was determined based on a 50% 1-year recurrence rate. With a sensitivity and specificity of 80%, the expected 95% confidence interval was (0.69, 0.91) with 100 patients. A failure was defined as documented disease progression, recurrence or death before one year. RESULTS: 202 patients were enrolled between February-2006 and October-2007. Four patients were ineligible as they did not receive RT. Of the remaining 198 patients, 128 had all three samples collected. In this group, 35 patients (27.3%) did not progress, 89 (69.5%) had progression and 4 (3.1%) died without evidence of progression. Median VEGF levels at baseline were 52.9 pg/mg Cr (range 0.2- 15,034.4); on the last day of RT, 56.6 (range 0-2,377.1); and at one month follow-up, 70.0 (range 0.1-1813.2). In patients without progression at 1-year, both baseline VEGF level and end of RT VEGF level were lower than those of patients who progressed: 40.3 (range 0.2-350.8) vs. 59.7 (range 1.3-15,034.4) and 41.8 (range 0-356.8) vs. 69.7 (range 0-2,377.1), respectively. This did not reach statistical significance. Comparison of the change in VEGF levels between the end of RT and one month following RT, demonstrated no significant difference in the proportions of progressors or non-progressors at 1-year for either the VEGF increased or VEGF decreased groups. CONCLUSION: Urine can be collected and analyzed in a prospective, multi-institutional trial. In this study of patients with GBM a change in urinary VEGF levels between the last day of RT and the one month following RT did not predict for tumor progression by one year.

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[604]

**TÍTULO / TITLE:** - Three-times daily ultrafractionated radiation therapy, a novel and promising regimen for glioblastoma patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Sep 25;5(4):1199-211. doi: 10.3390/cancers5041199.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5041199](#)

**AUTORES / AUTHORS:** - Beauchesne P

**INSTITUCIÓN / INSTITUTION:** - Neuro-Oncology Department, CHU de Nancy, Hospital Central, Nancy 54035, France. [beauchesnep@wanadoo.fr](mailto:beauchesnep@wanadoo.fr).

**RESUMEN / SUMMARY:** - Glioblastomas are considered to be one of the most radio resistant tumors. Despite new therapies, the prognosis of this disease remains dismal.

Also, the mechanisms of radiation resistance in mammalian cells are more complex than once believed. Experimental studies have indicated that some human cell lines are sensitive to low radiation doses of <1 Gy. This phenomenon has been termed low-dose hyper-radio-sensitivity (HRS), and is more apparent in radio resistant cell lines, such as glioblastoma cells. Sensitivity may result from the inability of low dose radiation to efficiently induce repair mechanisms, whereas higher doses cause enough damage to trigger repair responses for radio resistance. In vitro studies have demonstrated this phenomenon using various human malignant glioma cell lines: (1) daily repeated irradiation of cells with low doses compared to irradiation using a single biologically equivalent dose resulted in significantly higher cell killing; (2) experiments conducted on glioma xenografts demonstrated that repeated irradiation with low doses was more effective for inhibiting tumor growth than a single dose. In order to confirm and validate these promising studies on HRS, a few phase II trials were developed. For translating the experimental observations into the clinic, ultra fractionation protocols (with three daily doses) were tested in glioblastoma patients. Tolerance and toxicity were the primary endpoints, with overall survival as a secondary endpoint. These protocols were initiated before concomitant radio chemotherapy became the standard of care. For these trials, patients with an unfavorable clinical prognostic factor of newly unresectable GBM were included. When comparing the results of these trials with international literature using multivariate analysis for both progression free survival and overall survival, ultra fractionated irradiation showed superiority over radiotherapy alone. In addition, it was found to be equivalent to treatment using radiotherapy and temozolomide. Therefore, ultra fractionated protocols may prolong survival of glioblastoma patients. In this review, we describe the main experimental data regarding low-dose hypersensitivity as well as the findings of clinical trials that have investigated this new radiotherapy regimen.

[605]

**TÍTULO / TITLE:** - Management of prolactinomas during pregnancy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Minerva Endocrinol. 2013 Dec;38(4):351-63.

**AUTORES / AUTHORS:** - Witek P; Zielinski G

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology and Isotope Therapy, Military Institute of Medicine, Warsaw, Poland - [pwitek@wim.mil.pl](mailto:pwitek@wim.mil.pl)  
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**RESUMEN / SUMMARY:** - Prolactinomas constitute approximately 40% of hormone-secreting pituitary tumors. In women the main clinical features are menstrual disorders and infertility. Successful treatment with dopamine agonists restores the normal function of the pituitary-gonadal axis, ovulation, and fertility. Adequate management of pregnant prolactinoma patients from the moment of conception is of particular importance for both the mother and the developing fetus. This review article presents current opinions on the course and management of pregnancies in patients with prolactin-secreting pituitary tumors. The introduction contains background information on clinical aspects of the condition, including prolactinoma treatment in women of reproductive age. Physiological changes in the pituitary during normal pregnancy are also described. The next part presents current knowledge on the effect of pregnancy on prolactinoma size, including especially the high risk of prolactinoma growth in patients with pituitary macroadenomas. Safety issues concerning the use of dopamine

receptor agonists during pregnancy are also discussed, especially in terms of the risk of congenital defects in the fetus. Moreover, the article presents principles of prolactinoma management in pregnant patients, rare indications for surgical treatment during pregnancy, and the issues concerning pituitary tumor apoplexy in pregnant women, the last being a life-threatening condition. The final part of the article discusses the possible effects of pregnancy on hyperprolactinemia remission as well as on the issue of breastfeeding by mothers with prolactinoma.

[606]

**TÍTULO / TITLE:** - Idiopathic intracranial hypertension: A possible complication in the natural history of advanced prostate cancer.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Urol. 2013 Sep 22. doi: 10.1111/iju.12273.

●● [Enlace al texto completo \(gratis o de pago\) 1111/iju.12273](#)

**AUTORES / AUTHORS:** - Valcamonico F; Arcangeli G; Consoli F; Nonnis D; Grisanti S; Gatti E; Berruti A; Ferrari V

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, University of Brescia, Spedali Civili Hospital, Brescia, Italy.

**RESUMEN / SUMMARY:** - Idiopathic intracranial hypertension is a variety of intracranial hypertension that is extremely rare in men. Obesity and hypogonadism are the most important predictive factors. Etiological hypotheses include increased central venous pressure, and various hormonal and metabolic changes commonly found in obese patients. We described the case of an obese man with prostate cancer who showed a consistent bodyweight increase during treatment with taxanes and prednisone. He was hospitalized because of a severe loss of vision as a consequence of idiopathic intracranial hypertension. A complete symptom remission was obtained after 3 weeks of anti-edema therapies (steroids, acetazolamide). Castration-resistant prostate cancer is a risk factor for idiopathic intracranial hypertension. Long-term androgen deprivation therapy, bodyweight increase, and fluid retention during chronic steroid administration and taxane chemotherapy might favor the disease onset. This severe complication has a good outcome, and should be suspected in the presence of symptoms and signs of intracranial hypertension.

[607]

**TÍTULO / TITLE:** - Elderly patients with glioblastoma: the treatment challenge.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Neurother. 2013 Oct;13(10):1099-105. doi: 10.1586/14737175.2013.840419.

●● [Enlace al texto completo \(gratis o de pago\) 1586/14737175.2013.840419](#)

**AUTORES / AUTHORS:** - Fiorentino A; De Bonis P; Chiesa S; Balducci M; Fusco V

**INSTITUCIÓN / INSTITUTION:** - Radiation Oncology Department, IRCCS-CROB, via S. Pio 1, 85028, Rionero in Vulture (PZ), Italy.

**RESUMEN / SUMMARY:** - The treatment for elderly patients affected by glioblastoma represents a challenge in neuro-oncology. The recent randomized trials (the NOA-8 and the NCBTSG trials) showed an advantage of temozolomide for patients with O6-methylguanine methyltransferase methylated tumors. To date, no randomized trials

compared the standard treatment (radiochemotherapy) with other therapeutic approaches, due to the idea that elderly patients do not tolerate aggressive therapy. Nonetheless, with the increased lifespan and the better quality of life, the nihilism in the treatment of elderly with cancer is obsolete. Molecular (including O6-methylguanine methyltransferase) and clinical tools (including the geriatric evaluation) are needed for choosing the proper therapy for patients over 70.

[608]

**TÍTULO / TITLE:** - Effectiveness of adjuvant temozolomide treatment in patients with glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosciences (Riyadh). 2013 Oct;18(4):349-55.

**AUTORES / AUTHORS:** - Alnaami IM; Al-Nuaimi SK; Senthilselvan A; Murtha AD; Walling S; Mehta V; Gourishankar S

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, College of Medicine, King Khalid University, PO Box 641, Abha, Kingdom of Saudi Arabia. Tel. +966 541499966. Fax. +966 (17) 2412807. E-mail: [ialnaami@ualberta.ca](mailto:ialnaami@ualberta.ca) / [ialnaami@gmail.com](mailto:ialnaami@gmail.com).

**RESUMEN / SUMMARY:** - OBJECTIVE: To examine whether adjuvant temozolomide treatment improved glioblastoma patients' survival in a large Canadian cohort. METHODS: We retrospectively studied 364 glioblastoma patients who received different modalities of treatment in 2 Canadian tertiary care centers in Edmonton and Halifax, Canada, between January 2000 and December 2006. The primary outcome was survival following the treatment protocol. RESULTS: The following variables were associated with an increased risk of death: The hazard risk (HR) of on-gross total resection was 0.50 (95% confidence interval [CI]: 0.39-0.64). The HR for the surgery-only group was 5.2 (95% CI: 3.85-7.06). The standard treatment group (surgery, radiation therapy [RT], and temozolomide) had an HR of 0.52 (95% CI: 0.37-0.74). The HR for patients who presented with seizure or whose presentation included seizures was 0.88 (95% CI: 0.55-0.89). Patient entry into trials had an HR of 0.74 (95% CI: 0.57-0.96). Finally, the HR for age was 1.02 (95% CI: 1.01-1.03) for every extra year. CONCLUSION: Concomitant temozolomide with RT and surgery was associated with longer survival compared with RT with surgery alone. We also found that younger age, surgical resection, seizure presence, and entry into trials are important prognostic factors for longer survival.

[609]

**TÍTULO / TITLE:** - Outcomes in newly diagnosed elderly glioblastoma patients after concomitant temozolomide administration and hypofractionated radiotherapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Sep 24;5(3):1177-98. doi: 10.3390/cancers5031177.

●● [Enlace al texto completo \(gratis o de pago\) 3390/cancers5031177](#)

**AUTORES / AUTHORS:** - Nguyen LT; Touch S; Nehme-Schuster H; Antoni D; Eav S; Clavier JB; Bauer N; Vigneron C; Schott R; Kehrl P; Noel G

**INSTITUCIÓN / INSTITUTION:** - Neurology Department, CHU Hautepierre, rue Moliere, Strasbourg 67000, France. [gnoel@strasbourg.unicancer.fr](mailto:gnoel@strasbourg.unicancer.fr).

**RESUMEN / SUMMARY:** - This study aimed to analyze the treatment and outcomes of older glioblastoma patients. Forty-four patients older than 70 years of age were referred to the Paul Strauss Center for chemotherapy and radiotherapy. The median age was 75.5 years old (range: 70-84), and the patients included 18 females and 26 males. The median Karnofsky index (KI) was 70%. The Charlson indices varied from 4 to 6. All of the patients underwent surgery. O6-methylguanine-DNA methyltransferase (MGMT) methylation status was determined in 25 patients. All of the patients received radiation therapy. Thirty-eight patients adhered to a hypofractionated radiation therapy schedule and six patients to a normofractionated schedule. Neoadjuvant, concomitant and adjuvant chemotherapy regimens were administered to 12, 35 and 20 patients, respectively. At the time of this analysis, 41 patients had died. The median time to relapse was 6.7 months. Twenty-nine patients relapsed, and 10 patients received chemotherapy upon relapse. The median overall survival (OS) was 7.2 months and the one- and two-year OS rates were 32% and 12%, respectively. In a multivariate analysis, only the Karnofsky index was a prognostic factor. Hypofractionated radiotherapy and chemotherapy with temozolomide are feasible and acceptably tolerated in older patients. However, relevant prognostic factors are needed to optimize treatment proposals.

[610]

**TÍTULO / TITLE:** - Spinal cord compression due to undiagnosed thoracic meningioma following lumbar surgery in an elderly patient: A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Orthop Traumatol Surg Res. 2013 Dec;99(8):983-6. doi: 10.1016/j.otsr.2013.08.006. Epub 2013 Nov 5.

●● Enlace al texto completo (gratis o de pago) [1016/j.otsr.2013.08.006](#)

**AUTORES / AUTHORS:** - Knafo S; Lonjon G; Vassal M; Bouyer B; Lonjon N

**INSTITUCIÓN / INSTITUTION:** - Service de neurochirurgie, hopital Bicetre, 78, rue du General-Leclerc, 94270 Le Kremlin-Bicetre, France; Association des Jeunes Chirugiens du Rachis (AJCR), 237, rue de Bercy, 75012 Paris, France. Electronic address: [stevenknafo@gmail.com](mailto:stevenknafo@gmail.com).

**RESUMEN / SUMMARY:** - As spinal surgery in elderly patients is becoming increasingly frequent, comorbidities likely to be decompensated after such procedures must be kept in mind. We report here the case of an 82-year-old woman who presented rapidly progressive spinal cord compression following lumbar surgery for radiculopathy. Investigations showed a thoracic intradural extramedullary compressive lesion, which after removal turned out to be a meningioma. We suggest that radiculopathy and non-specific degenerative modifications partially masked this lesion, and that lumbar surgery caused this acute neurological deterioration. Therefore, we advice caution in older patients among whom such ambiguous clinical presentation is frequent.

[611]

**TÍTULO / TITLE:** - Melatonin treatment increases the transcription of cell proliferation-related genes prior to inducing cell death in C6 glioma cells

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Aug;6(2):347-352. Epub 2013 Jun 18.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1413](#)

**AUTORES / AUTHORS:** - Qu J; Rizak JD; Li X; Li J; Ma Y

**INSTITUCIÓN / INSTITUTION:** - School of Life Sciences, University of Science and Technology of China, Hefei, Anhui 230026; ; State Key Laboratories of Brain and Cognitive Science, Kunming, Yunnan 650223;

**RESUMEN / SUMMARY:** - A number of studies have suggested that melatonin possesses anticancer properties. However, conflicting data exists with regard to the role of melatonin in the treatment of cancer. In the present study, the effects of melatonin on the transcriptional regulation of three genes associated with cell proliferation (Nestin, Bmi-1 and Sox2), and on C6 glioma cell survival and viability, were investigated in vitro to evaluate the use of melatonin in cancer therapy. Melatonin was shown to increase the mRNA levels of Nestin, Bmi-1 and Sox2 in a similar pattern, with the highest mRNA levels noted at a concentration of 3 mM. At higher concentrations of melatonin (5 mM), the mRNA levels of Nestin, Bmi-1 and Sox2 were reduced from their peak levels, and were correlated with changes observed in immunofluorescence morphology studies, cell viability and survival assays. Immunofluorescence studies of Nestin-stained cells demonstrated that treatment with a higher concentration of melatonin (3 and 5 mM) led to the Nestin filaments condensing and rearranging around the cell nuclei, and an alteration in the cell morphology. C6 cell viability was also significantly decreased at 3 mM melatonin, and cell death was observed at 5 and 10 mM melatonin. These results suggested that Nestin, Bmi-1 and Sox2 were strongly correlated with the survival of C6 cells following treatment with melatonin, and that high therapeutic concentrations of melatonin (>5 mM) were required to induce cell death. These findings suggested that the implementation of melatonin in the treatment of glioma and other types of cancer may be inhibited by conflicting cell growth signals in cells. Therefore, adjunct therapy is required to improve the efficacy of melatonin in the treatment of cancer.

[612]

**TÍTULO / TITLE:** - Maximizing output from current glioma vaccine trials to construct robust next-generation immunotherapies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Immunotherapy. 2013 Nov;5(11):1147-50. doi: 10.2217/imt.13.115.

●● Enlace al texto completo (gratis o de pago) [2217/imt.13.115](#)

**AUTORES / AUTHORS:** - Migliorini D; Dietrich PY; Walker PR

**INSTITUCIÓN / INSTITUTION:** - Centre of Oncology, Geneva University Hospitals & University of Geneva, Geneva, Switzerland.

[613]

**TÍTULO / TITLE:** - Prognostic Value of a Nine-Gene Signature in Glioma Patients Based on mRNA Expression Profiling.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - CNS Neurosci Ther. 2013 Nov 27. doi: 10.1111/cns.12171.

●● Enlace al texto completo (gratis o de pago) [1111/cns.12171](#)

**AUTORES / AUTHORS:** - Bao ZS; Li MY; Wang JY; Zhang CB; Wang HJ; Yan W; Liu YW; Zhang W; Chen L; Tao J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, China.

**RESUMEN / SUMMARY:** - INTRODUCTION: Gliomas are the most common primary brain tumors in adults and a significant cause of cancer-related mortality. A 9-gene signature was identified as a novel prognostic model reflecting survival situation obviously in gliomas. AIMS: To identify an mRNA expression signature to improve outcome prediction for patients with different glioma grades. RESULTS: We used whole-genome mRNA expression microarray data of 220 glioma samples of all grades from the Chinese Glioma Genome Atlas (CGGA) database (<http://www.cgga.org.cn>) as a discovery set and data from Rembrandt and GSE16011 for validation sets. Data from every single grade were analyzed by the Kaplan-Meier method with a two-sided log-rank test. Univariate Cox regression and linear risk score formula were applied to derive a gene signature with better prognostic performance. We found that patients who had high risk score according to the signature had poor overall survival compared with patients who had low risk score. Highly expressed genes in the high-risk group were analyzed by gene ontology (GO) and gene set variation analysis (GSVA). As a result, the reason for the divisibility of gliomas was likely due to cell life processes and adhesion. CONCLUSION: This 9-gene-signature prediction model provided a more accurate predictor of prognosis that denoted patients with high risk score have poor outcome. Moreover, these risk models based on defined molecular profiles showed the considerable prospect in personalized cancer management.

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[614]

**TÍTULO / TITLE:** - Evaluation of outcome and prognostic factors in patients of glioblastoma multiforme: A single institution experience.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Aug;4(Suppl 1):S46-55. doi: 10.4103/0976-3147.116455.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.116455](http://4103/0976-3147.116455)

**AUTORES / AUTHORS:** - Kumar N; Kumar P; Angurana SL; Khosla D; Mukherjee KK; Aggarwal R; Kumar R; Bera A; Sharma SC

**INSTITUCIÓN / INSTITUTION:** - Department of Radiotherapy and Oncology, Postgraduate Institute of Medical Education and Research, Sector - 12, Chandigarh, India.

**RESUMEN / SUMMARY:** - AIMS: We present retrospective analysis of patients of glioblastoma multiforme (GBM) and discuss clinical characteristics, various treatment protocols, survival outcomes, and prognostic factors influencing survival. MATERIALS AND METHODS: From January 2002 to June 2009, 439 patients of GBM were registered in our department. The median age of patients was 50 years, 66.1% were males, and 75% underwent complete or near-total excision. We evaluated those 360 patients who received radiotherapy (RT). Radiotherapy schedule was selected depending upon pre-RT Karnofsky Performance Status (KPS). Patients with KPS < 70 (Group I, n = 48) were planned for RT dose of 30-35 Gy in 10-15 fractions, and patients with KPS ≥ 70 (Group II, n = 312) were planned for 60 Gy in 30 fractions. In group I, six patients and in group II, 89 patients received some form of chemotherapy (lomustine or temozolomide). STATISTICAL ANALYSIS USED: Statistical analysis was done using Statistical Package for Social Sciences, version 12.0. Overall survival (OS) was calculated using Kaplan-Meier method, and prognostic factors were determined by log rank test. The Cox proportional hazards model was used for multivariate analysis. RESULTS: The median follow-up was 7.53 months. The median and 2-year survival

rates were 6.33 months and 2.24% for group I and 7.97 months and 8.21% for group II patients, respectively (P = 0.001). In multivariate analysis, site of tumor (central vs. others; P = 0.006), location of tumor (parietal lobe vs. others; P = 0.003), RT dose (<60 Gy vs. 60 Gy; P = 0.0001), and use of some form of chemotherapy (P = 0.0001) were independent prognostic factors for survival. CONCLUSIONS: In patients with GBM, OS and prognosis remains dismal. Whenever possible, we should use concurrent and/or adjuvant chemotherapy to maximize the benefits of post-operative radiotherapy. Patients with poor performance status may be considered for hypofractionated RT schedules, which have similar median survival rates as conventional RT.

[615]

**TÍTULO / TITLE:** - Emerging association between androgen deprivation therapy and male meningioma: significant expression of luteinizing hormone-releasing hormone receptor in male meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Prostate Cancer Prostatic Dis. 2013 Dec;16(4):387-90. doi: 10.1038/pcan.2013.45. Epub 2013 Oct 8.

●● Enlace al texto completo (gratis o de pago) [1038/pcan.2013.45](#)

**AUTORES / AUTHORS:** - Li Q; Coulson H; Klaassen Z; Sharma S; Ramalingam P; Moses KA; Terris MK

**INSTITUCIÓN / INSTITUTION:** - 1] Department of Surgery, Section of Urology, Charlie Norwood Veterans Affairs Medical Center, Augusta, GA, USA [2] Division of Urology, Department of Surgery, Medical College of Georgia - Georgia Regents University, Augusta, GA, USA.

**RESUMEN / SUMMARY:** - Background: There is emerging data suggesting a potential risk for meningioma growth stimulation in patients on luteinizing hormone-releasing hormone (LHRH) analogs for prostate cancer. We examined the expression of LHRH receptor (LHRH-R), progesterone receptor (PR) and Ki67 labeling index (LI) in specimens from male meningioma (MM) and female meningioma (FM) patients. Methods: A total of 24 MM and 24 FM paraffin blocks were retrieved from our institution between 1991 and 2008. Sections from the paraffin blocks were stained with mouse monoclonal antibodies against LHRH-R, PR and Ki67. All male patients had no previous history of prostate cancer (PCa) or previous history of hormone therapy. Results: LHRH-R positivity was extensive in 92% of MM and 88% of FM samples, with both showing strong intensity (67% and 79%, respectively). PR was positive in 20 of 24 (83%) MM and 23 of 24 (96%) FM samples. MM is less likely to exhibit Ki67 LI >4% compared with FM. Conclusions: The majority of MM and FM samples were strongly positive for LHRH-R expression and PR expression. The emerging association of androgen deprivation therapy and meningioma growth should be recognized in urological practice. Caution should be taken when considering LHRH agonist administration for patients with PCa and concurrent meningioma or previous history of meningioma.

[616]

**TÍTULO / TITLE:** - A new strategy to improve coregistration of spect and MR images in patients with high grade glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Conf Proc IEEE Eng Med Biol Soc. 2013 Jul;2013:4002-5. doi: 10.1109/EMBC.2013.6610422.

●● Enlace al texto completo (gratis o de pago) [1109/EMBC.2013.6610422](https://doi.org/10.1109/EMBC.2013.6610422)

**AUTORES / AUTHORS:** - Tacchella JM; Roullot E; Lefort M; Cohen ME; Guillemin R; Petrirena G; Delattre JY; Habert MO; Yeni N; Kas A; Frouin F

**RESUMEN / SUMMARY:** - This paper proposes a new strategy to optimize the coregistration of Technetium-99m Sestamibi SPECT and MRI data in case of patients with high grade glioma. It consists in a personalized approach which selects, for each data set, the best registration method among several ones. To achieve this selection, a quantitative dedicated evaluation criterion based on the average intensities within specific anatomical structures corresponding to physiological areas of uptake of Sestamibi was defined. The strategy was applied to sixty-two data sets using nine registration methods based on mutual information and chamfer distance registration approaches, with different settings. It was implemented within the Anatomist/Brainvisa environment, using its basic registration functions. The visual evaluation by experts indicated that this strategy provides 60% good quality registrations, and 26% intermediate quality ones. Compared to the single use of the best global registration method, the number of registrations of good quality was multiplied by 1.4 when using the data specific strategy.

[617]

**TÍTULO / TITLE:** - Reduction of thromboembolic events in meningioma surgery: a cohort study of 724 consecutive patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 14;8(11):e79170. doi: 10.1371/journal.pone.0079170.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0079170](https://doi.org/10.1371/journal.pone.0079170)

**AUTORES / AUTHORS:** - Eisenring CV; Neidert MC; Sabanes Bove D; Held L; Sarnthein J; Krayenbühl N

**INSTITUCIÓN / INSTITUTION:** - Klinik für Neurochirurgie, UniversitätsSpital Zürich, Zürich, Switzerland.

**RESUMEN / SUMMARY:** - BACKGROUND: Meningiomas are associated with the highest postoperative rate of venous thromboembolic events (VTE) among all intracranial tumors. The aim of this study is to compare two entirely different VTE prophylaxis regimens in 724 consecutive patients undergoing meningioma surgery. METHODS: Two cohorts at a single institution treated with different regimens to prevent VTE were reviewed retrospectively. Cohort A (n = 482; 314 females, mean age 57 years, range: 11-87 years) received our institutional regimen during the years 1999-2006, consisting of low-molecular-weight heparin (LMWH) and compression stockings. For cohort B (n = 242; 163 females, mean age 56.8 years, range: 16-90 years), during the years 2008-2010, the management included intraoperative 10 degrees -20 degrees leg elevation with intermittent pneumatic compression (IPC), heparin and LMWH administration. We compared the incidence of the endpoints pulmonary embolism (PE), deep venous thrombosis (DVT), hemorrhage and death, taking into account several known associated risk factors. RESULTS: For all endpoints, we observed a more favorable outcome with the new regimen. The difference in incidence of PEs (cohort A: 38/482, 8%; cohort B: 6/242, 2.5%) reached statistical significance (p = 0.002). In general, patients with skull base meningiomas had a higher risk for PE (OR 2.77).

Regarding VTE prophylaxis, an adjusted subgroup analysis suggests that the new regimen is particularly beneficial for patients with skull base meningiomas.  
CONCLUSIONS: We recommend perioperative prophylaxis using a management composed of intraoperative leg-elevation, IPC, early heparin administration and LMWH to reduce the risk for PE.

[618]

**TÍTULO / TITLE:** - Re-irradiation with hypo-fractionated stereotactic robotic radiotherapy for salvage in adult patients with brainstem glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ecancermedalscience. 2013 Oct 23;7:366. doi: 10.3332/ecancer.2013.366.

●● Enlace al texto completo (gratis o de pago) [3332/ecancer.2013.366](#)

**AUTORES / AUTHORS:** - Susheela SP; Revannasiddaiah S; Muzumder S; Mallarajapatna G; Kallur K; Basavalingaiah AS

**INSTITUCIÓN / INSTITUTION:** - HealthCare Global - Bangalore Institute of Oncology, Bangalore, Karnataka 560027, India.

**RESUMEN / SUMMARY:** - PURPOSE: Brainstem glioma (BSG) is often treated with definitive irradiation. However, subsequent progression and death occur as a rule rather than the exception, after varying periods of control. The outlook of patients with post-irradiation progression is dismal, and most of these patients are treated with supportive care alone. Despite the obvious risks with an area as critical as the brainstem, it is a possibility to encounter situations wherein the patients (themselves or their associates) ask for re-irradiation, with the hope of a few extra months of life. The risk of radiation-induced brainstem toxicity may be justifiable under the strict assumption that the patients stand a chance of benefiting from re-irradiation but still may not live long enough to manifest brainstem toxicity. METHODS: Five adult BSG patients were treated with re-irradiation using robotic-arm stereotactic radiation therapy (SRT) between September 2009 and July 2012, primarily at the request of the concerned patient parties. Re-irradiation doses ranged from 16 to 25 Gray (Gy) delivered by robotic arm stereotactic irradiation in 2-5 fractions. RESULTS: Four out of five patients enjoyed a prolongation of survival in the order of months (three, five, six, and 14 months), which was very significant given that all patients had severe neurological compromise and poor performance status prior to re-irradiation. One patient has survived 36 months after re-irradiation and thus has lived long enough to manifest late radiation-induced brainstem toxicity. CONCLUSION: Despite the obvious risks of brainstem toxicity associated with the use of re-irradiation for BSG, the use of fractionated stereotactic re-irradiation seems to offer prospects of additional periods of local control and augments duration of life.

[619]

**TÍTULO / TITLE:** - Combining cellular and gene therapy approaches for treatment of intracranial tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncoimmunology. 2013 Oct 1;2(10):e25989. Epub 2013 Sep 12.

●● Enlace al texto completo (gratis o de pago) [4161/onci.25989](#)

**AUTORES / AUTHORS:** - Hickey MJ; Kasahara N; Mueller BM; Kruse CA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery; University of California Los Angeles; Los Angeles, CA USA.

**RESUMEN / SUMMARY:** - New treatments are needed for brain metastasis, which is associated with high morbidity and mortality. Two novel cellular and gene therapy modalities were evaluated in xenograft models for human breast cancer. The individual and especially the combined treatments with alloreactive cytotoxic T lymphocytes and replicating retroviral vectors coding for prodrug activating enzymes followed later with nontoxic prodrug demonstrated efficacy without off-target effects.

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[620]

**TÍTULO / TITLE:** - Cytotoxic and apoptotic functions of licofelone on rat glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Biol Hung. 2013 Dec;64(4):438-52. doi: 10.1556/ABiol.64.2013.4.4.

●● Enlace al texto completo (gratis o de pago) [1556/ABiol.64.2013.4.4](#)

**AUTORES / AUTHORS:** - Kus G; Oztopcu-Vatan P; Uyar R; Kabadere S

**INSTITUCIÓN / INSTITUTION:** - Anadolu University Department of Health Program, Open Faculty Eskisehir Turkey.

**RESUMEN / SUMMARY:** - Gliomas are the largest group of central nervous system tumors and despite of clinical treatments death rate is very high. Inhibition of both cyclooxygenase and lipoxygenase pathways that take role in arachidonic acid metabolism prevents cancer development and induces apoptosis. One of the most promising compounds that blocks both of these pathways is licofelone. Using colchicine and 5-fluorouracil as positive controls, we questioned whether licofelone affects the survival of rat glioma cell line (C6) and induces apoptosis in vitro. After growing the cells in culture, we determined viability with MT, apoptosis with flow cytometry and activity of caspase enzymes with real time PCR. All used doses of colchicine and 5-fluorouracil were cytotoxic and reduced the number of surviving C6 cells as much as 44% and 60%, respectively. Comparing to the control, treatments with 10, 50 and 100 µM licofelone for 24 or 48 h did not influence C6 survival, however, 150, 200 and 250 µM licofelone reduced the number of living cells by 58, 88 and 93%, respectively, and induced apoptosis of C6 cells in a dose and time dependent manner. Licofelone did not change the level of caspase-9, but increased the level of caspase-3. Comparing with 5-fluorouracil and colchicine, the present study reveals for the first time the possibility that licofelone possesses a strong dose and time dependent antiproliferative and proapoptotic properties on glioma cells.

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[621]

**TÍTULO / TITLE:** - Treatment of brain glioblastoma multiforme with pcDNA3.1-Egr. 1p-p16 combined with gamma knife radiation: An experimental study on nude mice.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol India. 2013 Sep-Oct;61(5):491-6. doi: 10.4103/0028-3886.121917.

●● Enlace al texto completo (gratis o de pago) [4103/0028-3886.121917](#)

**AUTORES / AUTHORS:** - Wenke L; Peng L; Xing W; Yujun S; Qi Z; Haibo R; Wei W

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, West China Hospital, Sichuan University, Chengdu 610041, Sichuan, China.

**RESUMEN / SUMMARY:** - Background: High post-operative recurrence and poor prognosis are likely to be related to the infiltrative growth of the glioblastoma multiforme (GBM). Objectives: The primary objective of this study is to investigate the possible synergistic effect of the combined treatment of gamma knife radio-surgery (GKRS) and gene therapy for GBM and secondary objective is to explore the role of GKRS for the temporal and spatial regulation of the gene expression. Materials and Methods: The study performed on 70 nude mice and randomly divided into seven groups. Subcutaneous injection of human GBM tumor cells (T98G) was carried out to establish the animal models. Various doses of liposome-mediated pcDNA3.1-Egr. 1p-p16 recombinant plasmid were transfected through intra-tumor injection. GKRS was scheduled following the plasmid transfection. Tumor volumes were measured every 4 days after the treatment. Subcutaneous tumor nodule specimens were collected to analyze the cell apoptosis and p16 gene expression using terminal-deoxynucleotidyl transferase mediated nick end labeling staining and reverse transcription-polymerase chain reaction. Tumor volumes, levels of cell apoptosis and p16 gene expression were compared between groups. Results: Rates of tumor growth were significantly lower in the pcDNA3.1-Egr. 1p-p16 plasmid + GKRS groups than that in the remaining groups 28 days following the GKRS management. The p16mRNA expression was noted in both of the pcDNA3.1-Egr. 1p-p16 plasmid group and the pcDNA3.1-Egr. 1p-p16 plasmid + GKRS with marginal-dose of 20 Gy group. The level of messenger ribonucleic acid expression was higher in the pcDNA3.1-Egr. 1p-p16 plasmid + GKRS with the marginal-dose of 20 Gy group, with a markedly increased apoptotic and necrotic cells, than that in the pcDNA3.1-Egr. 1p-p16 plasmid group. Conclusions: In animal studies, pcDNA3.1-Egr. 1p-p16 in combination with GKRS is a preferable management option for the GBM to the sole use of GKRS or gene therapy. It may be a novel approach for the treatment of human patient with GBM.

[622]

**TÍTULO / TITLE:** - Astrocytoma development following complete multiple myeloma remission in a 49-year-old patient: A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Exp Ther Med. 2013 Aug;6(2):509-512. Epub 2013 Jun 25.

●● Enlace al texto completo (gratis o de pago) [3892/etm.2013.1179](#)

**AUTORES / AUTHORS:** - Han X; Jin D; Zheng G; Luo Y; Cai Z

**INSTITUCIÓN / INSTITUTION:** - Multiple Myeloma Center, Bone Marrow Transplantation Center, Department of Hematology, The First Affiliated Hospital of Medical College, Zhejiang University, Hangzhou, Zhejiang 310003, P.R. China.

**RESUMEN / SUMMARY:** - Multiple myeloma (MM), one of the B-cell non-Hodgkin lymphomas, is a bone marrow-derived, antibody-producing cancer of the plasma cells. In the advanced stages, the cancer cells frequently cause widespread osteolytic bone damage; however, in rare cases, MM also manifests as an intracranial plasmacytoma. In the present study, we describe a case in which a patient, initially treated for MM and with subsequent complete remission, was admitted to hospital with a lesion in the right cerebellar hemisphere and neurological symptoms of a brain tumor. Our initial diagnosis was an MM relapse with the rare occurring intracranial manifestation. However, pathological tests confirmed the diagnosis of a high-grade astrocytoma. In

this case report, we describe the characteristics, as well as the treatment issues, diagnoses and clinical developments of this patient.

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[623]

**TÍTULO / TITLE:** - Podocalyxin-like protein is expressed in glioblastoma multiforme stem-like cells and is associated with poor outcome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 16;8(10):e75945. doi: 10.1371/journal.pone.0075945.

•• Enlace al texto completo (gratis o de pago) [1371/journal.pone.0075945](http://1371/journal.pone.0075945)

**AUTORES / AUTHORS:** - Binder ZA; Siu IM; Eberhart CG; Ap Rhys C; Bai RY; Staedtke V; Zhang H; Smoll NR; Piantadosi S; Piccirillo SG; Dimeco F; Weingart JD; Vescovi A; Olivi A; Riggins GJ; Gallia GL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Johns Hopkins University School of Medicine, Baltimore, Maryland, United States of America ; Johns Hopkins Physical Science Oncology Center and Institute for NanoBioTechnology, Johns Hopkins University, Baltimore, Maryland, United States of America.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common primary malignant adult brain tumor and is associated with poor survival. Recently, stem-like cell populations have been identified in numerous malignancies including GBM. To identify genes whose expression is changed with differentiation, we compared transcript profiles from a GBM oncosphere line before and after differentiation. Bioinformatic analysis of the gene expression profiles identified podocalyxin-like protein (PODXL), a protein highly expressed in human embryonic stem cells, as a potential marker of undifferentiated GBM stem-like cells. The loss of PODXL expression upon differentiation of GBM stem-like cell lines was confirmed by quantitative real-time PCR and flow cytometry. Analytical flow cytometry of numerous GBM oncosphere lines demonstrated PODXL expression in all lines examined. Knockdown studies and flow cytometric cell sorting experiments demonstrated that PODXL is involved in GBM stem-like cell proliferation and oncosphere formation. Compared to PODXL-negative cells, PODXL-positive cells had increased expression of the progenitor/stem cell markers Musashi1, SOX2, and BMI1. Finally, PODXL expression directly correlated with increasing glioma grade and was a marker for poor outcome in patients with GBM. In summary, we have demonstrated that PODXL is expressed in GBM stem-like cells and is involved in cell proliferation and oncosphere formation. Moreover, high PODXL expression correlates with increasing glioma grade and decreased overall survival in patients with GBM.

[624]

**TÍTULO / TITLE:** - Diagnostic performance of perfusion MRI in differentiating low-grade and high-grade gliomas: advanced MRI in glioma, A siriraj project.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Med Assoc Thai. 2013 Sep;96(9):1183-90.

**AUTORES / AUTHORS:** - Direksunthorn T; Chawalparit O; Sangruchi T; Witthiwej T; Tritrakarn SO; Piyapittayanan S; Charnchaowanish P; Pornpunyawut P; Sathornsumetee S

**INSTITUCIÓN / INSTITUTION:** - Division of Diagnostic Radiology, Department of Radiology, Faculty of Medicine Siriraj Hospital, Bangkok, Thailand.

**RESUMEN / SUMMARY:** - BACKGROUND: To determine the usefulness of the perfusion MRI technique at Siriraj Hospital for differentiating between high- and low-grade gliomas by using pathological results as the gold standard. MATERIAL AND METHOD: The authors prospectively investigated 64 consecutive patients who were suspected as cerebral glioma from prior conventional imaging. Cerebral perfusion study was achieved during the first pass of a bolus of gadolinium-based contrast agent. All post-processing MRI images were interpreted by two board-certified neuroradiologists (more than 10-year-experience), one radiology resident and one well-trained technician, who separately performed and blinded from the pathological results. RESULTS: Forty-four patients diagnosed as glioma were included in this study. There were 26 cases of high-grade and 18 cases of low-grade gliomas. The cerebral blood volume and flow and its ratios had a strong association with the grade of glioma. The areas under the ROC curve for CB K CBVratio (rCBV), CBF and CBF ratio (rCBF) are 0.778, 0.769, 0.769, and 0.772, respectively. On the basis of equal misclassification rates, a cutoff value of 6.15 for CBV (sensitivity, 81.5%; specificity, 64.7%), a cutoff value of 2.38 for the rCBV (sensitivity, 88.9%; specificity, 64.7%), a cutoff value of 0.66 for CBF (sensitivity 81.5%; specificity 70.6%), and a cutoff value of 2.6 for the rCBF (sensitivity, 85.2%; specificity, 70.60%) best discriminated the high and low-grade gliomas. CONCLUSION: Preoperative radiologic grading of gliomas based on conventional MR imaging is sometimes unreliable. The cerebral perfusion measurements can significantly improve the sensitivity and predictive values of radiologic glioma grading. The rCBV measurement is the best parameter for tumor grading due to the highest sensitivity.

[625]

**TÍTULO / TITLE:** - Prognostic value of isocitrate dehydrogenase 1, O6-methylguanine-DNA methyltransferase promoter methylation, and 1p19q co-deletion in Japanese malignant glioma patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World J Surg Oncol. 2013 Oct 25;11(1):284.

●● Enlace al texto completo (gratis o de pago) [1186/1477-7819-11-284](#)

**AUTORES / AUTHORS:** - Takahashi Y; Nakamura H; Makino K; Hide T; Muta D; Kamada H; Kuratsu JI

**RESUMEN / SUMMARY:** - BACKGROUND: To determine the prognostic value of isocitrate dehydrogenase 1 (IDH1) mutation, O6-methylguanine-DNA methyltransferase (MGMT) promoter methylation, and 1p/19q co-deletion in Japanese patients with malignant gliomas. METHODS: We studied 267 malignant gliomas, which included 171 glioblastomas (GBMs), 40 anaplastic astrocytomas (AAs), 30 anaplastic oligodendrogliomas (AOs), and 26 anaplastic oligoastrocytomas (AOAs). These malignant gliomas were divided into 2 groups (Group 1: GBM + AA, Group 2: AO + AOA) according to the presence of the oligodendroglioma component. We examined IDH1 mutation and MGMT promoter methylation in each group by direct sequencing and methylation-specific PCR, respectively. We further examined 1p/19q co-deletion in Group 2 by fluorescence in situ hybridization. Survival between groups was compared by Kaplan—Meier analysis. RESULTS: In Group 1, patients with IDH1 mutations exhibited a significantly longer survival time than patients with wild-type IDH1. However, no significant difference was observed in Group 2, although patients

with IDH mutations tended to show prolonged survival. For both Group 1 and Group 2, patients with MGMT methylation survived longer than those without this methylation. Further, patients with 1p/19q co-deletion showed significantly better outcome in Group 2. CONCLUSIONS: Our study confirms the utility of IDH1 mutations and MGMT methylation in predicting the prognosis of Group 1 patients (GBM + AA) and demonstrated that IDH1 mutations may serve as a more reliable prognostic factor for such patients. We also showed that MGMT methylation and 1p/19q co-deletion rather than IDH1 mutations were prognostic factors for Group 2 patients (AOA + AO). Our study suggests that patients survive longer if they have IDH1 mutations and undergo total resection. Further, irrespective of MGMT promoter methylation status, the prognosis of glioma patients can be improved if total resection is performed. Moreover, our study includes the largest number of Japanese patients with malignant gliomas that has been analyzed for these three markers. We believe that our findings will increase the awareness of oncologists in Japan of the value of these markers for predicting prognosis and designing appropriate therapeutic strategies for treating this highly fatal disease.

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[626]

**TÍTULO / TITLE:** - Double-strand breaks on F98 glioma rat cells induced by minibeam and broad-beam synchrotron radiation therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Transl Oncol. 2013 Nov 23.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s12094-013-1134-x](#)

**AUTORES / AUTHORS:** - Gil S; Prezado Y; Sabes M

**INSTITUCIÓN / INSTITUTION:** - Centre d'Estudis en Biofísica (CEB), Faculty of Medicine, Universitat Autònoma de Barcelona, Bellaterra (Catalonia), España, [sigidu@gmail.com](mailto:sigidu@gmail.com).

**RESUMEN / SUMMARY:** - PURPOSE: To assess the DNA damage induced by MBRT and BB radiations on glioma cells. METHODS: The analysis of fluorescent intensity emitted per nucleus was plotted versus DNA content 2 and 17 h after irradiations. At around cell-doubling time (17 h) after exposures, the remaining DNA radiation damage could be correlated with cellular death. RESULTS: A higher gammaH2AX IF intensity per cell could be detected 2 and 17 h after MBRT when compared with BB. 17 h after MBRT, misrepaired damaged cells remained arrested in both G1 and G2 phases. CONCLUSIONS: A pronounced G2 phase arrest was detected at 17 h after MBRT and BB. However, only after MBRT, a dose-dependent increasing number of damaged cells appeared arrested also in the G1 phase, and a higher amount of cells more prone to undergo apoptosis were detected. The threshold dose required to enhance the effectiveness of both synchrotron radiation techniques was 12 Gy.

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[627]

**TÍTULO / TITLE:** - Parental smoking and risk of childhood brain tumors by functional polymorphisms in polycyclic aromatic hydrocarbon metabolism genes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 18;8(11):e79110. doi: 10.1371/journal.pone.0079110.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0079110](#)

**AUTORES / AUTHORS:** - Barrington-Trimis JL; Searles Nielsen S; Preston-Martin S; Gauderman WJ; Holly EA; Farin FM; Mueller BA; McKean-Cowdin R

**INSTITUCIÓN / INSTITUTION:** - Department of Preventive Medicine, University of Southern California, Keck School of Medicine, Los Angeles, California, United States of America.

**RESUMEN / SUMMARY:** - BACKGROUND: A recent meta-analysis suggested an association between exposure to paternal smoking during pregnancy and childhood brain tumor risk, but no studies have evaluated whether this association differs by polymorphisms in genes that metabolize tobacco-smoke chemicals. METHODS: We assessed 9 functional polymorphisms in 6 genes that affect the metabolism of polycyclic aromatic hydrocarbons (PAH) to evaluate potential interactions with parental smoking during pregnancy in a population-based case-control study of childhood brain tumors. Cases (N = 202) were  $\leq 10$  years old, diagnosed from 1984-1991 and identified in three Surveillance, Epidemiology, and End Results (SEER) registries in the western U.S. Controls in the same regions (N = 286) were frequency matched by age, sex, and study center. DNA for genotyping was obtained from archived newborn dried blood spots. RESULTS: We found positive interaction odds ratios (ORs) for both maternal and paternal smoking during pregnancy, EPHX1 H139R, and childhood brain tumors (P interaction = 0.02; 0.10), such that children with the high-risk (greater PAH activation) genotype were at a higher risk of brain tumors relative to children with the low-risk genotype when exposed to tobacco smoke during pregnancy. A dose-response pattern for paternal smoking was observed among children with the EPHX1 H139R high-risk genotype only (OR<sub>no exposure</sub> = 1.0; OR $\leq 3$  hours/day = 1.32, 95% CI: 0.52-3.34; OR $> 3$  hours/day = 3.18, 95% CI: 0.92-11.0; P trend = 0.07). CONCLUSION: Parental smoking during pregnancy may be a risk factor for childhood brain tumors among genetically susceptible children who more rapidly activate PAH in tobacco smoke.

[628]

**TÍTULO / TITLE:** - Curcumin Suppresses Malignant Glioma Cells Growth and Induces Apoptosis by Inhibition of SHH/GLI1 Signaling Pathway in Vitro and Vivo.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - CNS Neurosci Ther. 2013 Dec;19(12):926-36. doi: 10.1111/cns.12163. Epub 2013 Oct 25.

●● [Enlace al texto completo \(gratis o de pago\) 1111/cns.12163](#)

**AUTORES / AUTHORS:** - Du WZ; Feng Y; Wang XF; Piao XY; Cui YQ; Chen LC; Lei XH; Sun X; Liu X; Wang HB; Li XF; Yang DB; Sun Y; Zhao ZF; Jiang T; Li YL; Jiang CL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The Second Affiliated Hospital of Harbin Medical University, Harbin, China.

**RESUMEN / SUMMARY:** - AIMS: To study the role of curcumin on glioma cells via the SHH/GLI1 pathway in vitro and vivo. METHODS: The effects of curcumin on proliferation, migration, apoptosis, SHH/GLI1 signaling, and GLI1 target genes expression were evaluated in multiple glioma cell lines in vitro. A U87-implanted nude mice model was used to study the role of curcumin on tumor volume and the suppression efficacy of GLI1. RESULTS: Curcumin showed cytotoxic effects on glioma cell lines in vitro. Both mRNA and protein levels of SHH/GLI1 signaling (Shh, Smo, GLI1) were downregulated in a dose- and time-dependent manner. Several GLI1-dependent target genes (CyclinD1, Bcl-2, Foxm1) were also downregulated. Curcumin

treatment prevented GLI1 translocating into the cell nucleus and reduced the concentration of its reporter. Curcumin suppressed cell proliferation, colony formation, migration, and induced apoptosis which was mediated partly through the mitochondrial pathway after an increase in the ratio of Bax to Bcl2. Intraperitoneal injection of curcumin in vivo reduced tumor volume, GLI1 expression, the number of positively stained cells, and prolonged the survival period compared with the control group. CONCLUSION: This study shows that curcumin holds a great promise for SHH/GLI1 targeted therapy against gliomas.

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[629]

**TÍTULO / TITLE:** - 5-azacytidine reduces methylation, promotes differentiation and induces tumor regression in a patient-derived IDH1 mutant glioma xenograft.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Oct;4(10):1737-47.

**AUTORES / AUTHORS:** - Borodovsky A; Salmasi V; Turcan S; Fabius AW; Baia GS; Eberhart CG; Weingart JD; Gallia GL; Baylin SB; Chan TA; Riggins GJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Johns Hopkins University School of Medicine, Baltimore, MD, USA.

**RESUMEN / SUMMARY:** - Somatic mutations in Isocitrate Dehydrogenase 1 (IDH1) are frequent in low grade and progressive gliomas and are characterized by the production of 2-hydroxyglutarate (2-HG) from alpha-ketoglutarate by the mutant enzyme. 2-HG is an "oncometabolite" that competitively inhibits alpha-KG dependent dioxygenases resulting in various widespread cellular changes including abnormal hypermethylation of genomic DNA and suppression of cellular differentiation. Despite the growing understanding of IDH mutant gliomas, the development of effective therapies has proved challenging in part due to the scarcity of endogenous mutant in vivo models. Here we report the generation of an endogenous IDH1 anaplastic astrocytoma model which rapidly grows in vivo, produces 2-HG and exhibits DNA hypermethylation. Using this model, we have demonstrated the preclinical efficacy and mechanism of action of the FDA approved demethylating drug 5-azacytidine in vivo. Long term administration of 5-azacytidine resulted in reduction of DNA methylation of promoter loci, induction of glial differentiation, reduction of cell proliferation and a significant reduction in tumor growth. Tumor regression was observed at 14 weeks and subsequently showed no signs of re-growth at 7 weeks despite discontinuation of therapy. These results have implications for clinical trials of demethylating agents for patients with IDH mutated gliomas.

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[630]

**TÍTULO / TITLE:** - Transcriptome analysis of glioma cells for the dynamic response to gamma-irradiation and dual regulation of apoptosis genes: a new insight into radiotherapy for glioblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Dis. 2013 Oct 31;4:e895. doi: 10.1038/cddis.2013.412.

●● [Enlace al texto completo \(gratis o de pago\) 1038/cddis.2013.412](#)

**AUTORES / AUTHORS:** - Ma H; Rao L; Wang HL; Mao ZW; Lei RH; Yang ZY; Qing H; Deng YL

**INSTITUCIÓN / INSTITUTION:** - School of Life Science, Beijing Institute of Technology, Beijing 100081, China.

**RESUMEN / SUMMARY:** - Ionizing radiation (IR) is of clinical importance for glioblastoma therapy; however, the recurrence of glioma characterized by radiation resistance remains a therapeutic challenge. Research on irradiation-induced transcription in glioblastomas can contribute to the understanding of radioresistance mechanisms. In this study, by using the total mRNA sequencing (RNA-seq) analysis, we assayed the global gene expression in a human glioma cell line U251 MG at various time points after exposure to a growth arrest dose of gamma-rays. We identified 1656 genes with obvious changes at the transcriptional level in response to irradiation, and these genes were dynamically enriched in various biological processes or pathways, including cell cycle arrest, DNA replication, DNA repair and apoptosis. Interestingly, the results showed that cell death was not induced even many proapoptotic molecules, including death receptor 5 (DR5) and caspases were activated after radiation. The RNA-seq data analysis further revealed that both proapoptosis and antiapoptosis genes were affected by irradiation. Namely, most proapoptosis genes were early continually responsive, whereas antiapoptosis genes were responsive at later stages. Moreover, HMGB1, HMGB2 and TOP2A involved in the positive regulation of DNA fragmentation during apoptosis showed early continual downregulation due to irradiation. Furthermore, targeting of the TRAIL/DR5 pathway after irradiation led to significant apoptotic cell death, accompanied by the recovered gene expression of HMGB1, HMGB2 and TOP2A. Taken together, these results revealed that inactivation of proapoptotic signaling molecules in the nucleus and late activation of antiapoptotic genes may contribute to the radioresistance of gliomas. Overall, this study provided novel insights into not only the underlying mechanisms of radioresistance in glioblastomas but also the screening of multiple targets for radiotherapy.

[631]

**TÍTULO / TITLE:** - Intelligence deficits in chinese patients with brain tumor: the impact of tumor resection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - ScientificWorldJournal. 2013 Oct 30;2013:261236. doi: 10.1155/2013/261236.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/261236](#)

**AUTORES / AUTHORS:** - Shen C; Xie R; Cao X; Bao W; Yang B; Mao Y; Gao C

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai 200040, China.

**RESUMEN / SUMMARY:** - Background. Intelligence is much important for brain tumor patients after their operation, while the reports about surgical related intelligence deficits are not frequent. It is not only theoretically important but also meaningful for clinical practice. Methods. Wechsler Adult Intelligence Scale was employed to evaluate the intelligence of 103 patients with intracranial tumor and to compare the intelligence quotient (IQ), verbal IQ (VIQ), and performance IQ (PIQ) between the intracerebral and extracerebral subgroups. Results. Although preoperative intelligence deficits appeared in all subgroups, IQ, VIQ, and PIQ were not found to have any significant difference between the intracerebral and extracerebral subgroups, but with VIQ lower than PIQ in all the subgroups. An immediate postoperative follow-up demonstrated a decline of IQ

and PIQ in the extracerebral subgroup, but an improvement of VIQ in the right intracerebral subgroup. Pituitary adenoma resection exerted no effect on intelligence. In addition, age, years of education, and tumor size were found to play important roles. Conclusions. Brain tumors will impair IQ, VIQ, and PIQ. The extracerebral tumor resection can deteriorate IQ and PIQ. However, right intracerebral tumor resection is beneficial to VIQ, and transsphenoidal pituitary adenoma resection performs no effect on intelligence.

[632]

**TÍTULO / TITLE:** - Role of endothelin B receptor in oligodendrogloma proliferation and survival: In vitro and in vivo evidence.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Med Rep. 2014 Jan;9(1):229-34. doi: 10.3892/mmr.2013.1746. Epub 2013 Oct 22.

●● [Enlace al texto completo \(gratis o de pago\) 3892/mmr.2013.1746](#)

**AUTORES / AUTHORS:** - Wan X; Zhang L; Jiang B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Xiangya Hospital, Central South University, Changsha, Hunan 410078, P.R. China.

**RESUMEN / SUMMARY:** - In this study, the role of the endothelin B receptor (ETBR) in oligodendrogloma cell proliferation and survival was investigated in vitro and in vivo. The overexpression and knockdown of ETBR was conducted in Hs683 human oligodendrogloma cells, and cell proliferation and activation (phosphorylation) of extracellular signal-regulated kinase (ERK) were measured in vitro. An orthotopic xenograft oligodendrogloma mouse model was established. Mouse survival times and immunohistochemical Ki67 staining in the xenografts were examined. In vitro experiments demonstrated that the overexpression of ETBR significantly enhanced the proliferation of oligodendrogloma cells and the activation of ERK compared with the controls, which was eliminated by the selective ETBR inhibitor BQ788 and ERK-specific inhibitor U0126, but not selective endothelin A receptor inhibitor BQ123. By contrast, the knockdown of endogenous ETBR markedly decreased oligodendrogloma cell proliferation and the activation of ERK compared with the controls. Overexpression of ETBR significantly increased immunohistochemical Ki67 staining in the Hs683 cell orthotopic xenograft and decreased animal survival. By contrast, knockdown of ETBR significantly decreased Ki67 staining and increased mouse survival times. Intratumoral injection of BQ788, but not BQ123, significantly decreased Ki67 staining and prolonged mouse survival times. In conclusion, ETBR was demonstrated to mediate the proliferation of oligodendrogloma cells according to an ERK-dependent mechanism. Using an orthotopic xenograft oligodendrogloma mouse model, it was demonstrated in vivo that ETBR promotes oligodendrogloma proliferation and that the selective ETBR antagonist effectively inhibits the proliferation of oligodendrogloma cells and prolongs survival times. This study provides a novel insight into the role of ETBR in oligodendrogloma proliferation and survival, and provides the first in vivo evidence that ETBR-specific antagonists are a potential therapeutic alternative for oligodendroglomas.

[633]

**TÍTULO / TITLE:** - BMP Signaling Induces Astrocytic Differentiation of \* Clinically-derived Oligodendrogloma Propagating Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cancer Res. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago) [1158/1541-7786.MCR-13-0349](#)

**AUTORES / AUTHORS:** - Srikanth M; Kim J; Das S; Kessler JA

**INSTITUCIÓN / INSTITUTION:** - Northwestern University.

**RESUMEN / SUMMARY:** - Oligodendrogliomas are a type of glioma that lack detailed investigation due to an inability to cultivate oligodendroglioma cells that faithfully recapitulate their salient qualities. We have successfully isolated and propagated glioma stem-like cells from multiple clinical oligodendroglioma specimens. These oligodendroglioma propagating cells (OligPCs) are multipotent and form xenografts with oligodendroglioma features. Bone morphogenetic proteins (BMPs) are considered potent inhibitors of oligodendroglial development; therefore, the effects of BMP signaling in OligPCs were characterized. BMP pathway components are expressed by OligPCs and canonical signaling via Smad proteins is intact. This signaling potently depletes CD133-positive OligPCs, decreasing proliferation and inducing astrocytic differentiation. Furthermore, analyses revealed that cytoplasmic sequestration of the oligodendrocyte differentiation factors OLIG1/2 by the BMP signaling effectors ID2 and ID4 is a plausible underlying mechanism. These findings elucidate the molecular pathways that underlie the effects of BMP signaling on oligodendroglioma stem-like cells. Implications: Stem-like cells are capable of propagating oligodendrogliomas, and BMP signaling potently diminishes their stemness by inducing astrocytic differentiation, suggesting that BMP activation may be effective as a cancer stem cell-targeted therapy.

[634]

**TÍTULO / TITLE:** - Regression of cerebellar tonsillar descent and hydrocephalus after endoscopic third ventriculostomy in a patient with a quadrigeminal arachnoid cyst.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Surg Neurol Int. 2013 Oct 15;4:142. doi: 10.4103/2152-7806.119883.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.119883](#)

**AUTORES / AUTHORS:** - Arakawa Y; Kita D; Ezuka I; Hayashi Y; Hamada J; Hayashi Y  
**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Joetsu General Hospital, Joetsu, Niigata, Japan - 148-1, Daidoufukuda, Joetsu, 943-8507, Japan.

**RESUMEN / SUMMARY:** - BACKGROUND: Posterior fossa arachnoid cysts, including quadrigeminal cistern arachnoid cysts, can occasionally cause compression of the quadrigeminal plate, leading to Sylvian aqueduct stenosis and induction of cerebellar tonsillar descent into the foramen magnum. This, in turn, can result in obstructive hydrocephalus. In such cases, the characteristic of hydrocephalus is generally considered to be hypertensive. CASE DESCRIPTION: We present the case of a 28-year-old female complaining of chronic and progressively worsening headaches following the delivery of her first child. Magnetic resonance imaging revealed marked tri-ventriculomegaly, the arachnoid cyst located in the quadrigeminal cistern, and cerebellar tonsillar descent. Ophthalmoscopy revealed bilateral papilledema indicating a long-standing elevation of intracranial pressure. Endoscopic third ventriculostomy (ETV) was performed successfully and resulted in complete recovery from her headaches and papilledema. Postoperative MRI revealed resolution of

ventriculomegaly and cerebellar tonsillar descent, suggesting that the fourth ventricle outlet obstruction was associated with the development of the hydrocephalus in this patient. CONCLUSION: Our case is the first report that a quadrigeminal arachnoid cyst associated with both cerebellar tonsillar descent and hydrocephalus was well treated with ETV. It was indicated that the patient's hydrocephalus and cerebellar tonsillar descent were secondary and synergistic events, caused by the arachnoid cyst located in the quadrigeminal cistern.

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[635]

**TÍTULO / TITLE:** - Diffusely Infiltrating Central Nervous System Lymphoma Involving the Brainstem in an Immune-Competent Patient.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - JAMA. Acceso gratuito al texto completo.

- Enlace a la Editora de la Revista <http://jama.ama-assn.org/search.dtl>
- Cita: JAMA: <> Neurol. 2013 Nov 11. doi: 10.1001/jamaneurol.2013.1578.
- Enlace al texto completo (gratuito o de pago) [1001/jamaneurol.2013.1578](http://1001/jamaneurol.2013.1578)

**AUTORES / AUTHORS:** - Alsherbini K; Beinlich B; Salamat MS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University of Wisconsin, Madison.

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[636]

**TÍTULO / TITLE:** - Glioblastoma-initiating cells: relationship with neural stem cells and the micro-environment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Aug 14;5(3):1049-71. doi: 10.3390/cancers5031049.

- Enlace al texto completo (gratuito o de pago) [3390/cancers5031049](http://3390/cancers5031049)

**AUTORES / AUTHORS:** - Goffart N; Kroonen J; Rogister B

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Developmental Neurobiology, GIGA-Neurosciences Research Center, University of Liege, Liege 4000, Belgium.  
[Bernard.Register@ulg.ac.be](mailto:Bernard.Register@ulg.ac.be).

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM, WHO grade IV) is the most common and lethal subtype of primary brain tumor with a median overall survival of 15 months from the time of diagnosis. The presence in GBM of a cancer population displaying neural stem cell (NSC) properties as well as tumor-initiating abilities and resistance to current therapies suggests that these glioblastoma-initiating cells (GICs) play a central role in tumor development and are closely related to NSCs. However, it is nowadays still unclear whether GICs derive from NSCs, neural progenitor cells or differentiated cells such as astrocytes or oligodendrocytes. On the other hand, NSCs are located in specific regions of the adult brain called neurogenic niches that have been shown to control critical stem cell properties, to nourish NSCs and to support their self-renewal. This "seed-and-soil" relationship has also been adapted to cancer stem cell research as GICs also require a specific micro-environment to maintain their "stem cell" properties. In this review, we will discuss the controversies surrounding the origin and the identification of GBM stem cells and highlight the micro-environment impact on their biology.

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[637]

**TÍTULO / TITLE:** - Optic pathway glioma, scoliosis, Chiari type 1 malformation, and syringomyelia in a patient with neurofibromatosis type 1.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Aug;4(Suppl 1):S141-3. doi: 10.4103/0976-3147.116473.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.116473](#)

**AUTORES / AUTHORS:** - Incecik F; Ozlem HM; Altunbasak S

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Neurology, Cukurova University, Faculty of Medicine, Adana, Turkey.

[638]

**TÍTULO / TITLE:** - Primary motor cortex activation and lateralization in patients with tumors of the central region.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroimage Clin. 2013 Jan 14;2:221-8. doi: 10.1016/j.nicl.2013.01.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.nicl.2013.01.002](#)

**AUTORES / AUTHORS:** - Tozakidou M; Wenz H; Reinhardt J; Nennig E; Riffel K; Blatow M; Stippich C

**INSTITUCIÓN / INSTITUTION:** - Division of Diagnostic and Interventional Neuroradiology, Department of Radiology and Nuclear Medicine, University Hospital of Basel, Basel, Switzerland.

**RESUMEN / SUMMARY:** - Hemispheric lateralization is a frequently encountered phenomenon of cortical function. It describes the functional specialization of a region on one side of the brain for a given task. It is well characterized in motor and sensory, as well as language systems and becomes more and more known for various cognitive domains. While in the adult healthy brain hemispheric lateralization is mostly set, pathological processes may lead to cortical reorganization. In these cases neuroplasticity of the corresponding region in the non-dominant hemisphere seems to play an important role. In a previous study we investigated language associated regions in right-handed patients with frontal and temporal tumors of the left hemisphere. We observed a marked change of language lateralization in these patients towards the non-dominant hemisphere as measured by functional MRI (Partovi et al., 2012). In the present study we evaluated activation and lateralization of cortical motor areas in patients with tumors of the central region. BOLD fMRI was performed during unilateral voluntary movements of the contralesional hand in 87 patients. Individual correlations of measured BOLD-signals with the model hemodynamic reference function were determined on a ROI basis in single subjects and compared to those of 16 healthy volunteers. In volunteers the strongest activation is usually found in the M1 hand representation contralateral to the movement, while a weaker homotopic co-activation is observed in ipsilateral M1 (Stippich et al., 2007a). In the patient group our results show significant changes of motor activations, ranging from a reduction of M1 lateralization to equalization of M1 activations or even inversion of M1 lateralization during contralesional movements. This study corroborates in a large patient group the idea that lesions affecting M1 may lead to functional reorganization of cortical motor systems and in particular equalize hemispheric lateralization. However, it is not yet clear whether these changes are only an epiphenomenon or indeed reflect an attempt of recovery of brain function.

[639]

**TÍTULO / TITLE:** - Secondary infiltration of the central nervous system in patients with diffuse large B-cell lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rev Bras Hematol Hemoter. 2013;35(4):256-62. doi: 10.5581/1516-8484.20130094.

●● Enlace al texto completo (gratis o de pago) [5581/1516-8484.20130094](#)

**AUTORES / AUTHORS:** - da Rocha TM; Sergio Costa F; Pinto MS; da Silva IC; Paes RP; Chiattonne CS

**INSTITUCIÓN / INSTITUTION:** - Faculdade de Ciencias Medicas da Santa Casa de Sao Paulo - FCMSCSP, Sao Paulo, SP, Brazil.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To investigate the incidence and risk factors of infiltration of the central nervous system after the initial treatment of diffuse large B-cell lymphoma in patients treated at Santa Casa de Misericordia de Sao Paulo. **METHODS:** A total of 133 patients treated for diffuse large B-cell lymphoma from January 2001 to April 2008 were retrospectively analyzed in respect to the incidence and risk factors of secondary central nervous system involvement of lymphoma. Intrathecal prophylaxis was not a standard procedure for patients considered to be at risk. This analysis includes patients whether they received rituximab as first-line treatment or not. **RESULTS:** Nine of 133 (6.7%) patients developed central nervous system disease after a mean observation time of 29 months. The median time to relapse or progression was 7.9 months after diagnosis and all but one patient died despite the treatment administered. Twenty-six (19.5%) patients of this cohort received rituximab as first-line treatment and nine (7.1%) received intrathecal chemoprophylaxis. Of the nine patients that relapsed, seven (77.7%) had parenchymal central nervous system involvement; seven (77.7%) had stage III or IV disease; one (11.1%) had bone marrow involvement; two (22.2%) had received intrathecal chemoprophylaxis; and 3 (33.3%) had taken rituximab. In a multivariate analysis, the risk factors for this infiltration were being male, previous use of intrathecal chemotherapy and patients that were refractory to initial treatment. **CONCLUSION:** Central nervous system infiltration in this cohort is similar to that of previous reports in the literature. As this was a small cohort with a rare event, only three risk factors were important for this infiltration.

[640]

**TÍTULO / TITLE:** - Comparison of swallowing functions between brain tumor and stroke patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Rehabil Med. 2013 Oct;37(5):633-41. doi: 10.5535/arm.2013.37.5.633. Epub 2013 Oct 29.

●● Enlace al texto completo (gratis o de pago) [5535/arm.2013.37.5.633](#)

**AUTORES / AUTHORS:** - Park DH; Chun MH; Lee SJ; Song YB

**INSTITUCIÓN / INSTITUTION:** - Department of Rehabilitation Medicine, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To compare the swallowing functions according to the lesion locations between brain tumor and stroke patients. **METHODS:** Forty brain tumor patients and the same number of age-, lesion-, and functional status-matching stroke patients were enrolled in this study. Before beginning the swallowing

therapy, swallowing function was evaluated in all subjects by videofluoroscopic swallowing study. Brain lesions were classified as either supratentorial or in-fratentorial. We evaluated the following: the American Speech-Language-Hearing Association (ASHA) National Outcome Measurement System (NOMS) swallowing scale, clinical dysphagia scale, functional dysphagia scale (FDS), penetration-aspiration scale (PAS), oral transit time, pharyngeal transit time, the presence of vallecular pouch residue, pyriform sinus residue, laryngopharyngeal incoordination, premature spillage, a decreased swallowing reflex, pneumonia, and the feeding method at discharge. RESULTS: The incidence of dysphagia was similar in brain tumor and stroke patients. There were no differences in the results of the various swallowing scales and other parameters between the two groups. When compared brain tumor patients with supratentorial lesions, brain tumor patients with infratentorial lesions showed higher proportion of dysphagia ( $p=0.01$ ), residue ( $p<0.01$ ), FDS ( $p<0.01$ ), PAS ( $p<0.01$ ), and lower ASHA NOMS ( $p=0.02$ ) at initial evaluation. However, there was no significant difference for the swallowing functions between benign and malignant brain tumor patients. CONCLUSION: Swallowing function of brain tumor patients was not different from that of stroke patients according to matching age, location of lesion, and functional status. Similar to the stroke patients, brain tumor patients with infratentorial lesions present poor swallowing functions. However, the type of brain tumor as malignancy does not influence swallowing functions.

[641]

**TÍTULO / TITLE:** - Primary multiple cerebral hydatid disease: still symptomatic despite pathologically confirmed death of the cyst.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(4):505-8. doi: 10.5137/1019-5149.JTN.5826-12.1.

●● Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.5826-12.1](#)

**AUTORES / AUTHORS:** - Yaka U; Aras Y; Aydoseli A; Akcakaya MO; Sencer A; Imer M; Hepgul K

**INSTITUCIÓN / INSTITUTION:** - Istanbul University, Istanbul Faculty of Medicine, Department of Neurosurgery, Istanbul, Turkey.

**RESUMEN / SUMMARY:** - Hydatid disease is a life-threatening parasitic infestation caused by *Echinococcus granulosus*. Infection with *E. granulosus* typically results in the formation of hydatid cysts in liver, lungs, kidney and spleen. Majority of the intracranial cysts are secondary and solitary. Multiple primary cerebral cysts are uncommon. Surgical and medical management of a 14-year-old boy with multiple primary hydatid cysts are presented. 14 cysts, which were symptomatic due to their mass effect, were surgically removed, whereas a deep-seated asymptomatic cyst was followed-up with medical treatment. Despite proper antibiotic regimen the patient was admitted with epileptic seizures six months later. The deep-seated lesion was also surgically removed. Intraoperative observations and pathological examination demonstrated different characteristics, with pericystic gliosis, gel-like cyst content and death scolices within the cavity. In addition to the fact, that the presented case is an additional example for the rare primary multiple cerebral hydatid cysts, to our knowledge it is the first case of a dead cerebral hydatid cyst, causing symptoms despite effective medical treatment.

[642]

**TÍTULO / TITLE:** - Hormone replacement therapy and risk of glioma: A nationwide nested case-control study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Epidemiol. 2013 Dec;37(6):876-80. doi: 10.1016/j.canep.2013.09.017. Epub 2013 Oct 16.

●● Enlace al texto completo (gratis o de pago) [1016/j.canep.2013.09.017](#)

**AUTORES / AUTHORS:** - Andersen L; Friis S; Hallas J; Ravn P; Gaist D

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Odense University Hospital, Institute of Clinical Research, Faculty of Health Sciences, University of Southern Denmark, Sdr. Boulevard 29, 5000 Odense C, Denmark.

**RESUMEN / SUMMARY:** - Aim: Several studies indicate that use of hormone replacement therapy (HRT) is associated with an increased risk of intracranial meningioma, while associations between HRT use and risk of other brain tumors have been less explored. We investigated the influence of HRT use on the risk of glioma in a nationwide setting. Methods: Using population-based registries we conducted a case-control study nested in the Danish female population. We identified all women aged 55-84 years with a first diagnosis of histologically verified brain glioma during 2000-2009. Using risk-set sampling, each case was matched on birth year to eight population controls. Ever use of HRT was defined as  $\geq 2$  HRT prescriptions and categorized according to type (oestrogens only, combined oestrogen-progestagen and progestagen only) and duration of use ( $< 1$ ,  $\geq 1$  to  $< 5$ ,  $\geq 5$  to  $< 10$ , and  $\geq 10$  years). We used conditional logistic regression to compute odds ratios (ORs), with 95% confidence intervals (CIs), for glioma associated with HRT use, adjusting for potential confounders. Results: We identified 658 cases and 4350 controls. Ever use of HRT was associated with an OR of 0.9 (95% CI: 0.8-1.1) for glioma. For long-term use ( $\geq 10$  years) we found ORs of 1.1 (95% CI: 0.7-1.7) for HRT overall, 1.6 (95% CI: 0.9-2.6) for oestrogen only, 0.8 (0.4-1.6) for combined oestrogen-progestagen, and 2.2 (0.9-5.5) for progestagen. Tests for trends were statistically non-significant in all strata. Conclusion: Use of HRT overall was not associated with an increased risk of glioma. However, our findings indicate that prolonged use of oestrogen only or progestagen may be associated with an increased risk of glioma.

[643]

**TÍTULO / TITLE:** - Clinical implications of girdin protein expression in glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - ScientificWorldJournal. 2013 Oct 27;2013:986073. doi: 10.1155/2013/986073.

●● Enlace al texto completo (gratis o de pago) [1155/2013/986073](#)

**AUTORES / AUTHORS:** - Zhao L; Ma S; Liu Q; Liang P

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Affiliated Hospital of Harbin Medical University, Harbin, Heilongjiang 150001, China.

**RESUMEN / SUMMARY:** - Objective. To investigate the expression status of Girdin in glioma and the relationship between Girdin expression and the biological behavior of glioma. Materials and methods. The expression status of Girdin in glioma from 560 cases was evaluated by RT-PCR, Western Blot and immunohistochemistry. The relationship between Girdin expression and clinic-pathological parameters as well as

prognosis was also studied. Results. The expression of Girdin in high grade glioma was significantly higher than low grade glioma. After universal analysis, the expression of Girdin protein is closely related to KPS score, extent of resection, Ki67 and WHO grade, but it was not related to sex and age. Finally, extent of resection, Ki67 and WHO grade were indentified to be related to the Girdin protein expression in logistic regression. Interestingly, we found that the expression of Girdin is significantly related to the distant metastasis of glioma. After COX regression analysis, KPS score, Extent of resection, Ki67, WHO grade as well as Girdin were observed to be independent prognostic factors. Conclusions. Girdin is differential expressed in the glioma patients and closely related to the biological behavior of Glioma. Finally, Girdin was found to be a strong predictor for the post-operative prognosis.

[644]

**TÍTULO / TITLE:** - A peptide-mediated targeting gene delivery system for malignant glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Nanomedicine. 2013;8:3631-40. doi: 10.2147/IJN.S44990. Epub 2013 Sep 24.

●● Enlace al texto completo (gratis o de pago) [2147/IJN.S44990](#)

**AUTORES / AUTHORS:** - Wang C; Ning L; Wang H; Lu Z; Li X; Fan X; Wang X; Liu Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Qilu Hospital of Shandong University, Jinan, People's Republic of China ; Brain Science Research Institute of Shandong University, Jinan, People's Republic of China.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common and malignant glioma. Although there has been considerable progress in treatment strategies, the prognosis of many patients with GBM remains poor. In this work, polyethylenimine (PEI) and the VTWTPQAWFQWV (VTW) peptide were modified and synthesized into GBM-targeting nanoparticles. The transfection efficiency of U-87 (human glioblastoma) cells was evaluated using fluorescence microscopy and flow cytometry. Cell internalization was investigated to verify the nanoparticle delivery into the cytoplasm. Results showed that the methods of polymer conjugation and the amount of VTW peptide were important factors to polymer synthesis and transfection. The PEI-VTW20 nanoparticles increased the transfection efficiency significantly. This report describes the use of VTW peptide-based PEI nanoparticles for intracellular gene delivery in a GBM cell-specific manner.

[645]

**TÍTULO / TITLE:** - Peripheral and cranial nerve sheath tumors-a clinical spectrum.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Surg. 2012 Oct;74(5):371-5. doi: 10.1007/s12262-011-0392-5. Epub 2012 Jan 10.

●● Enlace al texto completo (gratis o de pago) [1007/s12262-011-0392-5](#)

**AUTORES / AUTHORS:** - Arcot R; Ramakrishnan K; Rao S

**INSTITUCIÓN / INSTITUTION:** - Sri Ramachandra Medical College and Research Institute, No.1, Ramachandra Nagar, Porur, Chennai-600 116 Tamil Nadu India.

**RESUMEN / SUMMARY:** - To analyze the incidence of nerve sheath tumors in a tertiary care hospital over a period of 5 years and review the literature. Medical case records from last 5 years were retrieved and histopathology and operative details were studied

in a retrospective analysis. There is a slight male preponderance when it comes to nerve sheath tumors and acoustic schwannomas accounted for the largest fraction among schwannomas. Nerve sheath tumors include a wide spectrum of schwannomas, neurofibromas and malignant peripheral nerve sheath tumors. Hence combination of clinical, pathological and surgical expertise is needed to diagnose accurately.

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[646]

**TÍTULO / TITLE:** - Clinical effectiveness of preoperative embolization for cerebellar hemangioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian Pac J Cancer Prev. 2013;14(9):5179-83.

**AUTORES / AUTHORS:** - Liu AH; Peng TM; Wu Z; Xiao XR; Jiang CH; Wu ZX; Li YX

**INSTITUCIÓN / INSTITUTION:** - Department of Interventional Neuroradiology, Beijing Neurosurgical Institute, Beijing Tiantan Hospital, Capital Medical University, Beijing, China E-mail : [liuaihua\\_tty@126.com](mailto:liuaihua_tty@126.com), [lijouxiang\\_tty@126.com](mailto:lijouxiang_tty@126.com).

**RESUMEN / SUMMARY:** - The cerebellar hemangioblastoma (CHB) has an abundant blood supply and deep anatomical location. Complete surgical resection is generally very difficult. This study investigated the safety and effectiveness of preoperative embolization followed by surgical resection of CHB in a large cohort of patients. A database of 125 CHB patients with surgical resection in Beijing Tiantan Hospital between July 2006 and July 2012 was reviewed. Of those, 46 cases (experimental group) received preoperative embolization, 79 cases (control group) underwent surgery without embolization. Patient demographics, tumor size, duration of surgery, blood loss, blood transfusion, complications and follow-up results were collected and analyzed retrospectively. In the experimental group, the Kamofsky score (KS) was 80-100 in 40 cases (86.9%), 40-70 in 4 cases (8.7%), and below 40 in 2 cases (4.3%). Among 31 cases with follow-up, KS was 80-100 in 27 cases (87.1%), 40-70 in 2 cases (6.5%), and 0 in 2 cases (6.5%). In control group, KS was 80-100 in 65 cases (82.2%), 40-70 in 6 cases (7.6%), 10-30 in 3 cases (3.8%), and 0 in 3 cases (3.8%). Among 53 cases with follow-up, KS was 80-100 in 44 cases (83.0%), 40-70 in 4 cases (7.5%), 10-30 in 1 case (1.9%), and 0 in 4 cases (7.5%). There were statistically significant differences between the experimental and control groups in tumor size, duration of surgery, amount of intraoperative blood loss and transfusion ( $p < 0.01$ ). However, complications ( $p = 0.31$ ) and follow-up results ( $p = 0.76$ ) showed no significant differences between groups. Selective preoperative embolization of those CHB patients with richer blood supply, higher hemorrhage risk, is safe and effective, and is a reliable adjuvant therapy for complete surgical resection of CHB.

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[647]

**TÍTULO / TITLE:** - Clinicopathological study of gene rearrangement and microRNA expression of primary central nervous system diffuse large B-cell lymphomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Exp Pathol. 2013 Sep 15;6(10):2048-55.

**AUTORES / AUTHORS:** - Zheng J; Xu J; Ma S; Sun X; Geng M; Wang L

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, The General Hospital, Jinan Military Command Jinan, China, 250031.

**RESUMEN / SUMMARY:** - We studied the clinicopathological and imaging characteristics of primary central nervous system diffuse large B-cell lymphomas (PCNS-DLBCL). Imaging, pathologic histology, and immunohistochemical staining characteristics were analyzed, and the immunoglobulin heavy and light chain gene rearrangement of 25 PCNS-DLBCL cases was examined. MicroRNA was extracted from 10 cases each of PCNS-DLBCL, extracerebral germinal center DLBCL (GC-DLBCL), and extracerebral non-GC-DLBCL (NGC-DLBCL); we conducted chip hybridization and comparatively analyzed the difference among the three. PCNS-DLBCLs typically involved no less than two cerebral lobes (10/25); the frontal lobe was affected most often (6/25). Target-shaped structures were observed in all PCNS-DLBCLs due to the proliferation of centroblast-like large lymphocytes surrounding the vessels. There was strong and diffuse immunostaining for CD20 and CD79a, and negative immunostaining for CD3, CD5, CD23, and cyclin D1 for all PCNS-DLBCLs. The percentage of cells with nuclear positivity for anti-Ki67 antibody ranged 50-90% (mean, 80%). Three, 19, and 22 PCNS-DLBCLs were CD10-, Bcl-6-, and melanoma ubiquitous mutated 1-positive, respectively. Twenty-four PCNS-DLBCLs were B-cell monoclonal. MicroRNA hybridization showed that 788 PCNS-DLBCL microRNAs/segments increased to at least twice that of NGC-DLBCLs, and 401 PCNS-DLBCL microRNAs/segments declined to less than half of that of NGC-DLBCLs. Six hundred and eleven PCNS-DLBCL microRNAs/segments increased to at least twice that of GC-DLBCLs, and 229 PCNS-DLBCL microRNAs/segments declined to less than half of that in GC-DLBCLs. PCNS-DLBCL typically affected multiple sites, tended to occur in older men, arose from activated B cells, had high B-cell monoclonality; its microRNA expression differed from that of NGC-DLBCL and GC-DLBCL.

[648]

**TÍTULO / TITLE:** - Glioblastoma with ovarian teratoma having N-methyl-D-aspartate receptor (NMDAR) antibody in CSF—a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rinsho Shinkeigaku. 2013;53(9):712-5.

**AUTORES / AUTHORS:** - Fujii H; Kubo S; Yunoki T; Sato K; Takamatsu K; Tanaka K; Takahashi Y; Kuriyama M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Ota Memorial Hospital.

**RESUMEN / SUMMARY:** - A 54-year-old woman presented with complex partial seizure with impaired consciousness. Brain MRI revealed a high intensity lesion on T2-weighted and FLAIR images in the left temporal lobe, indicating limbic encephalitis. CT and MRI of the pelvis showed right ovarian teratoma. The cerebrospinal fluid (CSF) were positive for antibodies against the GluRepsilon2, GluRdelta2, and antibodies against NR1 + NR2B heteromers. On the basis of these data, anti-N-methyl-D-aspartate receptor (NMDAR) encephalitis associated with ovarian teratoma was suspected, and the right ovariectomy was performed. Six months after onset, brain biopsy from the right temporal lobe led to a diagnosed of glioblastoma. This is the first glioblastoma case with ovarian teratoma having autoantibodies against GluR and NR1 + NR2B heteromers in CSF. We suggest that patients with NMDAR antibodies should be carefully diagnosed with anti-NMDAR encephalitis.

[649]

**TÍTULO / TITLE:** - Cost-effectiveness analysis of cochlear dose reduction by proton beam therapy for medulloblastoma in childhood.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Radiat Res. 2013 Nov 1.

●● Enlace al texto completo (gratis o de pago) [1093/jrr/rrt112](#)

**AUTORES / AUTHORS:** - Hirano E; Fuji H; Onoe T; Kumar V; Shirato H; Kawabuchi K  
**INSTITUCIÓN / INSTITUTION:** - Tokyo Medical and Dental University, Faculty of Dentistry, School of Dentistry, 1-5-45 Yushima, Bunkyo-ku, Tokyo, 113-8510 Japan.

**RESUMEN / SUMMARY:** - Background: The aim of this study is to evaluate the cost-effectiveness of proton beam therapy with cochlear dose reduction compared with conventional X-ray radiotherapy for medulloblastoma in childhood. Methods: We developed a Markov model to describe health states of 6-year-old children with medulloblastoma after treatment with proton or X-ray radiotherapy. The risks of hearing loss were calculated on cochlear dose for each treatment. Three types of health-related quality of life (HRQOL) of EQ-5D, HUI3 and SF-6D were used for estimation of quality-adjusted life years (QALYs). The incremental cost-effectiveness ratio (ICER) for proton beam therapy compared with X-ray radiotherapy was calculated for each HRQOL. Sensitivity analyses were performed to model uncertainty in these parameters. Results: The ICER for EQ-5D, HUI3 and SF-6D were \$21 716/QALY, \$11 773/QALY, and \$20 150/QALY, respectively. One-way sensitivity analyses found that the results were sensitive to discount rate, the risk of hearing loss after proton therapy, and costs of proton irradiation. Cost-effectiveness acceptability curve analysis revealed a 99% probability of proton therapy being cost effective at a societal willingness-to-pay value. Conclusions: Proton beam therapy with cochlear dose reduction improves health outcomes at a cost that is within the acceptable cost-effectiveness range from the payer's standpoint.

[650]

**TÍTULO / TITLE:** - AQP9 Expression in Glioblastoma Multiforme Tumors Is Limited to a Small Population of Astrocytic Cells and CD15(+)/CalB(+) Leukocytes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Sep 25;8(9):e75764. doi: 10.1371/journal.pone.0075764.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0075764](#)

**AUTORES / AUTHORS:** - Jelen S; Parm Ulhoi B; Larsen A; Frokiaer J; Nielsen S; Rutzler M

**INSTITUCIÓN / INSTITUTION:** - Water and Salt Research Center, Department of Biomedicine, Aarhus University, Aarhus, Denmark.

**RESUMEN / SUMMARY:** - Aquaporin-9 (AQP9) is a membrane protein channel that is permeable to a range of small solutes, including glycerol, urea and nucleobases. Expression of AQP9 in normal brain is limited, while widespread AQP9 expression has previously been reported in human glioblastoma. However, the specific cellular expression of AQP9 in glioblastoma remains unclear. In this study, we have examined microarrays to corroborate AQP9 mRNA expression in glioma. These analyses suggested that AQP9 mRNA expression in glioblastoma is primarily explained by tumor infiltration with AQP9 expressing leukocytes. Immunolabeling confirmed that within tumor regions, AQP9 was expressed in CD15(+) and Calgranulin B(+) leukocytes, but

also in larger cells that morphologically resembled glioma cells. Specificity of immunoreagents was tested in recombinant cell lines, leukocyte preparations, and sections of normal human brain and liver tissue. Apparent AQP9(+) glioma cells were frequently observed in proximity to blood vessels, where brain tumor stem cells have been observed previously. A fraction of these larger AQP9 expressing cells co-expressed the differentiated astrocyte marker GFAP. AQP9 expressing glioma cells were negative for the brain tumor stem cell marker CD15, but were observed in proximity to CD15(+) glioma cells. AQP9 expression may therefore require signals of the perivascular tumor environment or alternatively it may be restricted to a population of glioma stem cell early progenitor cells.

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[651]

**TÍTULO / TITLE:** - Association between mutation of the NF2 gene and monosomy 22 in menopausal women with sporadic meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Med Genet. 2013 Oct 30;14(1):114.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1471-2350-14-114](#)

**AUTORES / AUTHORS:** - Taberner M; Jara-Acevedo M; Nieto AB; Caballero AR; Otero A; Sousa P; Goncalves J; Domingues PH; Orfao A

**RESUMEN / SUMMARY:** - BACKGROUND: Meningioma was the first solid tumor shown to contain a recurrent genetic alteration e.g. monosomy 22/del(22q), NF2 being the most relevant gene involved. Although monosomy 22/del(22q) is present in half of all meningiomas, and meningiomas frequently carry NF2 mutations, no study has been reported so far in which both alterations are simultaneously assessed and correlated with the features of the disease. METHODS: Here, we analyzed the frequency of both copy number changes involving chromosome 22 and NF2 mutations in 20 sporadic meningiomas using high-density SNP-arrays, interphase-FISH and PCR techniques. RESULTS: Our results show a significant frequency of NF2 mutations (6/20 patients, 30%), most of which (5/6) had not been previously reported in sporadic meningiomas. NF2 mutations involved five different exons and led to a truncated protein (p.Leu163CysfsX46, p.Phe62LeufsX61, p.Asp281MetfsX15, p.Phe285LeufsX11, p.Gln389ArgfsX37) and an in frame deletion of Phe119. Interestingly, all NF2 mutated cases were menopausal women with monosomy 22 but not del(22q). CONCLUSIONS: These results confirm and extend on previous observations about the high frequency and heterogeneity of NF2 mutations in sporadic meningiomas and indicate they could be restricted to a well-defined cytogenetic and clinical subgroup of menopausal women. Further studies in large series of patients are required to confirm our observations.

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[652]

**TÍTULO / TITLE:** - Pediatric tectal plate gliomas: clinical and radiological progression, MR imaging characteristics, and management of hydrocephalus.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Nov 1.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.9.PEDS13347](#)

**AUTORES / AUTHORS:** - Griessenauer CJ; Rizk E; Miller JH; Hendrix P; Tubbs RS; Dias MS; Riemenschneider K; Chern JJ

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, University of Alabama, Birmingham;

**RESUMEN / SUMMARY:** - Object Tectal plate gliomas are generally low-grade astrocytomas with favorable prognosis, and observation of the lesion and management of hydrocephalus remain the mainstay of treatment. Methods A cohort of patients with tectal plate gliomas at 2 academic institutions was retrospectively reviewed. Results Forty-four patients with a mean age of 10.2 years who harbored tectal plate gliomas were included in the study. The mean clinical and radiological follow-up was 7.6 +/- 3.3 years (median 7.9 years, range 1.5-14.7 years) and 6.5 +/- 3.1 years (median 6.5 years, range 1.1-14.7 years), respectively. The most frequent intervention was CSF diversion (81.8% of patients) followed by biopsy (11.4%), radiotherapy (4.5%), chemotherapy (4.5%), and resection (2.3%). On MR imaging tectal plate gliomas most commonly showed T1-weighted isointensity (71.4%), T2-weighted hyperintensity (88.1%), and rarely enhanced (19%). The initial mean volume was 1.6 +/- 2.2 cm<sup>3</sup> and it increased to 2.0 +/- 4.4 cm<sup>3</sup> (p = 0.628) at the last follow-up. Frontal and occipital horn ratio (FOHR) and third ventricular width statistically decreased over time (p < 0.001 and p < 0.05, respectively). Conclusions The authors' results support existing evidence that tectal plate gliomas frequently follow a benign clinical and radiographic course and rarely require any intervention beyond management of associated hydrocephalus.

[653]

**TÍTULO / TITLE:** - The effect of CXCR4 silencing on epithelial-mesenchymal transition related genes in glioma u87 cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Anat Rec (Hoboken). 2013 Dec;296(12):1850-6. doi: 10.1002/ar.22821. Epub 2013 Oct 23.

●● Enlace al texto completo (gratis o de pago) [1002/ar.22821](#)

**AUTORES / AUTHORS:** - Zhu Y; Yang P; Wang Q; Hu J; Xue J; Li G; Zhang G; Li X; Li W; Zhou C; Zhao M; Wang D

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Laboratory, Tianjin Huan Hu Hospital, Tianjin, 300060, China; Tianjin Key Laboratory of Cerebral Vessels and Neural Degeneration, Tianjin, 300060, China.

**RESUMEN / SUMMARY:** - The epithelial-mesenchymal transition (EMT) of tumor cells is deemed to be closely associated with tumor metastasis. CXCR4 has been proved to play an important role in the process of tumor metastasis. This study illustrates the function and expression of CXCR4 silencing and the EMT related genes in the human glioma cell line U87. The results showed that CXCR4 silencing could inhibit the cell invasive and adhesion potentials, expression of N-cadherin, vimentin, beta-catenin, TGF-beta1, p-Smad2, and p-Akt, and the activity of transcription factors NF-kappaB, AP-1, Snail, and twist. Meanwhile, CXCR4 silencing could also up-regulate the expression of E-cadherin, indicating that silencing of CXCR4 expression can inhibit the expression of EMT related genes in U87 cells. The study would provide a potential theoretical basis for the further exploration of the role of CXCR4 in human glioma. Anat Rec, 296:1850-1856, 2013. © 2013 Wiley Periodicals, Inc.

[654]

**TÍTULO / TITLE:** - Successful treatment by chemotherapy of pineal parenchymal tumor with intermediate differentiation: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. Acceso gratuito al texto completo a partir de 1 año de la fecha de publicación.

●● Enlace a la Editora de la Revista <http://cancerres.aacrjournals.org/>

●● Cita: Cancer Research: <> Treat. 2013 Sep;45(3):244-9. doi: 10.4143/crt.2013.45.3.244. Epub 2013 Sep 30.

●● Enlace al texto completo (gratuito o de pago) [4143/crt.2013.45.3.244](#)

**AUTORES / AUTHORS:** - Yi JW; Kim HJ; Choi YJ; Seol YM; Kahng DH; Choi YY; Park EK

**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine, Pusan National University Hospital, Pusan University College of Medicine, Busan, Korea.

**RESUMEN / SUMMARY:** - A 37-year-old male presented with a mass measuring 2.5 cm in size in the midbrain and obstructive hydrocephalus, which had manifested as a headache and dizziness. Magnetic resonance (MR) imaging of the brain showed intermediate enhancement on T1-weighted MR imaging and a high intensity of enhancement on T2-weighted MR. Neurosurgeons performed an occipital craniotomy with partial removal of the tumor and the postoperative diagnosis was a pineal parenchymal tumor with intermediate differentiation. He had undergone irradiation with 54 Gy of radiation on 27 fractions for removal of the remaining tumor approximately one month after surgery. However, in follow-up imaging performed four months after radiotherapy, a remnant mass in the superoposterior aspect of the midbrain was found to have extended to the hypothalamus and the third ventricle. He was treated with six cycles of procarbazine, lomustine, vincristine chemotherapy. At five months since the completion of chemotherapy, the brain MR imaging showed no evidence of any remaining tumor and he no longer displayed any of his initial symptoms.

[655]

**TÍTULO / TITLE:** - Targeting glioblastoma with NK cells and mAb against NG2/CSPG4 prolongs animal survival.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Sep;4(9):1527-46.

**AUTORES / AUTHORS:** - Poli A; Wang J; Domingues O; Planaguma J; Yan T; Rygh CB; Skaftnesmo KO; Thorsen F; McCormack E; Hentges F; Pedersen PH; Zimmer J; Enger PO; Chekenya M

**INSTITUCIÓN / INSTITUTION:** - Translational Cancer Research, Department of Biomedicine, University of Bergen, Norway.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most malignant brain tumor where patients' survival is only 14.6 months, despite multimodal therapy with debulking surgery, concurrent chemotherapy and radiotherapy. There is an urgent, unmet need for novel, effective therapeutic strategies for this devastating disease. Although several immunotherapies are under development for the treatment of GBM patients, the use of natural killer (NK) cells is still marginal despite this being a promising approach to treat cancer. In regard of our knowledge on the role of NG2/CSPG4 in promoting GBM aggressiveness we investigated the potential of an innovative immunotherapeutic strategy combining mAb9.2.27 against NG2/CSPG4 and NK cells in preclinical animal models of GBM. Multiple immune escape mechanisms maintain the tumor

microenvironment in an anti-inflammatory state to promote tumor growth, however, the distinct roles of resident microglia versus recruited macrophages is not elucidated. We hypothesized that exploiting the cytokine release capabilities of activated (NK) cells to reverse the anti-inflammatory axis combined with mAb9.2.27 targeting the NG2/CSPG4 may favor tumor destruction by editing pro-GBM immune responses. Combination treatment with NK+mAb9.2.27 diminished tumor growth that was associated with reduced tumor proliferation, increased cellular apoptosis and prolonged survival compared to vehicle and monotherapy controls. The therapeutic efficacy was mediated by recruitment of CCR2<sup>low</sup> macrophages into the tumor microenvironment, increased ED1 and MHC class II expression on microglia that might render them competent for GBM antigen presentation, as well as elevated IFN-gamma and TNF-alpha levels in the cerebrospinal fluid compared to controls. Depletion of systemic macrophages by liposome-encapsulated clodronate decreased the CCR2<sup>low</sup> macrophages recruited to the brain and abolished the beneficial outcomes. Moreover, mAb9.2.27 reversed tumor-promoting effects of patient-derived tumor-associated macrophage/microglia(TAM) ex vivo. Taken together, these findings indicate that NK+mAb9.2.27 treatment may be an amenable therapeutic strategy to treat NG2/CSPG4 expressing GBMs. We provide a novel conceptual approach of combination immunotherapy for glioblastoma. The results traverse beyond the elucidation of NG2/CSPG4 as a therapeutic target, but demonstrate a proof of concept that this antibody may hold potential for the treatment of GBM by activation of tumor infiltrated microglia/macrophages.

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[656]

**TÍTULO / TITLE:** - A comparison of PET imaging agents for the assessment of therapy efficacy in a rodent model of glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am J Nucl Med Mol Imaging. 2013 Sep 19;3(5):397-407.

**AUTORES / AUTHORS:** - Moonshi SS; Bejot R; Atcha Z; Vijayaragavan V; Bhakoo KK; Goggi JL

**INSTITUCIÓN / INSTITUTION:** - Singapore Bioimaging Consortium (ASTAR) Helios, 02-02, 11 Biopolis Way, 138667 Singapore.

**RESUMEN / SUMMARY:** - The aim of the current study was to assess the ability of PET imaging agents to detect early response to therapy in an orthotopic experimental rodent model of glioma. Clinically, MRI and [(18)F]FDG PET are routinely used but their ability to assess early therapeutic response can be limited. In this study, nude rats were implanted with U87-MG tumors orthotopically and imaged with either [(18)F]FDG or [(18)F]FLT to determine which tracer acts as the most sensitive biomarker for evaluation of treatment response in animals undergoing anti-angiogenic therapy with sunitinib, a receptor tyrosine kinase (RTK) inhibitor. Of the radiopharmaceuticals tested, [(18)F]FLT proved to be the most sensitive biomarker in the proliferating glioma, based on tumour-to-normal tissue radiotracer uptake (TNR ~17) in comparison to [(18)F]FDG (TNR ~1.7). Furthermore, [(18)F]FLT displayed earlier assessment of therapy efficacy, than either tumour volume measured by MRI or [(18)F]FDG PET imaging. Overall, longitudinal molecular imaging with [(18)F]FLT provides earlier detection of therapy response than either of the commonly used clinical imaging modalities potentially improving patient management.

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[657]

**TÍTULO / TITLE:** - Leptomeningeal infiltration of primary CNS B-cell lymphoma diagnosed by the biopsy of cauda equina: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rinsho Shinkeigaku. 2013;53(10):803-8.

**AUTORES / AUTHORS:** - Nakajima H; Motomura M; Yamaguchi M; Katoh T; Abe K

**INSTITUCIÓN / INSTITUTION:** - Unit of Translational Medicine, Department of Clinical Neuroscience and Neurology, Nagasaki University Graduate School of Biomedical Science.

**RESUMEN / SUMMARY:** - A 49-year-old man was admitted to our hospital with progressive gait disturbance. Our examination revealed a low grade fever, weight loss derived muscle weakness, sensory disturbance and loss of deep tendon reflex of the lower extremities. Magnetic resonance imaging (MRI) detected an abnormal intensity and gadolinium enhancement in the cauda equina. Two weeks after admission, disturbance of consciousness and bladder appeared. Cerebrospinal fluid examination showed pleocytosis, elevated protein and soluble IL-2R, but cytological examination was class II negative. We performed a cauda equina biopsy urgently and diagnosed malignant lymphoma, of a diffuse large B-cell type. We selected combined MTX-based chemoradiotherapy and his symptoms significantly improved after a month. He achieved complete remission and remains recurrence-free after 10 months post treatment although he remains with light paraparesis and sensory disturbance of the lower extremities. He has already gone back to a normal life. An examination of cauda equina biopsy led to quick diagnosis and treatment.

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[658]

**TÍTULO / TITLE:** - Resveratrol decreases B-cell lymphoma-2 expression and viability in GH3 pituitary adenoma cells of the rat.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Onco Targets Ther. 2013 Sep 16;9:1269-76. doi: 10.2147/OTT.S45154.

●● Enlace al texto completo (gratis o de pago) [2147/OTT.S45154](#)

**AUTORES / AUTHORS:** - Voellger B; Kirches E; Wilisch-Neumann A; Weise A; Tapia-Perez JH; Rupa R; Mawrin C; Firsching R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Otto von Guericke University, Magdeburg, Germany.

**RESUMEN / SUMMARY:** - OBJECTIVE: Resveratrol is a phytoestrogen with various antiproliferative and proapoptotic effects. This in vitro study aimed to analyze the effect of resveratrol on the viability and expression of modulators of apoptosis in GH3 pituitary adenoma cells of the rat. METHODS: GH3 cells were incubated with resveratrol concentrations from 20 to 100 µM for 48-72 hours. Cell viability was quantified using a hemocytometer. We assessed the ability of resveratrol to kill GH3 cells by an enzyme-linked immunosorbent assay (ELISA) of nucleosome liberation and by DNA degradation (unidimensional gel electrophoresis). Relative messenger RNA (mRNA) expression of survivin, B-cell lymphoma-2 protein (BCL-2) and BCL-2-associated X protein (BAX) normalized to beta2 microglobulin was measured using quantitative real-time polymerase chain reaction (qRT-PCR). RESULTS: GH3 cell survival significantly decreased with increasing concentrations of resveratrol. In GH3

cells treated with 100 µM resveratrol, ELISA demonstrated a significant rise of nucleosome liberation, which typically occurs during apoptosis. In parallel, gel electrophoresis showed degradation of DNA into random fragments, pointing to a necrotic mode of cell death in most GH3 cells. In GH3 cells treated with 100 µM resveratrol, qRT-PCR detected a significant decrease of BCL-2 mRNA expression and a decrease of survivin mRNA expression, whereas a change of BAX mRNA expression could not be found. The BAX/BCL-2 ratio was significantly increased in GH3 cells after resveratrol treatment. CONCLUSIONS: Resveratrol reduces GH3 cell viability in a dose-dependent manner by inducing nonapoptotic cell death and apoptosis. Apoptosis in GH3 cells is probably mediated by resveratrol-dependent downregulation of apoptosis inhibitors, namely BCL-2 and possibly survivin. Further investigation of the potential effects of resveratrol on pituitary adenoma cells is warranted.

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[659]

**TÍTULO / TITLE:** - BET bromodomain protein inhibition is a therapeutic option for medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Nov;4(11):2045-56.

**AUTORES / AUTHORS:** - Henssen A; Thor T; Odersky A; Heukamp L; El-Hindy N; Beckers A; Speleman F; Althoff K; Schafers S; Schramm A; Sure U; Fleischhack G; Eggert A; Schulte JH

**INSTITUCIÓN / INSTITUTION:** - Istituto Superiore di Sanita, Rome, Italy.

**RESUMEN / SUMMARY:** - Medulloblastoma is the most common malignant brain tumor of childhood, and represents a significant clinical challenge in pediatric oncology, since overall survival currently remains under 70%. Patients with tumors overexpressing MYC or harboring a MYC oncogene amplification have an extremely poor prognosis. Pharmacologically inhibiting MYC expression may, thus, have clinical utility given its pathogenetic role in medulloblastoma. Recent studies using the selective small molecule BET inhibitor, JQ1, have identified BET bromodomain proteins, especially BRD4, as epigenetic regulatory factors for MYC and its targets. Targeting MYC expression by BET inhibition resulted in antitumoral effects in various cancers. Our aim here was to evaluate the efficacy of JQ1 against preclinical models for high-risk MYC-driven medulloblastoma. Treatment of medulloblastoma cell lines with JQ1 significantly reduced cell proliferation and preferentially induced apoptosis in cells expressing high levels of MYC. JQ1 treatment of medulloblastoma cell lines downregulated MYC expression and resulted in a transcriptional deregulation of MYC targets, and also significantly altered expression of genes involved in cell cycle progression and p53 signalling. JQ1 treatment prolonged the survival of mice harboring medulloblastoma xenografts and reduced the tumor burden in these mice. Our preclinical data provide evidence to pursue testing BET inhibitors, such as JQ1, as molecular targeted therapeutic options for patients with high-risk medulloblastomas overexpressing MYC or harboring MYC amplifications.

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[660]

**TÍTULO / TITLE:** - Strategies in gene therapy for glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Oct 23;5(4):1271-305. doi: 10.3390/cancers5041271.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5041271](#)

**AUTORES / AUTHORS:** - Kwiatkowska A; Nandhu MS; Behera P; Chiocca EA; Viapiano MS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Brigham and Women's Hospital and Harvard Medical School, Boston, MA 02115, USA.  
[mviapiano@partners.org](mailto:mviapiano@partners.org).

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most aggressive form of brain cancer, with a dismal prognosis and extremely low percentage of survivors. Novel therapies are in dire need to improve the clinical management of these tumors and extend patient survival. Genetic therapies for GBM have been postulated and attempted for the past twenty years, with variable degrees of success in pre-clinical models and clinical trials. Here we review the most common approaches to treat GBM by gene therapy, including strategies to deliver tumor-suppressor genes, suicide genes, immunomodulatory cytokines to improve immune response, and conditionally-replicating oncolytic viruses. The review focuses on the strategies used for gene delivery, including the most common and widely used vehicles (i.e., replicating and non-replicating viruses) as well as novel therapeutic approaches such as stem cell-mediated therapy and nanotechnologies used for gene delivery. We present an overview of these strategies, their targets, different advantages, and challenges for success. Finally, we discuss the potential of gene therapy-based strategies to effectively attack such a complex genetic target as GBM, alone or in combination with conventional therapy.

[661]

**TÍTULO / TITLE:** - Sox2(+) stem/progenitor cells in the adult mouse pituitary support organ homeostasis and have tumor-inducing potential.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Stem Cell. 2013 Oct 3;13(4):433-45. doi: 10.1016/j.stem.2013.07.004.

●● Enlace al texto completo (gratis o de pago) [1016/j.stem.2013.07.004](#)

**AUTORES / AUTHORS:** - Andoniadou CL; Matsushima D; Mousavy Gharavy SN; Signore M; Mackintosh AI; Schaeffer M; Gaston-Massuet C; Mollard P; Jacques TS; Le Tissier P; Dattani MT; Pevny LH; Martinez-Barbera JP

**INSTITUCIÓN / INSTITUTION:** - Birth Defects Research Centre, Neural Development Unit, UCL Institute of Child Health, London, WC1N 1EH, UK. Electronic address: [cynthia.andoniadou@kcl.ac.uk](mailto:cynthia.andoniadou@kcl.ac.uk).

**RESUMEN / SUMMARY:** - Sox2(+) adult mouse pituitary cells can self-renew and terminally differentiate in vitro, but their physiological role in vivo and possible contribution to oncogenesis remain largely unknown. Using genetic lineage tracing, we show here that the Sox2(+) cell compartment of both the embryonic and adult pituitary contains stem/progenitor cells that are able to differentiate into all hormone-producing lineages and contribute to organ homeostasis during postnatal life. In addition, we show that targeted expression of oncogenic beta-catenin in Sox2(+) cells gives rise to pituitary tumors, but, unexpectedly, the tumor mass is not derived from the Sox2(+) mutation-sustaining cells, suggesting a paracrine role of Sox2(+) cells in pituitary oncogenesis. Our data therefore provide in vivo evidence of a role for Sox2(+) stem/progenitor cells in long-term physiological maintenance of the adult pituitary, and

highlight an unexpected non-cell-autonomous role for these cells in the induction of pituitary tumors.

[662]

**TÍTULO / TITLE:** - Marked Recovery of Vision in Children With Optic Pathway Gliomas Treated With Bevacizumab.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - JAMA. Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://jama.ama-assn.org/search.dtl>

●● Cita: JAMA: <> Ophthalmol. 2013 Nov 14. doi:

10.1001/jamaophthalmol.2013.5819.

●● Enlace al texto completo (gratuito o de pago)

[1001/jamaophthalmol.2013.5819](#)

**AUTORES / AUTHORS:** - Avery RA; Hwang EI; Jakacki RI; Packer RJ

**INSTITUCIÓN / INSTITUTION:** - Center for Neuroscience and Behavioral Medicine, Children's National Medical Center, Washington, DC2The Gilbert Family Neurofibromatosis Institute, Children's National Medical Center, Washington, DC3Division of Neurology, Children's National Medical Center, Washington, DC4Division of Ophthalmology, Children's National Medical Center, Washington, DC.

**RESUMEN / SUMMARY:** - IMPORTANCE Children with optic pathway gliomas (OPGs) frequently experience vision loss from their tumors. Standard front-line treatment using carboplatin-based chemotherapy typically produces only a modest benefit (eg, stabilization or 0.2 logMAR improvement) in visual acuity (VA). Bevacizumab is a monoclonal antibody that targets vascular endothelial growth factor and acts primarily as an anti-angiogenic agent. Recent reports suggest a qualitative improvement in vision after bevacizumab-based treatment in children with OPGs. OBSERVATIONS We report 4 cases of pediatric OPGs (2 neurofibromatosis type 1-related and 2 sporadic cases) that received treatment with bevacizumab due to progressive VA or visual field (VF) loss despite prior treatment with chemotherapy or proton-beam radiation. All 4 subjects demonstrated a marked improvement in their VA, VF, or both while receiving bevacizumab-based therapy. Three patients had complete resolution of their VA or VF loss in at least 1 eye-2 of whom had previously received bevacizumab therapy. CONCLUSIONS AND RELEVANCE Given that most patients with OPG-related visual impairment will show modest or no visual improvement with standard treatment, the incorporation of bevacizumab in these cases may greatly improve visual outcomes and should be considered in appropriate clinical situations.

[663]

**TÍTULO / TITLE:** - Potent Antiproliferative Cembrenoids Accumulate in Tobacco upon Infection with *Rhodococcus fascians* and Trigger Unusual Microtubule Dynamics in Human Glioblastoma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 22;8(10):e77529. doi:

10.1371/journal.pone.0077529.

●● Enlace al texto completo (gratuito o de pago) [1371/journal.pone.0077529](#)

**AUTORES / AUTHORS:** - Nacoulma AP; Megalizzi V; Pottier LR; De Lorenzi M; Thoret S; Dubois J; Vandeputte OM; Duez P; Vereecke D; Jaziri ME

**INSTITUCIÓN / INSTITUTION:** - Laboratoire de Toxicologie, Faculte de Pharmacie, Universite Libre de Bruxelles, Brussels, Belgium.

**RESUMEN / SUMMARY:** - AIMS: Though plant metabolic changes are known to occur during interactions with bacteria, these were rarely challenged for pharmacologically active compounds suitable for further drug development. Here, the occurrence of specific chemicals with antiproliferative activity against human cancer cell lines was evidenced in hyperplasia (leafy galls) induced when plants interact with particular phytopathogens, such as the Actinomycete *Rhodococcus fascians*. METHODS: We examined leafy galls fraction F3.1.1 on cell proliferation, cell division and cytoskeletal disorganization of human cancer cell lines using time-lapse videomicroscopy imaging, combined with flow cytometry and immunofluorescence analysis. We determined the F3.1.1-fraction composition by gas chromatography coupled to mass spectrometry. RESULTS: The leafy galls induced on tobacco by *R. fascians* yielded fraction F3.1.1 which inhibited proliferation of glioblastoma U373 cells with an IC50 of 4.5 microg/mL, F.3.1.1 was shown to increase cell division duration, cause nuclear morphological deformations and cell enlargement, and, at higher concentrations, karyokinesis defects leading to polyploidization and apoptosis. F3.1.1 consisted of a mixture of isomers belonging to the cembrenoids. The cellular defects induced by F3.1.1 were caused by a peculiar cytoskeletal disorganization, with the occurrence of fragmented tubulin and strongly organized microtubule aggregates within the same cell. Colchicine, paclitaxel, and cembrene also affected U373 cell proliferation and karyokinesis, but the induced microtubule rearrangement was very different from that provoked by F3.1.1. Altogether our data indicate that the cembrenoid isomers in F3.1.1 have a unique mode of action and are able to simultaneously modulate microtubule polymerization and stability.

[664]

**TÍTULO / TITLE:** - Pseudochoolinesterase activity in cerebrospinal fluid as a biomarker of solid central nervous system tumors in children.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Croat Med J. 2013 Oct 28;54(5):429-35.

**AUTORES / AUTHORS:** - Mikecin L; Krizmaric M; Stepan Giljevic J; Gjurasin M; Kern J; Lenicek Krleza J; Popovic L

**INSTITUCIÓN / INSTITUTION:** - Lili Mikecin, University Clinical Center Maribor, Pediatric Intensive Care Unit, Ljubljanska ulica 5, 2000 Maribor, Slovenia, [mikecin.lili@gmail.com](mailto:mikecin.lili@gmail.com).

**RESUMEN / SUMMARY:** - Aim. To determine the activity of pseudochoolinesterase (PChE) in cerebrospinal fluid (CSF) and serum in children with solid central nervous system (CNS) tumor and to assess whether PChE activity could be a valid biomarker for solid CNS tumors in children. Methods. The study and control group included 30 children each. Children in the study group had a solid CNS tumor, while those from the control group had never suffered from any tumor diseases. CSF and serum samples were collected from all participants and PChE activity was determined using the Ellman's spectrophotometric method. PChE activity in CSF was shown as a cerebrospinal fluid/serum ratio expressed in percentage, ie, PChE CSF/serum ratio. Receiver operating characteristic (ROC) curve was used to assess whether PChE activity can be used as a biomarker for identifying children with solid CNS tumors. Results. Children with solid CNS tumor had significantly higher PChE activity in CSF and serum, as well as PChE CSF/serum ratio ( $P=0.001$ ). PChE CSF/serum ratio in the

study group was 2.38% (interquartile range [IQR] 1.14-3.97) and 1.09% (IQR 0.95-1.45) in the control group. ROC curve analysis of PChE CSF/serum ratio resulted in an area under the curve (AUC) value of 0.76 (95% confidence interval [CI] 0.63-0.88) and a cut-off of 1.09. Twenty five of 29 patients with elevated PChE CSF/serum ratio had a tumor, corresponding to a sensitivity of 83% and a specificity of 53%. Conclusion. PChE CSF/serum ratio may be used as a test or biomarker with good sensitivity for solid CNS tumors in children.

[665]

**TÍTULO / TITLE:** - Inhibition of delta-opioid receptors induces brain glioma cell apoptosis through the mitochondrial and protein kinase C pathways.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Nov;6(5):1351-1357. Epub 2013 Aug 26.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1546](#)

**AUTORES / AUTHORS:** - Zhou L; Guo X; Chen M; Fu S; Zhou J; Ren G; Yang Z; Fan W

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Hospital of Jilin University, Changchun, Jilin 130021, P.R. China.

**RESUMEN / SUMMARY:** - Brain glioma is a malignant tumor with a high incidence rate and poor prognosis that has become a focus of studies of central nervous system diseases. Previous studies have suggested that delta-opioid receptors may affect the proliferation and apoptosis of numerous types of tumor cells. However, to date, their precise mechanism(s) of action have not been elucidated. The present study aimed to investigate the effects of inhibiting delta-opioid receptors in brain glioma cell proliferation and apoptosis and their relevant molecular mechanisms. Various doses of naltrindole were supplied to treat brain glioma cells using the MTT method to assess the proliferation index. Flow cytometry was used to investigate the changes in cell apoptosis and mitochondrial membrane potential. The expression levels of Bax, Bcl-2, Bcl-xL, cytochrome c, caspase-9, caspase-3 and protein kinase C (PKC) were measured using western blotting. Naltrindole was observed to inhibit brain glioma cell proliferation and promote apoptosis in a dose- and time-dependent manner. Furthermore, the addition of naltrindole lead to changes in the brain glioma cell membrane potential and regulated Bax translocation to the mitochondrial membrane, consequently promoting the release of cytochrome c into the cytoplasm, followed by the activation of caspase-9 and -3, which caused cell apoptosis. In addition, naltrindole was able to regulate the expression levels of the cellular internal phosphorylated PKC proteins, which are closely associated with the inhibition of cell proliferation. In conclusion, the inhibition of delta-opioid receptors may inhibit brain glioma cell proliferation and lead to apoptosis, which is closely associated with the mitochondrial and PKC pathways.

[666]

**TÍTULO / TITLE:** - Cognitive changes associated with central nervous system malignancies and treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Semin Oncol Nurs. 2013 Nov;29(4):238-47. doi: 10.1016/j.soncn.2013.08.004.

- Enlace al texto completo (gratis o de pago) [1016/j.soncn.2013.08.004](http://1016/j.soncn.2013.08.004)

**AUTORES / AUTHORS:** - Bohan EM

**RESUMEN / SUMMARY:** - OBJECTIVES: To review the cognitive changes associated with infiltrative, malignant brain tumors and treatments for brain tumors. DATA SOURCE: Review of journal articles and textbooks. CONCLUSION: Improvements in surgical, radiation, and medical therapies for central nervous system malignancies have resulted in increased patient survival. However, an increase in cognitive decline also has been associated with the presence of tumor and with tumor treatment modalities. Consequently, a negative impact on quality of life, as well as additional stress on caregivers occurs. IMPLICATIONS FOR NURSING PRACTICE: The role of the neuro-oncology nurse is to assist in identifying cognitive impairments in patients with central nervous system malignancies, and to aid in promoting strategies for improved quality of life for patients and their caregivers. The long-term goal for the neuro-oncology community is to further improve treatments, to minimize side effects and, ultimately, to reduce the cognitive sequelae of these tumors and their treatments.

[667]

**TÍTULO / TITLE:** - Comparison of Resilience in Adolescent Survivors of Brain Tumors and Healthy Adolescents.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Nurs. 2013 Oct 18.

- Enlace al texto completo (gratis o de pago)

[1097/NCC.0000000000000094](http://1097/NCC.0000000000000094)

**AUTORES / AUTHORS:** - Chen CM; Chen YC; Wong TT

**INSTITUCIÓN / INSTITUTION:** - Author Affiliations: School of Nursing, National Defense Medical Center, Taipei (Dr C.-M. Chen); Graduate School of Nursing, Hungkuang University, Taichung (Dr Y.-C. Chen); and Department of Surgery, Division of Neurosurgery, Cheng Hsin Hospital, Taipei (Dr Wong), Taiwan.

**RESUMEN / SUMMARY:** - BACKGROUND:: Resilience is essential for the psychological adjustment of adolescents experiencing difficulty. Comparing differences in resilience between adolescent survivors of brain tumors and healthy adolescents may help identify factors related to resilience in adolescents. OBJECTIVE:: The purpose of this study was to clarify how illness impacts the normative development of adolescent survivors of brain tumors by comparing them to healthy adolescents in terms of resilience and how it is affected by various health problems. METHODS:: This cross-sectional, case-control study used convenience sampling to recruit 13- to 18-year-old adolescent survivors of brain tumors and healthy adolescents matched by school level, gender, and living area. Data were collected by structured questionnaires. RESULTS:: The sample included 60 adolescent survivors and 120 healthy adolescents. Participants in both groups were predominantly male adolescents (63.3%) and junior high school students (55%). The 2 groups did not differ significantly in resilience, but survivors without emotional problems had a higher mean resilience score than did healthy adolescents and survivors with emotional problems ( $F = 8.65, P < .01$ ). CONCLUSIONS:: Our results identify emotional problems as a risk factor for resilience in both adolescent survivors of brain tumors and healthy adolescents. In addition, the impact of emotional problems on resilience was more severe in brain tumor survivors than in healthy adolescents. IMPLICATIONS FOR PRACTICE:: Our

results suggest that pediatric oncology nurses design interdisciplinary school-based interventions to reduce the impact of emotional problems on resilience in both healthy adolescents and those who survived brain tumors.

[668]

**TÍTULO / TITLE:** - Added value of fused somatostatin receptor imaging/magnetic resonance imaging in a rare case of paraganglioma of the urinary bladder.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rev Esp Med Nucl. Acceso gratuito al texto completo a partir de los 2 años de la fecha de publicación.

●● Enlace a la Editora de la Revista <http://db.doyma.es/>

●● Cita: Revista Española de Medicina Nuclear: <> Imagen Mol. 2013 Oct 1. pii: S2253-654X(13)00128-5. doi: 10.1016/j.remn.2013.08.001.

●● Enlace al texto completo (gratis o de pago) [1016/j.remn.2013.08.001](http://1016/j.remn.2013.08.001)

**AUTORES / AUTHORS:** - Treglia G; Ceriani L; Merlo E; Ruberto T; Paone G; Giovanella L

**INSTITUCIÓN / INSTITUTION:** - Department of Nuclear Medicine and PET/CT Centre, Oncology Institute of Southern Switzerland, Bellinzona, Switzerland. Electronic address: [giorgiomednuc@libero.it](mailto:giorgiomednuc@libero.it).

[669]

**TÍTULO / TITLE:** - A case of smoldering anti-leucine-rich glioma-inactivated 1 (LGI1) antibody-associated limbic encephalitis with faciobrachial dystonic seizure.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rinsho Shinkeigaku. 2013;53(9):706-11.

**AUTORES / AUTHORS:** - Nakaoku Y; Maki T; Kanazawa K; Matsumoto R; Fukuyama H; Takahashi R; Ikeda A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Kyoto University Graduate School of Medicine.

**RESUMEN / SUMMARY:** - We report a 59-year-old right-handed woman with smoldering leucine-rich glioma-inactivated 1 (LGI1) antibody-associated limbic encephalitis (LE) following faciobrachial dystonic seizures. During 8 months before her admission, she developed partial seizures manifesting very brief and very frequent dystonia in her right hand sometimes with oral automatism and loss of awareness. In addition, she showed psychiatric disturbances such as emotionally labile condition and personality changes. On admission, neuropsychological examination revealed short-term memory impairment. During electroencephalography (EEG) monitoring, ictal EEG showed rhythmic delta waves and interictal EEG showed intermittent irregular slow waves at the bilateral frontotemporal area. Brain MRI demonstrated high T2/FLAIR signal changes in the left amygdala expanding into the left hippocampus. FDG-PET showed hypermetabolism in the left amygdala, hippocampus and the bilateral basal ganglia. Cerebrospinal fluid analysis was unremarkable. There were no signs of malignant tumor detected on systemic examination. LGI1 antibody was positive in the serum and the cerebrospinal fluid and the clinical diagnosis of LGI1 antibody-associated LE was confirmed. Her symptoms and the abnormalities in the brain MRI/FDG-PET showed immediate improvement after anti-epileptic and steroid therapy.

[670]

**TÍTULO / TITLE:** - A high-content small molecule screen identifies sensitivity of glioblastoma stem cells to inhibition of polo-like kinase 1.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 30;8(10):e77053. doi: 10.1371/journal.pone.0077053.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0077053](#)

**AUTORES / AUTHORS:** - Danovi D; Folarin A; Gogolok S; Ender C; Elbatsh AM; Engstrom PG; Stricker SH; Gargica S; Georgian A; Yu D; U KP; Harvey KJ; Ferretti P; Paddison PJ; Preston JE; Abbott NJ; Bertone P; Smith A; Pollard SM

**INSTITUCIÓN / INSTITUTION:** - Samantha Dickson Brain Cancer Unit and Department of Cancer Biology, UCL Cancer Institute, University College London, London, United Kingdom.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common primary brain cancer in adults and there are few effective treatments. GBMs contain cells with molecular and cellular characteristics of neural stem cells that drive tumour growth. Here we compare responses of human glioblastoma-derived neural stem (GNS) cells and genetically normal neural stem (NS) cells to a panel of 160 small molecule kinase inhibitors. We used live-cell imaging and high content image analysis tools and identified JNJ-10198409 (J101) as an agent that induces mitotic arrest at prometaphase in GNS cells but not NS cells. Antibody microarrays and kinase profiling suggested that J101 responses are triggered by suppression of the active phosphorylated form of polo-like kinase 1 (Plk1) (phospho T210), with resultant spindle defects and arrest at prometaphase. We found that potent and specific Plk1 inhibitors already in clinical development (BI 2536, BI 6727 and GSK 461364) phenocopied J101 and were selective against GNS cells. Using a porcine brain endothelial cell blood-brain barrier model we also observed that these compounds exhibited greater blood-brain barrier permeability in vitro than J101. Our analysis of mouse mutant NS cells (INK4a/ARF(-/-), or p53(-/-)), as well as the acute genetic deletion of p53 from a conditional p53 floxed NS cell line, suggests that the sensitivity of GNS cells to BI 2536 or J101 may be explained by the lack of a p53-mediated compensatory pathway. Together these data indicate that GBM stem cells are acutely susceptible to proliferative disruption by Plk1 inhibitors and that such agents may have immediate therapeutic value.

[671]

**TÍTULO / TITLE:** - U87MG glioma cells overexpressing IL-17 accelerate early-stage growth and cause a higher level of CD31 mRNA expression in tumor tissues.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Oct;6(4):993-999. Epub 2013 Aug 7.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1518](#)

**AUTORES / AUTHORS:** - Hu J; Ye H; Zhang D; Liu W; Li M; Mao Y; Lu Y

**INSTITUCIÓN / INSTITUTION:** - Department of Lab Medicine, Gongli Hospital, Second Military Medicine University, Pudong New Area, Shanghai 200135, P.R. China ; Department of Lab Medicine, Huashan Hospital, Fudan University, Shanghai 200040, P.R. China.

**RESUMEN / SUMMARY:** - Immunological alterations have been reported to be involved in glioma, the most common malignant disease of the adult brain. Our recent study identified higher levels of IL-17 in glioma specimens. The present study investigated the role and possible mechanisms of IL-17 in glioma tumorigenesis. Human IL-17 cDNA was cloned and inserted into the eukaryotic pEGFP-N1 expression vector, which was used to transfect the glioma U87MG cell line, resulting in a high level of IL-17 expression in these cells. The cells were then transfected with IL-17 (pEGFP-N1-IL-17-U87MG) or mock (pEGFP-N1-U87MG) vector or left untransfected (U87MG) and subcutaneously inoculated into the right flank of nude mice. The results revealed that the pEGFP-N1-IL-17-U87MG cells grew more rapidly in the early stages ( $P < 0.05$ , determined on day 32 post-inoculation compared with the other two groups). Quantitative (q)PCR detected higher mouse (m)CD31 mRNA levels in the IL-17-transfected group ( $P < 0.01$ ) compared with the mock-transfected and untransfected groups. IL-17 transfection altered the mRNA expression of a panel of molecules that are associated with immunity and inflammation in U87MG cells in vitro. An effect of the vector was identified, whereby the mock transfection strongly inhibited cell growth in vivo and dramatically altered the mRNA levels of multiple molecules in the cell culture in vitro compared with the untransfected cells. The present study confirmed that IL-17 overexpression may enhance glioma cell growth in vivo, which may be associated with accelerated angiogenesis. IL-17 overexpression may also alter the cellular mRNA expression of immune-related molecules.

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[672]

**TÍTULO / TITLE:** - Effect of ERBB2 expression on invasiveness of glioma TJ905 cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian Pac J Trop Med. 2013 Dec;6(12):964-7. doi: 10.1016/S1995-7645(13)60172-8.

●● Enlace al texto completo (gratis o de pago) [1016/S1995-7645\(13\)60172-8](#)

**AUTORES / AUTHORS:** - Xu GF; Xie WF

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, First Hospital of Xi'an, Jiaotong University, Xi'an 710061, China.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To investigate the influence and possible mechanism of ERBB2 expression on the invasiveness of glioma cells. **METHODS:** Glioma TJ905 cells were separated and cultured. ERBB2 shRNA and overexpressing vectors were constructed, which were then transfected. The ERBB2 expression was up-regulated or down-regulated. Changes of invasiveness of TJ905 cells were detected by Transwell assay, and the expressions of matrix metalloprotease (MMP)-2 and MMP-9 were measured by Western blot. **RESULTS:** ERBB2 shRNA transfection vector could effectively inhibit expression of ERBB2; while ERBB2 overexpressing vector transfection could significantly improve the expression of ERBB2 in TJ905 cells. Transwell assay showed that when ERBB2 expression was down-regulated, the invasiveness of TJ905 cells was notably decreased; when ERBB2 expression was up-regulated, the invasiveness of TJ905 cells was markedly increased. Meanwhile, Western blot indicated that down-regulating ERBB2 inhibited the expression of MMP-2 and MMP-9, while up-regulating ERBB2 enhanced their expressions. **CONCLUSIONS:** ERBB2 expression is closely related to the invasiveness of glioma TJ905 cells.

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[673]

**TÍTULO / TITLE:** - Surgical management of posterior petrous meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Neurochir Pol. 2013 Sep-Oct;47(5):456-66.

**AUTORES / AUTHORS:** - Nowak A; Dziedzic T; Marchel A

**INSTITUCIÓN / INSTITUTION:** - dr Arkadiusz Nowak, Klinika Neurochirurgii, Warszawski Uniwersytet Medyczny, ul. Banacha 1 A, 02-097 Warszawa, Polska, e-mail: [arkady.n@wp.pl](mailto:arkady.n@wp.pl).

**RESUMEN / SUMMARY:** - Background and purpose: The aim of the study is to present our experience in the surgical treatment of posterior petrous meningiomas in regard to clinical presentation, surgical anatomy, complications and long-term functional postoperative results. Material and methods: A series of 48 consecutive patients operated on for posterior petrous meningiomas at the authors' institution between 2002 and 2011 is reported. The main symptom on first admission was hypoacusis, impairment of the fifth cranial nerve and cerebellar ataxia. The tumour was found to be attached to the premeatal dura in 46%, the inframeatal dura in 29% and the postmeatal dura in 25% of cases. Tumour resection was categorized as grade I in 16 patients, grade II in 29 patients, grade III in 1 patient and grade IV in 2 patients, according to the Simpson classification system. The petrosal approach and retrosigmoid approach were suitable for posterior petrous meningiomas. Results: Postoperative facial nerve dysfunction appeared in 8 and further deteriorated in 2 patients. Hearing function deteriorated after surgery in 8 and improved in 2 cases. Perioperative death occurred in two patients. Tumour recurrence was observed in two patients, and both underwent a second operation and postoperative stereotactic radiotherapy. Conclusions: Surgical treatment of posterior petrous meningiomas has become increasingly safe but these tumours still remain a surgical challenge because of the relatively high incidence of permanent complications associated with their removal. The site of displacement of the cranial nerves depending on the dural origin of the tumour has the most influence on the related difficulties in its removal.

[674]

**TÍTULO / TITLE:** - Successful treatment of hemorrhagic congenital intracranial immature teratoma with neoadjuvant chemotherapy and surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Oct 25.

●● Enlace al texto completo (gratis o de pago) [3171/2013.9.PEDS1347](#)

**AUTORES / AUTHORS:** - Fukuoka K; Yanagisawa T; Suzuki T; Wakiya K; Matsutani M; Sasaki A; Nishikawa R

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Neuro-Oncology.

**RESUMEN / SUMMARY:** - Congenital intracranial immature teratomas carry a dismal prognosis, and the usefulness of chemotherapy for these tumors has not been elucidated. The authors report on the successful management of a case of congenital intracranial immature teratoma by using neoadjuvant chemotherapy and surgery after the failure of an initial attempt at resection. The patient was an infant who had begun vomiting frequently at the age of 12 days and had been admitted to a hospital at the age of 18 days with continued vomiting, increased head circumference, and disturbance of consciousness. A CT scan of the brain revealed a large mass in his posterior fossa and hydrocephalus. Surgery was performed on an emergent basis, but

only minor tumor resection could be performed due to massive intraoperative hemorrhage. The histopathological diagnosis was immature teratoma. Postoperatively, the infant was in critical condition due to severe postoperative complications, and when he was transferred to the authors' institution 43 days after birth, his respiratory condition was still unstable because of lower cranial nerve palsy. Chemotherapy with carboplatin and etoposide resulted in moderate shrinkage of the tumor. Further chemotherapy led to improvement in the patient's general condition and weight gain, which allowed for a second attempt at resection. During this second surgery, which was performed when the child was 8 months of age, after 8 courses of chemotherapy, the tumor was completely resected with little bleeding. Histological findings from the second operation were consistent with mature teratoma. This case indicates that upfront chemotherapy may be effective for the initial management of such cases. Although the objective response to the treatment was modest, chemotherapy reduced the hemorrhagic nature of the tumor, facilitated improvement of the patient's general condition, and allowed for successful resection.

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[675]

**TÍTULO / TITLE:** - The coexistence of pleomorphic xanthoastrocytoma and arteriovenous malformation. A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Folia Neuropathol. 2013;51(3):269-74.

**AUTORES / AUTHORS:** - Naganska E; Matyja E; Pucko E; Zabek M

**INSTITUCIÓN / INSTITUTION:** - Ewa Matyja, MD, PhD, Department of Clinical and Experimental Neuropathology, M. Mossakowski Medical Research Centre, Polish Academy of Sciences, 5 Pawinskiego St., 02-106 Warsaw, Poland, e-mail: [ematyja@imdik.pan.pl](mailto:ematyja@imdik.pan.pl).

**RESUMEN / SUMMARY:** - Pleomorphic xanthoastrocytoma (PXA) is a rare, low-grade astrocytic tumour corresponding to WHO grade II that is usually diagnosed in adolescents and young adults with epileptic seizures. Pleomorphic xanthoastrocytoma typically appears as a superficial, often cystic mass lesion predominantly affecting the temporal lobe. Cases with typical pathology and total tumour excision have a favourable prognosis. Occasionally, the tumour reveals anaplastic features and behaves more aggressively due to local recurrences or subarachnoid spread. The treatment of PXA includes gross total resection followed by neuroradiological monitoring. The association between vascular malformations and cerebral gliomas is rarely encountered, especially if both such lesions occur as separate parts of the same tumour. The vascular pathology of such changes most often refers to arteriovenous malformation (AVM), less frequently - cavernous angioma. The coexistence of PXA and AVM is extremely rare, especially when dealing with two distinct patterns found within the same tumour mass. We present a 36-year-old woman with tumour of parasagittal localization in the right occipital lobe that was composed of two different and clearly demarcated components: PXA and vascular lesion of AVM morphology. The pathogenesis of such coexistence remains still unclear.

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[676]

**TÍTULO / TITLE:** - An extremely rare case of glioblastoma multiforme of the spinal cord.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Medicina (Kaunas). 2013;49(5):242-5.

**AUTORES / AUTHORS:** - Randakeviciene G; Gleizniene R; Basevicius A; Lukosevicius S

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Medical Academy, Lithuanian University of Health Sciences, Eiveniu 2, 50028 Kaunas, Lithuania.

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**RESUMEN / SUMMARY:** - Being the most common glial cell tumor of the adult brain, primary glioblastoma multiforme is an extremely rare but excessively devastating condition of the spinal cord. It presents with indistinctive magnetic resonance imaging findings, so the diagnosis is very complicated to make. A low-grade glioma may undergo a malignant transformation into glioblastoma multiforme in a very short period, critically impairing treatment possibilities and prognosis, so a correct and timely diagnosis is crucial. We report a case of intramedullary glioblastoma multiforme in a young man and describe the diagnostic difficulties and devastating progression of the entity.

[677]

**TÍTULO / TITLE:** - ALDH1 is an immunohistochemical diagnostic marker for solitary fibrous tumours and haemangiopericytomas of the meninges emerging from gene profiling study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol Commun. 2013 May 9;1(1):10.

●● [Enlace al texto completo \(gratis o de pago\) 1186/2051-5960-1-10](#)

**AUTORES / AUTHORS:** - Bouvier C; Bertucci F; Metellus P; Finetti P; de Paula AM; Forest F; Mokhtari K; Miquel C; Birnbaum D; Vasiljevic A; Jouvret A; Coindre JM; Loundou A; Figarella-Branger D

**INSTITUCIÓN / INSTITUTION:** - Department of Neuropathology and APHM Tumor Bank, LaTimone Hospital, Marseille, France. [corinne.bouvier@univ-amu.fr](mailto:corinne.bouvier@univ-amu.fr).

**RESUMEN / SUMMARY:** - BACKGROUND: Solitary Fibrous Tumours (SFT) and haemangiopericytomas (HPC) are rare meningeal tumours that have to be distinguished from meningiomas and more rarely from synovial sarcomas. We recently found that ALDH1A1 was overexpressed in SFT and HPC as compared to soft tissue sarcomas. Using whole-genome DNA microarrays, we defined the gene expression profiles of 16 SFT/HPC (9 HPC and 7 SFT). Expression profiles were compared to publicly available expression profiles of additional SFT or HPC, meningiomas and synovial sarcomas. We also performed an immunohistochemical (IHC) study with anti-ALDH1 and anti-CD34 antibodies on Tissue Micro-Arrays including 38 SFT (25 meningeal and 13 extrameningeal), 55 meningeal haemangiopericytomas (24 grade II, 31 grade III), 163 meningiomas (86 grade I, 62 grade II, 15 grade III) and 98 genetically confirmed synovial sarcomas. RESULTS: ALDH1A1 gene was overexpressed in SFT/HPC, as compared to meningiomas and synovial sarcomas. These findings were confirmed at the protein level. 84% of the SFT and 85.4% of the HPC were positive with anti-ALDH1 antibody, while only 7.1% of synovial sarcomas and 1.2% of meningiomas showed consistent expression. Positivity was usually more diffuse in SFT/HPC compared to other tumours with more than 50% of tumour cells immunostained in 32% of SFT and 50.8% of HPC. ALDH1 was a sensitive and specific marker for the diagnosis of SFT (SE = 84%, SP = 98.8%) and HPC (SE = 84.5%, SP =

98.7%) of the meninges. In association with CD34, ALDH1 expression had a specificity and positive predictive value of 100%. CONCLUSION: We show that ALDH1, a stem cell marker, is an accurate diagnostic marker for SFT and HPC, which improves the diagnostic value of CD34. ALDH1 could also be a new therapeutic target for these tumours which are not sensitive to conventional chemotherapy.

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[678]

**TÍTULO / TITLE:** - Elevated Serum IL-17A but not IL-6 in Glioma Versus Meningioma and Schwannoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian Pac J Cancer Prev. 2013;14(9):5225-30.

**AUTORES / AUTHORS:** - Doroudchi M; Pische ZG; Malekzadeh M; Golmoghaddam H; Taghipour M; Ghaderi A

**INSTITUCIÓN / INSTITUTION:** - Department of Immunology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran E-mail : [mdoroud@sums.ac.ir](mailto:mdoroud@sums.ac.ir).

**RESUMEN / SUMMARY:** - Background: There is a Th1/Th2 cytokine imbalance and expression of IL-17 in patients with brain tumours. We aimed to compare the levels of IL-17A and IL-6 in sera of glioma, meningioma and schwannoma patients as well as in healthy individuals. Materials and Methods: IL-17A and IL-6 levels were measured in sera of 38 glioma, 24 meningioma and 18 schwannoma patients for comparison with 26 healthy controls by commercial ELISA assays. Results: We observed an increase in the IL-17A in 30% of glioma patients while only 4% and 5.5% of meningioma and schwannoma patients and none of the healthy controls showed elevated IL-17A in their sera (0.29+/-0.54, 0.03+/-0.15 and 0.16+/-0.68 vs. 0.00+/-0.00pg/ml; p=0.01, p=0.01 and p=0.001, respectively). There was also a significant decrease in the level of IL-6 in glioma patients compared to healthy controls (2.34+/-4.35 vs. 4.67+/-4.32pg/ml; p=0.01). There was a direct correlation between the level of IL-17A and age in glioma patients (p=0.005). Glioma patients over 30 years of age had higher IL-17A and lower IL-6 in their sera compared to the young patients. In addition, a non-significant grade-specific inverse trend between IL-17A and IL-6 was observed in glioma patients, where high-grade gliomas had higher IL-17A and lower IL-6. Conclusions: Our data suggest a Th17 mediated inflammatory response in the pathogenesis of glioma. Moreover, tuning of IL-6 and IL-17A inflammatory cytokines occurs during progression of glioma. IL-17A may be a potential biomarker and/or immunotherapeutic target in glioma cases.

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[679]

**TÍTULO / TITLE:** - PD-0332991, a CDK4/6 inhibitor, significantly prolongs survival in a genetically engineered mouse model of brainstem glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 2;8(10):e77639. doi: 10.1371/journal.pone.0077639.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0077639](#)

**AUTORES / AUTHORS:** - Barton KL; Misuraca K; Cordero F; Dobrikova E; Min HD; Gromeier M; Kirsch DG; Becher OJ

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Duke University, Durham, North Carolina, United States of America ; Preston Robert Tisch Brain Tumor Center, Duke University, Durham, North Carolina, United States of America.

**RESUMEN / SUMMARY:** - Diffuse intrinsic pontine glioma (DIPG) is an incurable tumor that arises in the brainstem of children. To date there is not a single approved drug to effectively treat these tumors and thus novel therapies are desperately needed. Recent studies suggest that a significant fraction of these tumors contain alterations in cell cycle regulatory genes including amplification of the D-type cyclins and CDK4/6, and less commonly, loss of Ink4a-ARF leading to aberrant cell proliferation. In this study, we evaluated the therapeutic approach of targeting the cyclin-CDK-Retinoblastoma (Rb) pathway in a genetically engineered PDGF-B-driven brainstem glioma (BSG) mouse model. We found that PD-0332991 (PD), a CDK4/6 inhibitor, induces cell-cycle arrest in our PDGF-B; Ink4a-ARF deficient model both in vitro and in vivo. By contrast, the PDGF-B; p53 deficient model was mostly resistant to treatment with PD. We noted that a 7-day treatment course with PD significantly prolonged survival by 12% in the PDGF-B; Ink4a-ARF deficient BSG model. Furthermore, a single dose of 10 Gy radiation therapy (RT) followed by 7 days of treatment with PD increased the survival by 19% in comparison to RT alone. These findings provide the rationale for evaluating PD in children with Ink4a-ARF deficient gliomas.

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[680]

**TÍTULO / TITLE:** - A rare presentation of follicular lymphoma: cerebellar involvement, successfully treated with a combination of radiotherapy and chemotherapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Res. Acceso gratuito al texto completo a partir de 1 año de la fecha de publicación.

●● Enlace a la Editora de la Revista <http://cancerres.aacrjournals.org/>

●● Cita: Cancer Research: <> Treat. 2013 Sep;45(3):234-8. doi: 10.1143/crt.2013.45.3.234. Epub 2013 Sep 30.

●● Enlace al texto completo (gratuito o de pago) [4143/crt.2013.45.3.234](http://crt.2013.45.3.234)

**AUTORES / AUTHORS:** - Karadurmus N; Ataergin S; Erdem G; Cakar M; Emer O; Ozaydin S; Ozturk M; Safali M; Arpacı F

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, Gulhane School of Medicine, Ankara, Turkey.

**RESUMEN / SUMMARY:** - The central nervous system (CNS) is an important area of involvement for both high-grade, aggressive primary and secondary lymphomas. Although follicular lymphoma represents a low-grade histology, it may rarely present with CNS involvement. Here, we describe a patient diagnosed with follicular lymphoma who was presented with cerebellar involvement.

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[681]

**TÍTULO / TITLE:** - A case of adult onset medulloblastoma during maintenance chemotherapy for anaplastic astrocytoma one year after radiotherapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(4):521-6. doi: 10.5137/1019-5149.JTN.5198-11.1.

●● Enlace al texto completo (gratuito o de pago) [5137/1019-5149.JTN.5198-](http://5137/1019-5149.JTN.5198-11.1)

[11.1](#)

**AUTORES / AUTHORS:** - Takeshi N; Kazuhiko S; Koji I; Toshikazu H; Kaoru K

**INSTITUCIÓN / INSTITUTION:** - Hiroshima University, Department of Neurosurgery, Hiroshima-City, Japan.

**RESUMEN / SUMMARY:** - Multiple primitive intracranial tumors with different histological characteristics are uncommon. Although coexistence of a medulloblastoma with glial tumors has been reported in children, medulloblastoma is rarely found in adults, especially those older than 40 years of age. We present an extremely rare case of a medulloblastoma developing in a 40-year-old male undergoing maintenance chemotherapy for anaplastic astrocytoma for 21 months after radiotherapy. Initially, he complained of intractable epilepsy characterized by complex partial seizures. Magnetic resonance imaging (MRI) revealed a slightly enhanced mass lesion in the left insula region. He underwent subtotal removal of the tumor and it was histologically diagnosed as anaplastic astrocytoma. After 19 months of treatment with temozolomide (TMZ) and radiotherapy, he presented with vertigo and headache. A homogeneously enhanced mass had developed in the left cerebellar hemisphere. He received gross total resection of the second tumor, pathologically diagnosed as medulloblastoma. In conclusion, this is the first case report of an adult medulloblastoma coexisting with anaplastic astrocytoma.

[682]

**TÍTULO / TITLE:** - Liposomal encapsulation enhances in vivo near infrared imaging of exposed phosphatidylserine in a mouse glioma model.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Molecules. 2013 Nov 26;18(12):14613-28. doi: 10.3390/molecules181214613.

●● Enlace al texto completo (gratis o de pago) [3390/molecules181214613](#)

**AUTORES / AUTHORS:** - Zhang L; Zhao D

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, The University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75390, USA. [Dawen.Zhao@UTSouthwestern.edu](mailto:Dawen.Zhao@UTSouthwestern.edu).

**RESUMEN / SUMMARY:** - We have previously demonstrated that exposed phosphatidylserine (PS) on tumor vascular endothelial cells is highly tumor specific, and development of the PS targeted near infrared (NIR) optical probe enables successful in vivo optical imaging of U87 gliomas in a mouse model. Liposomes have been widely used as a nanovector for delivery of chemotherapeutics and imaging contrast agents due to their high payload and longer circulation time. In the current study, we have fabricated PS-targeted liposomal nanoprobe encapsulating a NIR dye, IRDye® 800CW, aiming to enhance PS-targeted tumor imaging. Hydrophilic 800CW dye was packed into the core of polyethylene glycol (PEG)-coated liposomes functionalized with F(ab')<sub>2</sub> fragments of PGN635, a fully human monoclonal antibody that binds PS. As expected, in vivo dynamic NIR imaging revealed significantly improved tumor/normal contrast (TNR = 20 +/- 3; p < 0.01) of subcutaneous U87 gliomas in mice after injection of the liposomal nanoprobe. Markedly enhanced TNR was observed after the tumors were irradiated to increase PS exposure (TNR = 48 +/- 6; p < 0.05). Intriguingly, the liposomal nanoprobe, PGN-L-800CW showed distinct biodistribution and pharmacokinetics compared to the 800CW-PGN probes used in our previous study. Our data further suggest the usefulness of PS-targeted imaging probes for sensitive tumor detection and the potential of utilizing liposomal platform for glioma theranostics.

[683]

**TÍTULO / TITLE:** - Pituitary apoplexy induced by Gonadotropin-releasing hormone agonists for treating prostate cancer-report of first Asian case.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World J Surg Oncol. 2013 Oct 2;11(1):254. doi: 10.1186/1477-7819-11-254.

●● Enlace al texto completo (gratis o de pago) [1186/1477-7819-11-254](#)

**AUTORES / AUTHORS:** - Huang TY; Lin JP; Lieu AS; Chen YT; Chen HS; Jang MY; Shen JT; Wu WJ; Huang SP; Juan YS

**INSTITUCIÓN / INSTITUTION:** - Department of Urology, Kaohsiung Medical University Hospital, Kaohsiung Medical University, 100 Tz-You 1<sup>st</sup> Road, Kaohsiung, Taiwan. [juanuro@gmail.com](mailto:juanuro@gmail.com).

**RESUMEN / SUMMARY:** - We present the first Asian case of a 77-year-old man who developed pituitary apoplexy (PA) soon after gonadotropin-releasing hormone agonist (GnRHa) (leuprorelin) injection to treat prostate cancer. Headache, ophthalmoplegia, visual field deficit, nausea, and vomiting are the typical characteristics of pituitary apoplexy. Though the occurrence rate is rare, the consequence of this condition can vary from mild symptoms such as headache to life-threatening scenarios like conscious change. Magnetic resonance imaging is the best imaging modality to detect PA and sublabial trans-sphenoid pituitary tumor removal can resolve most of PA symptoms and is so far the best solution in consensus. We also review 11 previous reported cases receiving GnRHa for androgen deprivation therapy of prostate cancer, and hope to alert clinicians to use GnRHa with caution.

[684]

**TÍTULO / TITLE:** - Suppressing the malignant phenotypes of glioma cells by lentiviral delivery of small hairpin RNA targeting hypoxia-inducible factor-1alpha.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Exp Pathol. 2013 Oct 15;6(11):2323-32.

**AUTORES / AUTHORS:** - Dong CG; Wu WK; Feng SY; Yu J; Shao JF; He GM

**INSTITUCIÓN / INSTITUTION:** - Institute of Molecular Ecology and Evolution, IAIR, East China Normal University Shanghai 200062, PR China.

**RESUMEN / SUMMARY:** - Hypoxic microenvironment of solid tumors is known to shape malignant phenotypes of cancer cells through the dimeric transcription factor hypoxia-inducible factor (HIF)-1. In the present study, the therapeutic effect of targeting alpha subunit of HIF-1 in glioma cells via lentiviral delivery of small hairpin RNA (shRNA) was evaluated. Data from quantitative real-time PCR and immunohistochemistry demonstrated that HIF-1alpha was progressively upregulated during the development of gliomas. Lentiviral shRNA targeting HIF-1alpha led to substantial loss of cell viability, G0/G1-phase cell cycle arrest, apoptosis, and impairment of cell motility and invasiveness in human glioma U87MG cells. Xenograft experiments in nude mice further showed that HIF-1alpha-shRNA inhibited tumor growth and caused persistent repression of HIF-1alpha and its target genes, including VEGF, GLUT1 and MMP2, up to 25 days post-inoculation. Taken together, lentiviral delivery of shRNA is a promising therapeutic approach for targeting HIF-1alpha in glioma.

[685]

**TÍTULO / TITLE:** - Intracranial germinoma masquerading as a granulomatous inflammation, diagnostic failure after brain biopsy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rinsho Shinkeigaku. 2013;53(10):835-8.

**AUTORES / AUTHORS:** - Riku Y; Ito M; Atsuta N; Watanabe H; Momota H; Sobue G

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Nagoya University.

**RESUMEN / SUMMARY:** - We report the case of a 33-year-old man with diplopia, sleepiness, and paresthesia of the left upper limb that were slowly progressive. On admission, he presented with restriction in the vertical movement of the eyes and abduction of the right eye, and horizontal and convergence nystagmus. Slight weakness of the left upper limb, bilateral Babinski sign, and truncal ataxia were also noted. Cerebral magnetic resonance imaging was performed, and gadolinium-enhanced T1-weighted imaging revealed a mass lesion that involved the diencephalon and the corpus callosum, which was invariably enhanced. Specimens obtained using a brain biopsy showed epithelioid granuloma with the presence of foreign body giant cells and lymphocytic infiltration. Prednisolone was administered because we suspected neurosarcoidosis, but the clinical symptoms worsened with the enlargement of the lesion. A re-evaluation of the biopsy specimens using immunohistochemistry revealed tumor cells of germinoma that were scattered among the lymphocytes and positive for periodic acid-Schiff staining, placental alkaline phosphatase, and c-kit. A combination of chemotherapy and radiation resulted in clinical improvement and marked reduction of the mass lesion in size. We concluded that the possibility of germinoma should be considered in case granulomatous inflammation is observed in brain biopsy specimens.

[686]

**TÍTULO / TITLE:** - Microsurgical treatment for parasagittal meningioma in the central gyrus region.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Sep;6(3):781-784. Epub 2013 Jun 26.

●● [Enlace al texto completo \(gratis o de pago\) 3892/ol.2013.1429](#)

**AUTORES / AUTHORS:** - Bi N; Xu RX; Liu RY; Wu CM; Wang J; Chen WD; Liu J; Xu YS; Wei ZQ; Li T; Zhang J; Bai JY; Dong B; Fan SJ; Xu YH

**INSTITUCIÓN / INSTITUTION:** - Department of Nursing, Chinese PLA General Hospital, Beijing 100853, P.R. China ; Department of Neurosurgery, The 309<sup>th</sup> Hospital of PLA, Beijing 100091, P.R. China.

**RESUMEN / SUMMARY:** - The aim of the present study was to determine the efficacy of microsurgery treatment for parasagittal meningioma in the central gyrus region. A microsurgical technique was used to treat 26 patients with large parasagittal meningioma in the central gyrus region. The Rolandic and draining veins and the peritumoral normal brain tissue were retained, and the associated sagittal sinus was appropriately protected. A Simpson grade I, II or III resection was performed in 8 (30.8%), 12 (46.2%) and 6 (23.1%) patients, respectively, with no post-operative mortalities. Following treatment, 9 patients exhibited hemiparesis. No tumor recurrence was found in 21 patients during the follow-up examination. The treatment protocol described in the current study included sufficient pre-operative imaging evaluations, a skilled microsurgical technique, improved protection of the Rolandic vein and treatment of the sagittal sinus, and was found to significantly increase the total tumor removal rate and decrease post-operative recurrence.

[687]

**TÍTULO / TITLE:** - Targeted therapies: Early vessel normalization improves glioblastoma outcomes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nat Rev Clin Oncol. 2013 Nov 26. doi: 10.1038/nrclinonc.2013.228.

●● Enlace al texto completo (gratis o de pago) [1038/nrclinonc.2013.228](#)

**AUTORES / AUTHORS:** - Jones B

[688]

**TÍTULO / TITLE:** - Differential effects of miR-34c-3p and miR-34c-5p on the proliferation, apoptosis and invasion of glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Nov;6(5):1447-1452. Epub 2013 Sep 12.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1579](#)

**AUTORES / AUTHORS:** - Wu Z; Wu Y; Tian Y; Sun X; Liu J; Ren H; Liang C; Song L; Hu H; Wang L; Jiao B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The Second Hospital of Hebei Medical University, Shi Jiazhuang, Hebei 050000, P.R. China ; Department of Neurosurgery, Handan Central Hospital, Handan, Hebei 056000, P.R. China.

**RESUMEN / SUMMARY:** - Glioblastoma is the most malignant and common intrinsic brain tumor, but the molecular mechanism of glioma pathophysiology is poorly understood. Recent data have shown that microRNAs regulate the expression of several genes associated with human cancer. In the present study, the function of miR-34c in glioma cells was analyzed. It was demonstrated that miR-34c-3p and miR-34c-5p were downregulated in gliomas, by performing qPCR on tumor tissues from glioma patients and glioma cell lines, compared with normal brain tissues and a normal glial cell line. Furthermore, the miR-34c expression was found to be inversely correlated with glioma WHO grades. Overexpression of miR-34c-3p inhibited U251 and U87 cell proliferation; however, miR-34c-5p only had an effect on U251 cells. Transfection with miR-34c-3p or miR-34c-5p in U251 cells and with miR-34c-3p in U87 cells produced S-phase arrest with G0/G1 reduction and induced cell apoptosis, but no significant changes were observed with miR-34c-5p transfection in U87 cells, normal or negative control groups. However, significant inhibition of glioma cell invasion was observed following transfection with miR-34c-3p and miR-34c-5p. Moreover, it was identified that miR-34c-3p overexpression reduced the expression of Notch pathway members, but miR-34c-5p overexpression did not. Therefore, these results suggest differential tumor suppressor roles for miR-34c-3p and miR-34c-5p and provide new insights into the role of miR-34c in glioma, which includes tumor-suppressing effects on proliferation, apoptosis and invasiveness.

[689]

**TÍTULO / TITLE:** - Major vault protein supports glioblastoma survival and migration by upregulating the EGFR/PI3K signalling axis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Nov;4(11):1904-18.

**AUTORES / AUTHORS:** - Lotsch D; Steiner E; Holzmann K; Spiegl-Kreinecker S; Pirker C; Hlavaty J; Petznek H; Hegedus B; Garay T; Mohr T; Sommergruber W; Grusch M; Berger W

**INSTITUCIÓN / INSTITUTION:** - Institute of Cancer Research, Department of Medicine I.

**RESUMEN / SUMMARY:** - Despite their ubiquitous expression and high conservation during evolution, precise cellular functions of vault ribonucleoparticles, mainly built of multiple major vault protein (MVP) copies, are still enigmatic. With regard to cancer, vaults were shown to be upregulated during drug resistance development as well as malignant transformation and progression. Such in a previous study we demonstrated that human astrocytic brain tumours including glioblastoma are generally high in vault levels while MVP expression in normal brain is comparably low. However a direct contribution to the malignant phenotype in general and that of glioblastoma in particular has not been established so far. Thus we address the questions whether MVP itself has a pro-tumorigenic function in glioblastoma. Based on a large tissue collection, we re-confirm strong MVP expression in gliomas as compared to healthy brain. Further, the impact of MVP on human glioblastoma aggressiveness was analysed by using gene transfection, siRNA knock-down and dominant-negative genetic approaches. Our results demonstrate that MVP/vaults significantly support migratory and invasive competence as well as starvation resistance of glioma cells in vitro and in vivo. The enhanced aggressiveness was based on MVP-mediated stabilization of the epidermal growth factor receptor (EGFR)/phosphatidylinositol-3-kinase (PI3K) signalling axis. Consequently, MVP overexpression resulted in enhanced growth and brain invasion in human glioblastoma xenograft models. Our study demonstrates, for the first time, that vaults have a tumour-promoting potential by stabilizing EGFR/PI3K-mediated migration and survival pathways in human glioblastoma.

[690]

**TÍTULO / TITLE:** - MiR-221/222 target the DNA methyltransferase MGMT in glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Sep 19;8(9):e74466. doi: 10.1371/journal.pone.0074466.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0074466](#)

**AUTORES / AUTHORS:** - Quintavalle C; Mangani D; Roscigno G; Romano G; Diaz-Lagares A; Iaboni M; Donnarumma E; Fiore D; De Marinis P; Soini Y; Esteller M; Condorelli G

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Medicine and Medical Biotechnology, "Federico II" University of Naples, Naples, Italy ; IEOS, CNR, Naples, Italy.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is one of the most deadly types of cancer. To date, the best clinical approach for treatment is based on administration of temozolomide (TMZ) in combination with radiotherapy. Much evidence suggests that the intracellular level of the alkylating enzyme O(6)-methylguanine-DNA methyltransferase (MGMT) impacts response to TMZ in GBM patients. MGMT expression is regulated by the methylation of its promoter. However, evidence indicates that this is not the only regulatory mechanism present. Here, we describe a hitherto unknown microRNA-mediated mechanism of MGMT expression regulation. We show that miR-221 and miR-222 are upregulated in GBM patients and

that these paralogues target MGMT mRNA, inducing greater TMZ-mediated cell death. However, miR-221/miR-222 also increase DNA damage and, thus, chromosomal rearrangements. Indeed, miR-221 overexpression in glioma cells led to an increase in markers of DNA damage, an effect rescued by re-expression of MGMT. Thus, chronic miR-221/222-mediated MGMT downregulation may render cells unable to repair genetic damage. This, associated also to miR-221/222 oncogenic potential, may poor GBM prognosis.

[691]

**TÍTULO / TITLE:** - Advanced MR Imaging Techniques in the Evaluation of Nonenhancing Gliomas: Perfusion-Weighted Imaging Compared with Proton Magnetic Resonance Spectroscopy and Tumor Grade.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroradiol J. 2013 Nov;26(5):531-41. Epub 2013 Nov 7.

**AUTORES / AUTHORS:** - Sahin N; Melhem ER; Wang S; Krejza J; Poptani H; Chawla S; Verma G

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Sifa University School of Medicine; Izmir, Turkey - [neslinshn@gmail.com](mailto:neslinshn@gmail.com).

**RESUMEN / SUMMARY:** - A significant number of nonenhancing (NE) gliomas are reported to be malignant. The purpose of this study was to compare the value of advanced MR imaging techniques, including T2\*-dynamic susceptibility contrast PWI (DSC-PWI) and proton magnetic resonance spectroscopy ((1)HMRS) in the evaluation of NE gliomas. Twenty patients with NE gliomas underwent MRI including DSC-PWI and (1)HMRS. The relative CBV (rCBV) measurements were obtained from regions of maximum perfusion. The peak ratios of choline/creatine (Cho/Cr) and myo-inositol/creatine (mIns/Cr) were measured at a TE of 30 ms. Demographic features, tumor volumes, and PWI- and (1)HMRS-derived measures were compared between low-grade gliomas (LGGs) and high-grade gliomas (HGGs). In addition, the association of initial rCBV ratio with tumor progression was evaluated in LGGs. No significant difference was noted in age, sex or tumor size between LGGs and HGGs. Cho/Cr ratios were significantly higher in HGGs (1.7+/-0.63) than in LGGs (1.2+/-0.38). The receiver operating characteristic analysis demonstrated that a Cho/Cr ratio with a cutoff value of 1.3 could differentiate between LGG and HGG with a specificity of 100% and a sensitivity of 71.4%. There was no significant difference in the rCBV ratio and the mIns/Cr ratio between LGG and HGG. However, higher rCBV ratios were observed with more rapid progressions in LGGs. The results imply that Cho/Cr ratios are useful in distinguishing NE LGG from HGG and can be helpful in preoperative grading and biopsy guidance. On the other hand, rCBV ratios do not help in the distinction.

[692]

**TÍTULO / TITLE:** - An intrasellar germinoma with normal tumor marker concentrations mimicking primary lymphocytic hypophysitis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Arq Bras Endocrinol Metabol. 2013 Oct;57(7):566-70.

**AUTORES / AUTHORS:** - Guzzo MF; Bueno CB; Amancio TT; Rosemberg S; Bueno C; Arioli EL; Glezer A; Bronstein MD

**RESUMEN / SUMMARY:** - Intracranial germinomas (GE) are malignant neoplasms most commonly found in the suprasellar region, which may cause anterior and particularly

posterior pituitary hormone deficits with central diabetes insipidus (DI). Differential diagnosis of pituitary stalk thickening includes granulomatous, inflammatory, infectious, and neoplastic lesions. Although careful analysis of clinical, laboratory, and imaging findings may facilitate the diagnosis, transsphenoidal biopsy is indicated to confirm the disease, as the correct diagnosis directs the appropriate treatment.

[693]

**TÍTULO / TITLE:** - Lgr4 promotes glioma cell proliferation through activation of Wnt signaling.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian Pac J Cancer Prev. 2013;14(8):4907-11.

**AUTORES / AUTHORS:** - Yu CY; Liang GB; Du P; Liu YH

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Shengjing Hospital, China Medical University, Shenyang, Liaoning, China E-mail : [Yun\\_huiLiu@126.com](mailto:Yun_huiLiu@126.com).

**RESUMEN / SUMMARY:** - The key signaling networks regulating glioma cell proliferation remain poorly defined. The leucine-rich repeat containing G-protein coupled receptor 4 (Lgr4) has been implicated in intestinal, gastric, and epidermal cell functions. We investigated whether Lgr4 functions in glioma cells and found that Lgr4 expression was significantly increased in glioma tissues. In addition, Lgr4 overexpression promoted while its knockdown using small interfering RNA oligos inhibited glioma cell proliferation. In addition, Wnt/beta-catenin signaling was activated in cells overexpressing Lgr4. Therefore, our results revealed that Lgr4 activates Wnt/beta-catenin signaling to regulate glioma cell proliferation.

[694]

**TÍTULO / TITLE:** - Clinical value of multi-slice 3-dimensional computed tomographic angiography in the preoperative assessment of meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Exp Ther Med. 2013 Aug;6(2):475-478. Epub 2013 Jun 6.

●● [Enlace al texto completo \(gratis o de pago\) 3892/etm.2013.1147](#)

**AUTORES / AUTHORS:** - Zhao X; Yu RT; Li JS; Xu K; Li X

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Affiliated Hospital of Xuzhou Medical College, Xuzhou, Jiangsu 221000, P.R. China.

**RESUMEN / SUMMARY:** - The aim of this study was to evaluate the clinical value of multislice 3-dimensional computed tomographic angiography (3D-CTA) in the preoperative assessment of meningiomas. A total of 331 cases with meningiomas confirmed by CT and MRI were examined using 3D-CTA. The locations of the tumors were observed to be as follows: parasagittal and falx in 125 cases, sphenoidal in 39 cases, in the olfactory groove in 19 cases, tentorial in 21 cases, parasellar in 33 cases, petroclival in 29 cases, intraventricular in 7 cases and on the convexity of the brain in 58 cases. The reconstructed images were processed by shaded volume rendering, maximum intensity projection and color-shaded surface display. The 3D-CTA images were used to imitate the surgical approach. Surgery was performed according to the information provided in the 3D-CTA images. 3D-CTA provided clear 3D images of the meningioma and the relationship with the adjacent vessels and the skull base, and demonstrated the optimal surgical approach for removing the neoplasm. The results of

3D-CTA corresponded extremely well with the surgical observations. 3D-CTA is able to provide 3D images of the meningioma, adjacent vessels and the bones in the skull base. Furthermore, 3D-CTA supplies information vital in the selection of the optimal surgical approach and information that aids the management of the sinus during the surgery. 3D-CTA is of great value in the preoperative evaluation of meningiomas.

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[695]

**TÍTULO / TITLE:** - Hyperpolarized (129)Xe spectra from C6 glioma cells implanted in rat brains.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Conf Proc IEEE Eng Med Biol Soc. 2013 Jul;2013:2972-5. doi: 10.1109/EMBC.2013.6610164.

●● [Enlace al texto completo \(gratis o de pago\) 1109/EMBC.2013.6610164](#)

**AUTORES / AUTHORS:** - Nakamura K; Kondoh Y; Kinoshita T

**RESUMEN / SUMMARY:** - Tumor cell density is dramatically different from normal tissue. Since the chemical shift of hyperpolarized (129)Xe reflects local cell structure, we hypothesized that the presence of tumor cells could potentially be determined from (129)Xe spectra. Spectra and washout decay rate from three rats implanted with C6 glioma cells were compared with eight control rats. No significant differences between normal and tumor spectra were observed. The decay time of the C6 rats (mean 13.5 +/- 1.9 s) was not significantly different from normal rats (mean 11.7 +/- 1.8 s). These results suggest that hyperpolarized Xe may not be a superior tracer for detection of tumor cells in the intact brain.

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[696]

**TÍTULO / TITLE:** - Magnetic resonance spectroscopy in intracranial tumours of glial origin.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Neurochir Pol. 2013;47(5):438-449.

**AUTORES / AUTHORS:** - Jaskolski DJ; Fortuniak J; Majos A; Gajewicz W; Papierz W; Liberski PP; Sikorska B; Stefanczyk L

**INSTITUCIÓN / INSTITUTION:** - Dariusz J. Jaskolski, Department of Neurosurgery and Oncology of the Central Nervous System, Medical University of Lodz, Barlicki Hospital, ul. Kopcynskiego 22, 90-153 Lodz, phone: +48 42 677 67 70, fax: +48 42 677 67 81, e-mail: [dariusz.jaskolski@umed.lodz.pl](mailto:dariusz.jaskolski@umed.lodz.pl).

**RESUMEN / SUMMARY:** - Background and purpose: To determine in vivo magnetic resonance spectroscopy (MRS) characteristics of intracranial glial tumours and to assess MRS reliability in glioma grading and discrimination between different histopathological types of tumours. Material and methods: Analysis of spectra of 26 patients with glioblastomas, 6 with fibrillary astrocytomas, 4 with anaplastic astrocytomas, 2 with pilocytic astrocytoma, 3 with oligodendrogliomas, 3 with anaplastic oligodendrogliomas and 17 control spectra taken from healthy hemispheres. Results: All tumours' metabolite ratios, except for Cho/Cr in fibrillary astrocytomas ( $p = 0.06$ ), were statistically significantly different from the control. The tumours showed decreased Naa and Cr contents and a high Cho signal. The Lac-Lip signal was high in grade III astrocytomas and glioblastomas. Reports that Cho/Cr ratio increases with glioma's grade whereas Naa/Cr decreases were not confirmed. Anaplastic astrocytomas compared to grade II astrocytomas had a statistically significantly greater

ml/Cr ratio ( $p = 0.02$ ). In pilocytic astrocytomas the Naa/Cr value ( $2.58 \pm 0.39$ ) was greater, whilst the Cho/Naa ratio was lower ( $2.14 \pm 0.64$ ) than in the other astrocytomas. The specific feature of oligodendrogliomas was the presence of glutamate/glutamine peak Glx. However, this peak was absent in two out of three anaplastic oligodendrogliomas. Characteristically, the latter tumours had a high Lac-Lip signal. Conclusions: MRS in vivo cannot be used as a reliable method for glioma grading. The method is useful in discrimination between WHO grade I and WHO grade II astrocytomas as well as oligodendrogliomas from other gliomas.

[697]

**TÍTULO / TITLE:** - Honokiol-induced apoptosis and autophagy in glioblastoma multiforme cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Nov;6(5):1435-1438. Epub 2013 Aug 28.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1548](#)

**AUTORES / AUTHORS:** - Chang KH; Yan MD; Yao CJ; Lin PC; Lai GM

**INSTITUCIÓN / INSTITUTION:** - Division of Hematology Oncology, Department of Internal Medicine, Shuang Ho Hospital, Taipei Medical University, Taipei 116, Taiwan, R.O.C.

**RESUMEN / SUMMARY:** - Honokiol, a hydroxylated biphenyl compound isolated from the Chinese herb *Magnolia officinalis*, has been reported to have anticancer activities in a variety of cancer cell lines. The present study aimed to evaluate the anticancer effect and possible molecular mechanisms of honokiol in a glioblastoma multiforme (GBM) cell line. The anticancer activities of honokiol were investigated in the DBTRG-05MG GBM cell line. The effect of honokiol on cell growth was determined using a sulforhodamine B assay. Flow cytometry and immunoblotting were used to measure honokiol-induced apoptosis (programmed cell death type I) and autophagy (programmed cell death type II). Honokiol was observed to reduce DBTRG-05MG cell viability in a dose-dependent manner. At a dose of 50  $\mu$ M, honokiol markedly decreased the expression of Rb protein and led to the cleavage of poly(ADP-ribose) polymerase and Bcl-xL to promote apoptosis in the cancer cells. In addition, markers of autophagy, including Beclin-1 and LC3-II, were also significantly increased. In addition to apoptosis, honokiol was also able to induce autophagy in the DBTRG-05MG cells. The mechanisms that are responsible for the correlation between honokiol-induced apoptosis and autophagy require further investigation. Such efforts may provide a potential strategy for improving the clinical outcome of GBM treatment.

[698]

**TÍTULO / TITLE:** - Induction of apoptosis of malignant gliomas cells by a prenylated chalcone.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pharm Biol. 2013 Nov 5.

●● Enlace al texto completo (gratis o de pago) [3109/13880209.2013.843573](#)

**AUTORES / AUTHORS:** - Teng CC; Sze CI; Liao WC

**INSTITUCIÓN / INSTITUTION:** - Institute of Basic Medicine Science, College of Medicine, National Cheng Kung University, Tainan, Taiwan.

**RESUMEN / SUMMARY:** - Abstract Context: Malignant gliomas are the most commonly diagnosed brain tumors in adults. Chalcone and its derivatives have shown potential against glioblastoma and malignant gliomas. Objective: The inhibitory activity of geranyl prenylated chalcone was investigated in four glioma cell lines: C6, U87 MB, CNS-1 and 13-06 MB. Cell death caused by the prenylated chalcone was determined to be necrosis or apoptosis. Materials and methods: The inhibitory activity of geranyl prenylated chalcone with 5, 10, 15, 20, 25, 30 and 40 mug/ml (treatment time: 24, 48 and 72 h) was investigated in C6, U87 MB, CNS-1 and 13-06 MB. Cell cycle distribution, DNA fragmentation, chromatin condensation and protein expression were used as indicators of apoptosis. The migration ability of glioma cells with 30 mug/ml prenylated chalcone after 24 and 36 h incubation was also studied by the scratch wound assay. Results: After 24 h, treatment with 20 mug/ml prenylated chalcone reduced the proliferation (approximately 50%) of all four glioma cell lines (half maximal inhibitory concentration (IC50) = 20 mug/ml). Glioma cell death was verified by the fluorescence-activated cell sorter as prenylated chalcone-induced apoptosis. After running the analysis of protein expression, apoptotic activity induced by the prenylated chalcone was caspase independent for the C6 and U87 MB cell lines, but caspase dependent for the 13-06 MB and CNS-1 cell lines. In addition, prenylated chalcone treatment (30 mug/ml) resulted in the inhibition of glioma cell migration after 24 and 36 h treatment. Discussion and conclusion: Because prenylated chalcone-induced apoptosis inhibited the proliferation and reduced the invasiveness of glioma cells, the prenylated chalcone has potential as a new chemotherapeutic reagent in the treatment of malignant gliomas. The ultimate goal was to develop a novel potential multi-therapy for treating gliomas.

[699]

**TÍTULO / TITLE:** - Follicle-stimulating hormone-secreting pituitary adenoma manifesting as recurrent ovarian cysts in a young woman - latent risk of unidentified ovarian hyperstimulation: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Res Notes. 2013 Oct 11;6:408. doi: 10.1186/1756-0500-6-408.

●● Enlace al texto completo (gratis o de pago) [1186/1756-0500-6-408](#)

**AUTORES / AUTHORS:** - Kawaguchi T; Ogawa Y; Ito K; Watanabe M; Tominaga T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Kohnan Hospital, 4-20-1 Nagamachi Minami, Taihaku-ku, Sendai, Miyagi 982-8523, Japan. [yogawa@kohnan-sendai.or.jp](mailto:yogawa@kohnan-sendai.or.jp).

**RESUMEN / SUMMARY:** - BACKGROUND: Ovarian hyperstimulation caused by follicle-stimulating hormone-secreting gonadotroph cell adenoma is a rare, with a few reported cases, but almost certainly unnoticed cases occur because of the absence of detailed examinations. We retrospectively reviewed 200 patients treated for gonadotroph cell adenoma in our institute and identified 26 women of reproductive age. Two of these 26 patients had a history of ovarian cysts. One patient was considered to have had typical ovarian hyperstimulation, successfully treated by transsphenoidal surgery. The other patient initially underwent transsphenoidal surgery because of visual disturbance, but endocrinological examinations suggested possible relationships with previous ovarian hyperstimulation. We present the former case and discuss the latent risk of failure to identify this entity. CASE PRESENTATION: A 36-year-old woman with a sellar tumor

was referred to our hospital with suspected ovarian hyperstimulation. She had a history of repeated surgery for ovarian cysts. Serum follicle-stimulating hormone and estradiol levels were within the normal ranges, and only the luteinizing hormone level was suppressed significantly. Transsphenoidal surgery achieved gross total tumor removal, and the histological diagnosis was follicle-stimulating hormone-secreting gonadotroph cell adenoma. The serum follicle-stimulating hormone, luteinizing hormone, and estradiol levels returned to the normal ranges postoperatively, and the ovarian cysts subsequently decreased in size without particular interventions. CONCLUSION: Ovarian hyperstimulation could regress after resolving the causes of high follicle-stimulating hormone level, so avoiding unnecessary ovary surgery. Detailed endocrinological examination including estradiol evaluation with pituitary imaging is quite important in women of reproductive age to establish the correct diagnosis.

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[700]

**TÍTULO / TITLE:** - Delivery of Functional Anti-miR-9 by Mesenchymal Stem Cell-derived Exosomes to Glioblastoma Multiforme Cells Conferred Chemosensitivity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Ther Nucleic Acids. 2013 Oct 1;2:e126. doi: 10.1038/mtna.2013.60.

●● Enlace al texto completo (gratis o de pago) [1038/mtna.2013.60](#)

**AUTORES / AUTHORS:** - Munoz JL; Bliss SA; Greco SJ; Ramkisson SH; Ligon KL; Rameshwar P

**INSTITUCIÓN / INSTITUTION:** - 1] Rutgers University-Graduate School of Biomedical Science, Newark, New Jersey, USA [2] New Jersey Medical School, Newark, New Jersey, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM), the most common and lethal tumor of the adult brain, generally shows chemo- and radioresistance. MicroRNAs (miRs) regulate physiological processes, such as resistance of GBM cells to temozolomide (TMZ). Although miRs are attractive targets for cancer therapeutics, the effectiveness of this approach requires targeted delivery. Mesenchymal stem cells (MSCs) can migrate to the sites of cancers, including GBM. We report on an increase in miR-9 in TMZ-resistant GBM cells. miR-9 was involved in the expression of the drug efflux transporter, P-glycoprotein. To block miR-9, methods were developed with Cy5-tagged anti-miR-9. Dye-transfer studies indicated intracellular communication between GBM cells and MSCs. This occurred by gap junctional intercellular communication and the release of microvesicles. In both cases, anti-miR-9 was transferred from MSCs to GBM cells. However, the major form of transfer occurred with the microvesicles. The delivery of anti-miR-9 to the resistant GBM cells reversed the expression of the multidrug transporter and sensitized the GBM cells to TMZ, as shown by increased cell death and caspase activity. The data showed a potential role for MSCs in the functional delivery of synthetic anti-miR-9 to reverse the chemoresistance of GBM cells. Molecular Therapy-Nucleic Acids (2013) 2, e126; doi:10.1038/mtna.2013.60; published online 1 October 2013.

[701]

**TÍTULO / TITLE:** - Efficient induction of differentiation and growth inhibition in IDH1 mutant glioma cells by the DNMT Inhibitor Decitabine.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Oct;4(10):1729-36.

**AUTORES / AUTHORS:** - Turcan S; Fabius AW; Borodovsky A; Pedraza A; Brennan C; Huse J; Viale A; Riggins GJ; Chan TA

**INSTITUCIÓN / INSTITUTION:** - Human Oncology and Pathogenesis Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA.

**RESUMEN / SUMMARY:** - Mutation in the IDH1 or IDH2 genes occurs frequently in gliomas and other human malignancies. In intermediate grade gliomas, IDH1 mutation is found in over 70% of tumors. These mutations impart the mutant IDH enzyme with a neomorphic activity - the ability to synthesize 2-hydroxyglutarate (2-HG). This ability leads to a reprogramming of chromatin state, a block in differentiation, and the establishment of the glioma hypermethylator phenotype (G-CIMP). It has been hypothesized but not proven that the extensive DNA methylation that occurs in G-CIMP tumors helps maintain and "lock in" glioma cancer cells in a dedifferentiated state. Here, we tested this hypothesis by treating patient derived IDH1 mutant glioma initiating cells (GIC) with non-cytotoxic, epigenetically targeted doses of the DNMT inhibitor decitabine. Global methylome analysis of treated IDH1 mutant GICs showed that DAC treatment resulted in reversal of DNA methylation marks induced by IDH and the re-expression of genes associated with differentiation. Accordingly, treatment of IDH1 mutant glioma cells resulted in a dramatic loss of stem-like properties and efficient adoption of markers of differentiation, effects not seen in decitabine treated IDH wild-type GICs. Induction of differentiation was much more efficient than that seen following treatment with a specific inhibitor of mutant IDH enzyme (Agiros). Decitabine also decreased replicative potential and tumor growth in vivo. Reexpression of polycomb regulated genes accompanied these DAC-induced phenotypes. In total, our data indicates that targeting the pathologic DNA methylation in IDH mutant cells can reverse mutant IDH induced hypermethylation and block in differentiation and promote tumor control. These findings have substantial impact for exploring new treatment strategies for patients with IDH mutant gliomas.

[702]

**TÍTULO / TITLE:** - Role of Epidermal Growth Factor-Triggered PI3K/Akt Signaling in the Migration of Medulloblastoma-Derived Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Mol Bioeng. 2012 Dec;5(4):502-413.

**AUTORES / AUTHORS:** - Dudu V; Able RA Jr; Rotari V; Kong Q; Vazquez M

**INSTITUCIÓN / INSTITUTION:** - Department of Biomedical Engineering, The City College of the City University of New York (CCNY), 160 Convent Ave., Steinman Hall Room 403D, New York, NY 10031, USA.

**RESUMEN / SUMMARY:** - Medulloblastoma (MB) is the most common brain cancer diagnosed among children. The cellular pathways that regulate MB invasion in response to environmental cues remain incompletely understood. Herein, we examine the migratory response of human MB-derived Daoy cells to different concentration profiles of Epidermal Growth Factor (EGF) using a microfluidic system. Our findings provide the first quantitative evidence that EGF concentration gradients modulate the chemotaxis of MB-derived cells in a dose-dependent manner via the EGF receptor (EGF-R). Data illustrates that higher concentration gradients caused increased number of cells to migrate. In addition, our results show that EGF-induced receptor phosphorylation triggered the downstream activation of phosphoinositide-3 kinase

(PI3K)/Akt pathway, while its downstream activation was inhibited by Tarceva (an EGF-R inhibitor), and Wortmannin (a PI3K inhibitor). The treatment with inhibitors also severely reduced the number of MB-derived cells that migrated towards increasing EGF concentration gradients. Our results provide evidence to bolster the development of anti-migratory therapies as viable strategies to impede EGF-stimulated MB dispersal.

[703]

**TÍTULO / TITLE:** - O(6)-methylguanine DNA methyltransferase as a promising target for the treatment of temozolomide-resistant gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Dis. 2013 Oct 24;4:e876. doi: 10.1038/cddis.2013.388.

●● Enlace al texto completo (gratis o de pago) [1038/cddis.2013.388](#)

**AUTORES / AUTHORS:** - Fan CH; Liu WL; Cao H; Wen C; Chen L; Jiang G

**INSTITUCIÓN / INSTITUTION:** - Xuzhou Children's Hospital, Xuzhou 221006, China.

**RESUMEN / SUMMARY:** - Temozolomide (TMZ) is an alkylating agent currently used as first-line therapy for gliomas treatment due to its DNA-damaging effect. However, drug resistance occurs, preventing multi-cycle use of this chemotherapeutic agent. One of the major mechanisms of cancer drug resistance is enhanced activity of a DNA repair enzyme, O(6)-methylguanine-DNA-methyltransferase (MGMT), which counteracts chemotherapy-induced DNA alkylation and is a key component of chemoresistance. MGMT repairs TMZ-induced DNA lesions, O(6)-meG, by transferring the alkyl group from guanine to a cysteine residue. This review provides an overview of recent advances in the field, with particular emphasis on the inhibitors of MGMT and underlying mechanisms. Literature search was performed through PubMed and all relevant articles were reviewed, with particular attention to MGMT, its role in TMZ-resistant gliomas, effects of MGMT inhibitors and the underlying mechanisms. Several strategies are currently being pursued to improve the therapeutic efficacy of TMZ via inhibition of MGMT to reduce chemoresistance and improve overall survival. MGMT may be a promising target for the treatment of TMZ-resistant gliomas.

[704]

**TÍTULO / TITLE:** - Differences in Transport Mechanisms of trans-1-Amino-3-[F]Fluorocyclobutanecarboxylic Acid in Inflammation, Prostate Cancer, and Glioma Cells: Comparison with L-[Methyl-C]Methionine and 2-Deoxy-2-[ F]Fluoro-D-Glucose.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Imaging Biol. 2013 Oct 18.

●● Enlace al texto completo (gratis o de pago) [1007/s11307-013-0693-0](#)

**AUTORES / AUTHORS:** - Oka S; Okudaira H; Ono M; Schuster DM; Goodman MM; Kawai K; Shirakami Y

**INSTITUCIÓN / INSTITUTION:** - Research Center, Nihon Medi-Physics Co., Ltd, Chiba, Japan, [shuntaro\\_oka@nmp.co.jp](mailto:shuntaro_oka@nmp.co.jp).

**RESUMEN / SUMMARY:** - PURPOSE: We aimed to elucidate trans-1-amino-3-[18F]fluorocyclobutanecarboxylic acid (anti-[18F]FACBC) uptake mechanisms in inflammatory and tumor cells, in comparison with those of L-[methyl-11C]methionine ([11C]Met) and 2-deoxy-2-[18F]fluoro-D-glucose ([18F]FDG). PROCEDURES: Using carbon-14-labeled tracers, in vitro time-course, pH dependence, and competitive

inhibition uptake experiments were performed in rat inflammatory (T cells, B cells, granulocytes, macrophages), prostate cancer (MLLB2), and glioma (C6) cells. RESULTS: Anti-[14C]FACBC uptake ratios of T/B cells to tumor cells were comparable, while those of granulocytes/macrophages to tumor cells were lower than those for [14C]FDG. Over half of anti-[14C]FACBC uptake by T/B and tumor cells was mediated by Na<sup>+</sup>-dependent amino acid transporters (system ASC), whereas most [14C]Met transport in all cells was mediated by Na<sup>+</sup>-independent carriers (system L). CONCLUSIONS: The low anti-[18F]FACBC accumulation in granulocytes/macrophages may be advantageous in discriminating inflamed regions from tumors. The significant anti-[18F]FACBC uptake in T/B cells may cause false-positives in some cancer patients who undergo FACBC-positron emission tomography (PET).

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[705]

**TÍTULO / TITLE:** - Inhibition of MMP14 potentiates the therapeutic effect of temozolomide and radiation in gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Med. 2013 Aug;2(4):457-67. doi: 10.1002/cam4.104. Epub 2013 Jun 30.

●● Enlace al texto completo (gratis o de pago) [1002/cam4.104](#)

**AUTORES / AUTHORS:** - Ulasov I; Thaci B; Sarvaiya P; Yi R; Guo D; Auffinger B; Pytel P; Zhang L; Kim CK; Borovjagin A; Dey M; Han Y; Baryshnikov AY; Lesniak MS

**INSTITUCIÓN / INSTITUTION:** - The Brain Tumor Center, The University of Chicago Chicago, Illinois, 60637.

**RESUMEN / SUMMARY:** - Metalloproteinases are membrane-bound proteins that play a role in the cellular responses to antiglioma therapy. Previously, it has been shown that treatment of glioma cells with temozolomide (TMZ) and radiation (XRT) induces the expression of metalloproteinase 14 (MMP14). To investigate the role of MMP14 in gliomagenesis, we used several chemical inhibitors which affect MMP14 expression. Of all the inhibitors tested, we found that Marimastat not only inhibits the expression of MMP14 in U87 and U251 glioma cells, but also induces cell cycle arrest. To determine the relationship between MMP14 inhibition and alteration of the cell cycle, we used an RNAi technique. Genetic knockdown of MMP14 in U87 and U251 glioma cells induced G2/M arrest and decreased proliferation. Mechanistically, we show that TMZ and XRT regulated expression of MMP14 in clinical samples and in vitro models through downregulation of microRNA374. In vivo genetic knockdown of MMP14 significantly decreased tumor growth of glioma xenografts and improved survival of glioma-bearing mice. Moreover, the combination of MMP14 silencing with TMZ and XRT significantly improved the survival of glioma-bearing mice compared to a single modality treatment group. Therefore, we show that the inhibition of MMP14 sensitizes tumor cells to TMZ and XRT and could be used as a future strategy for antiglioma therapy. Glioblastoma remains an incurable form of brain cancer. In this manuscript, we show that inhibition of MMP14 can potentiate the efficacy of current standard of care which includes chemo- and radiotherapy.

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[706]

**TÍTULO / TITLE:** - Intracavitary Radiation Therapy for Recurrent Cystic Brain Tumors with Holmium-166-Chico : A Pilot Study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Sep;54(3):175-182. Epub 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.54.3.175](#)

**AUTORES / AUTHORS:** - Ha EJ; Gwak HS; Rhee CH; Youn SM; Choi CW; Cheon GJ

**INSTITUCIÓN / INSTITUTION:** - Neuro-Oncology Clinic, National Cancer Center, Ilsan, Korea.

**RESUMEN / SUMMARY:** - OBJECTIVE: Intracavitary injection of beta-emitting radiation source for control of cystic tumors has been tried with a benefit of localized internal radiation. The authors treated cystic brain tumor patients with Holmium-166-chitosan complex (Ho-166-chico), composed of a beta-emitting radionuclide Holmium-166 and biodegradable chit polymer, and evaluated the safety and effective measurement for response. METHODS: Twenty-two patients with recurrent cystic brain tumor and/or located in a deep or eloquent area were enrolled in this pilot study. The cyst volume and wall thickness were determined on CT or MRI to assess radiological response. The activity of Ho-166-chico injected via Ommaya reservoir was prescribed to be 10-25 Gy to the cyst wall in a depth of 4 mm. RESULTS: There were neither complications related to systemic absorption nor leakage of Ho-166-chico in all 22 patients. But, two cases of oculomotor paresis were observed in patients with recurrent craniopharyngioma. Radiological response was seen in 14 of 20 available follow-up images (70%). Seven patients of 'evident' radiological response experienced more than 25% decrease of both cyst volume and wall thickness. Another 7 patients with 'suggestive' response showed decrease of cyst volume without definitive change of the wall thickness or vice versa. All patients with benign tumors or low grade gliomas experienced symptomatic improvement. CONCLUSION: Ho-166-chico intracavitary radiation therapy for cystic tumor is a safe method of palliation without serious complications. The determination of both minimal effective dosage and time interval of repeated injection through phase 1 trial could improve the results in the future.

[707]

**TÍTULO / TITLE:** - Involvement of miRNAs in the Differentiation of Human Glioblastoma Multiforme Stem-Like Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 14;8(10):e77098. doi: 10.1371/journal.pone.0077098.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0077098](#)

**AUTORES / AUTHORS:** - Aldaz B; Sagardoy A; Nogueira L; Guruceaga E; Grande L; Huse JT; Aznar MA; Diez-Valle R; Tejada-Solis S; Alonso MM; Fernandez-Luna JL; Martinez-Climent JA; Malumbres R

**INSTITUCIÓN / INSTITUTION:** - Division of Oncology, Center for Applied Medical Research (CIMA), University of Navarra, Pamplona, España ; Human Oncology and Pathogenesis Program, Memorial Sloan-Kettering Cancer Center, New York, New York, United States of America.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM)-initiating cells (GICs) represent a tumor subpopulation with neural stem cell-like properties that is responsible for the development, progression and therapeutic resistance of human GBM. We have recently shown that blockade of NFkappaB pathway promotes terminal differentiation and senescence of GICs both in vitro and in vivo, indicating that induction of

differentiation may be a potential therapeutic strategy for GBM. MicroRNAs have been implicated in the pathogenesis of GBM, but a high-throughput analysis of their role in GIC differentiation has not been reported. We have established human GIC cell lines that can be efficiently differentiated into cells expressing astrocytic and neuronal lineage markers. Using this in vitro system, a microarray-based high-throughput analysis to determine global expression changes of microRNAs during differentiation of GICs was performed. A number of changes in the levels of microRNAs were detected in differentiating GICs, including over-expression of hsa-miR-21, hsa-miR-29a, hsa-miR-29b, hsa-miR-221 and hsa-miR-222, and down-regulation of hsa-miR-93 and hsa-miR-106a. Functional studies showed that miR-21 over-expression in GICs induced comparable cell differentiation features and targeted SPRY1 mRNA, which encodes for a negative regulator of neural stem-cell differentiation. In addition, miR-221 and miR-222 inhibition in differentiated cells restored the expression of stem cell markers while reducing differentiation markers. Finally, miR-29a and miR-29b targeted MCL1 mRNA in GICs and increased apoptosis. Our study uncovers the microRNA dynamic expression changes occurring during differentiation of GICs, and identifies miR-21 and miR-221/222 as key regulators of this process.

[708]

**TÍTULO / TITLE:** - Pivotal role for ROS activation of p38 MAPK in the control of differentiation and tumor-initiating capacity of glioma-initiating cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Stem Cell Res. 2013 Oct 4;12(1):119-131. doi: 10.1016/j.scr.2013.09.012.

●● Enlace al texto completo (gratis o de pago) [1016/j.scr.2013.09.012](#)

**AUTORES / AUTHORS:** - Sato A; Okada M; Shibuya K; Watanabe E; Seino S; Narita Y; Shibui S; Kayama T; Kitanaka C

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Cancer Science, Yamagata University School of Medicine, Yamagata 990-9585, Japan; Department of Neurosurgery, Yamagata University School of Medicine, Yamagata 990-9585, Japan. Electronic address: [asato@med.id.yamagata-u.ac.jp](mailto:asato@med.id.yamagata-u.ac.jp).

**RESUMEN / SUMMARY:** - Reactive oxygen species (ROS) are involved in various aspects of cancer cell biology, yet their role in cancer stem cells (CSCs) has been poorly understood. In particular, it still remains unclear whether and how ROS control the self-renewal/differentiation process and the tumor-initiating capacity of CSCs. Here we show that ROS-mediated activation of p38 MAPK plays a pivotal role in the control of differentiation and tumor-initiating capacity of glioma-initiating cells (GICs) derived from human glioblastomas. Mechanistically, ROS triggered p38-dependent Bmi1 protein degradation and FoxO3 activation in GICs, which were shown to be responsible for the loss of their self-renewal capacity and differentiation, respectively. Thus, the results suggest that Bmi1 and FoxO3 govern distinct phases of transition from undifferentiated to fully differentiated cells. Furthermore, we also demonstrate in this study that oxidative stress deprives GICs of their tumor-initiating capacity through the activation of the ROS-p38 axis. As such, this is the first study to the best of our knowledge to delineate how ROS control self-renewal/differentiation and the tumor-initiating capacity of stem-like cancer cells. This study also suggests that targeting of the ROS-p38 axis could be a novel approach in the development of therapeutic strategies against gliomas, represented by glioblastoma.

[709]

**TÍTULO / TITLE:** - Lactate-Modulated Induction of THBS-1 Activates Transforming Growth Factor (TGF)-beta2 and Migration of Glioma Cells In Vitro.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 1;8(11):e78935. doi: 10.1371/journal.pone.0078935.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0078935](#)

**AUTORES / AUTHORS:** - Seliger C; Leukel P; Moeckel S; Jachnik B; Lottaz C; Kreutz M; Brawanski A; Proescholdt M; Bogdahn U; Bosserhoff AK; Vollmann-Zwerenz A; Hau P

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology and Wilhelm Sander-NeuroOncology Unit, University Hospital Regensburg, Regensburg, Germany.

**RESUMEN / SUMMARY:** - BACKGROUND: An important phenomenon observed in glioma metabolism is increased aerobic glycolysis in tumor cells, which is generally referred to as the Warburg effect. Transforming growth factor (TGF)-beta2, which we previously showed to be induced by lactic acid, is a key pathophysiological factor in glioblastoma, leading to increased invasion and severe local immunosuppression after proteolytic cleavage from its latency associated peptide. In this study we tested the hypothesis, that lactate regulates TGF-beta2 expression and glioma cell migration via induction of Thrombospondin-1 (THBS-1), a TGF-beta activating protein. METHODS: Lactate levels were reduced by knockdown of LDH-A using specific small interfering RNA (siRNA) and competitive inhibition of LDH-A by sodium oxamate. Knockdown of THBS-1 was performed using specific siRNA. Western Blot, qRT-PCR, and ELISA were used to investigate expression levels of LDH-A, LDH-B, TGF-beta2 and THBS-1. Migration of cells was examined by Spheroid, Scratch and Boyden Chamber assays. RESULTS: Knockdown of LDH-A with subsequent decrease of lactate concentration leads to reduced levels of THBS-1 and TGF-beta2 in glioma cells. Lactate addition increases THBS-1 protein, leading to increased activation of TGF-beta2. Inhibition of THBS-1 reduces TGF-beta2 protein and migration of glioma cells. Addition of synthetic THBS-1 can rescue reduced TGF-beta2 protein levels and glioma cell migration in siLDH-A treated cells. CONCLUSION: We define a regulatory cascade between lactate, THBS-1 and TGF-beta2, leading to enhanced migration of glioma cells. Our results demonstrate a specific interaction between tumor metabolism and migration and provide a better understanding of the mechanisms underlying glioma cell invasion.

[710]

**TÍTULO / TITLE:** - Glioma stem cells enhance endothelial cell migration and proliferation via the Hedgehog pathway.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Nov;6(5):1524-1530. Epub 2013 Sep 9.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1569](#)

**AUTORES / AUTHORS:** - Yan GN; Lv YF; Yang L; Yao XH; Cui YH; Guo DY

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Southwest Hospital, Third Military Medical University of PLA, Shapingba District, Chongqing 400038, P.R. China.

**RESUMEN / SUMMARY:** - The aim of the present study was to determine the possible mechanism underlying the enhanced migration and proliferation of endothelial cells caused by glioma stem cells (GSCs). Tumor spheres enriched in GSCs derived from

the mouse GL261 glioma cell line, and the brain microvessel endothelial cell line, b.END3, were used in this study. A Transwell co-culture system, RNAi experiments, quantitative polymerase chain reaction, western blotting and enzyme-linked immunosorbent, cell counting kit-8 (CCK-8) proliferation, Transwell migration and wound-healing assays were used in this study to determine the migration and proliferation ability, as well as the Hedgehog (HH) pathway-related gene expression in the b.END3 cells. Based on the results, it was demonstrated that the migration and proliferation of the endothelial cells were enhanced following co-culture with GSCs. The gene expression of the HH pathway-related genes, Sonic Hedgehog (Shh) and Hedgehog-interacting protein (Hhip) was altered in the endothelial cells when co-cultured with GSCs. Overexpression of glioma-associated oncogene homolog 1 indicated activation of the HH pathway. Following knockdown of smoothened (Smo) in the endothelial cells, the migration and proliferation abilities of the cells were inhibited. GSCs have little effect on enhancing these behaviors in endothelial cells following Smo-knockdown. Further investigation revealed that Shh levels in the supernatant of the co-culture system were elevated, indicating the importance of secreted Shh from the endothelial cells. In conclusion, GSCs enhanced the migration and proliferation of the endothelial cells in vitro, which was likely associated with the activation of the HH pathway in the endothelial cells, caused by the increased secretion of Shh.

[711]

**TÍTULO / TITLE:** - Cannabidiol, a Non-Psychoactive Cannabinoid Compound, Inhibits Proliferation and Invasion in U87-MG and T98G Glioma Cells through a Multitarget Effect.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 21;8(10):e76918. doi: 10.1371/journal.pone.0076918.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0076918](#)

**AUTORES / AUTHORS:** - Solinas M; Massi P; Cinquina V; Valenti M; Bolognini D; Gariboldi M; Monti E; Rubino T; Parolaro D

**INSTITUCIÓN / INSTITUTION:** - Department of Theoretical and Applied Sciences, Biomedical Research Division, Centre of Neuroscience, University of Insubria, Busto Arsizio, Varese, Italy.

**RESUMEN / SUMMARY:** - In the present study, we found that CBD inhibited U87-MG and T98G cell proliferation and invasiveness in vitro and caused a decrease in the expression of a set of proteins specifically involved in growth, invasion and angiogenesis. In addition, CBD treatment caused a dose-related down-regulation of ERK and Akt prosurvival signaling pathways in U87-MG and T98G cells and decreased hypoxia inducible factor HIF-1alpha expression in U87-MG cells. Taken together, these results provide new insights into the antitumor action of CBD, showing that this cannabinoid affects multiple tumoral features and molecular pathways. As CBD is a non-psychoactive phytocannabinoid that appears to be devoid of side effects, our results support its exploitation as an effective anti-cancer drug in the management of gliomas.

[712]

**TÍTULO / TITLE:** - Both GLS silencing and GLS2 overexpression synergize with oxidative stress against proliferation of glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Mol Med (Berl). 2013 Nov 26.

●● Enlace al texto completo (gratis o de pago) [1007/s00109-013-1105-2](#)

**AUTORES / AUTHORS:** - Martin-Rufian M; Nascimento-Gomes R; Higuero A; Crisma AR; Campos-Sandoval JA; Gomez-Garcia MC; Cardona C; Cheng T; Lobo C; Segura JA; Alonso FJ; Szeliga M; Albrecht J; Curi R; Marquez J; Colquhoun A; Deberardinis RJ; Mates JM

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Biology and Biochemistry, Faculty of Sciences, Campus de Teatinos, University of Malaga, 29071, Malaga, España.

**RESUMEN / SUMMARY:** - Mitochondrial glutaminase (GA) plays an essential role in cancer cell metabolism, contributing to biosynthesis, bioenergetics, and redox balance. Humans contain several GA isozymes encoded by the GLS and GLS2 genes, but the specific roles of each in cancer metabolism are still unclear. In this study, glioma SFxL and LN229 cells with silenced isoenzyme glutaminase KGA (encoded by GLS) showed lower survival ratios and a reduced GSH-dependent antioxidant capacity. These GLS-silenced cells also demonstrated induction of apoptosis indicated by enhanced annexin V binding capacity and caspase 3 activity. GLS silencing was associated with decreased mitochondrial membrane potential (DeltaPsim) (JC-1 dye test), indicating that apoptosis was mediated by mitochondrial dysfunction. Similar observations were made in T98 glioma cells overexpressing glutaminase isoenzyme GAB, encoded by GLS2, though some characteristics (GSH/GSSG ratio) were different in the differently treated cell lines. Thus, control of GA isoenzyme expression may prove to be a key tool to alter both metabolic and oxidative stress in cancer therapy. Interestingly, reactive oxygen species (ROS) generation by treatment with oxidizing agents: arsenic trioxide or hydrogen peroxide, synergizes with either KGA silencing or GAB overexpression to suppress malignant properties of glioma cells, including the reduction of cellular motility. Of note, negative modulation of GLS isoforms or GAB overexpression evoked lower c-myc and bcl-2 expression, as well as higher pro-apoptotic bid expression. Combination of modulation of GA expression and treatment with oxidizing agents may become a therapeutic strategy for intractable cancers and provides a multi-angle evaluation system for anti-glioma pre-clinical investigations. KEY MESSAGE: Silencing GLS or overexpressing GLS2 induces growth inhibition in glioma cell lines. Inhibition is synergistically enhanced after arsenic trioxide (ATO) or H2O2 treatment. Glutathione levels decrease in GLS-silenced cells but augment if GLS2 is overexpressed. ROS synergistically inhibit cell migration by GLS silencing or GLS2 overexpression. c-myc, bid, and bcl-2 mediate apoptosis resulting from GLS silencing or GLS2 overexpression.

[713]

**TÍTULO / TITLE:** - MicroRNA-203 inhibits the proliferation and invasion of U251 glioblastoma cells by directly targeting PLD2.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Med Rep. 2013 Nov 20. doi: 10.3892/mmr.2013.1814.

●● Enlace al texto completo (gratis o de pago) [3892/mmr.2013.1814](#)

**AUTORES / AUTHORS:** - Chen Z; Li D; Cheng Q; Ma Z; Jiang B; Peng R; Chen R; Cao Y; Wan X

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Xiangya Hospital of Central South University, Changsha, Hunan 410008, P.R. China.

**RESUMEN / SUMMARY:** - MicroRNAs (miRNAs) have been demonstrated to be important in the development and progression of various types of cancer. However, the exact roles of certain antioncogenic miRNAs in human malignant gliomas remain to be elucidated. The present study aimed to reveal the expression of microRNA203 (miR-203) in normal brain tissues and gliomas, and to investigate the role of miR-203 in cell proliferation and migration in human glioblastoma U251 cells. Real-time reverse transcription polymerase chain reaction (RT-PCR) showed that the expression of miR-203 in high WHO grade glioma tissues was significantly decreased compared with low WHO grade glioma tissues and normal brain tissues, and its expression demonstrated a decreasing tendency with ascending WHO grades. The transfection of the miR-203 mimic into U251 cells markedly downregulated the expression of phospholipase D2 (PLD2), which was identified as a direct target of miR-203. Furthermore, miR-203 overexpression significantly suppressed the proliferation and invasion of U251 cells, while the overexpression of PLD2 abrogated these effects induced by the miR-203 mimic. In conclusion, the present study demonstrated the clinical significance of miR-203 in gliomas and suggested that miR-203 was able to inhibit the proliferation and invasion of glioma cells, partially at least via suppressing the protein expression of PLD2. Thus, miR-203 may be a novel candidate for the development of therapeutic strategies for gliomas.

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[714]

**TÍTULO / TITLE:** - Neuro-oncology: Novel molecular targets in treatment of glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nat Rev Neurol. 2013 Nov;9(11):612-3. doi: 10.1038/nrneurol.2013.210. Epub 2013 Oct 15.

●● Enlace al texto completo (gratis o de pago) [1038/nrneurol.2013.210](#)

**AUTORES / AUTHORS:** - Sanson M; Idbaih A

**INSTITUCIÓN / INSTITUTION:** - Assistance Publique-Hopitaux de Paris, Groupe Hospitalier Pitie-Salpetriere, Service de Neurologie 2-Mazarin, 47-83 Boulevard de l'Hopital, Paris 75013, France.

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[715]

**TÍTULO / TITLE:** - Ultrasound-guided steroid injection in the treatment of stump neuroma: Pilot study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Back Musculoskelet Rehabil. 2013 Nov 27.

●● Enlace al texto completo (gratis o de pago) [3233/BMR-130444](#)

**AUTORES / AUTHORS:** - Kesikburun S; Yasar E; Dede I; Goktepe S; Tan AK

**INSTITUCIÓN / INSTITUTION:** - Gulhane Military Medical Academy, Department of Physical Medicine and Rehabilitation, Turkish Armed Forces Rehabilitation Center, Ankara, Turkey.

**RESUMEN / SUMMARY:** - BACKGROUND: Stump neuroma is a major cause of postamputation pain. Ultrasound is a practical way of imaging stump neuromas and can be employed for guiding therapeutic injections. OBJECTIVE: The aim of this pilot study was to investigate the effectiveness of ultrasound-guided steroid injection in the treatment of stump neuroma. METHODS: The amputee patients with stump neuroma who underwent a single ultrasound guided steroid injection in amputee rehabilitation

unit of our hospital were reviewed. The pain logs employing a 11-point pain scale for each evaluation time (before the procedure, one day, one week, 2 weeks, 4 weeks, 6 weeks after procedure) and a subsequent phone call approximately six months after procedure were used as the source of information in the study. Mean changes in pain levels (pain in rest and pain with prosthesis) over time were evaluated. The patients that had 50% decrease in pain scores were regarded as having treated successfully. Time after amputation and duration of pain symptom were compared between successfully (Group A) and unsuccessfully (Group B) treated patients. RESULTS: All patients (mean age, 29.7 +/- 5.5 year) in the study were male (n=14). 12 patients were transtibial amputee (85.7%) and 2 patients were transfemoral amputee (14.3%). Both mean pain scores improved significantly in repeated measures (pain in rest F=25.35, p< 0.01; pain with prosthesis F=81.45, p <0.01). A total of 7 patients (50%) were regarded as having treated successfully. Time after amputation and duration of pain symptom were significantly longer in Group B. (p< 0.05, Group A: 16.8 +/- 14.3 months after amputation, 3.5 +/- 4.1 months pain duration; Group B: 80.2 +/- 74.2 months after amputation, 52.8 +/- 57.6 months pain duration). CONCLUSIONS: Steroid injection may have positive effect in the treatment of postamputation neuroma. The patients with shorter pain and amputation duration may respond well to the injection.

[716]

**TÍTULO / TITLE:** - Machine-based morphologic analysis of glioblastoma using whole-slide pathology images uncovers clinically relevant molecular correlates.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 13;8(11):e81049. doi: 10.1371/journal.pone.0081049.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0081049](#)

**AUTORES / AUTHORS:** - Kong J; Cooper LA; Wang F; Gao J; Teodoro G; Scarpace L; Mikkelsen T; Schniederjan MJ; Moreno CS; Saltz JH; Brat DJ

**INSTITUCIÓN / INSTITUTION:** - Center for Comprehensive Informatics, Emory University, Atlanta, Georgia, United States of America ; Department of Biomedical Informatics, Emory University, Atlanta, Georgia, United States of America.

**RESUMEN / SUMMARY:** - Pathologic review of tumor morphology in histologic sections is the traditional method for cancer classification and grading, yet human review has limitations that can result in low reproducibility and inter-observer agreement. Computerized image analysis can partially overcome these shortcomings due to its capacity to quantitatively and reproducibly measure histologic structures on a large-scale. In this paper, we present an end-to-end image analysis and data integration pipeline for large-scale morphologic analysis of pathology images and demonstrate the ability to correlate phenotypic groups with molecular data and clinical outcomes. We demonstrate our method in the context of glioblastoma (GBM), with specific focus on the degree of the oligodendroglioma component. Over 200 million nuclei in digitized pathology slides from 117 GBMs in the Cancer Genome Atlas were quantitatively analyzed, followed by multiplatform correlation of nuclear features with molecular and clinical data. For each nucleus, a Nuclear Score (NS) was calculated based on the degree of oligodendroglioma appearance, using a regression model trained from the optimal feature set. Using the frequencies of neoplastic nuclei in low and high NS intervals, we were able to cluster patients into three well-separated disease groups that contained low, medium, or high Oligodendroglioma Component (OC). We showed

that machine-based classification of GBMs with high oligodendroglioma component uncovered a set of tumors with strong associations with PDGFRA amplification, proneural transcriptional class, and expression of the oligodendrocyte signature genes MBP, HOXD1, PLP1, MOBP and PDGFRA. Quantitative morphologic features within the GBMs that correlated most strongly with oligodendrocyte gene expression were high nuclear circularity and low eccentricity. These findings highlight the potential of high throughput morphologic analysis to complement and inform human-based pathologic review.

[717]

**TÍTULO / TITLE:** - Glioblastoma Multiforme Therapy and Mechanisms of Resistance.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pharmaceuticals (Basel). 2013 Nov 25;6(12):1475-1506.

●● [Enlace al texto completo \(gratis o de pago\) 3390/ph6121475](#)

**AUTORES / AUTHORS:** - Ramirez YP; Weatherbee JL; Wheelhouse RT; Ross AH

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry and Molecular Pharmacology and Department of Cancer Biology, University of Massachusetts Medical School, 364 Plantation Street, Worcester, MA 01605, USA.

[Alonzo.Ross@umassmed.edu](mailto:Alonzo.Ross@umassmed.edu).

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is a grade IV brain tumor characterized by a heterogeneous population of cells that are highly infiltrative, angiogenic and resistant to chemotherapy. The current standard of care, comprised of surgical resection followed by radiation and the chemotherapeutic agent temozolomide, only provides patients with a 12-14 month survival period post-diagnosis. Long-term survival for GBM patients remains uncommon as cells with intrinsic or acquired resistance to treatment repopulate the tumor. In this review we will describe the mechanisms of resistance, and how they may be overcome to improve the survival of GBM patients by implementing novel chemotherapy drugs, new drug combinations and new approaches relating to DNA damage, angiogenesis and autophagy.

[718]

**TÍTULO / TITLE:** - Vacuolar meningioma: a new and rare variant of canine meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Vet Rec. 2013 Nov 23;173(20):502. doi: 10.1136/vr.101548. Epub 2013 Oct 7.

●● [Enlace al texto completo \(gratis o de pago\) 1136/vr.101548](#)

**AUTORES / AUTHORS:** - Scarpante E; Palus V; Summers BA; Caine A; Cherubini GB

**INSTITUCIÓN / INSTITUTION:** - Dick White Referrals, London Road, Six Mile Bottom, Cambridgeshire, CB8 0UH, UK.

[719]

**TÍTULO / TITLE:** - Primary tumors of the lateral ventricles of the brain.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chirurgia (Bucur). 2013 Sep-Oct;108(5):616-30.

**AUTORES / AUTHORS:** - Danaila L

**RESUMEN / SUMMARY:** - Background: The lateral ventricles are located in the center of the brain. Each ventricle lies in contact with five critical neural structures: the caudate

nucleus, the thalamus, the fornix, the corpus callosum, and the genu of internal capsule. The authors report their experience in primary tumors of the lateral ventricles of the brain by analysing the symptomatology, the surgical treatment, the complications and the postoperative results. Objective: To determine the importance of the surgical technique on the morbidity and the recurrence of lateral ventricles tumors. Total surgical resection followed by radiotherapy and or chemotherapy had been the main objective in the cases of anaplastic tumors. Methods: This retrospective study makes reference to 202 primary tumors of the lateral ventricles operated by Leon Danaila between 1982 and 2012. The respective analysis is based on the operative approaches and on the extent of resection. The surgical access routes were the interhemispheric transcallosal approach and the transcortical approach. Results: A number of 177 (87%) of the primary tumors of the lateral ventricles were benign (low grade lesions), while 25 (12.37%) of them were anaplastic. The most frequent tumors were ependymomas, astrocytomas, subependymomas, choroid plexus papillomas and meningiomas. Out of the total of 202 tumor cases, 164 (81.18%) were discharged with very good and good results, 35 (17.32%) were left with neurological deficits, and 3 (1.48%) died. A significant proportion of the patients undergoing surgery develop cerebrospinal fluid outflow obstruction, and this fact made the postoperative mounting of a number of ventricular shunts necessary. Conclusion: The majority of these tumors were benign, with a relatively slow growth rate. Owing to this fact, the preoperative dimensions of the tumors were of several centimeters. The average age of the patients was lower than that of those with similar lesions located intraparenchymatously. The symptoms were determined by the ventricular outflow obstruction and by the affection of the periventricular structures. Interhemispheric transcallosal and transcortical approaches were the best surgical access routes.

[720]

**TÍTULO / TITLE:** - Synchronous tricompartimental benign CNS tumors with tonsillar herniation, cervicodorsal syringomyelia and hydrocephalus.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Surg. 2012 Oct;74(5):420-1. doi: 10.1007/s12262-012-0463-2. Epub 2012 Mar 16.

●● Enlace al texto completo (gratis o de pago) [1007/s12262-012-0463-2](#)

**AUTORES / AUTHORS:** - Das KK; Jaiswal AK; Behari S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Rae Bareilly Road, Lucknow, 226014 India.

**RESUMEN / SUMMARY:** - In this study, three primary central nervous system tumors of different histological cell types occurring together without neurofibromatosis are reported. These included a sellar pituitary adenoma with apoplexy, a large torculetorial meningioma in the posterior fossa, and a cervical spinal intramedullary schwannoma. Displacement of primitive multipotent cells in different central nervous system compartments or the oncogenic effects of activated signaling of growth factor receptors are the proposed pathophysiological mechanisms for the simultaneous genesis of different types of tumors. There was associated tonsillar herniation, cervicodorsal syringomyelia, and hydrocephalus. The radiological features and treatment strategy of these rare synchronous tumors are highlighted.

[721]

**TÍTULO / TITLE:** - Zosteriform palisaded encapsulated neuroma: an unusual presentation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Dermatol. 2013 Nov;58(6):492. doi: 10.4103/0019-5154.119971.

●● Enlace al texto completo (gratis o de pago) [4103/0019-5154.119971](#)

**AUTORES / AUTHORS:** - Halder C; Sen S; Gangopadhyay A; Bala S

**INSTITUCIÓN / INSTITUTION:** - Department of Dermatology, I.P.G.M.E and R., S.S.K.M. Hospital, Kolkata, India.

**RESUMEN / SUMMARY:** - Palisaded encapsulated neuroma (PEN) is an infrequent benign cutaneous neural tumor, which usually presents as solitary, asymptomatic, papule or nodule, often localized on the faces, around the orifices, in middle age with no sex preponderance. Rarely, it can be multiple. Both solitary and multiple lesions are not associated with neurofibromatosis or multiple endocrine neoplasia syndrome type 2B (MEN 2B). We hereby report, a rare case of multiple cutaneous PEN in a 30-year-old female who presented with multiple asymptomatic soft-to-firm papules and nodules in a dermatomal distribution on the face along the supply of the ophthalmic division of the trigeminal nerve with no signs of neurofibromatosis or MEN 2B.

[722]

**TÍTULO / TITLE:** - Primary central nervous system lymphoma mimicking ventriculitis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rinsho Shinkeigaku. 2013;53(10):831-4.

**AUTORES / AUTHORS:** - Yamamoto S; Nagano S; Shibata S; Kunieda T; Imai Y; Kohara N

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Kobe City Medical Center General Hospital.

**RESUMEN / SUMMARY:** - A 66-year-old man presented with deteriorated bradykinesia, gait disturbance, disorientation, and urinary incontinence for three weeks. Magnetic resonance imaging (MRI) showed dilatation of the ventricles. Cerebrospinal fluid (CSF) examination demonstrated lymphocytic pleocytosis, elevation of protein levels, and decreased of glucose levels. A gadolinium-enhanced MRI revealed lesions in the ventricular wall and choroid plexus, mimicking ventriculitis. No evidence of bacterial, fungal, mycobacterial, or viral infections were observed in the CSF. Flow cytometry of CSF showed predominance of CD20+, lambda+ cells. PCR examination of CSF revealed positive IgH gene rearrangement, suggesting B cell lymphoma. Endoscopic brain biopsy showed diffuse large B cell lymphoma. As the patient had no evidence of lymphoma in the other organs, we made a diagnosis of primary central nervous system lymphoma (PCNSL). A limited intraventricular spread of PCNSL is rare but important as one of differential diagnosis of ventriculitis.

[723]

**TÍTULO / TITLE:** - Myeloid-derived suppressor cells in glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Neurother. 2013 Dec;13(12):1395-406. doi: 10.1586/14737175.2013.857603. Epub 2013 Nov 12.

●● Enlace al texto completo (gratis o de pago) [1586/14737175.2013.857603](#)

**AUTORES / AUTHORS:** - Mirghorbani M; Van Gool S; Rezaei N

**INSTITUCIÓN / INSTITUTION:** - Research Center for Immunodeficiencies, Children's Medical Center, Tehran University of Medical Sciences, Tehran, Iran.

**RESUMEN / SUMMARY:** - Glioblastoma is the most prevalent form of gliomas with high aggressive nature and high recurrence. Despite aggressive therapy, including surgery, chemotherapy and radiotherapy, median patient survival is only about 15 months. Hence, developing novel and efficient therapies seem urgent. Many fields have begun their work in preclinical studies but gained limited success in clinical phases. One of the most notable reasons is tumor-induced immunosuppression. In recent decade, efforts to dissect this immunosuppressive network have been done vastly. In a number of malignancies such as glioma, myeloid-derived suppressor cells (MDSCs) have been shown to infiltrate malignant tissues having critical role in the network. Many studies, most of them on lab models, were conducted to understand how MDSCs take part in immunosuppression. Here, we reviewed MDSC relations with other immunocellular components like T cell and natural killer cell.

[724]

**TÍTULO / TITLE:** - Acetate Supplementation Induces Growth Arrest of NG2/PDGFRalpha-Positive Oligodendroglioma-Derived Tumor-Initiating Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 20;8(11):e80714. doi: 10.1371/journal.pone.0080714.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0080714](#)

**AUTORES / AUTHORS:** - Long PM; Tighe SW; Driscoll HE; Moffett JR; Namboodiri AM; Viapiano MS; Lawler SE; Jaworski DM

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Sciences, University of Vermont College of Medicine, Burlington, Vermont, United States of America.

**RESUMEN / SUMMARY:** - Cancer is associated with globally hypoacetylated chromatin and considerable attention has recently been focused on epigenetic therapies. N-acetyl-L-aspartate (NAA), the primary storage form of acetate in the brain, and aspartoacylase (ASPA), the enzyme responsible for NAA catalysis to generate acetate and ultimately acetyl-Coenzyme A for histone acetylation, are reduced in oligodendroglioma. The short chain triglyceride glyceryl triacetate (GTA), which increases histone acetylation and inhibits histone deacetylase expression, has been safely used for acetate supplementation in Canavan disease, a leukodystrophy due to ASPA mutation. We demonstrate that GTA induces cytostatic G0 growth arrest of oligodendroglioma-derived cells in vitro, without affecting normal cells. Sodium acetate, at doses comparable to that generated by complete GTA catalysis, but not glycerol also promoted growth arrest, whereas long chain triglycerides promoted cell growth. To begin to elucidate its mechanism of action, the effects of GTA on ASPA and acetyl-CoA synthetase protein levels and differentiation of established human oligodendroglioma cells (HOG and Hs683) and primary tumor-derived oligodendroglioma cells that exhibit some features of cancer stem cells (grade II OG33 and grade III OG35) relative to an oligodendrocyte progenitor line (Oli-Neu) were

examined. The nuclear localization of ASPA and acetyl-CoA synthetase-1 in untreated cells was regulated during the cell cycle. GTA-mediated growth arrest was not associated with apoptosis or differentiation, but increased expression of acetylated proteins. Thus, GTA-mediated acetate supplementation may provide a safe, novel epigenetic therapy to reduce the growth of oligodendroglioma cells without affecting normal neural stem or oligodendrocyte progenitor cell proliferation or differentiation.

[725]

**TÍTULO / TITLE:** - NETRIN-4 Protects Glioblastoma Cells FROM Temozolomide Induced Senescence.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 12;8(11):e80363. doi: 10.1371/journal.pone.0080363.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0080363](http://1371/journal.pone.0080363)

**AUTORES / AUTHORS:** - Li L; Hu Y; Ylivinkka I; Li H; Chen P; Keski-Oja J; Hyytiainen M

**INSTITUCIÓN / INSTITUTION:** - Departments of Virology and Pathology, Faculty of Medicine, the Haartman Institute, Translational Cancer Biology Research Program and Helsinki University Hospital, University of Helsinki, Helsinki, Finland ; Department of Oncology, the Second Clinical College, Harbin Medical University, Harbin, People's Republic of China.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme is the most common primary tumor of the central nervous system. The drug temozolomide (TMZ) prolongs lifespan in many glioblastoma patients. The sensitivity of glioblastoma cells to TMZ is interfered by many factors, such as the expression of O-6-methylguanine-DNA methyltransferase (MGMT) and activation of AKT signaling. We have recently identified the interaction between netrin-4 (NTN4) and integrin beta-4 (ITGB4), which promotes glioblastoma cell proliferation via activating AKT-mTOR signaling pathway. In the current work we have explored the effect of NTN4/ITGB4 interaction on TMZ induced glioblastoma cell senescence. We report here that the suppression of either ITGB4 or NTN4 in glioblastoma cell lines significantly enhances cellular senescence. The sensitivity of GBM cells to TMZ was primarily determined by the expression of MGMT. To omit the effect of MGMT, we concentrated on the cell lines devoid of expression of MGMT. NTN4 partially inhibited TMZ induced cell senescence and rescued AKT from dephosphorylation in U251MG cells, a cell line bearing decent levels of ITGB4. However, addition of exogenous NTN4 displayed no significant effect on TMZ induced senescence rescue or AKT activation in U87MG cells, which expressed ITGB4 at low levels. Furthermore, overexpression of ITGB4 combined with exogenous NTN4 significantly attenuated U87MG cell senescence induced by TMZ. These data suggest that NTN4 protects glioblastoma cells from TMZ induced senescence, probably via rescuing TMZ triggered ITGB4 dependent AKT dephosphorylation. This suggests that interfering the interaction between NTN4 and ITGB4 or concomitant use of the inhibitors of the AKT pathway may improve the therapeutic efficiency of TMZ.

[726]

**TÍTULO / TITLE:** - The Effect of Antitumor Glycosides on Glioma Cells and Tissues as Studied by Proton HR-MAS NMR Spectroscopy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 23;8(10):e78391. doi: 10.1371/journal.pone.0078391.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0078391](https://doi.org/10.1371/journal.pone.0078391)

**AUTORES / AUTHORS:** - Garcia-Alvarez I; Garrido L; Romero-Ramirez L; Nieto-Sampedro M; Fernandez-Mayoralas A; Campos-Olivas R

**INSTITUCIÓN / INSTITUTION:** - Unidad de Neurología Experimental, Hospital Nacional de Parapléjicos, Servicio de Salud de Castilla-La Mancha (SESCAM), Toledo, España ; Instituto de Química Orgánica General, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, España.

**RESUMEN / SUMMARY:** - The effect of the treatment with glycolipid derivatives on the metabolic profile of intact glioma cells and tumor tissues, investigated using proton high resolution magic angle spinning ((<sup>1</sup>H HR-MAS) nuclear magnetic resonance (NMR) spectroscopy, is reported here. Two compounds were used, a glycoside and its thioglycoside analogue, both showing anti-proliferative activity on glioma C6 cell cultures; however, only the thioglycoside exhibited antitumor activity in vivo. At the drug concentrations showing anti-proliferative activity in cell culture (20 and 40 μM), significant increases in choline containing metabolites were observed in the (<sup>1</sup>H NMR spectra of the same intact cells. In vivo experiments in nude mice bearing tumors derived from implanted C6 glioma cells, showed that reduction of tumor volume was associated with significant changes in the metabolic profile of the same intact tumor tissues; and were similar to those observed in cell culture. Specifically, the activity of the compounds is mainly associated with an increase in choline and phosphocholine, in both the cell cultures and tumoral tissues. Taurine, a metabolite that has been considered a biomarker of apoptosis, correlated with the reduction of tumor volume. Thus, the results indicate that the mode of action of the glycoside involves, at least in part, alteration of phospholipid metabolism, resulting in cell death.

[727]

**TÍTULO / TITLE:** - Proton beam irradiation stimulates migration and invasion of human U87 malignant glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Radiat Res. 2013 Nov 1.

●● Enlace al texto completo (gratis o de pago) [1093/jrr/rrt119](https://doi.org/10.1093/jrr/rrt119)

**AUTORES / AUTHORS:** - Zaboronok A; Isobe T; Yamamoto T; Sato E; Takada K; Sakae T; Tsurushima H; Matsumura A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Faculty of Medicine, University of Tsukuba, 1-1-1 Tennodai, Tsukuba, Ibaraki 305-8575, Japan.

**RESUMEN / SUMMARY:** - Migration and invasion of malignant glioma play a major role in tumor progression and can be increased by low doses of gamma or X-ray irradiation, especially when the migrated tumor cells are located at a distance from the main tumor mass or postoperative cavity and are irradiated in fractions. We studied the influence of proton beam irradiation on migration and invasion of human U87 malignant glioma (U87MG) cells. Irradiation at 4 and 8 Gy increased cell migration by 9.8% (+/-4, P = 0.032) and 11.6% (+/-6.6, P = 0.031) and invasion by 45.1% (+/-16.5, P = 0.04) and 40.5% (+/-12.7, P = 0.041), respectively. After irradiation at 2 and 16 Gy, cell motility did not differ from that at 0 Gy. We determined that an increase in proton beam irradiation dose to over 16 Gy might provide tumor growth control, although additional

specific treatment might be necessary to prevent the potentially increased motility of glioma cells during proton beam therapy.

[728]

**TÍTULO / TITLE:** - Down-modulation of Bis reduces the invasive ability of glioma cells induced by TPA through NF-kappaB mediated activation of MMP-9.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMB Rep. 2013 Dec 1. pii: 2464.

**AUTORES / AUTHORS:** - Lee YD; Cui MN; Yoon HH; Kim HY; Oh IH; Lee JH

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry, Cancer Research Institute, and Cancer Evolution Research Center, College of Medicine, The Catholic University of Korea, Seoul, Korea [leejh@catholic.ac.kr](mailto:leejh@catholic.ac.kr).

**RESUMEN / SUMMARY:** - Bcl-2 interacting cell death suppressor (Bis) has been shown to have anti-apoptotic and anti-stress functions. Recently, increased Bis expression was reported to correlate with the glioma aggressiveness. Here, we investigated the effect of Bis knockdown on the acquisition of the invasive phenotype of A172 glioma cells, induced by 12-O-Tetradecanoylphorbol-13-acetate (TPA) using a Transwell assay. Bis knockdown resulted in a significant decrease in the migration and invasion of A172 cells. Furthermore, Bis knockdown notably decreased TPA-induced matrix metalloproteinase-9 (MMP-9) activity and mRNA expression, as measured by zymography and quantitative real time PCR, respectively. A luciferase reporter assay indicated that Bis suppression significantly down-regulated NF-kappaB-driven transcription. Finally, we demonstrated that the rapid phosphorylation and subsequent degradation of I kappa B-alpha induced by TPA was remarkably delayed by Bis knockdown. These results suggest that Bis regulates the invasive ability of glioma cells elicited by TPA by modulating NF-kappaB activation and subsequent induction of MMP-9 mRNA.

[729]

**TÍTULO / TITLE:** - PMA and Ionomycin Induce Glioblastoma Cell Death: Activation-Induced Cell-Death-Like Phenomena Occur in Glioma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 9;8(10):e76717. doi: 10.1371/journal.pone.0076717.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0076717](#)

**AUTORES / AUTHORS:** - Han S; Tie X; Meng L; Wang Y; Wu A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Hospital of China Medical University, Shenyang, Liaoning, China.

**RESUMEN / SUMMARY:** - Phorbol myristate acetate (PMA) and ionomycin (Io) can induce T cell activation and proliferation. Furthermore, they stimulate activation-induced cell death (AICD) in mature lymphocytes via Fas/Fas ligand (FasL) up-regulation. In this study, we explored the influence of PMA/Io treatment on glioblastoma cells, and found that AICD-like phenomena may also occur in glioma. Using the MTT assay and cell counting, we demonstrated that treatment of PMA/Io significantly inhibited the proliferation of glioma cell lines, U87 and U251. TUNEL assays and transmission electron microscopy revealed that PMA/Io markedly induced U87 and U251 cell apoptosis. Propidium iodide staining and flow cytometry showed that treatment with PMA/Io resulted in an arrestment of cell cycle and an increase in cell

death. Using real-time PCR and western blot, we found that PMA/Io up-regulated the expression of Fas and FasL at both mRNA and protein level, which confirmed that PMA/Io induced glioma cell death. Specific knockdown of NFAT1 expression by small hairpin RNA greatly reduced the PMA/Io induced cell death and apoptosis by inhibition of FasL expression. Microarray analysis showed that the expression of NFAT1 significantly correlated with the expression of Fas. The coexistence of Fas with NFAT1 in vivo provides the background for AICD-like phenomena to occur in glioma. These findings demonstrate that PMA/Io can induce glioblastoma cell death through the NFAT1-Fas/FasL pathway. Glioma-related AICD-like phenomena may provide a novel avenue for glioma treatment.

[730]

**TÍTULO / TITLE:** - Effect of Nrf2 activators on release of glutathione, cysteinylglycine and homocysteine by human U373 astroglial cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Redox Biol. 2013 Sep 12;1(1):441-5. doi: 10.1016/j.redox.2013.08.006.

●● Enlace al texto completo (gratis o de pago) [1016/j.redox.2013.08.006](#)

**AUTORES / AUTHORS:** - Steele ML; Fuller S; Patel M; Kersaitis C; Ooi L; Munch G

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmacology, School of Medicine, University of Western Sydney, Locked Bag 1797, Campbelltown, Penrith, NSW 2751, Australia.

**RESUMEN / SUMMARY:** - Neurons rely on the release and subsequent cleavage of GSH to cysteinylglycine (CysGly) by astrocytes in order to maintain optimal intracellular GSH levels. In neurodegenerative diseases characterised by oxidative stress, neurons need an optimal GSH supply to defend themselves against free radicals released from activated microglia and astroglia. The rate of GSH synthesis is controlled largely by the activity of gamma-glutamyl cysteine ligase. Expression of gamma-glutamyl cysteine ligase and of the Xc<sup>-</sup> system, which facilitates cystine uptake, is regulated by the redox-sensitive transcription factor, nuclear factor erythroid-2-related factor 2 (Nrf2). Compounds that can activate the Nrf2-ARE pathway, referred to as 'Nrf2 activators' are receiving growing attention due to their potential as GSH-boosting drugs. This study compares four known Nrf2 activators, R-alpha-Lipoic acid (LA), tert-butylhydroquinone (TBHQ), sulforaphane (SFN) and Polygonum cuspidatum extract containing 50% resveratrol (PC-Res) for their effects on astroglial release of GSH and CysGly. GSH levels increased dose-dependently in response to all four drugs. Sulforaphane produced the most potent effect, increasing GSH by up to 2.4-fold. PC-Res increased GSH up to 1.6-fold, followed by TBHQ (1.5-fold) and LA (1.4-fold). GSH is processed by the ectoenzyme, gamma-glutamyl transpeptidase, to form CysGly. Once again, SFN produced the most potent effect, increasing CysGly by up to 1.7-fold, compared to control cells. TBHQ and PC-Res both induced fold increases of 1.3, followed by LA with a fold increase of 1.2. The results from the present study showed that sulforaphane, followed by lipoic acid, resveratrol and Polygonum multiflorum were all identified as potent "GSH and Cys-Gly boosters".

[731]

**TÍTULO / TITLE:** - Identification of U251 glioma stem cells and their heterogeneous stem-like phenotypes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Dec;6(6):1649-1655. Epub 2013 Oct 11.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1623](#)

**AUTORES / AUTHORS:** - Zhang S; Xie R; Wan F; Ye F; Guo D; Lei T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery and Chinese-German Lab of Molecular Neurooncology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei 430030, P.R. China.

**RESUMEN / SUMMARY:** - Glioblastoma, the most common and lethal type of intracranial tumor, is characterized by extensive heterogeneity at the cellular and molecular levels. The discovery of glioma stem cells (GSCs) lends support to a new paradigm in tumor biology. In the present study, we aimed to clarify the validity of using U251 glioma cells as a source of GSC culture and critically evaluate the heterogeneous stem-like phenotypes of these cells when grown under various culture conditions. The findings suggested that U251 cells (U251-Adh, U251-SC-Sph and U251-SC-Adh) showed distinctive growth patterns and self-renewal capacity. The U251 glioma cell line is endowed with certain GSC phenotypes that may be moderately enriched in vitro when transferred into stem cell culture conditions, although this is not sustainable and reproducible in vivo. Notably, glioma cells are plastic in response to their environment. The reversible adaptive plasticity contributes to the GSC heterogeneity, which may lead to the heterogeneity of glioblastoma and the differing responses to current therapies. Therefore, an improved understanding of GSC heterogeneity is urgently required for designing more effective therapies against this highly malignant brain tumor.

[732]

**TÍTULO / TITLE:** - Induction of cytopathogenicity in human glioblastoma cells by chikungunya virus.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Sep 25;8(9):e75854. doi: 10.1371/journal.pone.0075854.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0075854](#)

**AUTORES / AUTHORS:** - Abraham R; Mudaliar P; Padmanabhan A; Sreekumar E

**INSTITUCIÓN / INSTITUTION:** - Viral Disease Biology Program, Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram, Kerala, India.

**RESUMEN / SUMMARY:** - Chikungunya virus (CHIKV), an arthritogenic old-world alphavirus, has been implicated in the central nervous system (CNS) infection in infants and elderly patients. Astrocytes are the major immune cells of the brain parenchyma that mediate inflammation. In the present study we found that a local isolate of CHIKV infect and activate U-87 MG cells, a glioblastoma cell line of human astrocyte origin. The infection kinetics were similar in infected U-87 MG cells and the human embryo kidney (HEK293) cells as indicated by immunofluorescence and plaque assays, 24h post-infection (p.i.). In infected U-87 MG cells, apoptosis was detectable from 48h p.i. evidenced by DNA fragmentation, PARP cleavage, loss of mitochondrial membrane potential, nuclear condensation and visible cytopathic effects in a dose and time-dependent manner. XBP1 mRNA splicing and eIF2alpha phosphorylation studies indicated the occurrence of endoplasmic reticulum stress in infected cells. In U-87 MG cells stably expressing a green fluorescent protein-tagged light chain-3 (GFP-LC3) protein, CHIKV infection showed increased autophagy response. The infection led to

an enhanced expression of the mRNA transcripts of the pro-inflammatory cytokines IL-1beta, TNF-alpha, IL-6 and CXCL9 within 24h p.i. Significant up-regulation of the proteins of RIG-I like receptor (RLR) pathway, such as RIG-I and TRAF-6, was observed indicating the activation of the cytoplasmic-cellular innate immune response. The overall results show that the U-87 MG cell line is a potential in vitro model for in depth study of these molecular pathways in response to CHIKV infection. The responses in these cells of CNS origin, which are inherently defective in Type I interferon response, could be analogous to that occurring in infants and very old patients who also have a compromised interferon-response. The results also point to the intriguing possibility of using this virus for studies to develop oncolytic virus therapy approaches against glioblastoma, a highly aggressive malignancy.

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[733]

**TÍTULO / TITLE:** - Altered expression of polycomb group genes in glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 15;8(11):e80970. doi: 10.1371/journal.pone.0080970.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0080970](#)

**AUTORES / AUTHORS:** - Li G; Warden C; Zou Z; Neman J; Krueger JS; Jain A; Jandial R; Chen M

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, City of Hope National Medical Center, Duarte, California, United States of America.

**RESUMEN / SUMMARY:** - The Polycomb group (PcG) proteins play a critical role in histone mediated epigenetics which has been implicated in the malignant evolution of glioblastoma multiforme (GBM). By systematically interrogating The Cancer Genome Atlas (TCGA), we discovered widespread aberrant expression of the PcG members in GBM samples compared to normal brain. The most striking differences were upregulation of EZH2, PHF19, CBX8 and PHC2 and downregulation of CBX7, CBX6, EZH1 and RYBP. Interestingly, changes in EZH2, PHF19, CBX7, CBX6 and EZH1 occurred progressively as astrocytoma grade increased. We validated the aberrant expression of CBX6, CBX7, CBX8 and EZH2 in GBM cell lines by Western blotting and qRT-PCR, and further the aberrant expression of CBX6 in GBM tissue samples by immunohistochemical staining. To determine if there was functional significance to the diminished CBX6 levels in GBM, CBX6 was overexpressed in GBM cells resulting in decreased proliferative capacity. In conclusion, aberrant expression of PcG proteins in GBMs may play a role in the development or maintenance of the malignancy.

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[734]

**TÍTULO / TITLE:** - Neuro-oncology: RNA interference-based nanomedicine provides a new approach for glioblastoma therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nat Rev Neurol. 2013 Nov 12. doi: 10.1038/nrneurol.2013.240.

●● Enlace al texto completo (gratis o de pago) [1038/nrneurol.2013.240](#)

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[735]

**TÍTULO / TITLE:** - Spherical Nucleic Acid Nanoparticle Conjugates as an RNAi-Based Therapy for Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Sci Transl Med. 2013 Oct 30;5(209):209ra152. doi: 10.1126/scitranslmed.3006839.

●● Enlace al texto completo (gratis o de pago) [1126/scitranslmed.3006839](#)

**AUTORES / AUTHORS:** - Jensen SA; Day ES; Ko CH; Hurley LA; Luciano JP; Kouri FM; Merkel TJ; Luthi AJ; Patel PC; Cutler JI; Daniel WL; Scott AW; Rotz MW; Meade TJ; Giljohann DA; Mirkin CA; Stegh AH

**INSTITUCIÓN / INSTITUTION:** - Ken and Ruth Davee Department of Neurology, The Northwestern Brain Tumor Institute, The Robert H. Lurie Comprehensive Cancer Center, Northwestern University, 303 East Superior, Chicago, IL 60611, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is a neurologically debilitating disease that culminates in death 14 to 16 months after diagnosis. An incomplete understanding of how cataloged genetic aberrations promote therapy resistance, combined with ineffective drug delivery to the central nervous system, has rendered GBM incurable. Functional genomics efforts have implicated several oncogenes in GBM pathogenesis but have rarely led to the implementation of targeted therapies. This is partly because many “undruggable” oncogenes cannot be targeted by small molecules or antibodies. We preclinically evaluate an RNA interference (RNAi)-based nanomedicine platform, based on spherical nucleic acid (SNA) nanoparticle conjugates, to neutralize oncogene expression in GBM. SNAs consist of gold nanoparticles covalently functionalized with densely packed, highly oriented small interfering RNA duplexes. In the absence of auxiliary transfection strategies or chemical modifications, SNAs efficiently entered primary and transformed glial cells in vitro. In vivo, the SNAs penetrated the blood-brain barrier and blood-tumor barrier to disseminate throughout xenogeneic glioma explants. SNAs targeting the oncoprotein Bcl2Like12 (Bcl2L12)-an effector caspase and p53 inhibitor overexpressed in GBM relative to normal brain and low-grade astrocytomas-were effective in knocking down endogenous Bcl2L12 mRNA and protein levels, and sensitized glioma cells toward therapy-induced apoptosis by enhancing effector caspase and p53 activity. Further, systemically delivered SNAs reduced Bcl2L12 expression in intracerebral GBM, increased intratumoral apoptosis, and reduced tumor burden and progression in xenografted mice, without adverse side effects. Thus, silencing antiapoptotic signaling using SNAs represents a new approach for systemic RNAi therapy for GBM and possibly other lethal malignancies.

[736]

**TÍTULO / TITLE:** - Fatal intracranial hemorrhage as the initial presentation of acute lymphocytic leukemia: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(4):568-71. doi: 10.5137/1019-5149.JTN.5831-12.0.

●● Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.5831-12.0](#)

**AUTORES / AUTHORS:** - Patil S; Nourbakhsh A; Thakur JD; Khan IS; Guthikonda B  
**INSTITUCIÓN / INSTITUTION:** - Louisiana State University Health Science Center, Department of Neurosurgery, Shreveport, USA.

**RESUMEN / SUMMARY:** - Hemorrhagic complications of acute leukemia are well described and are a common cause of mortality in these patients. However, to our

knowledge, fatal intracerebral hemorrhage (ICH) as an initial presentation of acute lymphocytic leukemia (ALL) has only been reported once. We report a case of previously undiagnosed ALL presenting with ICH. Our patient is a 17-year old male who was found unresponsive several hours after complaining of headache. Initial emergency room evaluation found the patient to have anisocoria with a fixed and dilated right pupil and demonstrated evidence of decorticate posturing. Imaging revealed a large right-sided intraparenchymal hemorrhage, intraventricular hemorrhage, midline shift, and uncal herniation. Laboratory evaluation showed marked leukocytosis with blastic predominance and evidence of disseminated intravascular coagulopathy. Emergent surgical intervention was performed. However, despite evacuation of the hematoma, the patient eventually progressed to clinical brain death. Usually, ICH is seen in ALL patients after the diagnosis has been made. We report a unique case of fatal intracranial hemorrhage as the initial presentation of ALL and discuss the possible management dilemmas to treat such entities. ALL should be kept in the broad differential diagnosis of spontaneous ICH, especially in a young patient with evidence of severe coagulopathy.

[737]

**TÍTULO / TITLE:** - Anti-human-cytomegalovirus immunoglobulin G levels in glioma risk and prognosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Med. 2013 Feb;2(1):57-62. doi: 10.1002/cam4.44. Epub 2013 Feb 3.

●● [Enlace al texto completo \(gratis o de pago\) 1002/cam4.44](#)

**AUTORES / AUTHORS:** - Susan Amirian E; Marquez-Do D; Bondy ML; Scheurer ME

**INSTITUCIÓN / INSTITUTION:** - Dan L. Duncan Cancer Center, Baylor College of Medicine Houston, Texas.

**RESUMEN / SUMMARY:** - The role of human cytomegalovirus (HCMV) in glioma development and progression remains controversial. The purpose of our study was to assess the potential associations between anti-HCMV antibodies (immunoglobulin G [IgG] and immunoglobulin M [IgM]) and glioma risk and prognosis using data from the Harris County Case-Control Study. Multivariable logistic regression models were utilized to estimate odds ratios and 95% confidence intervals (CI) for the associations between glioma status and antibody levels among glioma cases (n = 362) and cancer-free controls (n = 462). Hazard ratios and 95% CIs were calculated using Cox proportional hazards regression, adjusting for age, race, and sex, to determine if antibody levels were associated with survival over time among cases. Among IgG-positive participants, increasing anti-HCMV IgG levels were associated with decreasing glioma risk (P for trend = 0.0008), and those with the lowest level of anti-HCMV IgG (<10 U/mL) had the highest glioma risk, controlling for age, sex, and race/ethnicity (OR: 2.51, 95% CI: 1.42-4.43). Antibody levels were not associated with survival among glioma cases. Our study contributes new evidence toward the potential importance of the direct and indirect effects of HCMV infection in gliomagenesis.

[738]

**TÍTULO / TITLE:** - Aqueous Ethanolic Extract of *Tinospora cordifolia* as a Potential Candidate for Differentiation Based Therapy of Glioblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 24;8(10):e78764. doi: 10.1371/journal.pone.0078764.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0078764](http://dx.doi.org/10.1371/journal.pone.0078764)

**AUTORES / AUTHORS:** - Mishra R; Kaur G

**INSTITUCIÓN / INSTITUTION:** - Department of Biotechnology, Guru Nanak Dev University, Amritsar, India.

**RESUMEN / SUMMARY:** - Glioblastomas are the most aggressive primary brain tumors and their heterogeneity and complexity often renders them non responsive to various conventional treatments. Search for herbal products having potential anti-cancer activity is an active area of research in the Indian traditional system of medicine i.e., Ayurveda. *Tinospora cordifolia*, also named as 'heavenly elixir' is used in various ayurvedic decoctions as panacea to treat several body ailments. The current study investigated the anti-brain cancer potential of 50% ethanolic extract of *Tinospora cordifolia* (TCE) using C6 glioma cells. TCE significantly reduced cell proliferation in dose-dependent manner and induced differentiation in C6 glioma cells, resulting in astrocyte-like morphology as indicated by phase contrast images, GFAP expression and process outgrowth data of TCE treated cells which exhibited higher number and longer processes than untreated cells. Reduced proliferation of cells was accompanied by enhanced expression of senescence marker, p21 and its translocation from perinuclear to pancytoplasmic spaces. Further, TCE showed anti-migratory and anti-invasive potential as depicted by wound scratch assay and reduced expression of plasticity markers NCAM and PSA-NCAM along with MMP-2 and 9. On analysis of the cell cycle and apoptotic markers, TCE treatment was seen to arrest the C6 cells in G0/G1 and G2/M phase, suppressing expression of G1/S phase specific protein cyclin D1 and anti-apoptotic protein Bcl-xL, thus supporting its anti-proliferative and apoptosis inducing potential. Present study provides the first evidence for the presence of anti-proliferative, differentiation-inducing and anti-migratory/anti-metastatic potential of TCE in glioma cells and possible signaling pathways involved in its mode of action. Our primary data suggests that TCE and its active components may prove to be promising phytotherapeutic interventions in glioblastoma multiforme.

[739]

**TÍTULO / TITLE:** - Neural stem cell-mediated delivery of irinotecan-activating carboxylesterases to glioma: implications for clinical use.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Stem Cells. Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://stemcells.alphamedpress.org/>

●● Cita: Stem Cells: <> Transl Med. 2013 Dec;2(12):983-92. doi:

10.5966/sctm.2012-0177. Epub 2013 Oct 28.

●● Enlace al texto completo (gratis o de pago) [5966/sctm.2012-0177](http://dx.doi.org/10.5966/sctm.2012-0177)

**AUTORES / AUTHORS:** - Metz MZ; Gutova M; Lacey SF; Abramyants Y; Vo T; Gilchrist M; Tirughana R; Ghoda LY; Barish ME; Brown CE; Najbauer J; Potter PM; Portnow J; Synold TW; Aboody KS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences.

**RESUMEN / SUMMARY:** - CPT-11 (irinotecan) has been investigated as a treatment for malignant brain tumors. However, limitations of CPT-11 therapy include low levels of the drug entering brain tumor sites and systemic toxicities associated with higher doses. Neural stem cells (NSCs) offer a novel way to overcome these obstacles

because of their inherent tumor tropism and ability to cross the blood-brain barrier, which enables them to selectively target brain tumor sites. Carboxylesterases (CEs) are enzymes that can convert the prodrug CPT-11 (irinotecan) to its active metabolite SN-38, a potent topoisomerase I inhibitor. We have adenovirally transduced an established clonal human NSC line (HB1.F3.CD) to express a rabbit carboxylesterase (rCE) or a modified human CE (hCE1m6), which are more effective at converting CPT-11 to SN-38 than endogenous human CE. We hypothesized that NSC-mediated CE/CPT-11 therapy would allow tumor-localized production of SN-38 and significantly increase the therapeutic efficacy of irinotecan. Here, we report that transduced NSCs transiently expressed high levels of active CE enzymes, retained their tumor-tropic properties, and mediated an increase in the cytotoxicity of CPT-11 toward glioma cells. CE-expressing NSCs (NSC.CEs), whether administered intracranially or intravenously, delivered CE to orthotopic human glioma xenografts in mice. NSC-delivered CE catalyzed conversion of CPT-11 to SN-38 locally at tumor sites. These studies demonstrate the feasibility of NSC-mediated delivery of CE to glioma and lay the foundation for translational studies of this therapeutic paradigm to improve clinical outcome and quality of life in patients with malignant brain tumors.

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[740]

**TÍTULO / TITLE:** - A two-stage model for in vivo assessment of brain tumor perfusion and abnormal vascular structure using arterial spin labeling.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 2;8(10):e75717. doi: 10.1371/journal.pone.0075717.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0075717](#)

**AUTORES / AUTHORS:** - Hales PW; Phipps KP; Kaur R; Clark CA

**INSTITUCIÓN / INSTITUTION:** - Imaging and Biophysics Unit, Institute of Child Health, University College London, London, United Kingdom.

**RESUMEN / SUMMARY:** - The ability to assess brain tumor perfusion and abnormalities in the vascular structure in vivo could provide significant benefits in terms of lesion diagnosis and assessment of treatment response. Arterial spin labeling (ASL) has emerged as an increasingly viable methodology for non-invasive assessment of perfusion. Although kinetic models have been developed to describe perfusion in healthy tissue, the dynamic behaviour of the ASL signal in the brain tumor environment has not been extensively studied. We show here that dynamic ASL data acquired in brain tumors displays an increased level of 'biphasic' behaviour, compared to that seen in healthy tissue. A new two-stage model is presented which more accurately describes this behaviour, and provides measurements of perfusion, pre-capillary blood volume fraction and transit time, and capillary bolus arrival time. These biomarkers offer a novel contrast in the tumor and surrounding tissue, and provide a means for measuring tumor perfusion and vascular structural abnormalities in a fully non-invasive manner.

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[741]

**TÍTULO / TITLE:** - Lipid metabolism emerges as a promising target for malignant glioma therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - CNS Oncol. 2013 May 1;2(3):289-299.

●● Enlace al texto completo (gratis o de pago) [2217/cns.13.20](#)

**AUTORES / AUTHORS:** - Guo D; Bell EH; Chakravarti A

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Ohio State University Comprehensive Cancer Center & Arthur G James Cancer Hospital, Columbus, OH 43210, USA.

**RESUMEN / SUMMARY:** - Malignant gliomas are one of the most treatment-refractory cancers. Development of resistance to chemo- and radio-therapies contributes to these tumors' aggressive phenotypes. Elevated lipid levels in gliomas have been reported for the last 50 years. However, the molecular mechanisms of how tumor tissues obtain lipids and utilize them are not well understood. Recently, the oncogenic signaling EGFR/PI3K/Akt pathway has been shown to enhance lipid synthesis and uptake by upregulating SREBP-1, a master transcriptional factor, to control lipid metabolism. This article discusses the analytical chemistry results of lipid components in glioma tissues from different research groups. The molecular mechanisms that link oncogenes with lipid programming, and identification of the key molecular targets and development of effective drugs to inhibit lipid metabolism in malignant gliomas will be discussed.

[742]

**TÍTULO / TITLE:** - Patented nanomedicines for the treatment of brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pharm Pat Anal. 2013 Nov;2(6):745-54. doi: 10.4155/ppa.13.56.

- [Enlace al texto completo \(gratis o de pago\) 4155/ppa.13.56](#)

**AUTORES / AUTHORS:** - Caruso G; Raudino G; Caffo M

**INSTITUCIÓN / INSTITUTION:** - Neurosurgical Clinic, Department of Neuroscience, University of Messina, School of Medicine, 98125, Messina, Italy.

**RESUMEN / SUMMARY:** - Patients affected by malignant brain tumors present an extremely poor prognosis, notwithstanding improvements in surgery techniques and therapeutic protocols. Brain tumor treatment has been principally hampered by limited drug delivery across the blood-brain barrier (BBB). An efficacious chemotherapeutic treatment requires a pharmacological agent that can penetrate the BBB and target neoplastic cells. Nanotechnology involves the design, synthesis and characterization of materials that have a functional organization in at least one dimension on the nanometer scale. Nanoparticle systems can represent optimal devices for delivery of various drugs into the brain across the BBB. Nanoparticle drug-delivery systems can also be used to provide targeted delivery of drugs, improve bioavailability and sustain release of drugs for systemic delivery. In this patent review, the recent studies of certain nanoparticle systems in treatment of brain tumors are summarized. Common nanoparticles systems include polymeric nanoparticles, lipid nanoparticles and inorganic nanoparticles. Various patents of nanoparticle systems able to cross the BBB to target brain tumors are also reported and discussed.

[743]

**TÍTULO / TITLE:** - Prolactinoma-associated obesity treated with bupropion and methylphenidate.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ther Adv Psychopharmacol. 2013 Jun;3(3):177-80. doi: 10.1177/2045125312467345.

- [Enlace al texto completo \(gratis o de pago\) 1177\\_2045125312467345](#) [pii]

●● Enlace al texto completo (gratis o de pago) [1177/2045125312467345](https://doi.org/10.1177/2045125312467345)

**AUTORES / AUTHORS:** - Terock J; Hohagen F; Petersen D; Zurowski B

**INSTITUCIÓN / INSTITUTION:** - Department of Psychiatry and Psychotherapy, University of Lubeck, Ratzeburger Allee 160, Lubeck, 23538, Germany.

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[744]

**TÍTULO / TITLE:** - Examining Changes in [ F]FDG and [ F]FLT Uptake in U87-MG Glioma Xenografts as Early Response Biomarkers to Treatment with the Dual mTOR1/2 Inhibitor AZD8055.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Imaging Biol. 2013 Nov 19.

●● Enlace al texto completo (gratis o de pago) [1007/s11307-013-0705-0](https://doi.org/10.1007/s11307-013-0705-0)

**AUTORES / AUTHORS:** - Keen HG; Ricketts SA; Maynard J; Logie A; Odedra R; Shannon AM; Wedge SR; Guichard SM

**INSTITUCIÓN / INSTITUTION:** - Personalised Healthcare and Biomarkers, AstraZeneca, Alderley Park, Macclesfield, Cheshire, SK10 4TG, UK, [heather.keen@astrazeneca.com](mailto:heather.keen@astrazeneca.com).

**RESUMEN / SUMMARY:** - PURPOSE: The mTOR kinase inhibitor AZD8055 inhibits both mTORC1 and mTORC2 leading to disruption of glucose metabolism and proliferation pathways. This study assessed the impact of single and multiple doses of AZD8055 on the uptake of the glucose metabolism marker 2-deoxy-2-[18 F]fluoro-D-glucose ([18 F]FDG) and the proliferation marker 3'-deoxy-3'-[18 F]fluorothymidine ([18 F]FLT) in U87-MG glioma xenografts. PROCEDURES: Mice bearing U87-MG tumours received either vehicle or AZD8055 (20 mg/kg) once daily p.o. Mice were imaged with either [18 F]FDG or [18 F]FLT PET to assess treatment response. Comparisons were made between in vivo imaging and ex vivo histopathology data. RESULTS: Tumour uptake of [18 F]FDG was reduced by 33 % 1 h after a single dose of AZD8055 and by 49 % following 4 days of dosing. These changes coincided with suppression of the mTOR pathway biomarkers pS6 and pAKT. In contrast, the effect of AZD8055 on [18 F]FLT uptake was inconsistent. CONCLUSIONS: The very rapid change in [18 F]FDG uptake following acute AZD8055 treatment suggests that this could be used as an early mechanistic biomarker of metabolic changes resulting from mTOR inhibition. The utility of [18 F]FLT for measuring the anti-proliferative effect of AZD8055 remains unclear.

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[745]

**TÍTULO / TITLE:** - Effect of Combined Bevacizumab and Temozolomide Treatment on Intramedullary Spinal Cord Tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Spine (Phila Pa 1976). 2013 Oct 23.

●● Enlace al texto completo (gratis o de pago)

[1097/BRS.0000000000000070](https://doi.org/10.1097/BRS.0000000000000070)

**AUTORES / AUTHORS:** - Gwak SJ; An SS; Yang MS; Joe E; Kim DH; Yoon DH; Kim KN; Ha Y

**INSTITUCIÓN / INSTITUTION:** - 1Spine & Spinal Cord Institute, Department of Neurosurgery, Yonsei University College of Medicine, Seoul, Republic of Korea  
2Department of Electrical and Electronic Engineering, Yonsei University, 134 Shinchondong, Seodaemungu, Seoul 120-749, Republic of Korea daggerCo-first authors: These authors contributed equally to this work.

**RESUMEN / SUMMARY:** - Study Design. C6 glioma cells and an intramedullary spinal cord tumor model were used to evaluate the effect of bevacizumab(Avastin) or temozolomide (TMZ).Objective. In this study, we hypothesized that treatment with bevacizumab accelerates the therapeutic effect of TMZ on intramedullary gliomas in an animal model.Summary of Background Data. Recently therapies for the management of intramedullary malignant gliomas include surgery, chemotherapy, and radiotherapy. Concurrent or adjuvant TMZ has been considered an emerging new treatment for intramedullary malignant gliomas, however, high-dose application of TMZ has limitation of side effect.Methods. C6 glioma cells were injected into the T5 level of the spinal cord, and TMZ and bevacizumab were administered 5 days after C6 inoculation (n = 7 for each group). Tumor size was analyzed using histology and magnetic resonance imaging (MRI) at 13 days after tumor inoculation.Results. Histological analyses and MRI findings showed that combined treatment with TMZ and bevacizumab reduced tumor mass. The tumor volume of control group was 2.8-fold higher than combined therapy (p<0.05). Neurologic outcomes demonstrated that combined therapy improved hind limb function more than TMZ alone or control group (p<0.05).Conclusion. This study shows that bevacizumab could be useful in combination with TMZ to increase the therapeutic benefits of TMZ for intramedullary spinal cord tumors.

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[746]

**TÍTULO / TITLE:** - SAMS1 Is Highly Expressed and Associated with a Poor Survival in Glioblastoma Multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 22;8(11):e81905. doi: 10.1371/journal.pone.0081905.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0081905](#)

**AUTORES / AUTHORS:** - Yan Y; Zhang L; Xu T; Zhou J; Qin R; Chen C; Zou Y; Fu D; Hu G; Chen J; Lu Y

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery Research Institution of Shanghai, Department of Neurosurgery, Changzheng Hospital, Second Military Medical University, Shanghai, China.

**RESUMEN / SUMMARY:** - OBJECTIVES: To study the expression pattern and prognostic significance of SAMS1 in glioma. METHODS: Affymetrix and Arrystar gene microarray data in the setting of glioma was analyzed to preliminarily study the expression pattern of SAMS1 in glioma tissues, and Hieratical clustering of gene microarray data was performed to filter out genes that have prognostic value in malignant glioma. Survival analysis by Kaplan-Meier estimates stratified by SAMS1 expression was then made based on the data of more than 500 GBM cases provided by The Cancer Genome Atlas (TCGA) project. At last, we detected the expression of SAMS1 in large numbers of glioma and normal brain tissue samples using Tissue Microarray (TMA). Survival analysis by Kaplan-Meier estimates in each grade of glioma was stratified by SAMS1 expression. Multivariate survival analysis was made by Cox proportional hazards regression models in corresponding groups of glioma. RESULTS: With the expression data of SAMS1 and 68 other genes, high-grade glioma could be classified into two groups with clearly different prognoses. Gene and large sample tissue microarrays showed high expression of SAMS1 in glioma particularly in GBM. Survival analysis based on the TCGA GBM data matrix and TMA multi-grade glioma dataset found that SAMS1 expression was closely related to the prognosis of GBM,

either PFS or OS ( $P < 0.05$ ). Multivariate survival analysis with Cox proportional hazards regression models confirmed that high expression of SAMS1 was a strong risk factor for PFS and OS of GBM patients. CONCLUSION: SAMS1 is over-expressed in glioma as compared with that found in normal brains, especially in GBM. High expression of SAMS1 is a significant risk factor for the progression free and overall survival of GBM.

[747]

**TÍTULO / TITLE:** - Surgical Resection of Twenty-Three Cases of Brain Meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Vet Med Sci. 2013 Nov 8.

**AUTORES / AUTHORS:** - Ijiri A; Yoshiki K; Tsuboi S; Shimazaki H; Akiyoshi H; Nakade T

**INSTITUCIÓN / INSTITUTION:** - Atsuki Veterinary Medical Center.

**RESUMEN / SUMMARY:** - To report the effectiveness of MRI scanning during brain meningioma resection surgery in canine and feline. Twenty three cases from 2006 to 2008 in canine and feline diagnosed with meningioma. All were aged between 8 years and 16 years old. There were 12 males and 11 females. Appropriate craniotomy was performed for each case according to the initial MRI taken to diagnose meningioma prior to the surgery. Once dura mater was exposed, an MRI biopsy needle was placed in the tumor as a guide. 1<sup>st</sup> MRI during the surgery was scanned with this needle to confirm the location of the tumor. This MRI image was also processed and displayed by MPR to reveal the tumor extent in three dimensions. Sonopet was applied in the middle of the tumor to destroy the inner part and release pressure from the entire tumor. Creating some space between the brain tissue and tumor, we treated blood vessels and carefully resected them. This procedure was repeated until complete removal of the tumor was confirmed by MRI. Sixteen of the twenty three cases survived for more than 2 years postoperatively. The other seven died due to other disorders within 2 years. Our method with MRI navigation during the surgery improved our surgical performance and contributed to a prolonged survival time for the patients. In order to perform multiple MRI procedures smoothly during the surgery, it is necessary to have skillful assistants.

[748]

**TÍTULO / TITLE:** - The KDM1A histone demethylase is a promising new target for the epigenetic therapy of medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol Commun. 2013 May 29;1(1):19.

●● [Enlace al texto completo \(gratis o de pago\) 1186/2051-5960-1-19](#)

**AUTORES / AUTHORS:** - Pajtler KW; Weingarten C; Thor T; Kunkele A; Heukamp LC; Buttner R; Suzuki T; Miyata N; Grotzer M; Rieb A; Sprussel A; Eggert A; Schramm A; Schulte JH

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Oncology and Hematology, University Hospital Essen, Essen, Germany. [kristian.pajtler@uk-essen.de](mailto:kristian.pajtler@uk-essen.de).

**RESUMEN / SUMMARY:** - BACKGROUND: Medulloblastoma is a leading cause of childhood cancer-related deaths. Current aggressive treatments frequently lead to cognitive and neurological disabilities in survivors. Novel targeted therapies are

required to improve outcome in high-risk medulloblastoma patients and quality of life of survivors. Targeting enzymes controlling epigenetic alterations is a promising approach recently bolstered by the identification of mutations in histone demethylating enzymes in medulloblastoma sequencing efforts. Hypomethylation of lysine 4 in histone 3 (H3K4) is also associated with a dismal prognosis for medulloblastoma patients. Functional characterization of important epigenetic key regulators is urgently needed. RESULTS: We examined the role of the H3K4 modifying enzyme, KDM1A, in medulloblastoma, an enzyme also associated with malignant progression in the closely related tumor, neuroblastoma. Re-analysis of gene expression data and immunohistochemistry of tissue microarrays of human medulloblastomas showed strong KDM1A overexpression in the majority of tumors throughout all molecular subgroups. Interestingly, KDM1A knockdown in medulloblastoma cell lines not only induced apoptosis and suppressed proliferation, but also impaired migratory capacity. Further analyses revealed bone morphogenetic protein 2 (BMP2) as a major KDM1A target gene. BMP2 is known to be involved in development and differentiation of granule neuron precursor cells (GNCPs), one potential cell of origin for medulloblastoma. Treating medulloblastoma cells with the specific KDM1A inhibitor, NCL-1, significantly inhibited growth in vitro. CONCLUSION: We provide the first evidence that a histone demethylase is functionally involved in the regulation of the malignant phenotype of medulloblastoma cells, and lay a foundation for future evaluation of KDM1A-inhibiting therapies in combating medulloblastoma.

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[749]

**TÍTULO / TITLE:** - Anti-cancer Therapies in High Grade Gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Proteomics. 2013 Sep;10(3):246-260.

●● Enlace al texto completo (gratis o de pago) [2174/1570164611310030007](#)

**AUTORES / AUTHORS:** - Tanase CP; Enciu AM; Mihai S; Neagu AI; Calenic B; Cruceru ML

**INSTITUCIÓN / INSTITUTION:** - Victor Babes National Institute of Pathology, Department of Biochemistry-Proteomics, no 99-101 Splaiul Independentei, 050096 sect 5 Bucharest, Romania;

**RESUMEN / SUMMARY:** - High grade gliomas represent one of the most aggressive and treatment-resistant types of human cancer, with only 1-2 years median survival rate for patients with grade IV glioma. The treatment of glioblastoma is a considerable therapeutic challenge; combination therapy targeting multiple pathways is becoming a fast growing area of research. This review offers an up-to-date perspective of the literature about current molecular therapy targets in high grade glioma, that include angiogenic signals, tyrosine kinase receptors, nodal signaling proteins and cancer stem cells related approaches. Simultaneous identification of proteomic signatures could provide biomarker panels for diagnostic and personalized treatment of different subsets of glioblastoma. Personalized medicine is starting to gain importance in clinical care, already having recorded a series of successes in several types of cancer; nonetheless, in brain tumors it is still at an early stage.

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[750]

**TÍTULO / TITLE:** - TAMs Are a Potential Therapeutic Target in Glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Discov. 2013 Nov;3(11):1217. doi: 10.1158/2159-8290.CD-RW2013-217. Epub 2013 Oct 3.

●● Enlace al texto completo (gratis o de pago) [1158/2159-8290.CD-RW2013-217](https://doi.org/10.1158/2159-8290.CD-RW2013-217)

**RESUMEN / SUMMARY:** - CSF1R blockade inhibits glioma growth via reeducation of tumor-associated macrophages (TAM).

[751]

**TÍTULO / TITLE:** - HDAC inhibitors and their potential applications to glioblastoma therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncoimmunology. 2013 Aug 1;2(8):e25219. Epub 2013 Jun 10.

●● Enlace al texto completo (gratis o de pago) [4161/onci.25219](https://doi.org/10.1158/2159-8290.CD-RW2013-217)

**AUTORES / AUTHORS:** - Adamopoulou E; Naumann U

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Immunology; Department of Vascular Neurology; Hertie Institute for Clinical Brain Research; University of Tuebingen; Tuebingen, Germany.

**RESUMEN / SUMMARY:** - Natural killer (NK) cells are integral components of the antitumor immune response. The downregulation of ligands for NK-cell stimulatory receptors represents a strategy whereby glioblastoma cells can evade NK-cell attacks. Histone deacetylase inhibitors can stimulate the (re)expression of these ligands, driving cytotoxic responses against glioblastoma cells that efficiently inhibit tumor growth.

[752]

**TÍTULO / TITLE:** - Spinal meningiomas in dogs: Description of 8 cases including a novel radiological and histopathological presentation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can Vet J. 2013 Oct;54(10):948-54.

**AUTORES / AUTHORS:** - Jose-Lopez R; de la Fuente C; Pumarola M; Anor S

**INSTITUCIÓN / INSTITUTION:** - Departament de Medicina i Cirurgia Animal (Jose-Lopez, de la Fuente, Pumarola, Anor), and Fundacio Hospital Clinic Veterinari (Jose-Lopez, de la Fuente, Anor), Facultat de Veterinaria. Universitat Autonoma de Barcelona, Bellaterra, Barcelona, España.

**RESUMEN / SUMMARY:** - Clinical, imaging, and histological features of 8 canine spinal meningiomas, including a cervical cystic meningioma with imaging and intraoperative features of an arachnoid cyst, are described. All meningiomas were histologically classified and graded following the international World Health Organization human classification for tumors. Six meningiomas were located in the cervical spinal cord. Myelography showed intradural/ extramedullary lesions in ¾ cases. Magnetic resonance imaging revealed hyperintense intradural/extramedullary masses on pre-contrast T1-weighted and T2-weighted images with homogeneous contrast enhancement in 7/8 cases. One dog had a cerebrospinal fluid-filled subarachnoid cavity dorsal to the cervical spinal cord. A spinal arachnoid cyst was diagnosed on imaging, but the histopathological study of the resected tissue revealed a grade I meningothelial cystic meningioma. There were no differences in outcome associated with tumor grade and surgical treatment (6/8). Cystic meningioma should be considered in the differential diagnosis of intraspinal cystic lesions, and biopsy is necessary for definitive diagnosis.

[753]

**TÍTULO / TITLE:** - Long-Term Survival and Improved Quality of Life following Multiple Repeat Gamma Knife Radiosurgeries for Recurrent Glioblastoma Multiforme: A Case Report and Review of the Literature.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Oncol Med. 2013;2013:431857. doi: 10.1155/2013/431857. Epub 2013 Sep 24.

●● Enlace al texto completo (gratis o de pago) [1155/2013/431857](#)

**AUTORES / AUTHORS:** - Larson EW; Peterson HE; Fairbanks RK; Lamoreaux WT; Mackay AR; Call JA; Demakas JJ; Cooke BS; Lee CM

**INSTITUCIÓN / INSTITUTION:** - Gamma Knife of Spokane, Cancer Care Northwest, 910 W 5<sup>th</sup> Avenue, Suite 102, Spokane, WA 99204, USA ; Cancer Care Northwest, 910 W 5<sup>th</sup> Avenue, Suite 102, Spokane, WA 99204, USA ; University of Washington School of Medicine, 1959 NE Pacific Street, Seattle, WA 98195, USA.

**RESUMEN / SUMMARY:** - The management of glioblastoma multiforme (GBM) is in most cases complex and must be specifically tailored to the needs of the patient with the goals of extended survival and improved quality of life. Despite advancements in therapy, treatment outcomes remain almost universally poor. Salvage treatment options for the recurrence of the disease is an area of intense study. The following case highlights the utility of Gamma Knife Radiosurgery (GKRS) as a salvage treatment. In this clinical situation, three sequential GKRS treatments led to prolonged survival (beyond four years after diagnosis) and improved quality of life in a patient who was unable to receive further chemotherapy regimens and was unwilling to undergo further aggressive resection. To date, there have been few reports of three or more sequential GKRS treatment sessions utilized as salvage therapy for recurrent GBM in patients who can no longer tolerate chemotherapy. This report provides evidence that aggressive local treatment with GKRS at the time of recurrence may be appropriate, depending on a patient's individual clinical situation, and can lead to prolonged survival and improved quality of life.

[754]

**TÍTULO / TITLE:** - A Long-Term Survival Case of a Primary Malignant Intracerebral Nerve Sheath Tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Sep;54(3):261-264. Epub 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.54.3.261](#)

**AUTORES / AUTHORS:** - Lee BS; Kim YG; Kim DH; Lee MS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Chungbuk National University School of Medicine & Medical Research Institute, Cheongju, Korea.

**RESUMEN / SUMMARY:** - We report a long-term survival case of a primary malignant intracerebral nerve sheath tumor (MINST) occurring in the right frontal lobe of a 13-year old boy. After the gross total resection (GTR), we have performed radiation therapy but it recurred 50 months after the surgery, so the second GTR was performed. Later, second tumor recurrence was found 4 months after the second surgery. Subsequently the third GTR, radiotherapy, and chemotherapy were carried out. At

present, the patient has been remaining alive for 77 months without evidence of tumor recurrence. According to the previous reports, the primary MINST is very rare : there are only 8 cases reported. It is also a fast-growing, invasive tumor with poor outcome. This is the first case that had no recurrence for 50 months after the surgery among the reported cases that had been followed up for more than 5 years. It is supposed that a period of recurrence free survival after GTR and low mitotic activity are associated with the patient's prognosis. A GTR followed by adjuvant radiation therapy and chemotherapy will be recommended to patients of MINST.

[755]

**TÍTULO / TITLE:** - Comparison of intraoperative fluorescence and MRI image guided neuronavigation in malignant brain tumours, a prospective controlled study.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Photodiagnosis Photodyn Ther. 2013 Dec;10(4):356-61. doi: 10.1016/j.pdpdt.2013.03.006. Epub 2013 Apr 17.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.pdpdt.2013.03.006](#)

**AUTORES / AUTHORS:** - Eljamel S; Petersen M; Valentine R; Buist R; Goodman C; Moseley H; Eljamel S

**INSTITUCIÓN / INSTITUTION:** - Radiology Department, Edinburgh, UK.

**RESUMEN / SUMMARY:** - INTRODUCTION: MBT carry poor prognosis and more than 80% of MBT recur locally within 2cm of the resection margin because of inadequate surgical removal. A number of techniques have been implemented in recent years to improve surgical removal of MBT with variable success. We examined two methods commonly used to resect MBT to establish which one offered the best chances of gross total removal; MRI guided technology and ALA-induced fluorescence. PATIENTS AND METHODS: Twenty consecutive patients diagnosed with MBT were included in this study. They were given 20mg ALA per kg body weight 3h before anaesthesia orally mixed in water. Surgery was planned using preoperative enhanced MPR age images. Surgery was executed using the Stealth Station image guidance system and ALA-induced fluorescence microsurgical techniques. During surgery the intensity of fluorescence was graded into red, pink or blue. The intensity of fluorescence was also measured using pulsed 405nm laser and a compact spectrometer using a touch probe directly placed on the tissue. The extent of tumour invasion was assessed intraoperatively using standard white light, blue light and spectroscopic measurements. Postoperative enhanced MRI was used to assess the extent of resection and the volume of residual tumour was measured. RESULTS: There were six newly diagnosed GBM, eight recurrent GBM, one oligodendroglioma (ODG) and five metastases (MET). On enhanced MRI, the mean diameter of new GBM, recurrent GBM, ODG and MET was 2.3cm, 2.3cm, 1.5cm, and 2.3cm respectively. Under the blue light, the mean diameter of new GBM, recurrent GBM, ODG and MET was 2.9cm, 3cm, 1.5cm and 2.3cm respectively. The results of quantitative measurements of fluorescence ratios revealed that red fluorescence corresponded to 5.9-11.6 (solid tumour on histology), and pink fluorescence measured 0.8-1.9 (infiltrating edge of tumour on histology). When we compared the maximum tumour diameter of GBM we found on average it was 10mm wider on spectroscopy compared to standard white light microscopy and 6mm wider than what the enhanced MRI demonstrated. CONCLUSIONS: Fluorescence technology revealed that GBMs are wider than the enhanced MRI had demonstrated, while MET enhanced MRI was similar in size to fluorescence.

Furthermore, solid tumour can be identified intraoperatively and can be measured using fluorescence and spectroscopy techniques and it can be removed safely. Infiltrating tumour can also be identified intraoperatively using this technology and can be removed in non-eloquent areas to maximise surgical resection.

[756]

**TÍTULO / TITLE:** - Saponin 1 Induces Apoptosis and Suppresses NF-kappaB-Mediated Survival Signaling in Glioblastoma Multiforme (GBM).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 21;8(11):e81258. doi: 10.1371/journal.pone.0081258.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0081258](#)

**AUTORES / AUTHORS:** - Li J; Tang H; Zhang Y; Tang C; Li B; Wang Y; Gao Z; Luo P; Yin A; Wang X; Cheng G; Fei Z

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Xijing Institute of Clinical Neuroscience, Fourth Military Medical University, Xi'an, China ; Faculty of Biomedical Engineering, Fourth Military Medical University, Xi'an, China.

**RESUMEN / SUMMARY:** - Saponin 1 is a triterpenoid saponin extracted from *Anemone taipaiensis*, a traditional Chinese medicine against rheumatism and phlebitis. It has also been shown to exhibit significant anti-tumor activity against human leukemia (HL-60 cells) and human hepatocellular carcinoma (Hep-G2 cells). Herein we investigated the effect of saponin 1 in human glioblastoma multiforme (GBM) U251MG and U87MG cells. Saponin 1 induced significant growth inhibition in both glioblastoma cell lines, with a 50% inhibitory concentration at 24 h of 7.4 microg/ml in U251MG cells and 8.6 microg/ml in U87MG cells, respectively. Nuclear fluorescent staining and electron microscopy showed that saponin 1 caused characteristic apoptotic morphological changes in the GBM cell lines. Saponin 1-induced apoptosis was also verified by DNA ladder electrophoresis and flow cytometry. Additionally, immunocytochemistry and western blotting analyses revealed a time-dependent decrease in the expression and nuclear location of NF-kappaB following saponin 1 treatment. Western blotting data indicated a significant decreased expression of inhibitors of apoptosis (IAP) family members, (e.g., survivin and XIAP) by saponin 1. Moreover, saponin 1 caused a decrease in the Bcl-2/Bax ratio and initiated apoptosis by activating caspase-9 and caspase-3 in the GBM cell lines. These findings indicate that saponin 1 inhibits cell growth of GBM cells at least partially by inducing apoptosis and inhibiting survival signaling mediated by NF-kappaB. In addition, in vivo study also demonstrated an obvious inhibition of saponin 1 treatment on the tumor growth of U251MG and U87MG cells-produced xenograft tumors in nude mice. Given the minimal toxicities of saponin 1 in non-neoplastic astrocytes, our results suggest that saponin 1 exhibits significant in vitro and in vivo anti-tumor efficacy and merits further investigation as a potential therapeutic agent for GBM.

[757]

**TÍTULO / TITLE:** - Role of podocalyxin in astrocytoma: Clinicopathological and evidence.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Nov;6(5):1390-1396. Epub 2013 Sep 2.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1556](#)

**AUTORES / AUTHORS:** - Huang T; Jin X; He L; Zhang M; Wu J; Wang Y; Fang J  
**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Xiangya Hospital, Central South University, Changsha, Hunan 410008, P.R. China.

**RESUMEN / SUMMARY:** - The present study examined the expression of podocalyxin (PODX) in surgically-resected astrocytomas, associated the levels of PODX expression with the clinicopathological characteristics and survival outcomes of astrocytoma and assessed how PODX affected the viability of astrocytoma cells following the administration of chemotherapeutic agents. The immunohistochemical analysis of 102 patient samples revealed that a high expression of PODX was significantly associated with high-grade astrocytomas ( $P < 0.001$ ) and a high Ki-67 labeling index (LI;  $P < 0.001$ ). A Kaplan-Meier survival analysis demonstrated that the high PODX expression group had significantly shorter disease-free survival (DFS) and overall survival (OS) rates compared with the low expression group ( $P < 0.001$ ). The multivariate analysis using the Cox's proportional hazards model revealed that a high expression of PODX, a high World Health Organization grade and a high Ki-67 LI were independent factors for shorter DFS and OS times. A subsequent in vitro study using SW1783 and U-87 human astrocytoma cell lines revealed that knocking down PODX decreased astrocytoma cell viability against temozolomide-induced apoptotic stress through the inhibition of the Akt survival signaling pathway. In conclusion, the in vivo findings indicated that a high expression of PODX is predictive of a poor survival outcome and, thus, may be used as a prognostic factor to predict the survival outcomes of astrocytoma patients. The in vitro findings indicated that PODX may promote astrocytoma cell viability against chemotherapeutic agent-induced apoptotic stress through the Akt pathway, indicating that PODX may be a novel target for overcoming chemoresistance in astrocytomas.

[758]

**TÍTULO / TITLE:** - Exploration of the gene fusion landscape of glioblastoma using transcriptome sequencing and copy number data.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Genomics. 2013 Nov 22;14(1):818.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1471-2164-14-818](#)

**AUTORES / AUTHORS:** - Shah N; Lankerovich M; Lee H; Yoon JG; Schroeder B; Foltz G

**RESUMEN / SUMMARY:** - BACKGROUND: RNA-seq has spurred important gene fusion discoveries in a number of different cancers, including lung, prostate, breast, brain, thyroid and bladder carcinomas. Gene fusion discovery can potentially lead to the development of novel treatments that target the underlying genetic abnormalities. RESULTS: In this study, we provide comprehensive view of gene fusion landscape in 185 glioblastoma multiforme patients from two independent cohorts. Fusions occur in approximately 30-50% of GBM patient samples. In the Ivy Center cohort of 24 patients, 33% of samples harbored fusions that were validated by qPCR and Sanger sequencing. We were able to identify high-confidence gene fusions from RNA-seq data in 53% of the samples in a TCGA cohort of 161 patients. We identified 13 cases (8%) with fusions retaining a tyrosine kinase domain in the TCGA cohort and one case in the Ivy Center cohort. Ours is the first study to describe recurrent fusions involving non-coding genes. Genomic locations 7p11 and 12q14-15 harbor majority of the fusions. Fusions on 7p11 are formed in focally amplified EGFR locus whereas 12q14-15 fusions

are formed by complex genomic rearrangements. All the fusions detected in this study can be further visualized and analyzed using our website:

<http://ivygap.swedish.org/fusions>. CONCLUSIONS: Our study highlights the prevalence of gene fusions as one of the major genomic abnormalities in GBM. The majority of the fusions are private fusions, and a minority of these recur with low frequency. A small subset of patients with fusions of receptor tyrosine kinases can benefit from existing FDA approved drugs and drugs available in various clinical trials. Due to the low frequency and rarity of clinically relevant fusions, RNA-seq of GBM patient samples will be a vital tool for the identification of patient-specific fusions that can drive personalized therapy.

[759]

**TÍTULO / TITLE:** - A rare cause of stroke in young adults: occlusion of the middle cerebral artery by a meningioma postpartum.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Neurol Med. 2013;2013:652538. doi: 10.1155/2013/652538. Epub 2013 Oct 2.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/652538](#)

**AUTORES / AUTHORS:** - Mathis S; Bataille B; Boucebc S; Jeantet M; Ciron J; Vandamme L; Neau JP

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, CHU Poitiers, University of Poitiers, 2 rue de la Milettrie, 86021 Poitiers, France.

**RESUMEN / SUMMARY:** - Meningioma is the most common nonglial intracranial primary tumor. It is a slowly growing tumor and presents clinically by causing seizures along with neurological or neuropsychological deficit. However, acute presentation of meningioma is possible. We are reporting a case of cerebral infarction due to a sphenoid wing meningothelial meningioma (with progesterone receptor positivity) leading to an occlusion of the middle cerebral artery (MCA) in a 30-year-old right-handed woman (1 month after childbirth). After surgery, no new neurological event occurred, and she recovered most of her neurological functions. Strokes due to meningioma are a highly rare clinical occurrence but should be given serious consideration, particularly in young patients.

[760]

**TÍTULO / TITLE:** - G-protein coupled receptor expression patterns delineate medulloblastoma subgroups.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol Commun. 2013 Oct 10;1(1):66.

●● [Enlace al texto completo \(gratis o de pago\) 1186/2051-5960-1-66](#)

**AUTORES / AUTHORS:** - Whittier KL; Boese EA; Gibson-Corley KN; Kirby PA; Darbro BW; Qian Q; Ingram WJ; Robertson T; Remke M; Taylor MD; O'Dorisio MS

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Carver College of Medicine, University of Iowa, Iowa City, IA 52242 JCP, USA. [sue-odorisio@uiowa.edu](mailto:sue-odorisio@uiowa.edu).

**RESUMEN / SUMMARY:** - BACKGROUND: Medulloblastoma is the most common malignant brain tumor in children. Genetic profiling has identified four principle tumor subgroups; each subgroup is characterized by different initiating mutations, genetic and clinical profiles, and prognoses. The two most well-defined subgroups are caused by overactive signaling in the WNT and SHH mitogenic pathways; less is understood

about Groups 3 and 4 medulloblastoma. Identification of tumor subgroup using molecular classification is set to become an important component of medulloblastoma diagnosis and staging, and will likely guide therapeutic options. However, thus far, few druggable targets have emerged. G-protein coupled receptors (GPCRs) possess characteristics that make them ideal targets for molecular imaging and therapeutics; drugs targeting GPCRs account for 30-40% of all current pharmaceuticals. While expression patterns of many proteins in human medulloblastoma subgroups have been discerned, the expression pattern of GPCRs in medulloblastoma has not been investigated. We hypothesized that analysis of GPCR expression would identify clear subsets of medulloblastoma and suggest distinct GPCRs that might serve as molecular targets for both imaging and therapy. RESULTS: Our study found that medulloblastoma tumors fall into distinct clusters based solely on GPCR expression patterns. Normal cerebellum clustered separately from the tumor samples. Further, two of the tumor clusters correspond with high fidelity to the WNT and SHH subgroups of medulloblastoma. Distinct over-expressed GPCRs emerge; for example, LGR5 and GPR64 are significantly and uniquely over-expressed in the WNT subgroup of tumors, while PTGER4 is over-expressed in the SHH subgroup. Uniquely under-expressed GPCRs were also observed. Our key findings were independently validated using a large international dataset. CONCLUSIONS: Our results identify GPCRs with potential to act as imaging and therapeutic targets. Elucidating tumorigenic pathways is a secondary benefit to identifying differential GPCR expression patterns in medulloblastoma tumors.

[761]

**TÍTULO / TITLE:** - Freiburg neuropathology case conference: a pineal region tumour in a child.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neuroradiol. 2013 Dec;23(4):331-8. doi: 10.1007/s00062-013-0262-6.

●● Enlace al texto completo (gratis o de pago) [1007/s00062-013-0262-6](#)

**AUTORES / AUTHORS:** - Taschner CA; Brendecke S; van Velthoven V; Maurer CJ; Prinz M

**INSTITUCIÓN / INSTITUTION:** - Department of Neuroradiology, University Hospital Freiburg, Freiburg, Germany, [christian.taschner@uniklinik-freiburg.de](mailto:christian.taschner@uniklinik-freiburg.de).

[762]

**TÍTULO / TITLE:** - Primary spinal leptomeningeal gliomatosis in a 3-year-old boy revealed with MRI and FDG PET/CT mimicking tuberculosis meningitis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rev Esp Med Nucl. Acceso gratuito al texto completo a partir de los 2 años de la fecha de publicación.

●● Enlace a la Editora de la Revista <http://db.doyma.es/>

●● Cita: Revista Española de Medicina Nuclear: <> Imagen Mol. 2013 Sep 26. pii: S2253-654X(13)00134-0. doi: 10.1016/j.remnm.2013.07.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.remnm.2013.07.010](#)

**AUTORES / AUTHORS:** - Erdogan EB; Asa S; Yilmaz Aksoy S; Ozhan M; Aliyev A; Halac M

**INSTITUCIÓN / INSTITUTION:** - Department of Nuclear Medicine, Bezmialem Vakif University, Faculty of Medicine, Istanbul, Turkey. Electronic address: [erdogan\\_ezgi@yahoo.com.tr](mailto:erdogan_ezgi@yahoo.com.tr).

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[763]

**TÍTULO / TITLE:** - New Agents for Targeting of IL-13RA2 Expressed in Primary Human and Canine Brain Tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 16;8(10):e77719. doi: 10.1371/journal.pone.0077719.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0077719](#)

**AUTORES / AUTHORS:** - Debinski W; Dickinson P; Rossmeis JH; Robertson J; Gibo DM

**INSTITUCIÓN / INSTITUTION:** - The Brain Tumor Center of Excellence, Thomas K. Hearn Brain Tumor Research Center, Departments of Neurosurgery, Radiation Oncology, Wake Forest School of Medicine, Winston-Salem, North Carolina, United States of America.

**RESUMEN / SUMMARY:** - Interleukin 13 receptor alpha 2 (IL-13RA2) is over-expressed in a vast majority of human patients with high-grade astrocytomas like glioblastoma. Spontaneous astrocytomas in dogs resemble human disease and have been proposed as translational model system for investigation of novel therapeutic strategies for brain tumors. We have generated reagents for both detection and therapeutic targeting of IL-13RA2 in human and canine brain tumors. Peptides from three different regions of IL-13RA2 with 100% sequence identity between human and canine receptors were used as immunogens for generation of monoclonal antibodies. Recombinant canine mutant IL-13 (canIL-13.E13K) and canIL-13.E13K based cytotoxin were also produced. The antibodies were examined for their immunoreactivities in western blots, immunohistochemistry, immunofluorescence and cell binding assays using human and canine tumor specimen sections, tissue lysates and established cell lines; the cytotoxin was tested for specific cell killing. Several isolated MAb were immunoreactive to IL-13RA2 in western blots of cell and tissue lysates from glioblastomas from both human and canine patients. Human and canine astrocytomas and oligodendrogliomas were also positive for IL-13RA2 to various degrees. Interestingly, both human and canine meningiomas also exhibited strong reactivity. Normal human and canine brain samples were virtually negative for IL-13RA2 using the newly generated MAbs. MAb 1E10B9 uniquely worked on tissue specimens and western blots, bound live cells and was internalized in GBM cells over-expressing IL-13RA2. The canIL-13.E13K cytotoxin was very potent and specific in killing canine GBM cell lines. Thus, we have obtained several monoclonal antibodies against IL-13RA2 cross-reacting with human and canine receptors. In addition to GBM, other brain tumors, such as high grade oligodendrogliomas, meningiomas and canine choroid plexus papillomas, appear to express the receptor at high levels and thus may be appropriate candidates for IL-13RA2-targeted imaging/therapies. Canine spontaneous primary brain tumors represent an excellent translational model for human counterparts.

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[764]

**TÍTULO / TITLE:** - Perfusion and spectroscopy magnetic resonance imaging in a case of lymphocytic vasculitis mimicking brain tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pol J Radiol. 2013 Jul;78(3):66-9. doi: 10.12659/PJR.884011.

●● Enlace al texto completo (gratis o de pago) [12659/PJR.884011](#)

**AUTORES / AUTHORS:** - Muccio CF; Di Blasi A; Esposito G; Brunese L; D'Arco F; Caranci F

**INSTITUCIÓN / INSTITUTION:** - Neuroradiology Unit, Department of Neuroscience, "G. Rummo" Hospital, Benevento, Italy.

**RESUMEN / SUMMARY:** - BACKGROUND: Lymphocytic vasculitis of the central nervous system is an uncommon subtype of primary angiitis of the central nervous system (PACNS) - a rare inflammatory disorder affecting parenchymal and leptomeningeal arteries and veins. CASE REPORT: Establishing diagnosis on the basis of neuroimaging only is difficult, as it can mimic a brain tumor. Thus, histological diagnosis is essential for appropriate management. We present a case of biopsy-proven lymphocytic vasculitis mimicking a brain tumor on neuroimaging that was subsequently successfully treated with steroid therapy. We also discuss the findings in perfusion MR (PWI) and MR spectroscopy (MRS). CONCLUSIONS: Regional hypoperfusion on PWI and elevation of glutamate and glutamine levels on MRS (without associated typical tumor spectra) are common findings in inflammatory disorders, including PACNS, and can be useful in differential diagnosis with tumors.

[765]

**TÍTULO / TITLE:** - Ganglioglioma mimicking the cerebral abscess in advanced age: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(4):557-60. doi: 10.5137/1019-5149.JTN.5682-12.2.

●● Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.5682-12.2](#)

**AUTORES / AUTHORS:** - Atabey C; Eroglu A; Dinc C; Colak A

**INSTITUCIÓN / INSTITUTION:** - GATA Haydarpasa Training Hospital, Clinic of Neurosurgery, Istanbul, Turkey.

**RESUMEN / SUMMARY:** - Ganglioglioma is one of the rare mixed neuronal glial tumors of the central nerve system. It is responsible for 0.4 - 2% of the intracranial tumors observed in infants and young matures. Its most common localization is the supratentorial region. Typically, the first symptom is epilepsy. Due to the glial structure, that rare tumor can exhibit a malign transformation. Growing slowly through several months or years, it forms neurological dysfunction. The standard treatment of that supratentorial tumor is usually total resection. If an anaplastic quality is observed, the patient undergoes radiotherapy after the surgical intervention. In this article, we presented a 53-year-old patient who presented with headache and dysphasia. The patient was operated for the cystic mass in the left parietal lobe reported as an abscess. The pathology was reported as ganglioglioma and we discussed the case according to the literature.

[766]

**TÍTULO / TITLE:** - Telomere length and risk of glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Epidemiol. 2013 Dec;37(6):935-8. doi: 10.1016/j.canep.2013.10.002. Epub 2013 Nov 11.

●● Enlace al texto completo (gratis o de pago) [1016/j.canep.2013.10.002](https://doi.org/10.1016/j.canep.2013.10.002)

**AUTORES / AUTHORS:** - Walcott F; Rajaraman P; Gadalla SM; Inskip PD; Purdue MP; Albanes D; Orr E; De Vivo I; Savage SA

**INSTITUCIÓN / INSTITUTION:** - Cancer Prevention Fellowship Program, Division of Cancer Prevention, National Cancer Institute, National Institutes of Health, Rockville, MD 20892, United States.

**RESUMEN / SUMMARY:** - BACKGROUND: Telomere length in blood or buccal cell DNA has been associated with risk of various cancers. Glioma can be a highly malignant brain tumor and has few known risk factors. Genetic variants in or near RTEL1 and TERT, key components of telomere biology, are associated with glioma risk. Therefore, we evaluated the association between relative telomere length (RTL) and glioma in a prospective study. MATERIALS AND METHODS: We performed a nested case-control study within the Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial. RTL was determined by quantitative PCR on blood or buccal cell DNA obtained at least 2 years prior to diagnosis from 101 individuals with glioma cases. Healthy controls (n=198) were matched to cases (2:1) on age, gender, smoking status, calendar year, and DNA source. Conditional logistic regression was used to investigate the association between RTL and glioma. RESULTS: As expected, RTL declined with increasing age in both cases and controls. There was no statistically significant association between RTL and glioma overall. An analysis stratified by gender suggested that short RTL (1<sup>st</sup> tertile) in males was associated with glioma (odds ratio, [OR]=2.29, 95% confidence interval [CI] 1.02-5.11); this association was not observed for females (OR=0.41, 95% CI 0.14-1.17). CONCLUSIONS: This prospective study did not identify significant associations between RTL and glioma risk, but there may be gender-specific differences. Larger, prospective studies are needed to evaluate these findings.

[767]

**TÍTULO / TITLE:** - Benign extracerebral fluid collection in infancy as a risk factor for the development of de novo intracranial arachnoid cysts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Dec;12(6):555-64. doi: 10.3171/2013.8.PEDS1399. Epub 2013 Oct 4.

●● Enlace al texto completo (gratis o de pago) [3171/2013.8.PEDS1399](https://doi.org/10.3171/2013.8.PEDS1399)

**AUTORES / AUTHORS:** - Mattei TA; Bond BJ; Sambhara D; Goulart CR; Lin JJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Illinois College of Medicine, Illinois Neurological Institute, Peoria, Illinois.

**RESUMEN / SUMMARY:** - Object Intracranial arachnoid cysts are a relatively common benign intracranial pathology, accounting for as many as 0.75%-1% of nontraumatic CNS lesions. Although it has already been demonstrated that rupture of arachnoid cysts may lead to subdural hematomas/hygromas, no study to date has investigated benign extracerebral collection in infancy as a possible predisposing factor for further development of arachnoid cysts. Methods The authors performed a retrospective imaging and chart review of macrocephalic infants 12 months old or younger who were referred to neurosurgical care at OSF St. Francis Medical Center from 2003 to 2010, and who were diagnosed with benign extracerebral fluid collection in infancy on thin-

slice (1-mm) head CT scans. Special attention was given to the investigation of risk factors for further development of de novo arachnoid cysts. Several epidemiological factors in the infants and mothers were analyzed, including gestational age at delivery, mode of delivery, mother's age at delivery, delivery complications, birth weight, age of macrocephaly development, degree of macrocephaly, family history of macrocephaly, prenatal and postnatal history of infection, fontanel status, presence of papilledema, previous history of head trauma, and smoking status. Imaging characteristics of the initial scans, such as location of subdural collection (frontal vs frontoparietal and frontotemporal) and presence of ventriculomegaly, were also evaluated. For those patients in whom arachnoid cysts were identified on subsequent CT scans, the size and location of the cysts were also analyzed. Results The authors identified 44 children with benign extracerebral fluid collection in infancy. From this group, over a mean follow-up of 13 months (range 6-13 months), 18 children developed intracranial arachnoid cysts (a 40.9% incidence of de novo development of arachnoid cysts), with 27.8% presenting with bilateral cysts. In the multiple logistic regression analysis, infants who presented with an extracerebral collection restricted to the bilateral frontal region were more likely to develop intracranial arachnoid cysts ( $p = 0.035$ ) than those with collections involving the frontotemporal and frontoparietal regions (odds ratio [OR] = 5.73). Additionally, children with benign extracerebral fluid collections and plagiocephaly were more likely to develop intracranial arachnoid cysts ( $p = 0.043$ ) than those without plagiocephaly (OR = 4.96). Conclusions This is the first report in the neurosurgical literature demonstrating that benign extracerebral fluid collections in infancy may constitute a significant risk factor for development of de novo arachnoid cysts. These findings support a 2-hit hypothesis for the development of arachnoid cysts, in which the combination of an embryological defect in arachnoid development followed by a second event leading to impairment of CSF fluid absorption in early childhood could lead to abnormal CSF dynamics and the consequent expansion of fluid collections in the intrarachnoid spaces.

[768]

**TÍTULO / TITLE:** - The risk of CNS involvement in aggressive lymphomas in the rituximab era.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Hematol. 2013 Dec;6(6):643-52. doi: 10.1586/17474086.2013.850896. Epub 2013 Oct 30.

●● Enlace al texto completo (gratis o de pago) [1586/17474086.2013.850896](#)

**AUTORES / AUTHORS:** - Benevolo G; Chiappella A; Vitolo U

**INSTITUCIÓN / INSTITUTION:** - Hematology, Citta della Salute e della Scienza Hospital, Corso Bramante 88 10126, Torino, Italy.

**RESUMEN / SUMMARY:** - The risk of CNS dissemination and CNS prophylaxis strategies in aggressive non-Hodgkin lymphoma (NHL) is still debated. CNS dissemination is a rare but fatal event. A CNS prophylaxis is common for Burkitt and B-cell lymphoblastic lymphoma; however, in other NHLs, prophylactic treatments are not systematically warranted. Current risk models showed low sensitivity in predicting CNS involvement, implying overtreatment in roughly 70% of high-risk patients. Risk models in the rituximab era were modulated for the detection of occult CNS disease at diagnosis using flow cytometry. The optimal regimen for CNS prophylaxis in aggressive lymphoma patients has not been established thus far and should be modulated at

different levels of 'intensity' such as standard intrathecal chemotherapy, 'active' intrathecal chemotherapy with liposomal cytarabine or more aggressive systemic treatment with high doses of drugs having good CNS bioavailability reserved for patients who are truly at high risk of CNS dissemination.

[769]

**TÍTULO / TITLE:** - Predictors of visual outcome following surgical resection of medial sphenoid wing meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg B Skull Base. 2012 Oct;73(5):321-6. doi: 10.1055/s-0032-1321510.

●● [Enlace al texto completo \(gratis o de pago\) 1055/s-0032-1321510](#)

**AUTORES / AUTHORS:** - Chaichana KL; Jackson C; Patel A; Miller NR; Subramanian P; Lim M; Gallia G; Olivi A; Weingart J; Brem H; Quinones-Hinojosa A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Brain Tumor Surgery Program, Johns Hopkins Hospital, Baltimore, Maryland, United States.

**RESUMEN / SUMMARY:** - Objective Medial sphenoid wing meningiomas (SWMs) are relatively common tumors that are associated with significant morbidity and mortality, primarily from their anatomic proximity to many critical neurological and vascular structures. A major complication is visual deterioration. This study aimed to identify predictors of visual outcome following medial SWM resection. Design Retrospective, stepwise multivariate proportional hazards regression analysis. Setting Johns Hopkins Hospital. Participants All patients who underwent medial SWM resection from 1998 to 2009. Main Outcome Measures Visual function. Results Sixty-five medial SWM resections were performed. After multivariate proportional hazards regression analysis, preoperative visual decline (relative risk [RR] 95% confidence interval [CI]; 13.431 [2.601 to 46.077],  $p = 0.006$ ), subtotal resection (RR [95% CI]; 3.717 [1.204 to 13.889],  $p = 0.02$ ), and repeat surgery (RR [95% CI]; 5.681 [1.278 to 19.802],  $p = 0.03$ ) were found to be independent predictors of visual decline at last follow-up. Tumor recurrence and postoperative radiation therapy trended toward, but did not reach statistical significance. Conclusion These findings advocate for early and aggressive surgical intervention for patients with medial SWMs to maximize the likelihood of subsequent visual preservation. This may provide patients and physicians with prognostic information that may guide medical and surgical therapy for patients with medial SWMs.

[770]

**TÍTULO / TITLE:** - Surgery for Primary Filum Terminale Ependymomas: Outcome and Prognostic Factors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - CNS Neurosci Ther. 2013 Nov 27. doi: 10.1111/cns.12174.

●● [Enlace al texto completo \(gratis o de pago\) 1111/cns.12174](#)

**AUTORES / AUTHORS:** - Xie TH; Chen XZ; Qian J; Lu YC; Jiang YK; Zhang L; Hu GH; Ding XH; Luo C

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Changzheng Hospital, Second Military Medical University, Shanghai, China.

**RESUMEN / SUMMARY:** - INTRODUCTION: Primary filum terminale ependymoma (PFTE) is a unique type of ependymomas and locates on extramedullary site.

However, the clinical features and prognostic factors of PFTE are still unknown due to its rarity. AIM: This study aimed to evaluate the clinical features, outcomes, and prognostic factors of PFTE in the largest series of cases. RESULT: Thirty-eight patients were included in this study. Gross total removal (GTR) of the tumors was achieved in 33(87%) patients. Five (13%) patients had subtotal resection (STR). For the residual tumors, postoperative radiotherapy increased the interval between the first surgery and tumor regrowth (P = 0.063). Six patients had local recurrence/progression. Univariate analysis identified STR(P = 0.001), unencapsulated tumor (P = 0.018), tumor involving more than two vertebral columns (P = 0.005), and tumor invading sacral canal(P < 0.001) as predictors of tumor recurrence. In addition, 36 (95%) patients had stable or improved neurological status directly after surgery. Klekamp-Samii score was better correlated with the symptoms than McCormick scale. CONCLUSION: Extent of surgical removal, tumor size, tumor location, and the integrity of tumor capsule are the prognostic factors of PFTEs, and the intrasacral PFTEs always have a poor prognosis.

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[771]

**TÍTULO / TITLE:** - Promoter hypermethylation of the EMP3 gene in a series of 229 human gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomed Res Int. 2013;2013:756302. doi: 10.1155/2013/756302. Epub 2013 Sep 3.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/756302](#)

**AUTORES / AUTHORS:** - Mellai M; Piazzini A; Caldera V; Annovazzi L; Monzeglio O; Senetta R; Cassoni P; Schiffer D

**INSTITUCIÓN / INSTITUTION:** - Neuro-Bio-Oncology Center, Policlinico di Monza Foundation (Vercelli)/Consorzio di Neuroscienze, University of Pavia, Via Pietro Micca, 29, 13100 Vercelli, Italy.

**RESUMEN / SUMMARY:** - The epithelial membrane protein 3 (EMP3) is a candidate tumor suppressor gene in the critical region 19q13.3 for several solid tumors, including tumors of the nervous systems. The aim of this study was to investigate the EMP3 promoter hypermethylation status in a series of 229 astrocytic and oligodendroglial tumors and in 16 GBM cell lines. The analysis was performed by methylation-specific PCR and capillary electrophoresis. Furthermore, the EMP3 expression at protein level was evaluated by immunohistochemistry and Western blotting analysis. Associations of EMP3 hypermethylation with total 1p/19q codeletion, MGMT promoter hypermethylation, IDH1/IDH2 and TP53 mutations, and EGFR amplification were studied, as well as its prognostic significance. The EMP3 promoter hypermethylation has been found in 39.5% of gliomas. It prevailed in low-grade tumors, especially in gliomas with an oligodendroglial component, and in sGBMs upon pGBMs. In oligodendroglial tumors, it was strongly associated with both IDH1/IDH2 mutations and total 1p/19q codeletion and inversely with EGFR gene amplification. No association was found with MGMT hypermethylation and TP53 mutations. In the whole series, the EMP3 hypermethylation status correlated with 19q13.3 loss and lack of EMP3 expression at protein level. A favorable prognostic significance on overall survival of the EMP3 promoter hypermethylation was found in patients with oligodendroglial tumors.

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[772]

**TÍTULO / TITLE:** - Arterial interventional chemotherapy and IMRT with concurrent chemotherapy for nasopharyngeal carcinoma with intracranial involvement.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Aug;6(2):427-431. Epub 2013 Jun 17.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1407](#)

**AUTORES / AUTHORS:** - Fen X; Qin W; Bao W; Jiang F; Li B; Hu F; Chen X

**INSTITUCIÓN / INSTITUTION:** - Radiation Therapy Department of Oncology, Zhejiang Cancer Hospital, Hangzhou, Zhejiang 310022, P.R. China.

**RESUMEN / SUMMARY:** - The aim of this study was to ensure a high dose of intensity modulated radiation therapy (IMRT) was delivered to tumor tissue with a low dose to normal organs. Seldinger interventional techniques were used to inject chemotherapy drugs for nasopharyngeal carcinoma (NPC). IMRT was conducted 3 weeks after intervention. Primary tumor volume was reduced by 42.76% after 2 doses of interventional chemotherapy and intracranial tumor volume was reduced by 55.63%. All patients presented grade II and above nasopharyngeal mucositis. In the 2 years following radiotherapy, overall survival (OS) was 83.3% and progression-free survival (PFS) was 75%. In conclusion, T4 NPC patients with intracranial extension received induction chemotherapy followed by IMRT and concurrent chemotherapy, which proved to be efficacious and well tolerated.

[773]

**TÍTULO / TITLE:** - Cucurbitacin I blocks cerebrospinal fluid and platelet derived growth factor-BB stimulation of leptomenigeal and meningioma DNA synthesis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Complement Altern Med. 2013 Nov 4;13(1):303.

●● Enlace al texto completo (gratis o de pago) [1186/1472-6882-13-303](#)

**AUTORES / AUTHORS:** - Johnson MD; O Connell MJ; Walter K

**RESUMEN / SUMMARY:** - BACKGROUND: Currently, there are no consistently effective chemotherapies for recurrent and inoperable meningiomas. Recently, cucurbitacin I (JSI-124), a naturally occurring tetracyclic triterpenoid compound used as folk medicines has been found to have cytotoxic and anti-proliferative properties in several malignancies thru inhibition of activator of transcription (STAT3) activation. Previously, we have found STAT3 to be activated in meningiomas, particularly higher grade tumors. METHODS: Primary leptomenigeal cultures were established from 17, 20 and 22 week human fetuses and meningioma cell cultures were established from 6 world health organization (WHO) grade I or II meningiomas. Cells were treated with cerebrospinal fluid from patients without neurologic disease. The effects of cucurbitacin I on cerebrospinal fluid stimulation of meningioma cell DNA synthesis phosphorylation/activation of JAK1, STAT3, pMEK1/2, p44/42MAPK, Akt, mTOR, Rb and caspase 3 activation were analyzed in human leptomenigeal and meningioma cells. RESULTS: Cerebrospinal fluid significantly stimulated DNA synthesis in leptomenigeal cells. Co-administration of cucurbitacin I (250nM) produces a significant blockade of this effect. Cucurbitacin I alone also produced a significant reduction in basal DNA synthesis. In grade I and II meningiomas, cerebrospinal fluid also significantly stimulated DNA synthesis. Co-administration of cucurbitacin I (250nM) blocked this effect. In the leptomenigeal cultures, cerebrospinal fluid stimulated STAT3 phosphorylation but not p44/42MAPK, Akt or mTOR. Cucurbitacin I had no effect on basal STAT3 phosphorylation but co-administration with

cerebrospinal fluid blocked cerebrospinal fluid stimulation of STAT3 phosphorylation in each. In the grade I meningiomas, cerebrospinal fluid stimulated phosphorylation of STAT3 and decreased MEK1/2 and cucurbitacin I had no effect on basal STAT3, p44/42MAPK, Akt, JAK1, mTOR, or Rb phosphorylation. In the grade II meningiomas, cerebrospinal fluid stimulated STAT3 phosphorylation in all and reduced phosphorylation of MEK1/2 in all and p44/42MAPK in one. Cucurbitacin I had no effect on basal phosphorylation of STAT3 but reduced phosphorylated p44/42 MAPK in 2 grade II meningioma cells lines. CONCLUSIONS: These studies raise the possibility that cucurbitacin I might have value as an adjunct chemotherapy. Additional studies are warranted to evaluate the effects of cucurbitacin I on meningiomas in vivo.

[774]

**TÍTULO / TITLE:** - Cerebral aspergillosis and acute myeloid leukemia.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Aug;4(Suppl 1):S134-5. doi: 10.4103/0976-3147.116459.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.116459](#)

**AUTORES / AUTHORS:** - Matis GK; Voultsinou D; Chrysou O; Birbilis T; Geroukis T

**INSTITUCIÓN / INSTITUTION:** - Department of Neuroradiology, University Hospital of Zurich, Zurich, Switzerland ; Department of Neurosurgery, Democritus University of Thrace Medical School, Alexandroupolis, Greece.

[775]

**TÍTULO / TITLE:** - Targeted anti-epidermal growth factor receptor (cetuximab) immunoliposomes enhance cellular uptake in vitro and exhibit increased accumulation in an intracranial model of glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Drug Deliv. 2013;2013:209205. doi: 10.1155/2013/209205. Epub 2013 Sep 23.

●● Enlace al texto completo (gratis o de pago) [1155/2013/209205](#)

**AUTORES / AUTHORS:** - Mortensen JH; Jeppesen M; Pilgaard L; Agger R; Duroux M; Zachar V; Moos T

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Cancer Biology, Biomedicine, Institute of Medicine and Health Technology, Fredrik Bajers Vej 3B, 1.216, Aalborg University, 9220 Aalborg East, Denmark.

**RESUMEN / SUMMARY:** - Therapeutic advances do not circumvent the devastating fact that the survival rate in glioblastoma multiforme (GBM) is less than 5%. Nanoparticles consisting of liposome-based therapeutics are provided against a variety of cancer types including GBM, but available liposomal formulations are provided without targeting moieties, which increases the dosing demands to reach therapeutic concentrations with risks of side effects. We prepared PEGylated immunoliposomes (ILs) conjugated with anti-human epidermal growth factor receptor (EGFR) antibodies Cetuximab (alpha-hEGFR-ILs). The affinity of the alpha-hEGFR-ILs for the EGF receptor was evaluated in vitro using U87 mg and U251 mg cells and in vivo using an intracranial U87 mg xenograft model. The xenograft model was additionally analyzed with respect to permeability to endogenous albumin, tumor size, and vascularization. The in vitro studies revealed significantly higher binding of alpha-hEGFR-ILs when compared with liposomes conjugated with isotopic nonimmune immunoglobulin. The

uptake and internalization of the alpha -hEGFR-ILs by U87 mg cells were further confirmed by 3D deconvolution analyses. In vivo, the alpha -hEGFR-ILs accumulated to a higher extent inside the tumor when compared to nonimmune liposomes. The data show that alpha -hEGFR-ILs significantly enhance the uptake and accumulation of liposomes in this experimental model of GBM suggestive of improved specific nanoparticle-based delivery.

[776]

**TÍTULO / TITLE:** - The genetic landscape of anaplastic astrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Oct 16.

**AUTORES / AUTHORS:** - Killela PJ; Pirozzi CJ; Reitman ZJ; Jones S; Rasheed BA; Lipp E; Friedman H; Friedman AH; He Y; McLendon RE; Bigner DD; Yan H

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Duke University Medical Center, The Preston Robert Tisch Brain Tumor Center at Duke, and Pediatric Brain Tumor Foundation Institute at Duke, Durham, NC.

**RESUMEN / SUMMARY:** - Anaplastic astrocytoma WHO grade III (A3) is a lethal brain tumor that often occurs in middle aged patients. Clinically, it is challenging to distinguish A3 from glioblastoma multiforme (GBM) WHO grade IV. To reveal the genetic landscape of this tumor type, we sequenced the exome of a cohort of A3s (n=16). For comparison and to illuminate the genomic landscape of other glioma subtypes, we also included in our study diffuse astrocytoma WHO grade II (A2, n=7), oligoastrocytoma WHO grade II (OA2, n=2), anaplastic oligoastrocytoma WHO grade III (OA3, n=4), and GBM (n=28). Exome sequencing of A3s identified frequent mutations in IDH1 (75%, 12/16), ATRX (63%, 10/16), and TP53 (82%, 13/16). In contrast, the majority of GBMs (75%, 21/28) did not contain IDH1 or ATRX mutations, and displayed a distinct spectrum of mutations. Finally, our study also identified novel genes that were not previously linked to this tumor type. In particular, we found mutations in Notch pathway genes (NOTCH1, NOTCH2, NOTCH4, NOTCH2NL), including a recurrent NOTCH1-A465T mutation, in 31% (5/16) of A3s. This study suggests genetic signatures will be useful for the classification of gliomas.

[777]

**TÍTULO / TITLE:** - Light-controlled inhibition of malignant glioma by opsin gene transfer.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Dis. 2013 Oct 31;4:e893. doi: 10.1038/cddis.2013.425.

●● [Enlace al texto completo \(gratis o de pago\) 1038/cddis.2013.425](#)

**AUTORES / AUTHORS:** - Yang F; Tu J; Pan JQ; Luo HL; Liu YH; Wan J; Zhang J; Wei PF; Jiang T; Chen YH; Wang LP

**INSTITUCIÓN / INSTITUTION:** - Shenzhen Key Lab of Neuropsychiatric Modulation, Research Centre for Neural Engineering, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Xili Nanshan, Shenzhen, China.

**RESUMEN / SUMMARY:** - Glioblastomas are aggressive cancers with low survival rates and poor prognosis because of their highly proliferative and invasive capacity. In the current study, we describe a new optogenetic strategy that selectively inhibits glioma cells through light-controlled membrane depolarization and cell death. Transfer of the engineered opsin ChETA (engineered Channelrhodopsin-2 variant) gene into primary

human glioma cells or cell lines, but not normal astrocytes, unexpectedly decreased cell proliferation and increased mitochondria-dependent apoptosis, upon light stimulation. These optogenetic effects were mediated by membrane depolarization-induced reductions in cyclin expression and mitochondrial transmembrane potential. Importantly, the ChETA gene transfer and light illumination in mice significantly inhibited subcutaneous and intracranial glioma growth and increased the survival of the animals bearing the glioma. These results uncover an unexpected effect of opsin ion channels on glioma cells and offer the opportunity for the first time to treat glioma using a light-controllable optogenetic approach.

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[778]

**TÍTULO / TITLE:** - microRNA-100 Targets SMRT/NCOR2, Reduces Proliferation, and Improves Survival in Glioblastoma Animal Models.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 14;8(11):e80865. doi: 10.1371/journal.pone.0080865.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0080865](#)

**AUTORES / AUTHORS:** - Alrfaei BM; Vemuganti R; Kuo JS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery and Cellular and Molecular Pathology Training Program, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, United States of America.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most frequently diagnosed malignant human glioma, and current median patient survival is less than two years despite maximal surgery followed by temozolomide chemoradiation therapies. Novel microRNA-related therapies are now being developed for cancers such as GBM. Differential microRNA expression profiling revealed that miR-100 expression is down-regulated in GBM compared to normal controls. We report that miR-100 expression reduces GBM tumorigenicity. In vitro, four GBM lines (U87, U251, 22T, and 33T) demonstrated reduced proliferation 24 hours after transient miR100 overexpression via transfection. miR-100 triggered cell death an average 70% more than scrambled miR controls 24 hours after transient transfection ( $p < 0.01$ ). miR-100 targeted inhibition of the “silencing mediator of retinoid or thyroid hormone receptor-2” (SMRT/NCOR2) gene was confirmed via reporter assays. Ki67 proliferation index was decreased 40% in tumor xenografts generated from stable miR-100 transfected GBM lines versus controls ( $p < 0.01$ ). Furthermore, treatment of tumor xenografts with a single pre-mir-100 injection (60 pmol) significantly extended survival of mice bearing intracranial GBM xenografts 25% more than scrambled controls ( $p < 0.01$ ;  $n=8$ ). These studies establish miR-100’s effect on tumor GBM growth, and suggest clinical potential for microRNA-related GBM therapy.

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[779]

**TÍTULO / TITLE:** - The role of surgery in optic pathway/hypothalamic gliomas in children.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Oct 18.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.8.PEDS12546](#)

**AUTORES / AUTHORS:** - Goodden J; Pizer B; Pettorini B; Williams D; Blair J; Didi M; Thorp N; Mallucci C

**INSTITUCIÓN / INSTITUTION:** - Departments of Pediatric Neurosurgery.

**RESUMEN / SUMMARY:** - Object Optic pathway/hypothalamic gliomas (OPHG) are generally benign tumors situated in an exquisitely sensitive brain region. The location and natural history of OPHGs has led to much debate about optimal treatment. This paper revisits the role of and optimal timing of debulking surgery in OPHG. Methods This paper presents a series of cases managed by the neuro-oncology team at Alder Hey Children's Hospital and a single surgeon. Data were collected retrospectively for periods prior to 2009 and prospectively thereafter. Tailored treatment strategies were used, including observation and combinations of surgery, chemotherapy, and radiotherapy. Tumor control rates and outcomes are reviewed. Results Forty-two patients were treated between 1998 and 2011. Their median age at diagnosis was 5 years 7 months. Nineteen patients were positive for neurofibromatosis Type 1 (NF1) and 23 patients were negative for NF1. The median duration of follow-up was 77 months (range 21.8-142.3 months). Presenting symptoms included visual impairment (in 50% of cases), headache (in 24%), and hypothalamic/pituitary dysfunction (in 29%). Twenty-two debulking procedures were performed in 21 patients. Four biopsies (3 open, 1 endoscopic) were also performed. The histological diagnosis was pilocytic astrocytoma in 21 patients and pilomyxoid astrocytoma in 2 patients. Ten patients (Group 1) had primary surgical debulking alone and were then observed. Four patients (Group 2) had surgical debulking, plus planned chemotherapy within 3 months. Seven patients (Group 3) required surgical debulking for progressive disease following a variety of treatments. Patient age had the greatest impact on subsequent tumor progression. In total, 13 patients received chemotherapy, 4 on initial presentation, 4 in combination with surgery, and 5 for further tumor progression. Five patients were treated with radiotherapy, 3 prior to referral to Alder Hey. Eleven patients required shunt insertion for hydrocephalus. Vision was stabilized for 74% of patients. The number of patients with hypothalamic/pituitary dysfunction increased from 12 at presentation to 16 by the end of treatment. The overall survival rate was 93%. Three patients died-1 from tumor progression, 1 from infective complications from tumor biopsy, and 1 from a spontaneous posterior fossa hemorrhage. NF1 was associated with improved outcome-fewer patients required active intervention and rates of visual impairment and/or or hypothalamic/pituitary dysfunction were lower. Conclusions Good long-term survival and functional outcomes can be achieved in children with OPHG. Tumor control was achieved through an individualized approach using surgery, chemotherapy, or radiotherapy in varied combinations. The authors aim to limit radiotherapy to cases involving older children in whom other therapies have failed, due to the well-described and often devastating late effects associated with midline cranial irradiation. Surgery has a clear role for diagnosis, tumor control, and relief of mass effect. In particular, primary surgical debulking of tumor (without adjuvant therapy) is safe and effective. Recent advances in intraoperative MRI may add value and need further assessment.

[780]

**TÍTULO / TITLE:** - Case Report: Meningioma with Intra-tumoural Haemorrhage Secondary to Ruptured Distal Anterior Cerebral Artery Aneurysm.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Open Neuroimag J. 2013 Oct 18;7:32-4. doi: 10.2174/1874440001307010032.

●● Enlace al texto completo (gratis o de pago) [2174/1874440001307010032](https://doi.org/10.1186/1874440001307010032)

**AUTORES / AUTHORS:** - Alnaami I

**INSTITUCIÓN / INSTITUTION:** - Adult and Pediatric Neurosurgery, Endovascular Neurosurgery, King Khalid University, Abha, Saudi Arabia.

**RESUMEN / SUMMARY:** - BACKGROUND: Brain tumours that are associated with cerebral aneurysms are rare occurrences, whereas the coexistence of brain tumours and intra-tumoural aneurysms is even rarer. There have been 12 brain tumour cases that have been reported in the literature that describe an aneurysm within a brain tumour, with 4 of these tumours being meningiomas. CASE DESCRIPTION: A 34-year-old male patient presented with sudden-onset headache, and an inter-hemispheric meningioma with intra-tumoural bleeding was found due to a ruptured embedded anterior cerebral artery aneurysm. The aneurysm was diagnosed incidentally on the third cerebral angiogram, while the initial 2 angiograms were negative. The patient was treated with endovascular aneurysm embolisation that was followed by tumour resection. CONCLUSION: This paper is the first case report to describe the coexistence of a meningioma and an aneurysm, which presented with intra-tumoural haemorrhage that was negative on the initial cerebral angiogram. Unlike previous case reports, the aneurysm in this case was located with an anterior cerebral artery distribution.

[781]

**TÍTULO / TITLE:** - Mixed neuronal-glial tumor in the temporal lobe of an infant: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Diagn Pathol. 2013 Oct 2;8:164. doi: 10.1186/1746-1596-8-164.

●● Enlace al texto completo (gratis o de pago) [1186/1746-1596-8-164](https://doi.org/10.1186/1746-1596-8-164)

**AUTORES / AUTHORS:** - Yano H; Saigoh C; Nakayama N; Hirose Y; Abe M; Ohe N; Ozeki M; Shinoda J; Iwama T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Gifu University Graduate School of Medicine, Gifu, Japan. [hirohito@gifu-u.ac.jp](mailto:hirohito@gifu-u.ac.jp).

**RESUMEN / SUMMARY:** - BACKGROUND: Tumors that arise in the temporal lobes of infants and spread to the neural system are limited to several diagnoses. Herein, we present an infantile case of a temporal tumor showing neuronal and glial differentiation. CASE PRESENTATION: The patient was a 9-month-old boy with low body weight due to intrauterine growth retardation. At 9 months after birth, he presented partial seizures. Computed tomography scanning revealed a mass (35 \* 40 mm) in the left temporal lobe. Isointensity was noted on magnetic resonance T1-weighted images and fluid attenuation inversion recovery images. The tumor was heterogeneously enhanced with gadolinium. Positron emission tomography showed high methionine uptake in the tumor. During surgery, the tumor, which was elastic and soft and bled easily, was gross totally resected. A moderately clear boundary was noted between the tumor and normal brain parenchyma. Histologically, the tumor mainly comprised a ganglioglioma-like portion and short spindle cells at different densities. The former was immunohistochemically positive for some kinds of neuronal markers including synaptophysin. The spindle cells were positive for glial fibrillary acidic protein, but desmoplasia was not observed. DISCUSSION: The tumor contained both neuronal and glial elements; the former were the main constituents of the tumor and included several

ganglion-like cells. Because neuronal elements gradually transitioned to glial cells, a mixed neuronal-glial tumor was diagnosed. VIRTUAL SLIDES: The virtual slide(s) for this article can be found here:

<http://www.diagnosticpathology.diagnomx.eu/vs/2045126100982604>.

[782]

**TÍTULO / TITLE:** - Primary central nervous system T-cell lymphoma mimicking meningoencephalomyelitis in a cat.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can Vet J. 2013 Jun;54(6):602-5.

**AUTORES / AUTHORS:** - Guil-Luna S; Carrasco L; Gomez-Laguna J; Hilbe M; Minguez JJ; Kohler K; de Las Mulas JM

**INSTITUCIÓN / INSTITUTION:** - Department of Comparative Pathology, Veterinary Medicine Faculty, University of Cordoba, "International Excellence Agrifood Campus - Ceia3," Cordoba, España (Guil-Luna, Carrasco, Gomez-Laguna, Martin de las Mulas); Institute of Veterinary Pathology, Vetsuisse-Faculty, University of Zurich, Zurich, Switzerland (Hilbe); Guadamar Veterinary Hospital, Sevilla, España (Minguez); Institute of Veterinary Pathology, University of Giessen, Giessen, Germany (Kohler).

**RESUMEN / SUMMARY:** - A cat was presented with right head tilt and circling. The lack of expression of virus antigens did not support the postmortem diagnosis of encephalomyelitis pointing to a diffuse primary central nervous system T-cell lymphoma on the basis of CD3 and CD45R co-expression with absence of CD79alpha staining.

[783]

**TÍTULO / TITLE:** - Quality of life in adult intradural primary spinal tumors: 36-Item Short Form Health Survey correlation with McCormick and Aminoff-Logue scales.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Spine. 2013 Dec;19(6):721-35. doi: 10.3171/2013.8.SPINE12706. Epub 2013 Oct 11.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.8.SPINE12706](#)

**AUTORES / AUTHORS:** - Guirado VM; Taricco MA; Nobre MR; Couto Junior EB; Ribas ES; Meluzzi A; Brock RS; Pena Dias MR; Rodrigues R; Teixeira MJ

**INSTITUCIÓN / INSTITUTION:** - Spinal Tumors Unit.

**RESUMEN / SUMMARY:** - Object The most appropriate method to determine the quality of life of patients with intradural primary spinal tumors (IPSTs) is not still well established. Methods Clinical data in 234 patients who underwent surgery for intradural spinal disease were collected prospectively. The 36-Item Short Form Health Survey (SF-36), a generic score scale, was administered to 148 patients with IPSTs to demonstrate if the survey can be used to effectively evaluate these patients. Forty-eight patients were excluded because they did not complete the protocol. The study was finally conducted with 100 patients (45 male and 55 female) with IPSTs, and the results were compared with those of 2 other scales: the McCormick scale and the Aminoff-Logue scale. Results Construct validity was demonstrated by confirming the hypothesized relationship between the scores of the SF-36 and the McCormick scale ( $p = 0.003$ ), the Aminoff-Logue gait subscale ( $p = 0.025$ ), the Aminoff-Logue micturition subscale ( $p = 0.013$ ), and the Aminoff-Logue defecation subscale ( $p = 0.004$ ).

Reliability was demonstrated for all 8 SF-36 domain scales and the Physical Component Summary and the Mental Component Summary of the SF-36, where in each the Cronbach alpha satisfied the Nunnally criterion of > 0.85. Conclusions The authors' results demonstrated that SF-36 provides valid and reliable data for patients with IPSTs and that the survey can be used appropriately to evaluate these patients.

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[784]

**TÍTULO / TITLE:** - Correlation of Nav1.8 and Nav1.9 sodium channel expression with neuropathic pain in human subjects with lingual nerve neuromas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Pain. 2013 Oct 21;9(1):52.

●● Enlace al texto completo (gratis o de pago) [1186/1744-8069-9-52](#)

**AUTORES / AUTHORS:** - Bird EV; Christmas CR; Loescher AR; Smith KG; Robinson PP; Black JA; Waxman SG; Boissonade FM

**RESUMEN / SUMMARY:** - BACKGROUND: Voltage-gated sodium channels Nav1.8 and Nav1.9 are expressed preferentially in small diameter sensory neurons, and are thought to play a role in the generation of ectopic activity in neuronal cell bodies and/or their axons following peripheral nerve injury. The expression of Nav1.8 and Nav1.9 has been quantified in human lingual nerves that have been previously injured inadvertently during lower third molar removal, and any correlation between the expression of these ion channels and the presence or absence of dysaesthesia investigated. RESULTS: Immunohistochemical processing and quantitative image analysis revealed that Nav1.8 and Nav1.9 were expressed in human lingual nerve neuromas from patients with or without symptoms of dysaesthesia. The level of Nav1.8 expression was significantly higher in patients reporting pain compared with no pain, and a significant positive correlation was observed between levels of Nav1.8 expression and VAS scores for the symptom of tingling. No significant differences were recorded in the level of expression of Nav1.9 between patients with or without pain. CONCLUSIONS: These results demonstrate that Nav1.8 and Nav1.9 are present in human lingual nerve neuromas, with significant correlations between the level of expression of Nav1.8 and symptoms of pain. These data provide further evidence that changes in expression of Nav1.8 are important in the development and/or maintenance of nerve injury-induced pain, and suggest that Nav1.8 may be a potential therapeutic target.

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[785]

**TÍTULO / TITLE:** - Adapting non-local means of de-noising in intraoperative magnetic resonance imaging for brain tumor surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Radiol Phys Technol. 2013 Nov 27.

●● Enlace al texto completo (gratis o de pago) [1007/s12194-013-0241-2](#)

**AUTORES / AUTHORS:** - Mizukuchi T; Fujii M; Hayashi Y; Tsuzaka M

**INSTITUCIÓN / INSTITUTION:** - Department of Radiological and Medical Laboratory Sciences, Graduate School of Medicine, Nagoya University, 1-1-20 Daiko-minami, Higashi-ku, Nagoya, 461-8673, Japan, [mizukuchi.takashi@a.mbox.nagoya-u.ac.jp](mailto:mizukuchi.takashi@a.mbox.nagoya-u.ac.jp).

**RESUMEN / SUMMARY:** - In image-guided brain tumor surgery, intraoperative magnetic resonance imaging (iMRI) is a powerful tool for updating navigational information after brain shift, controlling the resection of brain tumors, and evaluating intraoperative

complications. Low-field iMRI scans occasionally generate a lot of noise, the reason for which is yet to be determined. This noise adversely affects the neurosurgeons' interpretations. In this study, in order to improve the image quality of iMR images, we optimized and adapted an unbiased non-local means (UNLM) filter to iMR images. This noise appears to occur at a specific frequency-encoding band. In order to adapt the UNLM filter to the noise, we improved the UNLM, so that de-noising can be performed at different noise levels that occur at different frequency-encoding bands. As a result, clinical iMR images can be de-noised adequately while preserving crucial information, such as edges. The UNLM filter preserved the edges more clearly than did other classical filters attached to an anisotropic diffusion filter. In addition, UNLM de-noising can improve the signal-to-noise ratio of clinical iMR images by more than 2 times ( $p < 0.01$ ). Although the computational time of the UNLM processing is very long, post-processing of UNLM filter images, for which the parameters were optimized, can be performed during other MRI scans. Therefore, The UNLM filter was more effective than increasing the number of signal averages. The iMR image quality was improved without extension of the MR scanning time. UNLM de-noising in post-processing is expected to improve the diagnosability of low-field iMR images.

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[786]

**TÍTULO / TITLE:** - Drainage Pathway of the Superior Petrosal Vein Evaluated by CT Venography in Petroclival Meningioma Surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg B Skull Base. 2012 Oct;73(5):316-20. doi: 10.1055/s-0032-1321509.

●● Enlace al texto completo (gratis o de pago) [1055/s-0032-1321509](#)

**AUTORES / AUTHORS:** - Kaku S; Miyahara K; Fujitsu K; Hataoka S; Tanino S; Okada T; Ichikawa T; Abe T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, National Hospital Organization, Yokohama Medical Center, Kanagawa, Japan.

**RESUMEN / SUMMARY:** - Objectives This study aimed to clarify the drainage location of the superior petrosal vein (SPV) in relation to Meckel's cave and the internal acoustic meatus (IAM) and to discuss its significance in petroclival meningioma surgery. Design Prospective clinical study. Setting Hospital-based. Participants Five patients with petroclival meningioma and 50 patients (primarily unruptured supratentorial aneurysm patients, with a few hemifacial spasm patients) with no posterior fossa lesions. Main Outcome Measures On computed tomography venography (CTV), the drainage site was classified into three patterns based on its relationship to Meckel's cave and the IAM: Meckel's cave type, Intermediate type, and Meatal type. Results In all patients, the SPV was patent and emptied into the superior petrosal sinus (SPS). In patients without posterior fossa lesions, 35% had Meckel's cave type, 54% had Intermediate type, and 11% had Meatal type. Of the five patients with petroclival meningioma, three had Intermediate type, and two had Meckel's cave type. Conclusion The SPV is a significant vein that should be preserved to prevent venous complications. Preoperative knowledge of the SPV drainage site is helpful for planning the approach and preserving the SPV in petroclival meningioma surgery.

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[787]

**TÍTULO / TITLE:** - Employment following chemoradiotherapy in glioblastoma: a prospective case series.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cancer Surviv. 2013 Nov 9.

●● Enlace al texto completo (gratis o de pago) [1007/s11764-013-0311-9](#)

**AUTORES / AUTHORS:** - Gzell C; Wheeler H; Guo L; Kastelan M; Back M

**INSTITUCIÓN / INSTITUTION:** - Northern Sydney Cancer Centre, Royal North Shore Hospital, Sydney, NSW, Australia, [cgzell@gmail.com](mailto:cgzell@gmail.com).

**RESUMEN / SUMMARY:** - PURPOSE: Radiotherapy (RT) and temozolomide (TMZ) for glioblastoma (GBM) has resulted in longer survival. Uncertainties exist regarding quality of survival. This study aims to determine the rate of patients returning to previous employment (EM) following treatment. METHODS: Eligible patients were diagnosed with GBM, aged 18-70 years, and treated with intensity-modulated radiotherapy to 60 Gray and TMZ (EORTC Protocol) between July 2007 and July 2011. EM was defined as paid work. Exclusion criteria included patients without histological confirmation of WHO grade IV glioblastoma, those not in paid employment in the 2-month period prior to diagnosis, or mothers of pre-school aged children not working. Data were collected on EM prior (EM pre) and after RT at 6 and 12 months (EM 6 m, EM 12 m). Rate of EM was analysed in regards to baseline performance status (ECOG), neurological deficits (MRC scale) and median survival. RESULTS: One hundred twelve patients were identified with median follow-up of 15.5 months and median survival 18 months (95%CI, 15-21 months). Seventy-one patients were working prior to diagnosis and eligible for analysis. Twenty patients returned to work (28 %) by EM 6 months and 19 patients (27 %) by EM 12 months. EM 6 months was strongly associated with ECOG and MRC status, with only 1 of 37 patients (3 %) with neurological deficit returning to work compared with 21 of 36 (58 %) intact patients. Of good performance status patients not returning to work, factors included presence of income insurance, family financial support or treatment-related symptoms. CONCLUSION: A modest proportion of patients with GBM return back to work at 6 and 12 months following radiotherapy with the majority demonstrating the lowest level of neurological deficit prior to RT. IMPLICATIONS FOR CANCER SURVIVORS: Return to work following treatment does occur but it is not a common outcome.

[788]

**TÍTULO / TITLE:** - Quantifying diffusion MRI tractography of the corticospinal tract in brain tumors with deterministic and probabilistic methods.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroimage Clin. 2013 Aug 20;3:361-368.

●● Enlace al texto completo (gratis o de pago) [1016/j.nicl.2013.08.008](#)

**AUTORES / AUTHORS:** - Bucci M; Mandelli ML; Berman JI; Amirbekian B; Nguyen C; Berger MS; Henry RG

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University of California, San Francisco, CA, USA.

**RESUMEN / SUMMARY:** - INTRODUCTION: Diffusion MRI tractography has been increasingly used to delineate white matter pathways in vivo for which the leading clinical application is presurgical mapping of eloquent regions. However, there is rare opportunity to quantify the accuracy or sensitivity of these approaches to delineate white matter fiber pathways in vivo due to the lack of a gold standard. Intraoperative

electrical stimulation (IES) provides a gold standard for the location and existence of functional motor pathways that can be used to determine the accuracy and sensitivity of fiber tracking algorithms. In this study we used intraoperative stimulation from brain tumor patients as a gold standard to estimate the sensitivity and accuracy of diffusion tensor MRI (DTI) and q-ball models of diffusion with deterministic and probabilistic fiber tracking algorithms for delineation of motor pathways. METHODS: We used preoperative high angular resolution diffusion MRI (HARDI) data (55 directions,  $b = 2000 \text{ s/mm}^2$ ) acquired in a clinically feasible time frame from 12 patients who underwent a craniotomy for resection of a cerebral glioma. The corticospinal fiber tracts were delineated with DTI and q-ball models using deterministic and probabilistic algorithms. We used cortical and white matter IES sites as a gold standard for the presence and location of functional motor pathways. Sensitivity was defined as the true positive rate of delineating fiber pathways based on cortical IES stimulation sites. For accuracy and precision of the course of the fiber tracts, we measured the distance between the subcortical stimulation sites and the tractography result. Positive predictive rate of the delineated tracts was assessed by comparison of subcortical IES motor function (upper extremity, lower extremity, face) with the connection of the tractography pathway in the motor cortex. RESULTS: We obtained 21 cortical and 8 subcortical IES sites from intraoperative mapping of motor pathways. Probabilistic q-ball had the best sensitivity (79%) as determined from cortical IES compared to deterministic q-ball (50%), probabilistic DTI (36%), and deterministic DTI (10%). The sensitivity using the q-ball algorithm (65%) was significantly higher than using DTI (23%) ( $p < 0.001$ ) and the probabilistic algorithms (58%) were more sensitive than deterministic approaches (30%) ( $p = 0.003$ ). Probabilistic q-ball fiber tracks had the smallest offset to the subcortical stimulation sites. The offsets between diffusion fiber tracks and subcortical IES sites were increased significantly for those cases where the diffusion fiber tracks were visibly thinner than expected. There was perfect concordance between the subcortical IES function (e.g. hand stimulation) and the cortical connection of the nearest diffusion fiber track (e.g. upper extremity cortex). DISCUSSION: This study highlights the tremendous utility of intraoperative stimulation sites to provide a gold standard from which to evaluate diffusion MRI fiber tracking methods and has provided an object standard for evaluation of different diffusion models and approaches to fiber tracking. The probabilistic q-ball fiber tractography was significantly better than DTI methods in terms of sensitivity and accuracy of the course through the white matter. The commonly used DTI fiber tracking approach was shown to have very poor sensitivity (as low as 10% for deterministic DTI fiber tracking) for delineation of the lateral aspects of the corticospinal tract in our study. Effects of the tumor/edema resulted in significantly larger offsets between the subcortical IES and the preoperative fiber tracks. The provided data show that probabilistic HARDI tractography is the most objective and reproducible analysis but given the small sample and number of stimulation points a generalization about our results should be given with caution. Indeed our results inform the capabilities of preoperative diffusion fiber tracking and indicate that such data should be used carefully when making pre-surgical and intra-operative management decisions.

[789]

**TÍTULO / TITLE:** - Deregulated expression of TANK in glioblastomas triggers pro-tumorigenic ERK1/2 and AKT signaling pathways.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncogenesis. 2013 Nov 11;2:e79. doi: 10.1038/oncsis.2013.42.

●● Enlace al texto completo (gratis o de pago) [1038/oncsis.2013.42](#)

**AUTORES / AUTHORS:** - Stellzig J; Chariot A; Shostak K; Ismail Goktuna S; Renner F; Acker T; Pagenstecher A; Schmitz ML

**INSTITUCIÓN / INSTITUTION:** - Institute of Biochemistry, Justus-Liebig-University, Medical Faculty, Friedrichstrasse 24, Giessen, Germany.

**RESUMEN / SUMMARY:** - Signal transmission by the noncanonical I $\kappa$ B kinases (IKKs), TANK-binding kinase 1 (TBK1) and IKK $\epsilon$ , requires interaction with adapter proteins such as TRAF associated NF- $\kappa$ B activator (TANK). Although increased expression or dysregulation of both kinases has been described for a variety of human cancers, this study shows that deregulated expression of the TANK protein is frequently occurring in glioblastomas (GBMs). The functional relevance of TANK was analyzed in a panel of GBM-derived cell lines and revealed that knockdown of TANK arrests cells in the S-phase and prohibits tumor cell migration. Deregulated TANK expression affects several signaling pathways controlling cell proliferation and the inflammatory response. Interference with stoichiometrically assembled signaling complexes by overexpression or silencing of TANK prevented constitutive interferon-regulatory factor 3 (IRF3) phosphorylation. Knockdown of TANK frequently prevents constitutive activation of extracellular signal-regulated kinases 1 and 2 (ERK1/2). TANK-mediated ERK1/2 activation is independent from the canonical MAP kinase or ERK kinase (MEK) 1/2-mediated pathway and utilizes an alternative pathway that uses a TBK1/IKK $\epsilon$ /Akt signaling axis, thus identifying a novel pathway suitable to block constitutive ERK1/2 activity.

[790]

**TÍTULO / TITLE:** - Quadrigeminal plate cistern lipoma presenting with seizures in a child.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Neurosci. 2013 May;8(2):172-3. doi: 10.4103/1817-1745.117865.

●● Enlace al texto completo (gratis o de pago) [4103/1817-1745.117865](#)

**AUTORES / AUTHORS:** - Jha A; Khalid M; Gupta P; Gupta G; Zaidi SY

**INSTITUCIÓN / INSTITUTION:** - Department of Radiodiagnosis, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh, Uttar Pradesh, India.

[791]

**TÍTULO / TITLE:** - Suppurative meningitis: A life-threatening complication in male macroprolactinomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2013 Oct;17(Suppl 1):S117-21. doi: 10.4103/2230-8210.119524.

●● Enlace al texto completo (gratis o de pago) [4103/2230-8210.119524](#)

**AUTORES / AUTHORS:** - Chentli F; Akkache L; Daffeur K; Haddad M; Azzoug S

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology and Metabolic Diseases, Bab El Oued Hospital, 5Boulevard Said Touati, Algiers, Algeria.

**RESUMEN / SUMMARY:** - BACKGROUND: Suppurative meningitis (SM) or bacterial meningitis is a life-threatening condition, which is exceptionally due to pituitary tumors (PT). Our aim was to analyze its frequency among male macroprolactinomas (MPRL) deemed to be aggressive, to report the cases we observed in our practice and describe the circumstances under which SM appeared. MATERIALS AND METHODS: We retrospectively analyzed 82 male MPRL in order to look for a history of well proved SM and the circumstances under which SM appeared. We also took into account the possibility of SM relapsing. RESULTS: Four out of 82 male MPRL had SM = 4.87%. Three consulted for SM symptoms. SM was confirmed in Infectious Diseases department, but only one had rhinorrhea. Hormonal assessment and cerebral magnetic resonance imaging pleaded for aggressive prolactinomas. After antibiotics, SM was sterilized. Then, MPRL were treated with bromocriptine, which normalized prolactin and reduced PT. SM never relapsed. The 4(th) case was hospitalized for a large multidirectional prolactinoma invading and/or arising from the skull base. He was operated on 3 times and then he was given Bromocriptine. After 3 months, he had rhinorrhea and then SM which was successfully treated by antibiotics. SM never relapsed after tumor reduction. CONCLUSION: SM was demonstrated in 4.87%. SM has revealed MPRL in 3 cases and appeared after bromocriptine intake in the 4(th) one. Endocrinologists should be aware of this severe condition, which can be avoided by repairing as soon as possible the bony defect secondary to aggressive tumors, unless it is clogged by fibrosis: What probably happened in our cases.

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[792]

**TÍTULO / TITLE:** - ABC transporter activity linked to radiation resistance and molecular subtype in pediatric medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Exp Hematol. Acceso gratuito al texto completo.

- Enlace a la Editora de la Revista <http://www.medicinedirect.com/journal>
- Cita: Experimental Hematology: <> Oncol. 2013 Oct 4;2(1):26. doi:

10.1186/2162-3619-2-26.

- Enlace al texto completo (gratuito o de pago) [1186/2162-3619-2-26](#)

**AUTORES / AUTHORS:** - Ingram WJ; Crowther LM; Little EB; Freeman R; Harliwong I; Veleva D; Hassall TE; Remke M; Taylor MD; Hallahan AR

**RESUMEN / SUMMARY:** - BACKGROUND: Resistance to radiation treatment remains a major clinical problem for patients with brain cancer. Medulloblastoma is the most common malignant brain tumor of childhood, and occurs in the cerebellum. Though radiation treatment has been critical in increasing survival rates in recent decades, the presence of resistant cells in a substantial number of medulloblastoma patients leads to relapse and death. METHODS: Using the established medulloblastoma cell lines UW228 and Daoy, we developed a novel model system to enrich for and study radiation tolerant cells early after radiation exposure. Using fluorescence-activated cell sorting, dead cells and cells that had initiated apoptosis were removed, allowing surviving cells to be investigated before extensive proliferation took place. RESULTS: Isolated surviving cells were tumorigenic in vivo and displayed elevated levels of ABCG2, an ABC transporter linked to stem cell behavior and drug resistance. Further investigation showed another family member, ABCA1, was also elevated in surviving cells in these lines, as well as in early passage cultures from pediatric medulloblastoma patients. We discovered that the multi-ABC transporter inhibitors verapamil and

reserpine sensitized cells from particular patients to radiation, suggesting that ABC transporters have a functional role in cellular radiation protection. Additionally, verapamil had an intrinsic anti-proliferative effect, with transient exposure in vitro slowing subsequent in vivo tumor formation. When expression of key ABC transporter genes was assessed in medulloblastoma tissue from 34 patients, levels were frequently elevated compared with normal cerebellum. Analysis of microarray data from independent cohorts (n = 428 patients) showed expression of a number of ABC transporters to be strongly correlated with certain medulloblastoma subtypes, which in turn are associated with clinical outcome. CONCLUSIONS: ABC transporter inhibitors are already being trialed clinically, with the aim of decreasing chemotherapy resistance. Our findings suggest that the inhibition of ABC transporters could also increase the efficacy of radiation treatment for medulloblastoma patients. Additionally, the finding that certain family members are associated with particular molecular subtypes (most notably high ABCA8 and ABCB4 expression in Sonic Hedgehog pathway driven tumors), along with cell membrane location, suggests ABC transporters are worthy of consideration for the diagnostic classification of medulloblastoma.

[793]

**TÍTULO / TITLE:** - Pipoxolan Ameliorates Cerebral Ischemia via Inhibition of Neuronal Apoptosis and Intimal Hyperplasia through Attenuation of VSMC Migration and Modulation of Matrix Metalloproteinase-2/9 and Ras/MEK/ERK Signaling Pathways.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Sep 24;8(9):e75654. doi: 10.1371/journal.pone.0075654.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0075654](#)

**AUTORES / AUTHORS:** - Chen YF; Tsai HY; Wu KJ; Siao LR; Wood WG

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmacology, College of Medicine, China Medical University, Taichung, Taiwan ; Department of Pharmacy, China Medical University Hospital, Taichung, Taiwan.

**RESUMEN / SUMMARY:** - Pipoxolan (PIPO) has anti-spasmodic effects, and it is used clinically to relieve smooth muscle spasms. Cerebrovascular disease is one of the leading causes of disability and death worldwide. The main aim of this study was to investigate the effects of PIPO on cerebral ischemia and vascular smooth muscle cell (VSMC) migration in vivo and in vitro. Cerebral infarction area, ratio of intima to media area (I/M ratio) and PCNA antibody staining of the carotid artery in vivo were measured. Cell viability of A7r5 cells, PDGF-BB-stimulated cell migration, and potential mechanisms of PIPO were evaluated by wound healing, transwell and Western blotting. PIPO (10 and 30 mg/kg p.o.) reduced: the cerebral infarction area; neurological deficit; TUNEL-positive cells; cleaved caspase 3-positive cells; intimal hyperplasia; and inhibited proliferating cell nuclear antigen (PCNA)-positive cells in rodents. PIPO (5, 10 and 15 microM) significantly inhibited PDGF-BB-stimulated VSMC migration and reduced Ras, MEK, and p-ERK levels. Moreover, PIPO decreased levels of matrix metalloproteinases -2 and -9 in PDGF-BB-stimulated A7r5 cells. In summary, PIPO is protective in models of ischemia/reperfusion-induced cerebral infarction, carotid artery ligation-induced intimal hyperplasia and VSMC migration both in vivo and in vitro. PIPO could be potentially efficacious in preventing cerebrovascular and vascular diseases.

[794]

**TÍTULO / TITLE:** - Extra-adrenal retroperitoneal paraganglioma in a dog.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Vet Diagn Invest. 2013 Nov;25(6):803-6. doi: 10.1177/1040638713506579. Epub 2013 Oct 8.

●● Enlace al texto completo (gratis o de pago) [1177/1040638713506579](#)

**AUTORES / AUTHORS:** - Ilha MR; Styer EL

**INSTITUCIÓN / INSTITUTION:** - 1Marcia R. S. Ilha, Tifton Veterinary Diagnostic and Investigational Laboratory, University of Georgia, 43 Brighton Road, Tifton, GA 31793. [milha@uga.edu](mailto:milha@uga.edu).

**RESUMEN / SUMMARY:** - An extra-adrenal retroperitoneal paraganglioma was observed in a 10.5-year-old male Boxer dog. Additionally, the dog had an aortic base tumor, multiple thyroid adenomas, multiple testicular interstitial cell tumors, bilateral nodular adrenal cortical hyperplasia, and parathyroid gland hyperplasia. The hypothesis that the retroperitoneal mass represents a primary extra-adrenal paraganglioma rather than metastatic mass from the aortic body tumor is considered. Either primary or metastatic extra-adrenal retroperitoneal paragangliomas are rarely reported in dogs.

[795]

**TÍTULO / TITLE:** - Volume increase in craniopharyngiomas under growth hormone and/or sex hormones substitution: Role of tumors receptors or mere coincidence?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Neurosci. 2013 May;8(2):113-6. doi: 10.4103/1817-1745.117839.

●● Enlace al texto completo (gratis o de pago) [4103/1817-1745.117839](#)

**AUTORES / AUTHORS:** - Chentli F; Deghima S; Zellagui H; Azzoug S

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrine and Metabolic Diseases, Bab El Oued Hospital, Algiers, Algeria.

**RESUMEN / SUMMARY:** - Craniopharyngiomas are rare embryonic tumors with low grade of malignancy that arise in supra- or intra-sellar areas with severe ophthalmological, neurological, and endocrine damages. Among pituitary deficits, somatotroph and gonadotroph deficiencies are the most challenging because of potential increased risk of tumor growth and recurrence. While data exist to suggest that growth hormone (GH) treatment is safe, very little is known about sex hormones replacement on tumor growth. Our aim was to report 3 craniopharyngiomas with tumor increase under GH and/or estrogen (E2) therapy. The three patients, aged 21, 22, and 23, were studied for severe short stature related to calcified (n = 1) or apparently stable (for more than 2 years) craniopharyngiomas with somatotroph and gonadotroph deficiencies. After 4 months to 1 year GH (n = 2) and/or E2 replacement (n = 3), there was an increase in craniopharyngiomas' size with signs of intracranial hypertension in two cases. In our three craniopharyngiomas that were either totally calcified or stable before substitution, the tumor increase seemed to be the result of GH and/or E2 substitution. But, as spontaneous evolution of these tumors is unpredictable, we could not exclude a mere coincidence.

[796]

**TÍTULO / TITLE:** - Osteolytic myxopapillary ependymoma with marked hyaline degeneration in a 72-year-old male: A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Aug;6(2):487-489. Epub 2013 Jun 14.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1397](#)

**AUTORES / AUTHORS:** - Wang H; Zhang Z; Makki MS; Shi Q

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Jinling Hospital, Nanjing University School of Medicine;

**RESUMEN / SUMMARY:** - Myxopapillary ependymomas (MPEs) are uncommon and account for approximately 15% of all ependymomas. The current study presents a case of rare spinal MPE with abnormal hyaline degeneration. The patient was a 72-year-old male with a 10-month history of lower back pain. Magnetic resonance imaging revealed a mass involving the L4 and L5 vertebrae with local bone destruction. The tumor was completely resected. Histologically, the majority of the tumor exhibited low cellularity. A marked change in hyaline was observed in the blood vessels and stroma. In specific areas, the tumor showed reticular or tubular patterning embedded in hyaline materials. The tumor cells were cuboidal to columnar in shape with strong immunostaining for glial fibrillary acidic protein and S-100. A fluorescence in situ hybridization analysis for amplification of the epidermal growth factor receptor gene was negative. The results of pathological and immunohistochemical studies were consistent with the ependymal nature of neoplastic cells.

[797]

**TÍTULO / TITLE:** - Efficacy of magnetic resonance imaging at 3 T compared with 1.5 T in small pituitary tumors for stereotactic radiosurgery planning.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Jpn J Radiol. 2013 Nov 19.

●● Enlace al texto completo (gratis o de pago) [1007/s11604-013-0262-0](#)

**AUTORES / AUTHORS:** - Nakazawa H; Shibamoto Y; Tsugawa T; Mori Y; Nishio M; Takami T; Komori M; Hashizume C; Kobayashi T

**INSTITUCIÓN / INSTITUTION:** - Department of Radiological Sciences, Nagoya University Graduate School of Medicine, 1-1-20 Daikominami, Higashiku, Nagoya, Aichi, 461-8673, Japan, [hnakazawa@kaikou.or.jp](mailto:hnakazawa@kaikou.or.jp).

**RESUMEN / SUMMARY:** - **PURPOSE:** The objective of this study was to determine the value of high-field magnetic resonance imaging and to clarify the characteristics of each image among three-dimensional gradient echo (3D-GRE), two-dimensional spin echo (2D-SE) and inversion recovery (2D-IR) sequences used as contrast-enhanced T1-weighted images for stereotactic irradiation treatment planning of sellar lesions. **MATERIALS AND METHODS:** Pulse sequences of 2D-SE and 3D-spoiled gradient recalled acquisition in the steady state (3D-SPGR) using GRE at 1.5 T and 2D-IR and 3D-fast SPGR (3D-FSPGR) at 3 T after injection of contrast material were acquired for 14 small pituitary tumors. As quantitative methods, signal-to-noise ratios (SNR) and contrast-to-noise ratios (CNR) were evaluated using a region-of-interest analysis. **RESULTS:** There was no significant difference in SNR between 1.5-T SPGR and 3-T FSPGR, while 3-T IR was superior to 1.5-T SE. The 2D-SE and -IR provided significantly better CNR than 3D-GRE between tumor and normal structures. **CONCLUSIONS:** Three Tesla was found to be superior to 1.5 T in distinguishing

tumors from the normal sellar structure. Optimal dose planning will utilize each advantage of imaging; 3D-GRE allows high-resolution acquisition and 2D-SE and -IR can offer better tissue contrast.

[798]

**TÍTULO / TITLE:** - Complete abolition of reading and writing ability with a third ventricle colloid cyst: implications for surgical intervention and proposed neural substrates of visual recognition and visual imaging ability.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://bmj.com/search.dtl>

●● Cita: British Medical J. (BMJ): <> Case Rep. 2013 Oct 24;2013. pii: bcr2013200854. doi: 10.1136/bcr-2013-200854.

●● Enlace al texto completo (gratis o de pago) [1136/bcr-2013-200854](#)

**AUTORES / AUTHORS:** - Barker LA; Morton N; Romanowski CA; Gosden K

**INSTITUCIÓN / INSTITUTION:** - Department of Psychology, Sheffield Hallam University, Sheffield, UK.

**RESUMEN / SUMMARY:** - We report a rare case of a patient unable to read (alexia) and write (agraphia) after a mild head injury. He had preserved speech and comprehension, could spell aloud, identify words spelled aloud and copy letter features. He was unable to visualise letters but showed no problems with digits. Neuropsychological testing revealed general visual memory, processing speed and imaging deficits. Imaging data revealed an 8 mm colloid cyst of the third ventricle that splayed the fornix. Little is known about functions mediated by fornix connectivity, but this region is thought to contribute to memory recall. Other regions thought to mediate letter recognition and letter imagery, visual word form area and visual pathways were intact. We remediated reading and writing by multimodal letter retraining. The study raises issues about the neural substrates of reading, role of fornix tracts to selective memory in the absence of other pathology, and effective remediation strategies for selective functional deficits.

[799]

**TÍTULO / TITLE:** - Nucleostemin and ASPP2 expression is correlated with pituitary adenoma proliferation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Nov;6(5):1313-1318. Epub 2013 Sep 4.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1562](#)

**AUTORES / AUTHORS:** - Ma L; Chen ZM; Li XY; Wang XJ; Shou JX; Fu XD

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The Fifth Affiliated Hospital of Zhengzhou University, Zhengzhou, Henan 450052, P.R. China.

**RESUMEN / SUMMARY:** - Nucleostemin is a GTP-conjugated protein located in the nucleoli of stem cells and certain cancer cells, and maintains cellular self-renewal. The present study aimed to evaluate nucleostemin as a potential target for pituitary adenoma gene therapy by investigating nucleostemin and apoptosis-stimulating of p53 protein 2 (ASPP2) expression and their effect on pituitary adenoma cell proliferation. A total of 71 samples of pituitary adenomas were collected. Semi-quantitative PCR was used to detect the expression of nucleostemin and ASPP2 mRNA in the samples. Immunohistochemistry techniques were used to examine Ki-67 expression in the paraffin section of the samples. Coherent clinical data were also collected. Nucleostemin and

ASPP2 were detectable in all the pituitary adenoma samples. Significant differences were observed in nucleostemin and ASPP2 expression between invasive pituitary adenoma and non-invasive pituitary adenomas ( $P < 0.01$ ) and the Ki-67 labeling index (LI;  $P > 0.05$ ). The difference in the Ki-67 LI between the recurrence and non-recurrence groups was significant ( $P < 0.05$ ). There was positive correlation between nucleostemin gene expression and the Ki-67 LI levels ( $P < 0.05$ ). The correlation between ASPP2 expression and the Ki-67 LI was negative ( $P < 0.05$ ). Negative correlation was demonstrated between nucleostemin and ASPP2 expression ( $P < 0.01$ ). The nucleostemin and ASPP2 genes were expressed in the human pituitary adenoma tissues. The differences in the expression of nucleostemin, ASPP2 and Ki-67 in the various pathological types of pituitary adenomas represented differences in molecular biological character and were associated with invasion. In the pituitary adenomas, the expression of nucleostemin and ASPP2 was correlated with tumor proliferation. Nucleostemin, ASPP2 and Ki-67 may serve as valid clinical detection markers for the invasion of pituitary adenomas.

[800]

**TÍTULO / TITLE:** - Novel CIC point mutations and an exon-spanning, homozygous deletion identified in oligodendroglial tumors by a comprehensive genomic approach including transcriptome sequencing.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Sep 27;8(9):e76623. doi: 10.1371/journal.pone.0076623.

•• [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0076623](#)

**AUTORES / AUTHORS:** - Eisenreich S; Abou-El-Ardat K; Szafranski K; Campos Valenzuela JA; Rump A; Nigro JM; Bjerkvig R; Gerlach EM; Hackmann K; Schrock E; Krex D; Kaderali L; Schackert G; Platzer M; Klink B

**INSTITUCIÓN / INSTITUTION:** - Institut für Klinische Genetik, Medizinische Fakultät Carl Gustav Carus, Technische Universität Dresden, Dresden, Germany.

**RESUMEN / SUMMARY:** - Oligodendroglial tumors form a distinct subgroup of gliomas, characterized by a better response to treatment and prolonged overall survival. Most oligodendrogliomas and also some oligoastrocytomas are characterized by a unique and typical unbalanced translocation, der(1,19), resulting in a 1p/19q co-deletion. Candidate tumor suppressor genes targeted by these losses, CIC on 19q13.2 and FUBP1 on 1p31.1, were only recently discovered. We analyzed 17 oligodendrogliomas and oligoastrocytomas by applying a comprehensive approach consisting of RNA expression analysis, DNA sequencing of CIC, FUBP1, IDH1/2, and array CGH. We confirmed three different genetic subtypes in our samples: i) the “oligodendroglial” subtype with 1p/19q co-deletion in twelve out of 17 tumors; ii) the “astrocytic” subtype in three tumors; iii) the “other” subtype in two tumors. All twelve tumors with the 1p/19q co-deletion carried the most common IDH1 R132H mutation. In seven of these tumors, we found protein-disrupting point mutations in the remaining allele of CIC, four of which are novel. One of these tumors also had a deleterious mutation in FUBP1. Only by integrating RNA expression and array CGH data, were we able to discover an exon-spanning homozygous microdeletion within the remaining allele of CIC in an additional tumor with 1p/19q co-deletion. Therefore we propose that the mutation rate might be underestimated when looking at sequence variants alone. In conclusion, the high frequency and the spectrum of CIC mutations in our 1p/19q-codeleted tumor cohort

support the hypothesis that CIC acts as a tumor suppressor in these tumors, whereas FUBP1 might play only a minor role.

[801]

**TÍTULO / TITLE:** - Fourth ventricular ependymoma with a distant intraventricular metastasis: Report of a rare case.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Aug;4(Suppl 1):S121-4. doi: 10.4103/0976-3147.116444.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.116444](#)

**AUTORES / AUTHORS:** - Ambekar S; Ranjan M; Prasad C; Santosh V; Somanna S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, National Institute of Mental Health and Neurosciences, Bangalore, Karnataka, India.

**RESUMEN / SUMMARY:** - Ependymoma is one of the uncommon tumors of the central nervous system (CNS) in the adult age group. These tumors have a distinct propensity for metastasis, both within and outside the CNS. However, dissemination at the time of first presentation and retrograde dissemination of the tumor is rare. We report the case of a patient with fourth ventricular anaplastic ependymoma who presented with left lateral ventricular metastasis which was anatomically different from the primary tumor. We describe the clinic-pathological detail of the patient and discuss the probable pathophysiological basis for this rare presentation and its significance in management of the patient.

[802]

**TÍTULO / TITLE:** - Foster Kennedy Syndrome Due to Meningioma Growth during Pregnancy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Neurol. 2013 Nov 11;4:183.

●● Enlace al texto completo (gratis o de pago) [3389/fneur.2013.00183](#)

**AUTORES / AUTHORS:** - Rodriguez-Porcel F; Hughes I; Anderson D; Lee J; Biller J  
**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Stritch School of Medicine, Loyola University Chicago, Maywood, IL, USA.

**RESUMEN / SUMMARY:** - Tumors of the olfactory groove may cause unilateral optic atrophy with contralateral papilledema and anosmia (Foster Kennedy syndrome). We describe a case of a young pregnant woman with Foster Kennedy syndrome due to an olfactory groove meningioma.

[803]

**TÍTULO / TITLE:** - Intra cranial hydatid cyst: A case report of total cyst extirpation and review of surgical technique.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Aug;4(Suppl 1):S125-8. doi: 10.4103/0976-3147.116445.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.116445](#)

**AUTORES / AUTHORS:** - Umerani MS; Abbas A; Sharif S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Liaquat National Hospital and Medical College, Karachi, Pakistan.

**RESUMEN / SUMMARY:** - Hydatid cysts commonly affect liver and lung but it can also affect the brain in rare cases. We report a case of 22 year female with history of headache for one and half years. Intracranial hydatid cyst was diagnosed on computed tomography scan and magnetic resonance imaging. The cyst was delivered without rupture using hydrostatic dissection followed by post-operative anthelmintic medication. Surgery remains to be the standard management. Amongst the surgical techniques described, Dowling's technique is the most acceptable. However, care must be taken in to avoid rupture of the cyst peroperatively which can result in subsequent complications and recurrence. Albendazole and corticosteroids can be used as adjunct to surgical treatment in selective cases.

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[804]

**TÍTULO / TITLE:** - TGF-beta induced miR10a/b expression promotes human glioma cell migration by targeting PTEN.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Med Rep. 2013 Dec;8(6):1741-6. doi: 10.3892/mmr.2013.1709. Epub 2013 Oct 1.

- [Enlace al texto completo \(gratis o de pago\) 3892/mmr.2013.1709](#)

**AUTORES / AUTHORS:** - Liu S; Sun J; Lan Q

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The Second Affiliated Hospital of Suzhou University, Suzhou, Jiangsu 215004, P.R. China.

**RESUMEN / SUMMARY:** - Human gliomas are associated with high rates of morbidity and mortality. In the brain, increased mRNA levels of transforming growth factor beta (TGFbeta) correlate with the degree of malignancy of human gliomas. miR10a/10b expression has been demonstrated to be associated with TGFbeta expression in brain tumors, and it is reported that TGFbeta induces miR10 expression. Therefore, miR10a/10b expression may be induced by TGFbeta expression and may be involved in the TGFbeta induced migration of brain tumor cells. The present study examined the expression of TGFbeta and miR10a/10b in the tissues of 10 patients with brain tumors using quantitative PCR (qPCR), and the correlation between TGFbeta and miR10a or miR10b expression was analyzed. Additionally, U251 and SHG44 cells were treated with TGFbeta and the expression of miR10a/10b was examined. Further, cell migration was analyzed following transfection of U251 cells with miR10a/10b and the association between miR10a/10b and phosphatase and tensin homolog deleted on chromosome 10 (PTEN) was investigated. U251 cells were transfected with miR10a/10b inhibitors and a PTEN expression plasmid prior to TGFbeta treatment and then cell migration was assessed. A significant correlation was identified between TGFbeta and miR10a expression ( $r^2=0.6936$ ,  $P=0.007$ ) and between TGFbeta and miR10b expression ( $r^2=0.5876$ ,  $P=0.02$ ) in the tissues of patients with brain tumors. The results also showed that TGFbeta induces miR10a/10b expression and that TGFbeta induced miR10a/10b expression promotes cell migration through the suppression of PTEN. In conclusion, TGFbeta induced miR10a/10b promotes brain tumor migration. This study may provide a number of suggestions for the clinical treatment of brain tumors.

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[805]

**TÍTULO / TITLE:** - Using neoadjuvant chemotherapy and replanning intensity-modulated radiotherapy for nasopharyngeal carcinoma with intracranial invasion to protect critical normal tissue.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Radiat Oncol. 2013 Oct 2;8(1):226. doi: 10.1186/1748-717X-8-226.

●● Enlace al texto completo (gratis o de pago) [1186/1748-717X-8-226](#)

**AUTORES / AUTHORS:** - Niu X; Chang X; Gao Y; Hu C; Kong L

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Shanghai Cancer Center of Fudan University, 270 Dong'an Road, Shanghai 200032, China.  
[konglinj@gmail.com](mailto:konglinj@gmail.com).

**RESUMEN / SUMMARY:** - PURPOSE: To investigate the feasibility of neoadjuvant chemotherapy and replanning intensity-modulated radiotherapy (IMRT) for intracranial invasion nasopharyngeal carcinoma (NPC). METHODS AND MATERIALS: From June 2007 to January 2012, 32 patients with intracranial invasion NPC treated with TPF (docetaxel 75 mg/m<sup>2</sup>, cisplatin 75 mg/m<sup>2</sup>, 5-FU 2500 mg/m<sup>2</sup> every 3 weeks for 3 cycles) neoadjuvant chemotherapy, and replanning IMRT with concurrent chemotherapy were retrospectively studied. The first IMRT plan for each patient was generated based on the original planning CT scan acquired before the start of treatment. Because of tumor shrinkage during radiotherapy, modified gross tumor volume of primary tumor (GTV-P) and high risk clinical target volume (CTV-H), and a new plan was generated and used to complete the course of IMRT. The DVHs of IMRT plan with or without replanning were compared. RESULTS: There weren't statistically significant differences in the V95, D-mean, D-95, and D-99 to the modified PTVGTV-P and PTVCTV-H with and without replanning IMRT. Replanning reduced the doses to the brain stem, optic nerve, optic chiasm and temporal lobe. Objective responses were 100.0% 3 months after completion of radiotherapy. Acute toxicities were well tolerated, except for the relatively high incidence of neutropenia. The 2-year local control rates and distant-metastasis free survival were 88.2% (95% CI, 72.9% to 100.0%) and 89.6% (95% CI, 75.9% to 100.0%). CONCLUSION: Neoadjuvant chemotherapy and replanning IMRT according to tumor shrinkage during the treatment is essential to ensure safe doses to normal tissues, and produces encouraging outcome for intracranial invasion NPC.

[806]

**TÍTULO / TITLE:** - Isolated cerebral post-transplant lymphoproliferative disorder in a lymphoma recipient.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cancer Res Ther. 2013 Jul-Sep;9(3):534-6. doi: 10.4103/0973-1482.119373.

●● Enlace al texto completo (gratis o de pago) [4103/0973-1482.119373](#)

**AUTORES / AUTHORS:** - Tang TC; Chuang WY; Chang H

**INSTITUCIÓN / INSTITUTION:** - Division of Hematology-Oncology, Chang Gung Memorial Hospital, Taoyuan, Taiwan.

**RESUMEN / SUMMARY:** - Post-transplant lymphoproliferative disorder (PTLD) can occur after solid organ transplantation (SOT) or hematopoietic stem cell transplantation (HSCT). The majority of PTLDs are related to the reactivation of Epstein-Barr virus (EBV) in the lymphoid organs. PLTDs in HSCT recipients tend to present with systemic involvement, and isolated PTLD in these patients is rare. Only 14 isolated cerebral PTLDs have been reported in HSCT recipients, and none have been reported in lymphoma patients. When diagnosing PTLD in a lymphoma patient, it is challenging

to discriminate between a PTLD that originated from previous disease and a newly developed clone and to distinguish between donor and recipient origin. In this report, we present the first case of a B-cell lymphoma patient who developed isolated PTLD in the CNS, and we confirmed that the PTLD originated in a distinct clone and from a different origin. Furthermore, the role of EBV-DNA monitoring in such patients is discussed.

[807]

**TÍTULO / TITLE:** - Identification of a neuronal transcription factor network involved in medulloblastoma development.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol Commun. 2013 Jul 11;1(1):35.

●● [Enlace al texto completo \(gratis o de pago\) 1186/2051-5960-1-35](#)

**AUTORES / AUTHORS:** - Lastowska M; Al-Afghani H; Al-Balool HH; Sheth H; Mercer E; Coxhead JM; Redfern CP; Peters H; Burt AD; Santibanez-Koref M; Bacon CM; Chesler L; Rust AG; Adams DJ; Williamson D; Clifford SC; Jackson MS

**INSTITUCIÓN / INSTITUTION:** - Institute of Genetic Medicine, Newcastle University, Central Parkway, Newcastle upon Tyne NE1 3BZ, UK.

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**RESUMEN / SUMMARY:** - BACKGROUND: Medulloblastomas, the most frequent malignant brain tumours affecting children, comprise at least 4 distinct clinicogenetic subgroups. Aberrant sonic hedgehog (SHH) signalling is observed in approximately 25% of tumours and defines one subgroup. Although alterations in SHH pathway genes (e.g. PTCH1, SUFU) are observed in many of these tumours, high throughput genomic analyses have identified few other recurring mutations. Here, we have mutagenised the Ptch<sup>+/-</sup> murine tumour model using the Sleeping Beauty transposon system to identify additional genes and pathways involved in SHH subgroup medulloblastoma development. RESULTS: Mutagenesis significantly increased medulloblastoma frequency and identified 17 candidate cancer genes, including orthologs of genes somatically mutated (PTEN, CREBBP) or associated with poor outcome (PTEN, MYT1L) in the human disease. Strikingly, these candidate genes were enriched for transcription factors ( $p=2 \times 10^{-5}$ ), the majority of which (6/7; Crebbp, Myt1L, Nfia, Nfib, Tead1 and Tgif2) were linked within a single regulatory network enriched for genes associated with a differentiated neuronal phenotype. Furthermore, activity of this network varied significantly between the human subgroups, was associated with metastatic disease, and predicted poor survival specifically within the SHH subgroup of tumours. Igf2, previously implicated in medulloblastoma, was the most differentially expressed gene in murine tumours with network perturbation, and network activity in both mouse and human tumours was characterised by enrichment for multiple gene-sets indicating increased cell proliferation, IGF signalling, MYC target upregulation, and decreased neuronal differentiation. CONCLUSIONS: Collectively, our data support a model of medulloblastoma development in SB-mutagenised Ptch<sup>+/-</sup> mice which involves disruption of a novel transcription factor network leading to Igf2 upregulation, proliferation of GNPs, and tumour formation. Moreover, our results identify rational therapeutic targets for SHH subgroup tumours, alongside prognostic biomarkers for the identification of poor-risk SHH patients.

[808]

**TÍTULO / TITLE:** - Chemotherapy of glioblastoma by targeted liposomal platinum compounds with focused ultrasound.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Conf Proc IEEE Eng Med Biol Soc. 2013 Jul;2013:6289-92. doi: 10.1109/EMBC.2013.6610991.

●● Enlace al texto completo (gratis o de pago) [1109/EMBC.2013.6610991](#)

**AUTORES / AUTHORS:** - Yang FY; Horng SC

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most aggressive brain neoplasm, and patients have a poor prognosis after radiation and chemotherapy. The chemotherapy protocols still marginally improve the anti-tumor effect of patients with glioblastoma because the therapeutic dosage of many drugs is impeded by the blood-brain barrier (BBB). The use of liposomal drugs to GBM treatment might benefit from a more crossing of the BBB due to the lipid nature achieving higher doses of drug at the tumor sites. Human GBM-bearing mice were injected intravenously with cisplatin encapsulated in atherosclerotic plaque-specific peptide-1 (AP-1)-conjugated liposomes or unconjugated liposome. Moreover, the administration of AP-1 liposomal cisplatin (lipoplatin) followed by focused ultrasound (FUS)-induced BBB disruption. Tumor progression was monitored by biophotonic imaging. The preliminary data demonstrated that the GBM chemotherapy with AP-1 lipoplatin followed by pulsed FUS showed a modest improvement of tumor growth in the brain compared to the group treated with lipoplatin alone. Further investigations are needed to use this new targeted lipoplatin in treatment of malignancies.

[809]

**TÍTULO / TITLE:** - Discharge dispositions, complications, and costs of hospitalization in spinal cord tumor surgery: analysis of data from the United States Nationwide Inpatient Sample, 2003-2010.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Spine. 2013 Nov 29.

●● Enlace al texto completo (gratis o de pago) [3171/2013.9.SPINE13274](#)

**AUTORES / AUTHORS:** - Sharma M; Sonig A; Ambekar S; Nanda A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Louisiana State University Health Science Center, Shreveport, Louisiana.

**RESUMEN / SUMMARY:** - Object The aim of this study was to analyze the incidence of adverse outcomes and inpatient mortality following resection of intramedullary spinal cord tumors by using the US Nationwide Inpatient Sample (NIS) database. The overall complication rate, length of the hospital stay, and the total cost of hospitalization were also analyzed from the database. Methods This is a retrospective cohort study conducted using the NIS data from 2003 to 2010. Various patient-related (demographic categories, complications, comorbidities, and median household income) and hospital-related variables (number of beds, high/low case volume, rural/urban location, region, ownership, and teaching status) were analyzed from the database. The adverse discharge disposition, in-hospital mortality, and the higher cost of hospitalization were taken as the dependent variables. Results A total of 15,545 admissions were identified from the NIS database. The mean patient age was 44.84 +/- 19.49 years (mean +/- SD), and 7938 (52%) of the patients were male. Regarding discharge disposition, 64.1% (n = 9917) of the patients were discharged to home or self-care, and the overall in-hospital mortality rate was 0.46% (n = 71). The mean total charges for

hospitalization increased from \$45,452.24 in 2003 to \$76,698.96 in 2010. Elderly patients, female sex, black race, and lower income based on ZIP code were the independent predictors of other than routine (OTR) disposition ( $p < 0.001$ ). Private insurance showed a protective effect against OTR disposition. Patients with a higher comorbidity index (OR 1.908, 95% CI 1.733-2.101;  $p < 0.001$ ) and with complications (OR 2.214, 95% CI 1.768-2.772;  $p < 0.001$ ) were more likely to have an adverse discharge disposition. Hospitals with a larger number of beds and those in the Northeast region were independent predictors of the OTR discharge disposition ( $p < 0.001$ ). Admissions on weekends and nonelective admission had significant influence on the disposition ( $p < 0.001$ ). Weekend and nonelective admissions were found to be independent predictors of inpatient mortality and the higher cost incurred to the hospitals ( $p < 0.001$ ). High-volume and large hospitals, West region, and teaching hospitals were also the predictors of higher cost incurred to the hospitals ( $p < 0.001$ ). The following variables (young patients, higher median household income, nonprivate insurance, presence of complications, and a higher comorbidity index) were significantly correlated with higher hospital charges ( $p < 0.001$ ), whereas the variables young patients, nonprivate insurance, higher median household income, and higher comorbidity index independently predicted for inpatient mortality ( $p < 0.001$ ).

Conclusions The independent predictors of adverse discharge disposition were as follows: elderly patients, female sex, black race, lower median household income, nonprivate insurance, higher comorbidity index, presence of complications, larger hospital size, Northeast region, and weekend and nonelective admissions. The predictors of higher cost incurred to the hospitals were as follows: young patients, higher median household income, nonprivate insurance, presence of complications, higher comorbidity index, hospitals with high volume and a large number of beds, West region, teaching hospitals, and weekend and nonelective admissions.

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[810]

**TÍTULO / TITLE:** - Pediatric cerebral stroke: susceptibility-weighted imaging may predict post-ischemic malignant edema.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroradiol J. 2013 Nov;26(5):579-83. Epub 2013 Nov 7.

**AUTORES / AUTHORS:** - Bosemani T; Poretti A; Orman G; Meoded A; Huisman TA

**INSTITUCIÓN / INSTITUTION:** - Section of Pediatric Neuroradiology, Division of Pediatric Radiology, Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine; Baltimore, MD, USA - [thuisma1@jhmi.edu](mailto:thuisma1@jhmi.edu).

**RESUMEN / SUMMARY:** - Susceptibility-weighted imaging (SWI) is an advanced MRI technique providing information on the blood oxygenation level. Deoxyhemoglobin is increased in hypoperfused tissue characterized by SWI-hypointensity, while high oxyhemoglobin concentration within hyperperfused tissue results in a SWI iso- or hyperintensity compared to healthy brain tissue. We describe a child with a stroke, where SWI in addition to excluding hemorrhage and delineating the thrombus proved invaluable in determining regions of hyperperfusion or luxury perfusion, which contributed further to the prognosis including an increased risk of developing post-ischemic malignant edema.

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[811]

**TÍTULO / TITLE:** - Adjuvant Chemotherapy for Brain Tumors Delivered via a Novel Intra-Cavity Moldable Polymer Matrix.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 14;8(10):e77435. doi: 10.1371/journal.pone.0077435.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0077435](#)

**AUTORES / AUTHORS:** - Rahman CV; Smith SJ; Morgan PS; Langmack KA; Clarke PA; Ritchie AA; Macarthur DC; Rose FR; Shakesheff KM; Grundy RG; Ruman Rahman

**INSTITUCIÓN / INSTITUTION:** - Division of Drug Delivery and Tissue Engineering, School of Pharmacy, University of Nottingham, Nottingham, United Kingdom.

**RESUMEN / SUMMARY:** - INTRODUCTION: Polymer-based delivery systems offer innovative intra-cavity administration of drugs, with the potential to better target micro-deposits of cancer cells in brain parenchyma beyond the resected cavity. Here we evaluate clinical utility, toxicity and sustained drug release capability of a novel formulation of poly(lactic-co-glycolic acid) (PLGA)/poly(ethylene glycol) (PEG) microparticles. METHODS: PLGA/PEG microparticle-based matrices were molded around an ex vivo brain pseudo-resection cavity and analyzed using magnetic resonance imaging and computerized tomography. In vitro toxicity of the polymer was assessed using tumor and endothelial cells and drug release from trichostatin A-, etoposide- and methotrexate-loaded matrices was determined. To verify activity of released agents, tumor cells were seeded onto drug-loaded matrices and viability assessed. RESULTS: PLGA/PEG matrices can be molded around a pseudo-resection cavity wall with no polymer-related artifact on clinical scans. The polymer withstands fractionated radiotherapy, with no disruption of microparticle structure. No toxicity was evident when tumor or endothelial cells were grown on control matrices in vitro. Trichostatin A, etoposide and methotrexate were released from the matrices over a 3-4 week period in vitro and etoposide released over 3 days in vivo, with released agents retaining cytotoxic capabilities. PLGA/PEG microparticle-based matrices molded around a resection cavity wall are distinguishable in clinical scanning modalities. Matrices are non-toxic in vitro suggesting good biocompatibility in vivo. Active trichostatin A, etoposide and methotrexate can be incorporated and released gradually from matrices, with radiotherapy unlikely to interfere with release. CONCLUSION: The PLGA/PEG delivery system offers an innovative intra-cavity approach to administer chemotherapeutics for improved local control of malignant brain tumors.

[812]

**TÍTULO / TITLE:** - Synchronous osteoclastoma and anaplastic astrocytoma: A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Nov;6(5):1299-1302. Epub 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1567](#)

**AUTORES / AUTHORS:** - Li B; Zhang B; Ren W; Xiao X; Dai M

**INSTITUCIÓN / INSTITUTION:** - Department of Orthopaedics, The First Affiliated Hospital of Nanchang University Medical School, Nanchang, Jiangxi 330006, P.R. China.

**RESUMEN / SUMMARY:** - Multiple primary neoplasms are defined as multiple occurrences of malignant neoplasms of differing histological origin in the same individual. The present study describes the case of a 46-year-old male who suffered

from two synchronous primary malignant neoplasms, an osteoclastoma of the left femoral trochanter and an anaplastic astrocytoma of the the Sylvian fissure area in the brain. At the 6-month follow-up, the patient presented no problems following the aggressive treatment, including surgical resection, radiation therapy and chemotherapy. To the best of our knowledge, this is the first study in the medical literature of such a presentation.

[813]

**TÍTULO / TITLE:** - Unsuspected paraganglioma of the urinary bladder with intraoperative hypertensive crises: A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Exp Ther Med. 2013 Oct;6(4):1067-1069. Epub 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [3892/etm.2013.1242](#)

**AUTORES / AUTHORS:** - Li S; Lui S; Li F; Yue Q; Huang X; Gong Q

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Huaxi MR Research Center (HMRRC), West China Hospital of Sichuan University, Chengdu, Sichuan 610041; ; Department of Radiology, The First People's Hospital of Zunyi, Zunyi, Guizhou 653002, P.R. China.

**RESUMEN / SUMMARY:** - Paraganglioma of the urinary bladder is rare, accounting for <0.05% of all bladder tumors. Common clinical findings in patients with bladder paraganglioma include hematuria and intermittent hypertension during urination, along with generalized symptoms due to increased levels of catecholamines. Although unsuspected bladder paraganglioma may result in intraoperative hypertensive crises, these may be avoided if characteristic imaging signs are observed. The present study reports a case in which a patient with unsuspected paraganglioma experienced a severe hypertensive episode during cystoscopic tumor resection. Although this case had typical computed tomographic characteristics of the bladder paraganglioma, the possibility of the paraganglioma pre-operatively was not taken into account.

[814]

**TÍTULO / TITLE:** - Glioblastoma mimicking a cerebral contusion: A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Nov;6(5):1499-1501. Epub 2013 Aug 21.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1537](#)

**AUTORES / AUTHORS:** - Li X; Wang K; Zhang A; Song Z; Yang S; Qian C; Wang Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Sir Run Run Shaw Hospital, Medical College, Zhejiang University, Hangzhou, Zhejiang 310016, P.R. China.

**RESUMEN / SUMMARY:** - A 61-year-old male presented with a rare case of glioblastoma mimicking a cerebral contusion subsequent to collapsing. The patient had been medicated for hypertension for seven years and diabetes for eight years prior to hospitalization. Brain computed tomography (CT) revealed a cerebral contusion and intracerebral hemorrhage (ICH) in the left temporal region. The patient was initially administered intravenous drugs to reduce the intracranial pressure following the diagnosis of a cerebral contusion. Serial CT revealed ICH resorption. However, the patient was again admitted due to a headache and vomiting two months later. Magnetic resonance imaging (MRI) demonstrated an enhanced ring-shaped mass around the cyst cavity within the left temporal region, with surrounding edema. The patient

underwent cyst puncture drainage in the temporal region. No tumor cells were identified in the cyst fluid and the culture was also negative. The patient was admitted for a headache and vomiting for the third time one month after being discharged. A cyst, tumor and meningoencephalitis were suspected following an MRI scan. The patient was treated with a left temporal craniotomy for a mass resection and biopsy. The histological diagnosis of the biopsy specimen was that of a glioblastoma. Two months later, MRI revealed a recurrence of the glioblastoma. In the present case, a brain tumor should have initially been suspected as the cause of the ICH, despite the history of craniocerebral trauma and hypertension. Early awareness of this potential cause of ICH may facilitate a more prompt diagnosis and treatment.

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[815]

**TÍTULO / TITLE:** - A case with transient refractive change after removal of pituitary tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Ophthalmol. 2013 Nov 1;13(1):65.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2415-13-65](#)

**AUTORES / AUTHORS:** - Ishikawa H; Akura J; Uchida K; Ikeda N; Ikeda T; Borlongan CV; Mimura O

**RESUMEN / SUMMARY:** - BACKGROUND: Refractive change can be caused by systemic illnesses such as Lupus erythematosus, thyroid deficiency, and diabetes mellitus. However, refractive change after pituitary tumor removal has so far not been reported. CASE PRESENTATION: A 62-year-old woman presented with blurred near vision 10 days after trans-sphenoidal surgery (TSS) for a pituitary tumor. Around the same time, she experienced intercurrent hyponatremia. The corrected visual acuity of both eyes was 20/20, the spherical equivalent of the right eye was -2.125 diopters, and of the left eye was -2.0 diopters before TSS. However, 11 days after TSS, the spherical equivalent of the right eye changed to -0.75 diopters, and that of left eye changed to -1.125 diopters without hyperglycemia. There were no changes in the corrected visual acuity during the follow-up. CONCLUSION: We demonstrated a case with transient refractive change after TSS. The following mechanism is proposed: Hyponatremia induced by the pituitary tumor removal causes an osmotic change in the aqueous humor with lens swelling. This case report is a reminder to both ophthalmologists and neurosurgeons that ophthalmological factors such as lens thickness and axial length should be taken into account when conducting preoperative examinations especially for patients undergoing TSS.

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[816]

**TÍTULO / TITLE:** - An interesting case of pituitary adenoma presenting as an invasive nasopharyngeal tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2013 Oct;17(Suppl 1):S135-8. doi: 10.4103/2230-8210.119533.

●● Enlace al texto completo (gratis o de pago) [4103/2230-8210.119533](#)

**AUTORES / AUTHORS:** - Panchani R; Varma T; Goyal A; Tripathi S

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology, Sir Ganga Ram Hospital, New Delhi, India.

**RESUMEN / SUMMARY:** - Pituitary masses usually present as sellar masses with suprasellar or parasellar extension. However, in unusual cases pituitary tumors especially macroprolactinomas and nonfunctional adenomas can present with intranasal extension which can be misdiagnosed as nasal polyp or a primary invasive nasopharyngeal malignant tumor. The otolaryngologists should be familiar with this rare presentation of pituitary masses. Measurement of prolactin (PRL) is essential in cases of recalcitrant nasal polyps or rhinorrhea as it may change the management in such cases. Here we describe case of a patient with an invasive pituitary adenoma who had presented in the otorhinolaryngology department with a nasal obstruction and epistaxis. We have also reviewed 30 cases of pituitary adenoma with nasopharyngeal invasion published in past.

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[817]

**TÍTULO / TITLE:** - Primary pineal glioblastoma: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(4):572-4. doi: 10.5137/1019-5149.JTN.5994-12.1.

- Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.5994-12.1](#)

**AUTORES / AUTHORS:** - Ozgural O; Kahilogullari G; Bozkurt M; Heper AO; Savas A  
**INSTITUCIÓN / INSTITUTION:** - Ankara University, Faculty of Medicine, Department of Neurosurgery, Ankara, Turkey.

**RESUMEN / SUMMARY:** - Glioblastoma is very rare in the pineal region. We report a case of glioblastoma in this region. This is the 18<sup>th</sup> case of primary glioblastoma in the pineal region and the second case that survived over two years according the literature. A 60-year-old man admitted with headache and ataxia that continued for the last 3 months. Physical examination was normal. Neurological examination revealed ataxia. There was no motor or sensory deficit. Computer tomography showed triventricular hydrocephalus and isodense rounded mass in the pineal region. Magnetic resonance images revealed a regular-edged heterogeneous contrast-enhanced tumor in pineal region. A ventriculoperitoneal shunt was inserted for hydrocephalus. After surgery, the ataxia and hydrocephalus were improved. Ten days later, serial stereotactic biopsies were performed. Histopathological specimens revealed glioblastoma. The patient was recommended to undergo radiotherapy and chemotherapy. The patient is still surviving without deficit two years after biopsy and shunt operation.

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[818]

**TÍTULO / TITLE:** - Paraneoplastic limbic encephalitis, an uncommon presentation of a common cancer: Case report and discussion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am J Case Rep. 2013 Oct 1;14:391-4. doi: 10.12659/AJCR.889560.

- Enlace al texto completo (gratis o de pago) [12659/AJCR.889560](#)

**AUTORES / AUTHORS:** - Said S; Cooper CJ; Reyna E; Alkhateeb H; Diaz J; Nahleh Z  
**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine, Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX, U.S.A.

**RESUMEN / SUMMARY:** - Patient: Female, 59 Final Diagnosis: Paraneoplastic limbic encephalitis Symptoms: Seizure \* memory changes \* decreased concentration Medication: Chemotherapy Clinical Procedure: Cerebral images Specialty: Hematology \* Oncology. OBJECTIVE: Challenging differential diagnosis. BACKGROUND: Paraneoplastic neurological disorders (PND) are defined as remote effects on the nervous system that are not caused directly by the tumor, its metastases, or metabolic disruptions. This syndrome occurs in less than 1 per 10,000 patients diagnosed with a malignancy. Many antibodies are found in the central nervous system in PND, the most well known are Anti-Hu, Tr, CV2 Ta, Yo, Ri and amphiphysin. Paraneoplastic limbic encephalitis occurs due to involvement of the limbic system secondary to an autoimmune response to neurons of the brain provoked by the antibodies. Patients, thus, present with seizures, changes in mood, memory, and personality. CASE REPORT: Fifty-nine years-old female patient presented with seizures, decreased concentration and memory changes. Laboratory workup was remarkable for hyponatremia. Further workup included brain computerized tomography (CT) and magnetic resonance imaging (MRI), which suggested a diagnosis of encephalitis for limbic encephalitis. Anti-Hu, anti-Ma and NMDA-receptor antibodies were requested of which Anti Hu antibodies were positive. Transbronchial biopsy was obtained which confirmed the diagnosis of small cell lung cancer. CONCLUSIONS: A very high index of suspicion should thus be present when patients present with paraneoplastic abnormalities. It must be emphasized that limbic encephalitis (LE) occurs at an early stage of the disease development and therefore the detection of paraneoplastic LE can lead to a quicker identification of the underlying malignancy and a better outcome.

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[819]

**TÍTULO / TITLE:** - A Rare Case of a Pure Testicular Seminoma Presenting 7 Years after a Pineal Germinoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Urol. 2013;2013:490638. Epub 2013 Oct 10.

●● Enlace al texto completo (gratis o de pago) [1155/2013/490638](#)

**AUTORES / AUTHORS:** - Bhatti UN; Ashrafi MH; Nicholson CM; Haq A

**INSTITUCIÓN / INSTITUTION:** - Urology Department, Lancashire Teaching Hospitals NHS Trust, Sharoe Green Lane, Fulwood, Preston PR2 9HT, UK.

**RESUMEN / SUMMARY:** - Pure testicular seminomas occurring in patients with previous intracranial germ cell tumours are extremely rare. We present such a case. A 37-year-old gentleman presented to urology after previously being treated for a pineal germinoma with steroids and radiotherapy. On routine followup, he described symptoms of a testicular seminoma. This was managed surgically with radical orchidectomy. We discuss the possible causes of such an association with a review of the literature.

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[820]

**TÍTULO / TITLE:** - A Case of Primary Cardiac Lymphoma Showing Isolated Central Nervous System Relapse.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Lymphoma Myeloma Leuk. 2013 Oct 2. pii: S2152-2650(13)00424-2. doi: 10.1016/j.clml.2013.09.003.

●● Enlace al texto completo (gratis o de pago) [1016/j.clml.2013.09.003](#)

**AUTORES / AUTHORS:** - Jung YH; Woo IS; Ko YJ; Lee JH; Lim JW; Han CW

**INSTITUCIÓN / INSTITUTION:** - Division of Hematology-Oncology, Department of Internal Medicine, Yeouido St. Mary's Hospital, The Catholic University of Korea College of Medicine, Seoul, Korea. Electronic address: [ksdmz@hanmail.net](mailto:ksdmz@hanmail.net).

[821]

**TÍTULO / TITLE:** - Giant cystic cerebral cavernous malformation with multiple calcification - case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cerebrovasc Endovasc Neurosurg. 2013 Sep;15(3):255-9. doi: 10.7461/jcen.2013.15.3.255. Epub 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [7461/jcen.2013.15.3.255](#)

**AUTORES / AUTHORS:** - Kim IC; Kwon KY; Rhee JJ; Lee JW; Hur JW; Lee HK

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Cheongju St. Mary's hospital, Cheongju, Korea.

**RESUMEN / SUMMARY:** - Cerebral cavernous malformation with giant cysts is rare and literature descriptions of its clinical features are few. In this case study, the authors describe the clinical symptoms, radiological findings, and pathological diagnosis of cerebral cavernous malformations with giant cysts, reviewing the relevant literature to clearly differentiate this from other disease entities. The authors present a case of a 19-year-old male with a giant cystic cavernous malformation, who was referred to the division of neurosurgery due to right sided motor weakness (grade II/II). Imaging revealed a large homogenous cystic mass, 7.2x4.6x6 cm in size, in the left fronto-parietal lobe and basal ganglia. The mass had an intra-cystic lesion, abutting the basal portion of the mass. The initial diagnosis considered this mass a glioma or infection. A left frontal craniotomy was performed, followed by a transcortical approach to resect the mass. Total removal was accomplished without post-operative complications. An open biopsy and a histopathological exam diagnosed the mass as a giant cystic cavernous malformation. Imaging appearances of giant cavernous malformations may vary. The clinical features, radiological features, and management of giant cavernous malformations are described based on pertinent literature review.

[822]

**TÍTULO / TITLE:** - Pineal epidermoid tumors: report of five cases.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(4):446-50. doi: 10.5137/1019-5149.JTN.6219-12.0.

●● Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.6219-](#)

[12.0](#)

**AUTORES / AUTHORS:** - Dinc C; Iplikcioglu AC; Ozek E

**INSTITUCIÓN / INSTITUTION:** - Ministry of Health Okmeydani Education&Research Hospital, Department of Neurosurgery, Istanbul, Turkey.

**RESUMEN / SUMMARY:** - AIM: The aim of this study was to retrospectively analyse the clinical, radiological features and surgical outcome of pineal epidermoid tumors treated at a single neurosurgical department. MATERIAL AND METHODS: We performed surgery on five patients with pineal region epidermoid tumors at a single neurosurgical department between the years 1998 and 2006. Headache, diplopia and ataxia were the most common presenting findings. Parinaud's syndrome was found in three patients.

Hydrocephalus was demonstrated radiologically in two patients. RESULTS: Two patients were operated on with the occipital-transtentorial approach, two were operated on with the infratentorial-supracerebellar approach and one was operated on with van Wagenen's approach. Recurrence of tumor was observed in one patient. One patient died at the first postoperative month due to ventriculitis. CONCLUSION: Total removal of epidermoid tumors may provide good clinical recovery and may reduce the possibility of tumor recurrence and shunt placement.

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[823]

**TÍTULO / TITLE:** - Sylvian fissure lipoma with angiomatous component and associated brain malformation: A case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Iran J Neurol. 2013;12(4):169-71.

**AUTORES / AUTHORS:** - Thakur S; Sood RG; Jhobta A; Makhaik S; Thakur C

**INSTITUCIÓN / INSTITUTION:** - Resident, Department of Radiology, Indira Gandhi Medical College and Hospital, Shimla, Himachal Pradesh, India.

**RESUMEN / SUMMARY:** - Intracranial lipomas are congenital malformations. These uncommon lesions have an incidence of 0.1 to 1.7% of all intracranial tumors. Most cases are located at midline and 5% are along the sylvian fissures. If symptomatic, seizures are the most common symptom. These tumors are slow growing and have favorable outcome. We report a case of a 25-year-old man whose CT and MRI revealed a lesion in right sylvian fissure suggesting a lipoma with abnormal vasculature and overlying cortical dysplasia.

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[824]

**TÍTULO / TITLE:** - Central Nervous System Involvement in Cutaneous T-Cell Lymphoma: 2 Illustrative Cases and a Review of Current Literature.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Lymphoma Myeloma Leuk. 2013 Oct 1. pii: S2152-2650(13)00437-0. doi: 10.1016/j.clml.2013.09.016.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.clml.2013.09.016](#)

**AUTORES / AUTHORS:** - Zhao G; Chamberlain MC; Khot SP; Shustov A; Olerud JE; Shinohara MM

**INSTITUCIÓN / INSTITUTION:** - Division of Dermatology, Department of Medicine, University of Washington, Seattle, WA. Electronic address: [zhaoge@uw.edu](mailto:zhaoge@uw.edu).

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[825]

**TÍTULO / TITLE:** - Suprasellar dermoid cyst associated with colloid cyst of the third ventricle: Disordered embryogenesis or a mere coincidence?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Jul;4(3):345-7. doi: 10.4103/0976-3147.118803.

●● [Enlace al texto completo \(gratis o de pago\) 4103/0976-3147.118803](#)

**AUTORES / AUTHORS:** - Kurwale N; Kumar R; Sharma MC; Sharma BS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery and Gamma Knife, All India Institute of Medical Sciences, New Delhi, India.

**RESUMEN / SUMMARY:** - Intracranial dermoid cyst and colloid cysts of the third ventricle are rare benign congenital lesions of early adulthood. Both lesions are thought

to be congenital in origin however association is rare. Only one case of this association has been reported. We report a 22-year-old male with suprasellar dermoid cyst and colloid cyst of the third ventricle presenting simultaneously. Embryogenesis of this association has been discussed.

[826]

**TÍTULO / TITLE:** - Phosphorylated SATB1 is associated with the progression and prognosis of glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Dis. 2013 Oct 31;4:e901. doi: 10.1038/cddis.2013.433.

●● Enlace al texto completo (gratis o de pago) [1038/cddis.2013.433](#)

**AUTORES / AUTHORS:** - Han S; Xia J; Qin X; Han S; Wu A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Hospital of China Medical University, Shenyang, China.

**RESUMEN / SUMMARY:** - Special AT-rich sequence-binding protein 1 (SATB1) is a global chromatin organizer and gene regulator, and high expression of SATB1 is associated with progression and poor prognosis in several malignancies. Here, we examine the expression pattern of SATB1 in glioma. Microarray analysis of 127 clinical samples showed that SATB1 mRNA was expressed at lower levels in highly malignant glioblastoma multiforme (GBM) than in low-grade glioma and normal brain tissue. This result was further confirmed by real-time RT-PCR in the clinical samples, three GBM cell lines, primary SU3 glioma cells and tumor cells harvested by laser-capture microdissection. Consistent with the mRNA levels, SATB1 protein expression was downregulated in high-grade glioma, as shown by western blotting. However, phospho-SATB1 levels showed an opposite pattern, with a significant increase in these tumors. Immunohistochemical analysis of phospho-SATB1 expression in tissue microarrays with tumors from 122 glioma cases showed that phospho-SATB1 expression was significantly associated with high histological grade and poor survival by Kaplan-Meier analysis. In vitro transfection analysis showed that phospho-SATB1 DNA binding has a key role in regulating the proliferation and invasion of glioma cells. The effect of SATB1 in glioma cell is mainly histone deacetylase (HDAC1)-dependent. We conclude that phospho-SATB1, but not SATB1 mRNA expression, is associated with the progression and prognosis of glioma. By interaction with HDAC1, phospho-SATB1 contributes to the invasive and proliferative phenotype of GBM cells.

[827]

**TÍTULO / TITLE:** - Microendoscopy for hypericin fluorescence tumor diagnosis in a subcutaneous glioma mouse model.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Photodiagnosis Photodyn Ther. 2013 Dec;10(4):552-60. doi: 10.1016/j.pdpdt.2013.06.001. Epub 2013 Jul 11.

●● Enlace al texto completo (gratis o de pago) [1016/j.pdpdt.2013.06.001](#)

**AUTORES / AUTHORS:** - Noell S; Feigl GC; Serifi D; Mayer D; Naumann U; Gobel W; Ehrhardt A; Ritz R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Tübingen, Hoppe-Seyler-Str. 3, 72076 Tübingen, Germany.

**RESUMEN / SUMMARY:** - BACKGROUND: New treatment strategies for malignant gliomas are indispensable, due to the poor prognosis for patients. Fluorescence diagnosis (FD) and photodynamic therapy (PDT) are currently under intensive investigation and seem to improve the prognosis. Especially for deep seated malignant brain lesions and in order to optimize therapy new diagnostic tools are needed. METHODS: In a syngeneic subcutaneous glioma mouse model we investigated the time dependent hypericin (HYP) uptake in malignant tumor tissue by microendoscopically fluorescence measurements. The HYP fluorescence in tumor was also detected by fluorescence microscopy (FM) and was compared to endoscopic data. RESULTS: Both methods, microendoscopy and FM, demonstrated time dependent HYP uptake in subcutaneously implanted mouse glioma. Maximum of HYP uptake was achieved after 6h, measured with both methods. FM reached a 10-fold increase in fluorescence intensity compared to the autofluorescence. Measured by microendoscopy a 2.2-fold HYP fluorescence intensity compared to the autofluorescence was detected. Microendoscopy enables visualization of small vessels even in healthy brain tissue by intravascular HYP fluorescence. CONCLUSION: The new developed microendoscope enables not only fluorescence based discrimination of tumor and healthy tissue, but also semiquantitative measurements of fluorescence intensities in vivo. Individual repetitive fluorescence diagnosis will become possible by this method and opens up new possibilities for determining optimal settings of light applications for PDT.

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[828]

**TÍTULO / TITLE:** - NOTCH3 Is a Prognostic Factor That Promotes Glioma Cell Proliferation, Migration and Invasion via Activation of CCND1 and EGFR.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 15;8(10):e77299. doi: 10.1371/journal.pone.0077299.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0077299](#)

**AUTORES / AUTHORS:** - Alqudah MA; Agarwal S; Al-Keilani MS; Sibenaller ZA; Ryken TC; Assem M

**INSTITUCIÓN / INSTITUTION:** - Pharmaceutics and Translational Therapeutics, College of Pharmacy, University of Iowa, Iowa City, Iowa, United States of America.

**RESUMEN / SUMMARY:** - Using a GWA analysis of a comprehensive glioma specimen population, we identified whole gain of chromosome 19 as one of the major chromosomal aberrations that correlates to patients' outcomes. Our analysis of significant loci revealed for the first time NOTCH3 as one of the most significant amplification. NOTCH3 amplification is associated with worse outcome compared to tumors with non-amplified locus. NOTCH receptors (NOTCH1-4) are key positive regulators of cell-cell interactions, angiogenesis, cell adhesion and stem cell niche development which have been shown to play critical roles in several human cancers. Our objective is to determine the molecular roles of NOTCH3 in glioma pathogenesis and aggressiveness. Here we show for the first time that NOTCH3 plays a major role in glioma cell proliferation, cell migration, invasion and apoptosis. Therefore, our study uncovers the prognostic value and the oncogenic function of NOTCH3 in gliomagenesis and supports NOTCH3 as a promising target of therapy in high grade glioma. Our studies allowed the identification of a subset of population that may benefit from GSI- or anti-NOTCH3- based therapies. This may lead to the design of novel

strategies to improve therapeutic outcome of patients with glioma by establishing medical and scientific basis for personalized chemotherapies.

[829]

**TÍTULO / TITLE:** - Integrated Chromosome 19 Transcriptomic and Proteomic Datasets Derived from Glioma Cancer Stem Cell Lines.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Proteome Res. 2013 Nov 24.

●● Enlace al texto completo (gratis o de pago) [1021/pr400786s](#)

**AUTORES / AUTHORS:** - Lichti CF; Liu H; Shavkunov AS; Mostovenko E; Sulman EP; Ezhilarasan R; Wang Q; Kroes R; Moskal JR; Fenyo D; Oksuz BA; Conrad CA; Lang FF; Berven FS; Vegvari A; Rezeli M; Marko-Varga G; Hober S; Nilsson CL

**RESUMEN / SUMMARY:** - One sub-project within the global Chromosome 19 Consortium is to define chromosome 19 gene and protein expression in glioma-derived cancer stem cells (GSCs). Chromosome 19 is notoriously linked to glioma by 1p/19q co-deletions and clinical tests are established to detect that specific aberration. GSCs are tumor-initiating cells and are hypothesized to provide a repository of cells in tumors that can self-replicate and be refractory to radiation and chemotherapeutic agents developed for the treatment of tumors. In this pilot study, we performed RNA-Seq, label-free quantitative protein measurements in six GSC lines, and targeted transcriptomic analysis using a chromosome 19-specific microarray in an additional six GSC lines. The data have been deposited to the ProteomeXchange with identifier PXD000563. Here, we present insights into differences in GSC gene and protein expression, including the identification of proteins listed as having no or low evidence at the protein level in the Human Protein Atlas, as correlated to chromosome 19 and GSC subtype. Furthermore, the upregulation of proteins downstream of adenovirus-associated viral integration site 1 (AAVS1) in GSC11 in response to oncolytic adenovirus treatment was demonstrated. Taken together, our results may indicate new roles for chromosome 19, beyond the 1p/19q co-deletion, in the future of personalized medicine for glioma patients.

[830]

**TÍTULO / TITLE:** - Letter to the Editor: Calcified meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Spine. 2013 Nov 1.

●● Enlace al texto completo (gratis o de pago) [3171/2013.6.SPINE13512](#)

**AUTORES / AUTHORS:** - Chang HK; Wu JC; Lin DS; Chang CC; Tu TH; Huang WC; Cheng H

**INSTITUCIÓN / INSTITUTION:** - Neurological Institute, Taipei Veterans General Hospital.

[831]

**TÍTULO / TITLE:** - A massive calcification and ossification of the transverse sinus and the neighbouring dura mimicking meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Neurol. 2013 Oct 11;13:143. doi: 10.1186/1471-2377-13-143.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2377-13-143](#)

**AUTORES / AUTHORS:** - Xu Z; Su C; Xiao Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, No,1 Shuaifuyuan, Dongcheng district, Beijing 100730, P, R, China. [xuzhq1999@126.com](mailto:xuzhq1999@126.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Although small calcifications of the dura and the transverse sinus occur frequently, large, single intracranial calcifications originating from the transverse sinus and the neighbouring dura are rare. CASE PRESENTATION: A 47-year-old man was admitted to the hospital for a right occipital headache that had persisted for two weeks. There was no neurological deficit. Normal skull X-ray and computed tomography (CT) scans revealed an irregular, calcified, intracranial lesion of approximately 4.4 x 4.0 x 2.5 cm in volume in the right occipital region. Via surgery, a bone-hard, poorly vascularised, pink mass originating from the right transverse sinus and the convex dura of the right cerebellar hemisphere, as well as the cerebellar tentorium, was completely removed. Pathological examination yielded a diagnosis of fibrous connective tissue with hyaline degeneration, calcification and ossification with no indication of neoplasia or inflammation. CONCLUSIONS: We report a rare case of massive calcification and ossification of the transverse sinus and the neighbouring dura mimicking meningioma. Degenerative calcification and ossification may serve as a rare differential diagnosis of diseases, such as meningiomas, in the transverse sinus and the neighbouring dura.

[832]

**TÍTULO / TITLE:** - Association between Inflammatory Infiltrates and Isolated Monosomy 22/del(22q) in Meningiomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 1;8(10):e74798. doi: 10.1371/journal.pone.0074798.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0074798](#)

**AUTORES / AUTHORS:** - Domingues PH; Teodosio C; Otero A; Sousa P; Ortiz J; Macias Mdel C; Goncalves JM; Nieto AB; Lopes MC; de Oliveira C; Orfao A; Taberero MD

**INSTITUCIÓN / INSTITUTION:** - Centre for Neurosciences and Cell Biology and Faculty of Pharmacy, University of Coimbra, Coimbra, Portugal ; Centre for Cancer Research (CIC-IBMCC; CSIC/USAL; IBSAL) and Department of Medicine, University of Salamanca, Salamanca, España.

**RESUMEN / SUMMARY:** - Meningiomas contain highly variable levels of infiltrating tissue macrophages (TiMa) and other immune cells. In this study we investigated the potential association between the number and immunophenotype of inflammatory and other immune cells infiltrating the tumor as evaluated by multiparameter flow cytometry, and the clinico-biological, cytogenetic and gene expression profile (GEP) of 75 meningioma patients. Overall, our results showed a close association between the amount and cellular composition of the inflammatory and other immune cell infiltrates and the cytogenetic profile of the tumors. Notably, tumors with isolated monosomy 22/del(22q) showed greater numbers of TiMa, NK cells and (recently)-activated CD69(+) lymphocytes versus meningiomas with diploid and complex karyotypes. In addition, in the former cytogenetic subgroup of meningiomas, tumor-infiltrating TiMa also showed a more activated and functionally mature phenotype, as reflected by a greater fraction of CD69(+), CD63(+), CD16(+) and CD33(+) cells. GEP at the mRNA level showed a unique GEP among meningiomas with an isolated monosomy

22/del(22q) versus all other cases, which consisted of increased expression of genes involved in inflammatory/immune response, associated with an M1 TiMa phenotype. Altogether, these results suggest that loss of expression of specific genes coded in chromosome 22 (e.g. MIF) is closely associated with an increased homing and potentially also anti-tumoral effect of TiMa, which could contribute to explain the better outcome of this specific good-prognosis cytogenetic subgroup of meningiomas.

[833]

**TÍTULO / TITLE:** - Totally Ossified Metaplastic Spinal Meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Sep;54(3):257-260. Epub 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.54.3.257](#)

**AUTORES / AUTHORS:** - Ju CI; Hida K; Yamauchi T; Houkin K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hokkaido University, Sapporo, Japan. ; Department of Neurosurgery, School of Medicine, Chosun University, Gwangju, Korea.

**RESUMEN / SUMMARY:** - A 61-year-old woman with a very rare case of totally ossified large thoracic spinal metaplastic meningioma, showing progressing myelopathy is presented. Computed tomographic images showed a large totally ossified intradural round mass occupying the spinal canal on T9-10 level. Magnetic resonance imaging revealed a large T9-10 intradural extramedullary mass that was hypointense to spinal cord on T1- and T2-weighted sequences, partial enhancement was apparent after Gadolinium administration. The spinal cord was severely compressed and displaced toward the right at the level of T9-10. Surgical removal of the tumor was successfully accomplished via the posterior midline approach and the histological diagnosis verified an ossified metaplastic meningioma. The clinical neurological symptoms of patient were improved postoperatively. In this article we discuss the surgical and pathological aspects of rare case of spinal totally ossified metaplastic meningioma.

[834]

**TÍTULO / TITLE:** - Extensive Growth of an Anaplastic Meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Neurol Med. 2013;2013:527184. Epub 2013 Oct 31.

●● Enlace al texto completo (gratis o de pago) [1155/2013/527184](#)

**AUTORES / AUTHORS:** - Ahmeti H; Maslehaty H; Petridis AK; Doukas A; Mahvash M; Barth H; Mehdorn HM

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospitals Schleswig-Holstein, Campus Kiel, Arnold-Heller Street 3, 24105 Kiel, Germany.

**RESUMEN / SUMMARY:** - We present the case of a 30-year-old male patient with an almost complete destruction of the calvarial bone through an anaplastic meningioma diagnosed in line with dizziness. Neuroimaging revealed an extensive growing, contrast enhancing lesion expanding at the supra- and infratentorial convexity, infiltrating and destroying large parts of the skull, and infiltrating the skin. Due to progressive ataxia and dysarthria with proven tumor growth in the posterior fossa in the continuing course, parts of the tumor were resected. A surgical procedure with the aim of complete tumor resection in a curative manner was not possible. Six months after the first operation, due to a new tumor progression, most extensive tumor resection was performed. Due

to the aggressive and destructive growth with a high rate of recurrence and tendency of metastases, anaplastic meningiomas can be termed as malignant tumors. The extrinsic growth masks the tumor until they reach a size, which makes these tumors almost unresectable. In the best case scenarios, the five-year survival is about 50%. With the presented case, we would like to show the aggressive behavior of anaplastic meningiomas in a very illustrative way. Chemotherapy, radiotherapy, and surgery reach their limits in this tumor entity.

[835]

**TÍTULO / TITLE:** - The 'double pituitary hot spot' sign of skull base meningioma on gallium-68-labelled somatostatin analogue PET.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Med Imaging Radiat Oncol. 2013 Dec;57(6):680-3. doi: 10.1111/1754-9485.12069. Epub 2013 May 3.

●● Enlace al texto completo (gratis o de pago) [1111/1754-9485.12069](#)

**AUTORES / AUTHORS:** - Law WP; Fiumara F; Fong W; Macfarlane DJ

**INSTITUCIÓN / INSTITUTION:** - Department of Nuclear Medicine and PET, Royal Brisbane and Women's Hospital, Brisbane, Queensland, Australia; Medical Imaging Department, Princess Alexandra Hospital, Brisbane, Queensland, Australia.

**RESUMEN / SUMMARY:** - Gallium-68 ((68) Ga)-labelled somatostatin analogue imaging by positron emission tomography (PET) is increasingly replacing single photon (such as (111) In-labelled octreotide) imaging in the detection and staging of carcinoid and other neuroendocrine tumours. Among other tissues, pituitary uptake of 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid-octreotate (DOTA-TATE) and other somatostatin analogues is physiological. DOTA-TATE also accumulates in meningiomas, which have a high density of somatostatin receptor expression. The combination of pituitary and skull base meningioma uptake results in a characteristic 'double hot spot' appearance, which indicates the presence of a meningioma. This is a case of a middle-aged woman who underwent (68) Ga-DOTA-TATE PET for confirmation and staging of clinically suspected carcinoid tumour, in whom a skull base meningioma was incidentally discovered. With the increasing use of PET in the management of neuroendocrine tumours - and the not infrequent occurrence of meningiomas - the appearance of meningiomas on somatostatin analogue imaging should be one with which reporting clinicians are familiar.

[836]

**TÍTULO / TITLE:** - Spinal extradural inclusion dermoid cyst mimicking pseudomeningocele, appearing after 17 years of meningomyelocele repair.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Neurosci. 2013 May;8(2):158-60. doi: 10.4103/1817-1745.117856.

●● Enlace al texto completo (gratis o de pago) [4103/1817-1745.117856](#)

**AUTORES / AUTHORS:** - Yerramneni VK; Patibandla MR; Venkateswararao K; Mudumba V

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Nizam's Institute of Medical Sciences, Punjagutta, Hyderabad, India.

**RESUMEN / SUMMARY:** - Dermoid cysts are congenital cystic tumors arising from embryonic rests and commonest site is in the thoracic region of the spinal canal. The

authors reported a case of dermoid cyst in a 17-year-old boy appearing after lumbar meningomyelocele repair at 2 months of age. The boy presented with 6 months history of gradually progressive globular swelling at the site of previous scar and weakness of the left foot. Preoperatively small extradurally protruding placode was seen attached to the swelling. The swelling was completely excised. At 1 year follow-up patient had improvement in foot weakness with magnetic resonance imaging showing no residual or recurrent lesion.

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[837]

**TÍTULO / TITLE:** - Primary diffuse leptomeningeal gliomatosis in 2 dogs.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Can Vet J. 2013 Nov;54(11):1075-9.

**AUTORES / AUTHORS:** - Canal S; Bernardini M; Pavone S; Mandara MT

**INSTITUCIÓN / INSTITUTION:** - Veterinary Hospital "I Portoni Rossi," Zola Predosa, Bologna, Italy (Canal, Bernardini); Department of Animal Medicine, Productions and Health, University of Padua, Italy (Bernardini); Department of Biopathological Science and Hygiene of Food and Animal Productions, University of Perugia, Italy (Pavone, Mandara).

**RESUMEN / SUMMARY:** - Clinical, neuroimaging, and neuropathological findings of 2 cases of canine primary diffuse leptomeningeal gliomatosis are described. Magnetic resonance imaging and histopathological examination of the brain revealed diffuse leptomeningeal alterations with no parenchymal involvement. These cases share many similarities with the same disease in humans.

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[838]

**TÍTULO / TITLE:** - Dying of brain tumours: specific aspects of care.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Curr Opin Support Palliat Care. 2013 Nov;7(4):417-23. doi: 10.1097/SPC.0b013e32836575f9.

●● [Enlace al texto completo \(gratis o de pago\) 1097/SPC.0b013e32836575f9](#)

**AUTORES / AUTHORS:** - Steigleder T; Stiel S; Ostgathe C

**INSTITUCIÓN / INSTITUTION:** - aDepartment of Palliative Medicine, Comprehensive Cancer Centre CCC EMN bDepartment of Neurology, University Hospital Erlangen, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany.

**RESUMEN / SUMMARY:** - PURPOSE OF REVIEW: Patients with brain tumours show a high symptom burden, and symptoms are difficult to treat and prone to be overlooked. This review of publications dealing with advanced stages of brain tumours tries to assess the knowledge gained in the past 2 years and to develop an outlook for further investigations. RECENT FINDINGS: We searched for publications on advanced brain tumours in a palliative medicine setting. Of 138 publications retrieved by search in PubMed, 22 publications met our criteria for inclusion. We predefined categories of interest: epidemiology and treatment of symptoms; quality of life; and impact on next of kin, caregivers, medico-social system and decision-making. SUMMARY: Data suggest that patients with primary or metastatic brain tumours often have a high symptom burden and unmet needs for palliative care, and symptoms are hard to diagnose; patients suffer often and early from cognitive impairment but are rarely appropriately prepared concerning end-of-life wishes. This reflects on their caregivers' burden as

well. For symptomatic treatment of common symptoms such as fatigue, depression and cognitive impairment, methylphenidate has established an important role. For assessment of these symptoms, a shortened questionnaire Quality of Life Questionnaire-15-Palliative shows potential. Cancer-directed therapy in advanced stages of brain tumours has to be weighed critically. To assess adequate strategies to help patients and caregivers with the challenges of brain tumour-specific symptoms, randomized intervention studies are necessary. The same accounts for cancer-directed treatment in relation to quality of life in advanced stages of brain tumours.

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[839]

**TÍTULO / TITLE:** - Health care professionals' perspectives of living and dying with primary malignant glioma: Implications for a unique cancer trajectory.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Palliat Support Care. 2013 Oct 21:1-9.

●● Enlace al texto completo (gratis o de pago) [1017/S1478951513000576](#)

**AUTORES / AUTHORS:** - Philip J; Collins A; Brand CA; Gold M; Moore G; Sundararajan V; Murphy MA; Lethborg C

**INSTITUCIÓN / INSTITUTION:** - Palliative Medicine and Centre for Palliative Care, St Vincent's Hospital Melbourne, Melbourne, Australia.

**RESUMEN / SUMMARY:** - Objectives: Health care professionals (HCPs) caring for people with primary malignant glioma (PMG) and their carers see many of the profound challenges facing this group, yet their perspectives are not documented. This study aimed to understand and document the unique perspective of HCPs in relation to the supportive and palliative care needs of patients with PMG and their carers, with a view to developing a model of care. Methods: Qualitative study involving semi-structured focus groups and interviews with 35 medical, nursing and allied health staff actively engaged in providing care for this patient group. Purposive and theoretical sampling from two major metropolitan hospitals and one community palliative care service in Australia was utilised to seek perspectives from a variety of disciplines and health care settings. Thematic analysis was conducted by three independent researchers, using a constant comparative method influenced by grounded theory. Results: Key themes relating to the needs of people with PMG which were apparent from the HCPs included: The difference in the illness course of glioma compared to other cancers; Limitations of current medical care; Challenges in balancing hope with reality of the illness; and Recommendations to improve care, including recognising the role of family and moving from a model where services are offered in response to demonstrated needs. Significance of the results: Current models of care based upon the classic cancer trajectory are unresponsive to the needs of people with PMG. Care may be enhanced by moving towards a proactive approach, extending the goals of care beyond medical needs and broadening the focus of care to include family needs.

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[840]

**TÍTULO / TITLE:** - Diagnostic and surgical implications of ventral vertebral displacement by posterior fossa neurenteric cysts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World Neurosurg. 2013 Oct 16. pii: S1878-8750(13)01362-4. doi: 10.1016/j.wneu.2013.10.037.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.10.037](#)

**AUTORES / AUTHORS:** - Uschold T; Xu DS; Wilson DA; Ablá AA; Nakaji P; Spetzler RF; Chang SW

**INSTITUCIÓN / INSTITUTION:** - Division of Neurological Surgery, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, Phoenix, Arizona.

**RESUMEN / SUMMARY:** - OBJECT: Neurenteric cysts (NECs) are uncommonly encountered lesions of the central nervous system with heterogeneous imaging characteristics. The object of this study was to review the preoperative imaging findings represented among a cohort of surgically treated posterior-fossa NECs. These findings are considered in the context of surgical technique, and inform an understanding of aberrant neuroembryological development associated with NECs. METHODS: A single-institution, multi-surgeon series of 7 consecutive patients (5 females, 2 males, mean age 36 years, range 19-57 years) treated surgically for histopathologically confirmed posterior fossa NECs was retrospectively reviewed. Lesion imaging and anatomic characteristics were noted on preoperative magnetic resonance imaging (MRI). Imaging comparisons were made against an additional cohort of 266 consecutive surgically treated posterior fossa masses to validate unique anatomic findings. RESULTS: T1 and T2 MRI signal characteristics were variable when compared across lesions. All NECs were found to be anteriorly located within the posterior fossa, but always situated between the brainstem pial surface and vertebrasilar system, causing ventral displacement of vertebrasilar vessels. CONCLUSION: Posterior fossa NECs display variable patterns of MRI signal and are commonly considered as part of a broad differential of cystic posterior fossa masses. We identified tumor insinuation between the ventral brainstem and vertebrasilar system as a highly sensitive and specific radiographic sign for NECs. This finding was not observed among a large cohort of posterior fossa masses representative of multiple other pathologies.

[841]

**TÍTULO / TITLE:** - Misdiagnosing recurrent medulloblastoma: the danger of examination and imaging without histological confirmation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Nov 8.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.10.PEDS13231](#)

**AUTORES / AUTHORS:** - Weintraub L; Miller T; Friedman I; Abbott R; Levy AS

**INSTITUCIÓN / INSTITUTION:** - Divisions of Pediatric Hematology/Oncology.

**RESUMEN / SUMMARY:** - The screening and detection of recurrent medulloblastoma presents the clinician with significant diagnostic challenges, including the risk of misdiagnosis. The authors present the case of a young girl with a history of a treated standard-risk medulloblastoma that highlights the risk of assuming recurrence has occurred when clinical and/or imaging changes are observed. This girl developed both new clinical deficits and had radiographic evidence of recurrence. She subsequently experienced a complete resolution of symptoms and radiographic findings with steroids alone.

[842]

**TÍTULO / TITLE:** - BMP4, a new prognostic factor for glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World J Surg Oncol. 2013 Oct 8;11(1):264. doi: 10.1186/1477-7819-11-264.

●● Enlace al texto completo (gratis o de pago) [1186/1477-7819-11-264](https://doi.org/10.1186/1477-7819-11-264)

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**RESUMEN / SUMMARY:** - BACKGROUND: The expression status of bone morphogenetic protein 4 (BMP4) in gliomas is still unclear by now. We try to investigate the relationship between BMP4 expression and the biological behavior of gliomas in order to lay a foundation for the management of these tumors. METHODS: A total of 630 patients with glioma were enrolled in the study from January 2002 to January 2008. The expression status of BMP4 in gliomas was evaluated by RT-PCR and immunohistochemistry. The relationships between BMP4 expression and clinicopathological parameters and between BMP4 expression and prognosis were also studied. RESULTS: The expression of BMP4 in tumor tissues was significantly lower than that in the paracancer tissues at both mRNA and protein levels ( $P = 0.01$  and  $0.001$ , respectively). Univariate analysis showed that BMP4 expression was closely related to extent of resection, Ki-67 expression, and the WHO grade ( $P = 0.001$ ,  $0.001$ , and  $0.001$ , respectively), but it was not related to age, sex, or the Karnofsky Performance Status (KPS) score ( $P = 0.099$ ,  $0.472$ , and  $0.201$ , respectively). Finally, Ki-67 expression and the WHO grade were found to be related to BMP4 expression using logistic regression ( $P = 0.001$  and  $0.001$ , respectively). Interestingly, we found that the expression of BMP4 was significantly related to distant glioma metastasis. Cox regression analysis identified the KPS score, extent of resection, Ki-67 expression, WHO grade, and BMP4 expression as independent prognostic factors ( $P = 0.044$ ,  $0.010$ ,  $0.002$ ,  $0.001$ , and  $0.001$ , respectively). CONCLUSIONS: BMP4 is differentially expressed in glioma patients and is closely related to the biological behavior of gliomas. BMP4 expression was found to be a strong predictor of distant metastasis and postoperative prognosis.

[843]

**TÍTULO / TITLE:** - F11R Is a Novel Monocyte Prognostic Biomarker for Malignant Glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 11;8(10):e77571. doi: 10.1371/journal.pone.0077571.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0077571](https://doi.org/10.1371/journal.pone.0077571)

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**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Washington University School of Medicine, St. Louis, Missouri, United States of America.

**RESUMEN / SUMMARY:** - OBJECTIVE: Brain tumors (gliomas) contain large populations of infiltrating macrophages and recruited microglia, which in experimental murine glioma models promote tumor formation and progression. Among the barriers to understanding the contributions of these stromal elements to high-grade glioma (glioblastoma; GBM) biology is the relative paucity of tools to characterize infiltrating macrophages and resident microglia. In this study, we leveraged multiple RNA analysis

platforms to identify new monocyte markers relevant to GBM patient outcome. METHODS: High-confidence lists of mouse resident microglia- and bone marrow-derived macrophage-specific transcripts were generated using converging RNA-seq and microarray technologies and validated using qRT-PCR and flow cytometry. Expression of select cell surface markers was analyzed in brain-infiltrating macrophages and resident microglia in an induced GBM mouse model, while allogeneic bone marrow transplantation was performed to trace the origins of infiltrating and resident macrophages. Glioma tissue microarrays were examined by immunohistochemistry, and the Gene Expression Omnibus (GEO) database was queried to determine the prognostic value of identified microglia biomarkers in human GBM. RESULTS: We generated a unique catalog of differentially-expressed bone marrow-derived monocyte and resident microglia transcripts, and demonstrated that brain-infiltrating macrophages acquire F11R expression in GBM and following bone-marrow transplantation. Moreover, mononuclear cell F11R expression positively correlates with human high-grade glioma and additionally serves as a biomarker for GBM patient survival, regardless of GBM molecular subtype. SIGNIFICANCE: These studies establish F11R as a novel monocyte prognostic marker for GBM critical for defining a subpopulation of stromal cells for future potential therapeutic intervention.

[844]

**TÍTULO / TITLE:** - Prognostic value and functional consequences of cell cycle inhibitor p27Kip1 loss in medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomark Res. 2013 Mar 1;1(1):14.

●● Enlace al texto completo (gratis o de pago) [1186/2050-7771-1-14](#)

**AUTORES / AUTHORS:** - Hatton BA; Ellison DW; Gajjar A; Kool M; Fero M; Olson JM  
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**RESUMEN / SUMMARY:** - BACKGROUND: The cyclin-dependent kinase inhibitor p27Kip1 functions during normal cerebellar development and has demonstrated tumor suppressor functions in mouse models of medulloblastoma. Because P27 loss is associated with increased proliferation, we assessed whether P27 absence in surgical medulloblastoma specimens correlated with response to therapy in pediatric patients enrolled in two large studies. Additionally, we examined the functional consequence of p27Kip1 loss in the SmoA1 medulloblastoma model to distinguish whether p27Kip1 reduces tumor initiation or slows tumor progression. FINDINGS: Analysis of 87 well-characterized patient samples identified a threshold of P27 staining at which significant P27 loss correlated with poor patient outcome. The same criteria, applied to a second test set of tissues from 141 patients showed no difference in survival between patients with minimal P27 staining and others, suggesting that P27 levels alone are not a sufficient prognostic indicator for identifying standard-risk patients that may fail standard therapy. These findings were in contrast to prior experiments completed using a mouse medulloblastoma model. Analysis of cerebellar tumor incidence in compound mutant mice carrying the activated Smoothened (SmoA1) allele that were heterozygous or nullizygous for p27Kip1 revealed that p27Kip1 loss did not alter the frequency of tumor initiation. Tumors haploinsufficient or nullizygous for p27Kip1 were, however, more invasive and displayed a higher proliferative index, suggesting p27Kip1

loss may contribute to SmoA1 medulloblastoma progression. CONCLUSIONS: These studies revealed P27 loss affects medulloblastoma progression rather than initiation and that this putative biomarker should not be used for stratifying children with medulloblastoma to risk-based therapeutic regimens.

[845]

**TÍTULO / TITLE:** - VRK2 identifies a subgroup of primary high-grade astrocytomas with a better prognosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Clin Pathol. 2013 Oct 1;13(1):23. doi: 10.1186/1472-6890-13-23.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1472-6890-13-23](#)

**AUTORES / AUTHORS:** - Rodriguez-Hernandez I; Vazquez-Cedeira M; Santos-Briz A; Garcia JL; Fernandez IF; Gomez-Moreta JA; Martin-Vallejo J; Gonzalez-Sarmiento R; Lazo PA

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**RESUMEN / SUMMARY:** - BACKGROUND: Malignant astrocytomas are the most common primary brain tumors and one of the most lethal among human cancers despite optimal treatment. Therefore, the characterization of molecular alterations underlying the aggressive behavior of these tumors and the identification of new markers are thus an important step towards a better patient stratification and management. METHODS AND RESULTS: VRK1 and VRK2 (Vaccinia-related kinase-1, -2) expression, as well as proliferation markers, were determined in a tissue microarray containing 105 primary astrocytoma biopsies. Kaplan Meier and Cox models were used to find clinical and/or molecular parameters related to overall survival. The effects of VRK protein levels on proliferation were determined in astrocytoma cell lines. High levels of both protein kinases, VRK1 or VRK2, correlated with proliferation markers, p63 or ki67. There was no correlation with p53, reflecting the disruption of the VRK-p53-DRAM autoregulatory loop as a consequence of p53 mutations. High VRK2 protein levels identified a subgroup of astrocytomas that had a significant improvement in survival. The potential effect of VRK2 was studied by analyzing the growth characteristics of astrocytoma cell lines with different EGFR/VRK2 protein ratios. CONCLUSION: High levels of VRK2 resulted in a lower growth rate suggesting these cells are more indolent. In high-grade astrocytomas, VRK2 expression constitutes a good prognostic marker for patient survival.

[846]

**TÍTULO / TITLE:** - Polychlorinated biphenyls impair dibutyryl cAMP-induced astrocytic differentiation in rat C6 glial cell line.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - FEBS Open Bio. 2013 Oct 29;3:459-66. doi: 10.1016/j.fob.2013.10.008.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.fob.2013.10.008](#)

**AUTORES / AUTHORS:** - Adornetto A; Pagliara V; Renzo GD; Arcone R

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**RESUMEN / SUMMARY:** - In the central nervous system, alteration of glial cell differentiation can affect brain functions. Polychlorinated biphenyls (PCBs) are persistent environmental chemical contaminants that exert neurotoxic effects in glial and neuronal cells. We examined the effects of a commercial mixture of PCBs, Aroclor1254 (A1254) on astrocytic differentiation of glial cells, using the rat C6 cell line as in vitro model. The exposure for 24 h to sub-toxic concentrations of A1254 (3 or 9  $\mu$ M) impaired dibutyryl cAMP-induced astrocytic differentiation as showed by the decrease of glial fibrillary acidic protein (GFAP) protein levels and inhibition in change of cell morphology toward an astrocytic phenotype. The A1254 inhibition was restored by the addition of a protein kinase C (PKC) inhibitor, bisindolylmaleimide (bis), therefore indicating that PCBs disturbed the cAMP-induced astrocytic differentiation of C6 cells via the PKC pathway. The phosphorylation of signal transducer and activator of transcription 3 (STAT3) is essential for cAMP-induced transcription of GFAP promoter in C6 cells. Our results indicated that the exposure to A1254 (3 or 9  $\mu$ M) for 24 h suppressed cAMP-induced STAT3 phosphorylation. Moreover, A1254 reduced cAMP-dependent phosphorylation of STAT3 requires inhibition of PKC activity. Together, our results suggest that PCBs induce perturbation in cAMP/PKA and PKC signaling pathway during astrocytic differentiation of glial cells.

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[847]

**TÍTULO / TITLE:** - A surgical loupe system for observing protoporphyrin IX fluorescence in high-grade gliomas after administering 5-aminolevulinic acid.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Photodiagnosis Photodyn Ther. 2013 Dec;10(4):379-81. doi: 10.1016/j.pdpdt.2013.03.004. Epub 2013 May 2.

•• Enlace al texto completo (gratis o de pago) [1016/j.pdpdt.2013.03.004](http://1016/j.pdpdt.2013.03.004)

**AUTORES / AUTHORS:** - Kuroiwa T; Kajimoto Y; Furuse M; Miyatake S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Osaka Medical College, Japan. Electronic address: [neu040@poh.osaka-med.ac.jp](mailto:neu040@poh.osaka-med.ac.jp).

**RESUMEN / SUMMARY:** - BACKGROUND: We recently developed a surgical loupe system for observing the fluorescence emitted by protoporphyrin IX (PpIX), a metabolite of 5-aminolevulinic acid. METHODS: This system used a semiconductor laser as the excitation light source. A compact, transparent, and ultraviolet cut-off filter was mounted on an eyepiece lens, which did not require filter on-off manipulation. RESULTS: Good quality protoporphyrin IX fluorescence was acquired using the surgical loupe system during glioblastoma resection, which was nearly identical to that acquired by fluorescent microscopy. In addition, surgeons can perform ordinary surgical procedures using this surgical loupe system under white light. CONCLUSION: This surgical loupe system enables the detection of PpIX fluorescence during resection of high-grade glioma. Further evaluations of this system are required to determine the extent of surgical resection before its practical application.

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[848]

**TÍTULO / TITLE:** - Silver nanoparticles: a novel radiation sensitizer for glioma?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nanoscale. 2013 Dec 7;5(23):11829-36. doi: 10.1039/c3nr01351k. Epub 2013 Oct 15.

●● Enlace al texto completo (gratis o de pago) [1039/c3nr01351k](#)

**AUTORES / AUTHORS:** - Liu P; Huang Z; Chen Z; Xu R; Wu H; Zang F; Wang C; Gu N

**INSTITUCIÓN / INSTITUTION:** - Jiangsu Key Laboratory for Biomaterials and Devices, State Key Laboratory of Bioelectronics, School of Biological Science and Medical Engineering, Southeast University, Nanjing 210096, PR China. [guning@seu.edu.cn](mailto:guning@seu.edu.cn).

**RESUMEN / SUMMARY:** - Malignant gliomas are the most common primary intracranial tumors with a dismal prognosis. Previous investigations by our group demonstrated the radiosensitizing effect of silver nanoparticles (AgNPs) on glioma cells in vitro. The goal of the present study was to evaluate the efficacy of intratumoral administration of AgNPs in combination with a single dose of ionizing radiation at clinically relevant MV energies for the treatment of C6 glioma-bearing rats. AgNPs (10 or 20 µg/10 µl) were stereotactically administered on day 8 after tumor implantation. One day after AgNP injection, rats bearing glioma received 10 Gy radiation. The mean survival times were 100.5 and 98 days, the corresponding percent increase in life spans was 513.2% and 497.7%, and the cure rates were 41.7 and 38.5% at 200 days for the 10 and 20 µg AgNPs and radiation combination groups, respectively. In contrast, the mean survival times for irradiated controls, 10 and 20 µg AgNPs alone, and untreated controls were 24.5, 16.1, 19.4, and 16.4 days, respectively. Furthermore, a cooperative antiproliferative and proapoptotic effect was obtained when gliomas were treated with AgNPs followed by radiotherapy. Our results showed the therapeutic efficacy of AgNPs in combination with radiotherapy without apparent systemic toxicity, suggesting the clinical potential of AgNPs in improving the outcome of malignant glioma radiotherapy.

[849]

**TÍTULO / TITLE:** - Diagnostic segregation of human brain tumours using Fourier-transform infrared and/or Raman spectroscopy coupled with discriminant analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Anal Methods. 2012 Sep 6;5:89-102.

●● Enlace al texto completo (gratis o de pago) [1039/C2AY25544H](#)

**AUTORES / AUTHORS:** - Gajjar K; Heppenstall LD; Pang W; Ashton KM; Trevisan J; Patel II; Llabjani V; Stringfellow HF; Martin-Hirsch PL; Dawson T; Martin FL

**INSTITUCIÓN / INSTITUTION:** - Centre for Biophotonics, Lancaster Environment Centre, Lancaster University, Lancaster, LA1 4YQ, UK ; Lancashire Teaching Hospitals NHS Trust, Royal Preston Hospital, Sharoe Green Lane North, Preston, Lancashire, UK.

**RESUMEN / SUMMARY:** - The most common initial treatment received by patients with a brain tumour is surgical removal of the growth. Precise histopathological diagnosis of brain tumours is to some extent subjective. Furthermore, currently available diagnostic imaging techniques to delineate the excision border during cytoreductive surgery lack the required spatial precision to aid surgeons. We set out to determine whether infrared (IR) and/or Raman spectroscopy combined with multivariate analysis could be applied to discriminate between normal brain tissue and different tumour types (meningioma, glioma and brain metastasis) based on the unique spectral "fingerprints" of their biochemical composition. Formalin-fixed paraffin-embedded tissue blocks of normal brain and different brain tumours were de-waxed, mounted on low-E slides and desiccated before being analyzed using attenuated total reflection Fourier-transform IR (ATR-FTIR) and Raman spectroscopy. ATR-FTIR spectroscopy showed a clear

segregation between normal and different tumour subtypes. Discrimination of tumour classes was also apparent with Raman spectroscopy. Further analysis of spectral data revealed changes in brain biochemical structure associated with different tumours. Decreased tentatively-assigned lipid-to-protein ratio was associated with increased tumour progression. Alteration in cholesterol esters-to-phenylalanine ratio was evident in grade IV glioma and metastatic tumours. The current study indicates that IR and/or Raman spectroscopy have the potential to provide a novel diagnostic approach in the accurate diagnosis of brain tumours and have potential for application in intra-operative diagnosis.

[850]

**TÍTULO / TITLE:** - Differential diagnosis and management of a pituitary mass with renal cell carcinoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Aug;54(2):132-5. doi: 10.3340/jkns.2013.54.2.132. Epub 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.54.2.132](#)

**AUTORES / AUTHORS:** - Hwang JM; Kim YH; Kim TM; Park SH

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Seoul National University College of Medicine, Seoul National University Hospital, Seoul, Korea.

**RESUMEN / SUMMARY:** - The small pituitary mass was incidentally found in 40-years-old women with renal cell carcinoma. The endocrinological and ophthalmological evaluation revealed no deficit and the short-term follow-up was recommended. In 6 months later, the visual disturbance was reported and the size of mass was increased. The tumor was removed totally via the trans-sphenoid approach. The post-operative endocrinological insufficiency was not noticed. During one year of follow-up period, there was no evidence of recurrence without adjuvant radiotherapy. The clinical features of pituitary metastasis from renal cell carcinoma were similar to those of pituitary adenoma. The possibility of pituitary metastasis should be kept in mind in patients with sellar mass and renal cell carcinoma.

[851]

**TÍTULO / TITLE:** - Pancreatic paraganglioma: An extremely rare entity and crucial role of immunohistochemistry for diagnosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2013 Sep;17(5):917-9. doi: 10.4103/2230-8210.117217.

●● Enlace al texto completo (gratis o de pago) [4103/2230-8210.117217](#)

**AUTORES / AUTHORS:** - Borgohain M; Gogoi G; Das D; Biswas M

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Assam Medical College and Hospital, Dibrugarh, Assam, India.

**RESUMEN / SUMMARY:** - Paragangliomas are rare neuroendocrine neoplasms arising in extra-adrenal chromaffin cells of autonomic nervous system and histologically akin to chemodectomas. They are rare, affecting about 1 in 2,000,000 population. It is a generic term applied to tumors of paraganglia regardless of the location. In rare instances, paragangliomas present around and involve the pancreas, thereby mimicking any one of the more common primary pancreatic lesions. Pancreatic paraganglioma is an extremely rare tumor. It grows slowly, so radical resection is

recommended to achieve curability with good prognosis. These neoplasms present considerable diagnostic difficulty not only for the clinician and radiologist but also for the pathologist. Here, we report a case of a 55-year-old woman who presented with a left-sided abdominal swelling for 3 months duration, initially having clinical suspicion of an ovarian tumor. The radiological imaging revealed a lesion in the tail of pancreas with a differential diagnosis of pancreatic carcinoma and metastatic tumor. Only after exploratory laparotomy, the diagnosis was made as a rare case of pancreatic paraganglioma on the basis of histological examination and immunohistochemistry.

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[852]

**TÍTULO / TITLE:** - Cerebral vasculopathy in a Chinese family with neurofibromatosis type I mutation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosci Bull. 2013 Dec;29(6):708-14. doi: 10.1007/s12264-013-1388-x. Epub 2013 Nov 11.

●● Enlace al texto completo (gratis o de pago) [1007/s12264-013-1388-x](#)

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**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Xuan Wu Hospital of Capital Medical University, Beijing, 100053, China.

**RESUMEN / SUMMARY:** - Neurofibromatosis type I (NF1) is a hereditary, autosomal dominant, neurocutaneous syndrome that is attributed to NF1 gene mutation. NF1 has been associated with scoliosis, macrocephaly, pseudoarthrosis, short stature, mental retardation, and malignancies. NF1-associated vasculopathy is an uncommon and easily-overlooked presentation. Examination of a Chinese family affected by NF1 combined with cerebral vessel stenosis and/or abnormality suggested a possible relationship between NF1 and vessel stenosis. To determine which NF1 gene mutation is associated with vascular lesions, particularly cerebral vessel stenosis, we examined one rare family with combined cerebral vessel lesions or maldevelopment. Vascular lesions were detected using transcranial Doppler sonography and digital subtraction angiography in family members. Next, denaturing high-performance liquid chromatography and sequencing were used to screen for NF1 gene mutations. The results revealed a nonsense mutation, c.541C>T, in the NF1 gene. This mutation truncated the NF1 protein by 2659 aminoacid residues at the C-terminus and co-segregated with all of the patients, but was not present in unaffected individuals in the family. Exceptionally, three novel mutations were identified in unaffected family members, but these did not affect the product of the NF1 gene. Thus the nonsense mutation, c.541C>T, located in the NF1 gene could constitute one genetic factor for cerebral vessel lesions.

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[853]

**TÍTULO / TITLE:** - Immunohistochemistry is highly sensitive and specific for detection of BRAF V600E mutation in pleomorphic xanthoastrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol Commun. 2013 May 30;1(1):20.

●● Enlace al texto completo (gratis o de pago) [1186/2051-5960-1-20](#)

**AUTORES / AUTHORS:** - Ida CM; Vrana JA; Rodriguez FJ; Jentoft ME; Caron AA; Jenkins SM; Giannini C

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**RESUMEN / SUMMARY:** - BACKGROUND: High frequencies of the BRAF V600E mutation have been reported in pleomorphic xanthoastrocytoma (PXA). Recently, a BRAF V600E mutation-specific antibody has been developed and validated. We evaluated the immunohistochemical (IHC) detection of BRAF V600E mutation in PXA by comparing to gold standard molecular analysis and investigating the interobserver variability of the IHC scoring. We performed BRAF V600E IHC in 46 cases, of which 37 (80%) cases had sufficient tumor tissue for molecular analysis. IHC detection was performed using monoclonal mouse antibody VE1 (Spring Bioscience). IHC slides were scored independently by four reviewers blind to molecular data, including a primary (gold standard) and three additional reviewers. BRAF V600E mutation status was assessed by allele-specific polymerase chain reaction (PCR) with fragment analysis. RESULTS: All 46 cases showed interpretable BRAF V600E IHC results: 27 (59%) were positive (strong cytoplasmic staining), 19 (41%) were negative (6 of these cases with focal/diffuse weak cytoplasmic staining, interpreted as nonspecific by the primary reviewer). By molecular analysis, all 37 cases that could be tested had evaluable results: 22 (59%) cases were positive for BRAF V600E mutation and were scored as "IHC-positive", and 15 (41%) were negative (including 11 cases scored as "IHC-negative" and 4 cases scored as negative with minimal nonspecific staining). IHC detection of BRAF V600E mutant protein was congruent in all 37 cases that were successfully evaluated by molecular testing (sensitivity and specificity of 100%). Agreement for IHC scoring among the 4 reviewers was almost perfect (kappa 0.92) when cases were scored as "positive/negative" and substantial (kappa 0.78) when minimal nonspecific staining was taken into account. CONCLUSIONS: We conclude that detection of BRAF V600E mutation by immunohistochemistry is highly sensitive and specific. BRAF V600E IHC interpretation is usually straightforward, but awareness of possible nonspecific staining is necessary and training is recommended. It is a practical rapid method that may avoid the need of labor-intensive molecular testing and may be most valuable in small biopsies unsuitable for molecular analysis.

[854]

**TÍTULO / TITLE:** - FOXC2 Mutations in Familial and Sporadic Spinal Extradural Arachnoid Cyst.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 22;8(11):e80548. doi: 10.1371/journal.pone.0080548.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0080548](http://1371/journal.pone.0080548)

**AUTORES / AUTHORS:** - Ogura Y; Yabuki S; Iida A; Kou I; Nakajima M; Kano H; Shiina M; Kikuchi S; Toyama Y; Ogata K; Nakamura M; Matsumoto M; Ikegawa S

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Bone and Joint Diseases, Center for Integrative Medical Sciences, RIKEN, Tokyo, Japan ; Department of Orthopaedic Surgery, School of Medicine, Keio University, Tokyo, Japan.

**RESUMEN / SUMMARY:** - Spinal extradural arachnoid cyst (SEDAC) is a cyst in the spinal canal that protrudes into the epidural space from a defect in the dura mater. Most cases are sporadic; however, three familial SEDAC cases have been reported, suggesting genetic etiological factors. All familial cases are associated with lymphedema-distichiasis syndrome (LDS), whose causal gene is FOXC2. However,

FOXC2 mutation analysis has been performed in only 1 family, and no mutation analysis has been performed on sporadic (non-familial) SEDACs. We recruited 17 SEDAC subjects consisting of 2 familial and 7 sporadic cases and examined FOXC2 mutations by Sanger sequencing and structural abnormalities by TaqMan copy number assay. We identified 2 novel FOXC2 mutations in 2 familial cases. Incomplete LDS penetrance was noted in both families. Four subjects presented with SEDACs only. Thus, SEDAC caused by the heterozygous FOXC2 loss-of-function mutation should be considered a feature of LDS, although it often manifests as the sole symptom. Seven sporadic SEDAC subjects had no FOXC2 mutations, no symptoms of LDS, and showed differing clinical characteristics from those who had FOXC2 mutations, suggesting that other gene(s) besides FOXC2 are likely to be involved in SEDAC.

[855]

**TÍTULO / TITLE:** - Transcriptional Analysis of Aggressiveness and Heterogeneity across Grades of Astrocytomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 11;8(10):e76694. doi: 10.1371/journal.pone.0076694.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0076694](#)

**AUTORES / AUTHORS:** - Wang C; Funk CC; Eddy JA; Price ND

**INSTITUCIÓN / INSTITUTION:** - Institute for Systems Biology, Seattle, Washington, United States of America ; Department of Chemical and Biomolecular Engineering, University of Illinois, Urbana, Illinois, United States of America.

**RESUMEN / SUMMARY:** - Astrocytoma is the most common glioma, accounting for half of all primary brain and spinal cord tumors. Late detection and the aggressive nature of high-grade astrocytomas contribute to high mortality rates. Though many studies identify candidate biomarkers using high-throughput transcriptomic profiling to stratify grades and subtypes, few have resulted in clinically actionable results. This shortcoming can be attributed, in part, to pronounced lab effects that reduce signature robustness and varied individual gene expression among patients with the same tumor. We addressed these issues by uniformly preprocessing publicly available transcriptomic data, comprising 306 tumor samples from three astrocytoma grades (Grade 2, 3, and 4) and 30 non-tumor samples (normal brain as control tissues). Utilizing Differential Rank Conservation (DIRAC), a network-based classification approach, we examined the global and individual patterns of network regulation across tumor grades. Additionally, we applied gene-based approaches to identify genes whose expression changed consistently with increasing tumor grade and evaluated their robustness across multiple studies using statistical sampling. Applying DIRAC, we observed a global trend of greater network dysregulation with increasing tumor aggressiveness. Individual networks displaying greater differences in regulation between adjacent grades play well-known roles in calcium/PKC, EGF, and transcription signaling. Interestingly, many of the 90 individual genes found to monotonically increase or decrease with astrocytoma grade are implicated in cancer-affected processes such as calcium signaling, mitochondrial metabolism, and apoptosis. The fact that specific genes monotonically increase or decrease with increasing astrocytoma grade may reflect shared oncogenic mechanisms among phenotypically similar tumors. This work presents statistically significant results that enable better characterization of different human astrocytoma grades and hopefully can contribute

towards improvements in diagnosis and therapy choices. Our results also identify a number of testable hypotheses relating to astrocytoma etiology that may prove helpful in developing much-needed biomarkers for earlier disease detection.

[856]

**TÍTULO / TITLE:** - 5-aminolevulinic Acid induced fluorescence is a powerful intraoperative marker for precise histopathological grading of gliomas with non-significant contrast-enhancement.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 18;8(10):e76988. doi: 10.1371/journal.pone.0076988.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0076988](#)

**AUTORES / AUTHORS:** - Widhalm G; Kiesel B; Woehrer A; Traub-Weidinger T; Preusser M; Marosi C; Prayer D; Hainfellner JA; Knosp E; Wolfsberger S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Medical University Vienna, Vienna, Austria ; Institute of Neurology, Medical University Vienna, Vienna, Austria ; Comprehensive Cancer Center - Central Nervous System Tumours Unit (CCC-CNS), Medical University Vienna, Vienna, Austria.

**RESUMEN / SUMMARY:** - BACKGROUND: Intraoperative identification of anaplastic foci in diffusely infiltrating gliomas (DIG) with non-significant contrast-enhancement on MRI is indispensable to avoid histopathological undergrading and subsequent treatment failure. Recently, we found that 5-aminolevulinic acid (5-ALA) induced protoporphyrin IX (PpIX) fluorescence can visualize areas with increased proliferative and metabolic activity in such gliomas intraoperatively. As treatment of DIG is predominantly based on histopathological World Health Organisation (WHO) parameters, we analyzed whether PpIX fluorescence can detect anaplastic foci according to these criteria. METHODS: We prospectively included DIG patients with non-significant contrast-enhancement that received 5-ALA prior to resection. Intraoperatively, multiple samples from PpIX positive and negative intratumoral areas were collected using a modified neurosurgical microscope. In all samples, histopathological WHO criteria and proliferation rate were assessed and correlated to the PpIX fluorescence status. RESULTS: A total of 215 tumor specimens were collected in 59 patients. Of 26 WHO grade III gliomas, 23 cases (85%) showed focal PpIX fluorescence, whereas 29 (91%) of 33 WHO grade II gliomas were PpIX negative. In intratumoral areas with focal PpIX fluorescence, mitotic rate, cell density, nuclear pleomorphism, and proliferation rate were significantly higher than in non-fluorescing areas. The positive predictive value of focal PpIX fluorescence for WHO grade III histology was 85%. CONCLUSIONS: Our study indicates that 5-ALA induced PpIX fluorescence is a powerful marker for intraoperative identification of anaplastic foci according to the histopathological WHO criteria in DIG with non-significant contrast-enhancement. Therefore, application of 5-ALA optimizes tissue sampling for precise histopathological diagnosis independent of brain-shift.

[857]

**TÍTULO / TITLE:** - Successful pregnancy in a female with a large prolactinoma after pituitary tumor apoplexy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Obstet Gynecol. 2013;2013:817603. doi: 10.1155/2013/817603. Epub 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [1155/2013/817603](https://doi.org/10.1155/2013/817603)

**AUTORES / AUTHORS:** - Al-Sharafi BA; Nassar OH

**INSTITUCIÓN / INSTITUTION:** - Department of Medicine, School of Medicine and Health Sciences, Sana'a University, P.O Box 12268, Sana'a, Yemen.

**RESUMEN / SUMMARY:** - Pituitary apoplexy is a rare condition which may cause death of the patient in severe cases and many times leads to hypopituitarism. We report a case of apoplexy in a large prolactinoma resulting in empty sella syndrome followed by a successful pregnancy. Our patient is a 32-year-old female with a history of a macroprolactinoma for approximately 17 years who presented to our hospital with a history of severe headache, decreased level of consciousness, fever, nausea, vomiting, and diplopia of 12 hours duration. Magnetic resonance imaging done on admission showed an increase in the size of the pituitary adenoma with a subtle hemorrhage. The patient was admitted to the intensive care unit and treated conservatively. The condition of the patient improved within a few days. A few months later, she started having regular menstrual periods. A magnetic resonance imaging of the pituitary 1.5 years later was reported as empty sella syndrome, and approximately one year later she became pregnant. With the pituitary adenoma being resolved after developing pituitary apoplexy and continuing on cabergoline, the patient had a successful pregnancy with no recurrence of the adenoma after delivery and breastfeeding.

[858]

**TÍTULO / TITLE:** - INVITED REVIEW-NEUROIMAGING RESPONSE ASSESSMENT CRITERIA FOR BRAIN TUMORS IN VETERINARY PATIENTS.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Vet Radiol Ultrasound. 2013 Nov 13. doi: 10.1111/vru.12118.

●● Enlace al texto completo (gratis o de pago) [1111/vru.12118](https://doi.org/10.1111/vru.12118)

**AUTORES / AUTHORS:** - Rossmeisl JH Jr; Garcia PA; Daniel GB; Bourland JD; Debinski W; Dervisis N; Klahn S

**INSTITUCIÓN / INSTITUTION:** - Department of Small Animal Clinical Sciences, Virginia-Maryland College of Veterinary Medicine, VA, 24061; Biomechanical Systems and Veterinary and Comparative Neuro-oncology Laboratories, Department of Biomedical Engineering, Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences, VA, 24061.

**RESUMEN / SUMMARY:** - The evaluation of therapeutic response using cross-sectional imaging techniques, particularly gadolinium-enhanced MRI, is an integral part of the clinical management of brain tumors in veterinary patients. Spontaneous canine brain tumors are increasingly recognized and utilized as a translational model for the study of human brain tumors. However, no standardized neuroimaging response assessment criteria have been formulated for use in veterinary clinical trials. Previous studies have found that the pathophysiologic features inherent to brain tumors and the surrounding brain complicate the use of the response evaluation criteria in solid tumors (RECIST) assessment system. Objectives of this review are to describe strengths and limitations of published imaging-based brain tumor response criteria and propose a system for use in veterinary patients. The widely used human Macdonald and response assessment in neuro-oncology (RANO) criteria are reviewed and described as to how

they can be applied to veterinary brain tumors. Discussion points will include current challenges associated with the interpretation of brain tumor therapeutic responses such as imaging pseudophenomena and treatment-induced necrosis, and how advancements in perfusion imaging, positron emission tomography, and magnetic resonance spectroscopy have shown promise in differentiating tumor progression from therapy-induced changes. Finally, although objective endpoints such as MR imaging and survival estimates will likely continue to comprise the foundations for outcome measures in veterinary brain tumor clinical trials, we propose that in order to provide a more relevant therapeutic response metric for veterinary patients, composite response systems should be formulated and validated that combine imaging and clinical assessment criteria.

[859]

**TÍTULO / TITLE:** - Acromegaly associated with mixed pituitary adenoma-gangliocytoma and Rathke's cleft cyst.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(4):527-30. doi: 10.5137/1019-5149.JTN.5241-11.1.

●● Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.5241-](#)

[11.1](#)

**AUTORES / AUTHORS:** - Azarpira N; Pakbaz S; Torabineghad S; Musavi J; Rakei M

**INSTITUCIÓN / INSTITUTION:** - Shiraz University of Medical Sciences, Organ Transplant Research Center, Department of Pathology, Shiraz, Islamic Republic of Iran.

**RESUMEN / SUMMARY:** - Gangliocytoma of the pituitary gland is a rare lesion that often occurs in combination with pituitary adenomas and the exact origin is the subject of discussion. We report a rare case of an intrasellar mass of combined gangliocytoma/pituitary adenoma coexistent with Rathke's cleft cyst. A 50-year-old female was admitted to our hospital with headache, mild acromegaly, and bitemporal hemianopsia. Histologically the tumor was composed of triphasic component of pituitary adenoma, clusters of ganglion cells and small cysts embedded in a variably dense neuropil substrate. Immunohistochemical analysis revealed the ganglion cells and adenoma cells were positive for synaptophysin and neurofilament. The lining of Rathke's cleft cyst was immunoreactive for cytokeratin 8. The exact pathogenesis of combined sellar pathology is not clear yet. However, a common stem/progenitor cell origin of both the adenomatous and neuronal component of these lesions has been suggested.

[860]

**TÍTULO / TITLE:** - Occurrence of Spontaneous Tumors in the Central Nervous System (CNS) of F344 and SD Rats.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Toxicol Pathol. 2013 Sep;26(3):263-73. doi: 10.1293/tox.26.263. Epub 2013 Oct 15.

●● Enlace al texto completo (gratis o de pago) [1293/tox.26.263](#)

**AUTORES / AUTHORS:** - Nagatani M; Kudo K; Yamakawa S; Ohira T; Yamaguchi Y; Ikezaki S; Suzuki I; Saito T; Hoshiya T; Tamura K; Uchida K

**INSTITUCIÓN / INSTITUTION:** - Hamamatsu Branch of Pathology Division, BOZO Research Center Inc., 164-2 Wada-cho, Higashi-ku, Hamamatsu, Shizuoka 435-0016, Japan.

**RESUMEN / SUMMARY:** - In order to accurately assess the carcinogenicity of chemicals with regard to rare tumors such as rat CNS tumors, sufficient information about spontaneous tumors are very important. This paper presents the data on the type, incidence and detected age of CNS tumors in F344/DuCrI:CrIj (a total of 1363 males and 1363 females) and CrI:CD(SD) rats (a total of 1650 males and 1705 females) collected from in-house background data-collection studies and control groups of carcinogenicity studies at our laboratory, together with those previously reported in F344 and SD rats. The present data on F344/DuCrI:CrIj rats (F344 rats) and CrI:CD(SD) rats (SD rats) clarified the following. (1) The incidences of all CNS tumors observed in F344 rats were less than 1%. (2) The incidences of malignant astrocytoma and granular cell tumor were higher in male SD rats than in female SD rats. (3) The incidences of astrocytoma and granular cell tumor were higher in SD rats than in F344 rats. (4) Among astrocytoma, oligodendroglioma and granular cell tumor, oligodendroglioma was detected at the youngest age, followed by astrocytoma, and ultimately, granular cell tumor developed in both strains. The incidences observed in our study were almost consistent with those previously reported in F344 and SD rats.

[861]

**TÍTULO / TITLE:** - Neuronavigation-guided endoscopic and hodotopic approach to an arachnoid cyst.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Surg Neurol Int. 2013 Sep 19;4:120. doi: 10.4103/2152-7806.118492.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.118492](#)

**AUTORES / AUTHORS:** - Idris Z; Nandrajog P; Abdullah JM; Ghani RI; Idris B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, School of Medical Sciences, Universiti Sains Malaysia 16150, Kubang Kerian, Kelantan, Malaysia.

**RESUMEN / SUMMARY:** - BACKGROUND: Arachnoid cysts are intrarachnoid benign cystic lesions filled with cerebrospinal fluid and should be treated without incurring further morbidity to the patients. CASE DESCRIPTION: The authors present a case of a 68-year-old elderly female with a large right fronto-parieto-temporal arachnoid cyst who has been suffering from mild left hemiparesis for the past 4 years and presented with sudden onset of seizures. The 3 Tesla MR system with diffusion tensor imaging (DTI) and MR tractography of the brain showed a large right fronto-parieto-temporal cystic lesion measuring 7 x 5 x 5 cm with a midline shift of 1 cm, suggestive of an arachnoid cyst with surrounding ipsilateral white matter projection pathways and inferior occipito-frontal fasciculus or inferior longitudinal white matter tracts. The cyst was successfully treated with neuronavigation-guided endoscopic and hodotopic approach to fenestrate the arachnoid cyst into the sylvian cistern, avoiding inadvertent injury to major white matter tracts portrayed by DTI. Postoperatively, a repeated computed tomography (CT) scan of the brain revealed a smaller arachnoid cyst with correction of the midline shift. The patient was weaned off from the ventilator and her hemiplegia improved gradually. CONCLUSION: This case report emphasizes the value of neuronavigation-guided endoscopic and hodotopic approach to fenestrate the intra-axial arachnoid cyst.

[862]

**TÍTULO / TITLE:** - Dural defect repair in translabyrinthine acoustic neuroma surgery and its implications in cerebrospinal fluid leak occurrence.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg B Skull Base. 2012 Oct;73(5):327-30. doi: 10.1055/s-0032-1321511.

●● Enlace al texto completo (gratis o de pago) [1055/s-0032-1321511](#)

**AUTORES / AUTHORS:** - Netto AA; Colafemina JF; Centeno RS

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology-Head and Neck Surgery, Scholl of Medicine of Ribeirao Preto, University of Sao Paulo, Ribeirao Preto-SP, Brazil.

**RESUMEN / SUMMARY:** - Cerebrospinal fluid (CSF) leak is a complication that may occur after translabyrinthine (translab) acoustic neuroma (AN) removal. The aim of this study is to verify the incidence of CSF leak using two techniques for dural defect closure in translab AN surgery and present a new technique for dural repair. A retrospective study was held, reviewing charts of 34 patients in a tertiary neurologic referral center. Out of these 34 patients that underwent translab AN excision in a 1-year period, 18 had their dural defect repaired using only abdominal fat graft and 16 using synthetic dura substitute (SDS) plus abdominal fat tissue. One patient (5.5%) in the first group had CSF leak and 1 (6.2%) in the second group had CSF leak postoperatively. Our data suggest that there are no significant differences in CSF leak rates using both techniques, although studies in a larger series must be undertaken to conclude it. We believe that the development of some points in the new technique for dural repair can achieve better results and reduce the CSF leak incidence in the translabyrinthine acoustic neuroma surgery in the near future.

[863]

**TÍTULO / TITLE:** - The molecular landscape of diffuse glioma and prospects for biomarker development.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Opin Med Diagn. 2013 Nov;7(6):573-87. doi: 10.1517/17530059.2013.846321. Epub 2013 Oct 28.

●● Enlace al texto completo (gratis o de pago) [1517/17530059.2013.846321](#)

**AUTORES / AUTHORS:** - Huse JT; Aldape KD

**INSTITUCIÓN / INSTITUTION:** - Memorial Sloan-Kettering Cancer Center, Department of Pathology and Human Oncology and Pathogenesis Program , 1275 York Avenue, NY 10065 , USA.

**RESUMEN / SUMMARY:** - Introduction: High-throughput molecular profiling is transforming long-standing conceptions of diffuse gliomas, the most common primary brain tumors. Indeed, comprehensive genomic, transcriptomic and epigenomic analyses have not only provided striking mechanistic insights into the pathogenesis of diffuse gliomas but also greatly enriched the pool of potential biomarkers for prognostic and predictive patient stratification. Areas covered: This article summarizes significant recent developments in the molecular characterization of diffuse gliomas, focusing on implications for biomarker development and application. In doing so, we will also address relevant high-throughput molecular profiling technologies and both the opportunities and challenges implicit in their widespread incorporation into disease

management workflows. Expert opinion: Although the number of validated biomarkers guiding diffuse glioma management is currently quite small, rapidly progressing molecular annotation continues to provide a steady stream of clinically relevant candidates, many of which show promise for predictive capabilities in the context of specific targeted therapeutics. Such potential now requires rigorous validation in well-designed clinical trials supported by robust molecular profiling assays operative from standard clinical material.

[864]

**TÍTULO / TITLE:** - Inhibition of NF-kappaB Signaling Ablates the Invasive Phenotype of Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cancer Res. 2013 Oct 21.

●● [Enlace al texto completo \(gratis o de pago\) 1158/1541-7786.MCR-13-0435-T](#)

**AUTORES / AUTHORS:** - Westhoff MA; Zhou S; Nonnenmacher L; Karpel-Massler G; Jennewein C; Schneider M; Halatsch ME; Carragher NO; Baumann B; Krause A; Simmet T; Bachem MG; Wirtz CR; Debatin KM

**INSTITUCIÓN / INSTITUTION:** - University Medical Center Ulm.

**RESUMEN / SUMMARY:** - Glioblastoma Multiforme (GBM), the most common primary brain tumor, is highly refractory to therapy, mainly due to its ability to form micrometastases, which are small clusters or individual cells that rapidly transverse the brain and make full surgical resection impossible. Here it is demonstrated that the invasive phenotype of GBM is orchestrated by the transcription factor NF-kappaB which, via metalloproteinases (MMPs), regulates Fibronectin (Fn) processing. Both, cell lines and tumor stem cells from primary GBM, secrete high levels of Fn and when cleaved by MMPs form an extracellular substrate. Subsequently, forming and interacting with their own microenvironment, GBM cells are licensed to invade their surroundings. Mechanistic study revealed that NF-kappaB inhibition, either genetically or pharmacologically, by treatment with Disulfiram, significantly abolished the invasive phenotype in the chick chorioallantoic membrane (CAM) assay. Furthermore, having delineated the underlying molecular mechanism of GBM invasion, the potential of a Disulfiram-based therapy was revealed in a highly invasive orthotrophic GBM mouse model. Implications: This study defines a novel therapeutic approach that inhibits micrometastases invasion and reverts lethal Glioblastoma into a less aggressive disease.

[865]

**TÍTULO / TITLE:** - MicroRNA 203 Modulates Glioma Cell Migration via Robo1/ERK/MMP-9 Signaling.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Genes Cancer. 2013 Jul;4(7-8):285-96. doi: 10.1177/1947601913500141.

●● [Enlace al texto completo \(gratis o de pago\) 1177\\_1947601913500141](#) [pii

●● [Enlace al texto completo \(gratis o de pago\) 1177/1947601913500141](#)

**AUTORES / AUTHORS:** - Dontula R; Dinasarapu A; Chetty C; Pannuru P; Herbert E; Ozer H; Lakka SS

**INSTITUCIÓN / INSTITUTION:** - Section of Hematology/Oncology, University of Illinois Cancer Center, College of Medicine at Chicago, IL, USA.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most common and malignant primary adult brain cancer. Allelic deletion on chromosome 14q plays an important role in the pathogenesis of GBM, and this site was thought to harbor multiple tumor suppressor genes associated with GBM, a region that also encodes microRNA-203 (miR-203). In this study, we sought to identify the role of miR-203 as a tumor suppressor in the pathogenesis of GBM. We analyzed the miR-203 expression data of GBM patients in 10 normal and 495 tumor tissue samples derived from The Cancer Genome Atlas data set. Quantitative real-time PCR and in situ hybridization in 10 high-grade GBM and 10 low-grade anaplastic astrocytoma tumor samples showed decreased levels of miR-203 expression in anaplastic astrocytoma and GBM tissues and cell lines. Exogenous expression of miR-203 using a plasmid expressing miR-203 precursor (pmiR-203) suppressed glioma cell proliferation, migration, and invasion. We determined that one relevant target of miR-203 was Robo1, given that miR-203 expression decreased mRNA and protein levels as determined by RT-PCR and Western blot analysis. Moreover, cotransfection experiments using a luciferase-based transcription reporter assay have shown direct regulation of Robo1 by miR-203. We also show that Robo1 mediates miR-203 mediated antimigratory functions as up-regulation of Robo1 abrogates miR-203 mediated antimigratory effects. We also show that miR-203 expression suppressed ERK phosphorylation and MMP-9 expression in glioma cells. Furthermore, we demonstrate that miR-203 inhibits migration of the glioma cells by disrupting the Robo1/ERK/MMP-9 signaling axis. Taken together, these studies demonstrate that up-regulation of Robo1 in response to the decrease in miR-203 in glioma cells is responsible for glioma tumor cell migration and invasion.

[866]

**TÍTULO / TITLE:** - The effect and mechanism of CXCR4 silencing on metastasis suppression of human glioma u87 cell line.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Anat Rec (Hoboken). 2013 Dec;296(12):1857-64. doi: 10.1002/ar.22825. Epub 2013 Oct 28.

●● [Enlace al texto completo \(gratis o de pago\) 1002/ar.22825](#)

**AUTORES / AUTHORS:** - Zhu Y; Yang P; Zhang X; Zhang L; Cui G; Wang Q; Lv L; Zhang Y; Xin X; Yan T; Zhao M; Zhang N

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Laboratory, Tianjin Huan Hu Hospital, Tianjin, 300060, China; Tianjin Key Laboratory of Cerebral Vessels and Neural Degeneration, Tianjin, 300060, China.

**RESUMEN / SUMMARY:** - Tumor metastasis is the major cause of treatment failure and poor prognosis of glioma. Inhibiting metastasis has become an important therapeutic strategy for glioma treatment. CXCR4 has been proved to play an important role in the occurrence and development of tumors. In order to illustrate the effect of CXCR4 on glioma metastasis, we investigated the role of CXCR4 in U87 cells metastasis based on the CXCR4 silencing tumor cells. In this study, we found that CXCR4 silencing could suppress U87 cells invasion and adhesion potential, production of TGF-beta1, IL-6, and IL-8, and blocked the G0/G1 phase of the cell cycle. We also found that CXCR4 silencing could up-regulate the mRNA and protein expression of p53, p21, and E-cadherin, and down-regulate the mRNA and protein expression of CD44 and MMP-2/-

9. Meanwhile, CXCR4 silencing could decrease the phosphorylation of p-AKT and transcription activity of NF-kappaB promoter, and increased the phosphorylation of PTEN. The results provided a new research basis for the further study of CXCR4 gene, the screening of human glioma, as well as the target treatment for glioma and its prognosis. Anat Rec, 296:1857-1864, 2013. © 2013 Wiley Periodicals, Inc.

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[867]

**TÍTULO / TITLE:** - Anatomical location dictating major surgical complications for intradural extramedullary spinal tumors: a 10-year single-institutional experience.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Spine. 2013 Dec;19(6):701-7. doi: 10.3171/2013.9.SPINE12913. Epub 2013 Oct 11.

●● Enlace al texto completo (gratis o de pago) [3171/2013.9.SPINE12913](#)

**AUTORES / AUTHORS:** - Mehta AI; Adogwa O; Karikari IO; Thompson P; Verla T; Null UT; Friedman AH; Cheng JS; Bagley CA; Isaacs RE

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, Duke University Medical Center, Durham, North Carolina; and.

**RESUMEN / SUMMARY:** - Object Intradural extramedullary (IDEM) neoplasms are uncommon lesions that can pose a challenge for resection. Numerous factors affect the resectability and ultimately the outcome of these lesions. The authors report their 10-year institutional experience with the resection of IDEM neoplasms, focusing on the effect of location on surgical outcomes. Methods The authors performed a retrospective review of 96 consecutive patients who presented with a cervical and/or thoracic IDEM tumor that was resected between February 2000 and July 2009. All patients underwent MRI, and the axial location of the tumor was categorized as anterior, posterior, or lateral. Postoperative complications were assessed, as was neurological status at the patient's last follow-up clinic visit. Major complications assessed included CSF leakage requiring lumbar drainage, reexploration for epidural hematoma, and major postoperative neurological deficits. Results The mean +/- SD age at presentation was 51.16 +/- 17.87 years. Major surgical approach-related complications occurred in 15% of patients. Major non-approach related surgical complications occurred in 7.1% of patients, while minor complications occurred in 14.2% of patients. Postoperative neurological deficits occurred most commonly in the thoracic spine between T-1 and T-8. Based on axial spinal cord location, the surgery-related complications rates for all anterior tumors (n = 12) was 41.6%, whereas that for all lateral tumors (n = 69) was 4.4% and that for all posteriorly located tumors (n = 17) was 0%. Conclusions Spinal IDEM tumors that are anteriorly located in the upper thoracic spine were found to have the highest rate of surgery-related complications and postoperative neurological deficits. This finding may be associated with the unforgiving anatomy of the upper thoracic spine in which there is a higher cord-to-canal ratio and a tenuous vascular supply.

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[868]

**TÍTULO / TITLE:** - Association of cerebellopontine angle atypical teratoid/rhabdoid tumors with acute facial nerve palsy in infants.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Nov 15.

●● Enlace al texto completo (gratis o de pago) [3171/2013.10.PEDS13292](#)

**AUTORES / AUTHORS:** - Siu A; Lee M; Rice R; Myseros JS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, George Washington University;

**RESUMEN / SUMMARY:** - Atypical teratoid/rhabdoid tumors (AT/RTs) are highly malignant CNS tumors found almost exclusively in childhood. Although essentially universally fatal when incompletely resected, prompt diagnosis followed by early chemoradiation can improve outcomes. An AT/RT can occur extraaxially at the cerebellopontine angle (CPA) and cause acute cranial nerve deficits as the presenting sign. The authors report a series of 3 children who presented with isolated acute facial nerve palsies and in whom subsequent diagnosis of a CPA AT/RT was made. The authors propose that in young children whose presenting symptom is an acute facial nerve palsy with a CPA tumor, AT/RT should be highly suspected.

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[869]

**TÍTULO / TITLE:** - Primary spinal extra-osseous intradural mesenchymal chondrosarcoma in a young boy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Neurosci. 2013 May;8(2):111-2. doi: 10.4103/1817-1745.117838.

●● Enlace al texto completo (gratis o de pago) [4103/1817-1745.117838](#)

**AUTORES / AUTHORS:** - Turel MK; Rajshekhar V

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

**RESUMEN / SUMMARY:** - Primary spinal intradural mesenchymal chondrosarcoma is rare. We report the case of a 6-year-old boy to emphasize on the importance of considering this entity as differential diagnosis even when the lesion is purely intradural with no bony involvement.

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[870]

**TÍTULO / TITLE:** - Hypothalamic food intake regulation in a cancer-cachectic mouse model.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cachexia Sarcopenia Muscle. 2013 Nov 13.

●● Enlace al texto completo (gratis o de pago) [1007/s13539-013-0121-y](#)

**AUTORES / AUTHORS:** - Dwarkasing JT; van Dijk M; Dijk FJ; Boekschoten MV; Faber J; Argiles JM; Laviano A; Muller M; Witkamp RF; van Norren K

**INSTITUCIÓN / INSTITUTION:** - Nutrition and Pharmacology Group, Division of Human Nutrition, Wageningen University, Bomenweg 2, 6703, Wageningen, The Netherlands.

**RESUMEN / SUMMARY:** - BACKGROUND: Appetite is frequently affected in cancer patients leading to anorexia and consequently insufficient food intake. In this study, we report on hypothalamic gene expression profile of a cancer-cachectic mouse model with increased food intake. In this model, mice bearing C26 tumour have an increased food intake subsequently to the loss of body weight. We hypothesise that in this model, appetite-regulating systems in the hypothalamus, which apparently fail in anorexia, are still able to adapt adequately to changes in energy balance. Therefore, studying changes that occur on appetite regulators in the hypothalamus might reveal targets for treatment of cancer-induced eating disorders. By applying transcriptomics, many appetite-regulating systems in the hypothalamus could be taken into account,

providing an overview of changes that occur in the hypothalamus during tumour growth. METHODS: C26-colon adenocarcinoma cells were subcutaneously inoculated in 6 weeks old male CDF1 mice. Body weight and food intake were measured three times a week. On day 20, hypothalamus was dissected and used for transcriptomics using Affymetrix chips. RESULTS: Food intake increased significantly in cachectic tumour-bearing mice (TB), synchronously to the loss of body weight. Hypothalamic gene expression of orexigenic neuropeptides NPY and AgRP was higher, whereas expression of anorexigenic genes CCK and POMC were lower in TB compared to controls. In addition, serotonin and dopamine signalling pathways were found to be significantly altered in TB mice. Serotonin levels in brain showed to be lower in TB mice compared to control mice, while dopamine levels did not change. Moreover, serotonin levels inversely correlated with food intake. CONCLUSIONS: Transcriptomic analysis of the hypothalamus of cachectic TB mice with an increased food intake showed changes in NPY, AgRP and serotonin signalling. Serotonin levels in the brain showed to correlate with changes in food intake. Further research has to reveal whether targeting these systems will be a good strategy to avoid the development of cancer-induced eating disorders.

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[871]

**TÍTULO / TITLE:** - The miR-183 approximately 96 approximately 182 cluster promotes tumorigenesis in a mouse model of medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Biomed Res. 2013 Nov;27(6):486-494. Epub 2013 Jul 10.

●● [Enlace al texto completo \(gratis o de pago\) 7555/JBR.27.20130010](#)

**AUTORES / AUTHORS:** - Zhang Z; Li S; Cheng SY

**INSTITUCIÓN / INSTITUTION:** - Department of Developmental Genetics, Nanjing Medical University, Nanjing, Jiangsu 210029, China.

**RESUMEN / SUMMARY:** - Medulloblastoma is the most common malignant pediatric brain tumor. Some are thought to originate from cerebellar granule neuron progenitors (CGNPs) that fail to undergo normal cell cycle exit and differentiation. The contribution of microRNAs to the initiation and progression of medulloblastoma remains poorly understood. Increased expression of the miR-183 approximately 96 approximately 182 cluster of microRNAs has been noted in several aggressive subgroups. We identified that expression of miR-183 approximately 96 approximately 182 was higher in medulloblastomas with Pten gene loss in the background of the activated sonic hedgehog (Shh) signaling pathway. Ectopic miR-183 approximately 96 approximately 182 expression in CGNPs synergized with exogenous Shh to increase proliferation and its role depended on hedgehog signaling activation. Our findings suggest a new microRNA cluster, the miR-183 approximately 96 approximately 182, functionally collaborates with the Shh signaling pathway in the development of medulloblastomas in mice.

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[872]

**TÍTULO / TITLE:** - Functional Pituitary Adenoma Recurrence after Surgical Resection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World Neurosurg. 2013 Nov 8. pii: S1878-8750(13)01408-3. doi: 10.1016/j.wneu.2013.11.001.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.wneu.2013.11.001](#)

**AUTORES / AUTHORS:** - Ajlan AM; Harsh GR 4<sup>th</sup>

**INSTITUCIÓN / INSTITUTION:** - Stanford Hospitals and Clinics, Department of Neurosurgery, 300 Pasteur Drive, R200/MC: 5327, Stanford, CA 94305. Electronic address: [aajlan@stanford.edu](mailto:aajlan@stanford.edu).

[873]

**TÍTULO / TITLE:** - Intraoperative Transcranial Motor-Evoked Potential Monitoring of the Facial Nerve during Cerebellopontine Angle Tumor Resection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg B Skull Base. 2012 Oct;73(5):308-15. doi: 10.1055/s-0032-1321507.

●● Enlace al texto completo (gratis o de pago) [1055/s-0032-1321507](#)

**AUTORES / AUTHORS:** - Cosetti MK; Xu M; Rivera A; Jethanamest D; Kuhn MA; Beric A; Golfinos JG; Roland JT

**INSTITUCIÓN / INSTITUTION:** - Departments of Otolaryngology, New York University School of Medicine, New York, New York, United States.

**RESUMEN / SUMMARY:** - Objective To determine whether transcranial motor-evoked potential (TCMEP) monitoring of the facial nerve (FN) during cerebellopontine angle (CPA) tumor resection can predict both immediate and long-term postoperative FN function. Design Retrospective review. Setting Tertiary referral center. Main Outcome Measures DeltaTCMEP (final-initial) and immediate and long-term facial nerve function using House Brackmann (HB) rating scale. Results Intraoperative TCMEP data and immediate and follow-up FN outcome are reported for 52 patients undergoing CPA tumor resection. Patients with unsatisfactory facial outcome (HB >2) at follow-up had an average deltaTCMEP of 57 V, whereas those with HB I or II had a mean deltaTCMEP of 0.04 V (t = -2.6, p < 0.05.) Intraoperative deltaTCMEP did not differ significantly between groups with satisfactory (HB I, II) and unsatisfactory (HB > 2) facial function in the immediate postoperative period. Conclusion Intraoperative TCMEP of the facial nerve can be a valuable adjunct to conventional facial nerve electromyography during resection of tumors at the CPA. Intraoperative deltaTCMEP >57 V may be worrisome for long-term recovery of satisfactory facial nerve function.

[874]

**TÍTULO / TITLE:** - Occipital diploic cranial fasciitis after radiotherapy for a cerebellar medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Dec;12(6):637-41. doi: 10.3171/2013.8.PEDS13171. Epub 2013 Oct 11.

●● Enlace al texto completo (gratis o de pago) [3171/2013.8.PEDS13171](#)

**AUTORES / AUTHORS:** - Wu B; Zhu H; Liu W; Chen L

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurosurgery and.

**RESUMEN / SUMMARY:** - Radiation-induced cranial fasciitis is a rare complication of radiotherapy, especially in an intradiploic location. The authors report such a case of cranial fasciitis in a 13-year-old girl previously subjected to cranial radiotherapy for a recurrent cerebellar medulloblastoma. The patient had undergone a gross-total removal of a medulloblastoma followed by no radiation therapy at the age of 10 years. The tumor recurred at the original site 2 years later, warranting a repeat operation with a gross-total tumor removal and subsequent radiation therapy. The follow-up MRI

sequence demonstrated no abnormal appearance for 1 year, until a new enhancing mass was found within the occipital bone adjacent to the prior bone window. Following its resection, the new lesion was histologically identified as cranial fasciitis. Differential diagnosis of a well-circumscribed bone lesion should include cranial fasciitis, especially in young children with radiotherapy for a previous intracranial malignancy. Radiotherapy should be considered among the inciting factors in the development of cranial fasciitis. The osteolytic lesions of cranial fasciitis, although nontumoral and self-limited in duration, should be eligible candidates for early, total resection to avoid potential intracranial expansion.

[875]

**TÍTULO / TITLE:** - Radiotherapy plus Concomitant Adjuvant Temozolomide for Glioblastoma: Japanese Mono-Institutional Results.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 12;8(11):e78943. doi: 10.1371/journal.pone.0078943.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0078943](#)

**AUTORES / AUTHORS:** - Oike T; Suzuki Y; Sugawara K; Shirai K; Noda SE; Tamaki T; Nagaishi M; Yokoo H; Nakazato Y; Nakano T

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Gunma University Graduate School of Medicine, Maebashi, Gunma, Japan.

**RESUMEN / SUMMARY:** - This study was conducted to investigate the feasibility and survival benefits of combined treatment with radiotherapy and temozolomide (TMZ), which has been covered by the national health insurance in Japanese patients with glioblastoma since September 2006. Between September 2006 and December 2011, 47 patients with newly diagnosed and histologically confirmed glioblastoma received radiotherapy for 60 Gy in 30 fractions. Among them, 45 patients (TMZ group) received concomitant TMZ (75 mg/m<sup>2</sup>/day, every day) and adjuvant TMZ (200 mg/m<sup>2</sup>/day, 5 days during each 28-days). All 36 of the glioblastoma patients receiving radiotherapy between January 1988 and August 2006 were analyzed as historical controls (control group). All patients were followed for at least 1 year or until they died. The median survival was 15.8 months in the TMZ group and 12.0 months in the control group after a median follow-up of 14.0 months. The hazard ratio for death in the TMZ group relative to the control group was 0.52 (P<0.01); the 2-year survival rate was 27.7% in the TMZ group and 14.6% in the control group. Hematologic toxicity of grade 3 and higher was observed in 20.4% in the TMZ group. Multivariate analysis showed that extent of surgery had the strongest impact on survival (P<0.01), while the use of TMZ had the second largest impact on survival (P = 0.035). The results indicate that combined treatment with radiotherapy and TMZ has a significant survival benefit for Japanese patients with newly diagnosed glioblastoma with slightly higher toxicities than previously reported.

[876]

**TÍTULO / TITLE:** - A management strategy for intraventricular subependymal giant cell astrocytomas in tuberous sclerosis complex.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Nov 1.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.9.PEDS13193](#)

**AUTORES / AUTHORS:** - Harter DH; Bassani L; Rodgers SD; Roth J; Devinsky O; Carlson C; Wisoff JH; Weiner HL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery.

**RESUMEN / SUMMARY:** - Object Subependymal giant cell astrocytomas (SEGAs) are benign tumors, most commonly associated with tuberous sclerosis complex (TSC). The vast majority of these tumors arise from the lateral ependymal surface adjacent to the foramen of Monro, therefore potentially encroaching on one or both foramina, and resulting in obstructive hydrocephalus that necessitates surgical decompression. The indications for surgery, intraoperative considerations, and evolution of the authors' management paradigm are presented. Methods Patients with TSC who underwent craniotomy for SEGA resection at New York University Langone Medical Center between January 1997 and March 2011 were identified. Preoperative imaging, clinical characteristics, management decisions, operative procedures, and outcomes were reviewed. Results Eighteen patients with TSC underwent 22 primary tumor resections for SEGAs. The indication for surgery was meaningful radiographic tumor progression in 16 of 21 cases. The average age at the time of operation was 10.3 years. Average follow-up duration was 52 months (range 12-124 months). The operative approach was intrahemispheric-transcallosal in 16 cases, transcortical-transventricular in 5, and neuroendoscopic in 1. Nine tumors were on the right, 9 on the left, and 3 were bilateral. Gross-total resection was documented in 16 of 22 cases in our series, with radical subtotal resection achieved in 4 cases, and subtotal resection (STR) in 2 cases. Two patients had undergone ventriculoperitoneal shunt placement preoperatively and 7 patients required shunt placement after surgery for moderate to severe ventriculomegaly. Two patients experienced tumor progression requiring reoperation; both of these patients had initially undergone STR. Conclusions The authors present their management strategy for TSC patients with SEGAs. Select patients underwent microsurgical resection of SEGAs with acceptable morbidity. Gross-total resection or radical STR was achieved in 90.9% of our series (20 of 22 primary tumor resections), with no recurrences in this group. Approximately half of our patient series required CSF diversionary procedures. There were no instances of permanent neurological morbidity associated with surgery.

[877]

**TÍTULO / TITLE:** - Sporadic Lateral Ventricular Hemangioblastoma presenting with Intraventricular and Subarachnoid Haemorrhage.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Sultan Qaboos Univ Med J. 2013 Nov;13(4):597-600. Epub 2013 Nov 8.

**AUTORES / AUTHORS:** - Al-Najar M; Al-Hadidy A; Saleh A; Al-Tamimi A; Al-Darawish A; Obeidat F

**INSTITUCIÓN / INSTITUTION:** - Department of Diagnostic Radiology, The University of Jordan Hospital, Amman, Jordan.

**RESUMEN / SUMMARY:** - Intraventricular hemangioblastoma (HB) is very rare; few cases of intraventricular HB have been reported in the literature, either sporadically or in association with von Hippel-Lindau disease. Furthermore, the incidence of ventricular haemorrhage from HB seems to be uncommon. We report a unique case of sporadic HB of the right lateral ventricle presenting with intratumoural and intraventricular haemorrhage in addition to multifocal intracranial superficial siderosis,

indicating the presence of a subarachnoid haemorrhage (SAH) as well. Such a combination has not been reported before. In the future, the detection of an intraventricular mass in association with ventricular haemorrhage, with or without SAH, should include HB as a differential diagnosis, particularly when the imaging appearances are not typical of the more common intraventricular tumours.

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[878]

**TÍTULO / TITLE:** - Increased mitochondrial activity in a novel IDH1-R132H mutant human oligodendroglioma xenograft model: in situ detection of 2-HG and alpha-KG.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol Commun. 2013 May 29;1(1):18.

●● Enlace al texto completo (gratis o de pago) [1186/2051-5960-1-18](#)

**AUTORES / AUTHORS:** - Navis AC; Niclou SP; Fack F; Stieber D; van Lith S; Verrijp K; Wright A; Stauber J; Tops B; Otte-Holler I; Wevers RA; van Rooij A; Pusch S; von Deimling A; Tigchelaar W; van Noorden CJ; Wesseling P; Leenders WP

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Radboud University Nijmegen Medical Centre, PO Box 9101, Nijmegen, 6500 HB, The Netherlands.

[W.Leenders@pathol.umcn.nl](mailto:W.Leenders@pathol.umcn.nl).

**RESUMEN / SUMMARY:** - BACKGROUND: Point mutations in genes encoding NADP+-dependent isocitrate dehydrogenases (especially IDH1) are common in lower grade diffuse gliomas and secondary glioblastomas and occur early during tumor development. The contribution of these mutations to gliomagenesis is not completely understood and research is hampered by the lack of relevant tumor models. We previously described the development of the patient-derived high-grade oligodendroglioma xenograft model E478 that carries the commonly occurring IDH1-R132H mutation. We here report on the analyses of E478 xenografts at the genetic, histologic and metabolic level. RESULTS: LC-MS and in situ mass spectrometric imaging by LESA-nano ESI-FTICR revealed high levels of the proposed oncometabolite D-2-hydroxyglutarate (D-2HG), the product of enzymatic conversion of alpha-ketoglutarate (alpha-KG) by IDH1-R132H, in the tumor but not in surrounding brain parenchyma. alpha-KG levels and total NADP+-dependent IDH activity were similar in IDH1-mutant and -wildtype xenografts, demonstrating that IDH1-mutated cancer cells maintain alpha-KG levels. Interestingly, IDH1-mutant tumor cells in vivo present with high densities of mitochondria and increased levels of mitochondrial activity as compared to IDH1-wildtype xenografts. It is not yet clear whether this altered mitochondrial activity is a driver or a consequence of tumorigenesis. CONCLUSIONS: The oligodendroglioma model presented here is a valuable model for further functional elucidation of the effects of IDH1 mutations on tumor metabolism and may aid in the rational development of novel therapeutic strategies for the large subgroup of gliomas carrying IDH1 mutations.

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[879]

**TÍTULO / TITLE:** - Glioma surgical aspirate: a viable source of tumor tissue for experimental research.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Apr 3;5(2):357-71. doi: 10.3390/cancers5020357.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5020357](#)

**AUTORES / AUTHORS:** - Day BW; Stringer BW; Wilson J; Jeffree RL; Jamieson PR; Ensbey KS; Bruce ZC; Inglis P; Allan S; Winter C; Tolleson G; Campbell S; Lucas P; Findlay W; Kadrian D; Johnson D; Robertson T; Johns TG; Bartlett PF; Osborne GW; Boyd AW

**INSTITUCIÓN / INSTITUTION:** - Brain Cancer Research Unit & Leukaemia Foundation Research Unit, Queensland Institute of Medical Research, Brisbane, QLD 4006, Australia. [bryan.day@qimr.edu.au](mailto:bryan.day@qimr.edu.au).

**RESUMEN / SUMMARY:** - Brain cancer research has been hampered by a paucity of viable clinical tissue of sufficient quality and quantity for experimental research. This has driven researchers to rely heavily on long term cultured cells which no longer represent the cancers from which they were derived. Resection of brain tumors, particularly at the interface between normal and tumorigenic tissue, can be carried out using an ultrasonic surgical aspirator (CUSA) that deposits liquid (blood and irrigation fluid) and resected tissue into a sterile bottle for disposal. To determine the utility of CUSA-derived glioma tissue for experimental research, we collected 48 CUSA specimen bottles from glioma patients and analyzed both the solid tissue fragments and dissociated tumor cells suspended in the liquid waste fraction. We investigated if these fractions would be useful for analyzing tumor heterogeneity, using IHC and multi-parameter flow cytometry; we also assessed culture generation and orthotopic xenograft potential. Both cell sources proved to be an abundant, highly viable source of live tumor cells for cytometric analysis, animal studies and in-vitro studies. Our findings demonstrate that CUSA tissue represents an abundant viable source to conduct experimental research and to carry out diagnostic analyses by flow cytometry or other molecular diagnostic procedures.

[880]

**TÍTULO / TITLE:** - Experiment research on inhibition of glioma with sTRAIL in vitro.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Artif Cells Nanomed Biotechnol. 2013 Oct 25.

- Enlace al texto completo (gratis o de pago) [3109/21691401.2013.794350](#)

**AUTORES / AUTHORS:** - Dou Y; Wang Y; Xu J; Li Z; Sun P; Meng Q

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The Affiliated Hospital of Medical College, Qingdao University, Shandong Province, P. R. China.

**RESUMEN / SUMMARY:** - We report that adenovirus mediated TNF-related apoptosis-inducing ligand (TRAIL) influenced the cell growth and cell cycle in the glioma cells in vitro. After being infected with the Ad-sTRAIL, U251 cell growth was inhibited. The expression of sTRAIL was detected using immunofluorescence. The higher rate of apoptosis was demonstrated using short-term microculture tetrazolium (MTT) assay and flow cytometry. The rate of Ad-sTRAIL-inducing U251 cell apoptosis was increased depending on the dosage and the time. The apoptosis of G0/G1 and S phase cells was more significant than that of the control groups. The growth and proliferation of U251 cell line was inhibited after the infection of Ad-sTRAIL. It is dose- and time dependent.

[881]

**TÍTULO / TITLE:** - ID1 regulates U87 human cell proliferation and invasion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Oct;6(4):921-926. Epub 2013 Aug 1.

- Enlace al texto completo (gratis o de pago) [3892/ol.2013.1507](#)

**AUTORES / AUTHORS:** - Guo P; Lan J; Ge J; Mao Q; Qiu Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Ren Ji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai 200127, P.R. China.

**RESUMEN / SUMMARY:** - Despite therapeutic advances, the prognosis of patients diagnosed with malignant glioma has not improved in recent years. In particular, the molecular mechanisms that mediate glioma invasion remain poorly understood. The importance of ID1 in promoting tumor invasion and metastasis has recently emerged and a role for ID1 as a possible molecular marker of tumor aggressiveness has been proposed. To investigate the biological function of ID1 in glioblastomas, ID1-silenced U87 glioblastoma multiforme (GBM) cells were constructed using a small hairpin RNA (shRNA) sequence. The effect of the knockdown of ID1 on proliferation and invasion in these cells was analyzed using the 5-bromo-2'-deoxy-uridine cell proliferation, Transwell invasion, scratch and cell adhesion assays. Compared with the controls, the U87 cells expressing ID1-shRNA exhibited a significantly decreased proliferation and invasion capacity ( $P < 0.05$ ), as well as increased cell adhesion. Furthermore, silencing ID1 reduced the expression of c-Myc, cyclin D1 and beta-catenin, while increasing E-cadherin expression in U87 cells. This study showed that ID1 regulates the metastatic potential of GBM cells by controlling the epithelial-mesenchymal transition. Therefore, ID1 is a potential prognostic indicator and therapeutic target in glioblastomas.

[882]

**TÍTULO / TITLE:** - Decreased miR-106a inhibits glioma cell glucose uptake and proliferation by targeting SLC2A3 in GBM.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Cancer. 2013 Oct 14;13:478. doi: 10.1186/1471-2407-13-478.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1471-2407-13-478](#)

**AUTORES / AUTHORS:** - Dai DW; Lu Q; Wang LX; Zhao WY; Cao YQ; Li YN; Han GS; Liu JM; Yue ZJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Changhai Hospital, Second Military Medical University, 168 Changhai Road, Shanghai 200433, China. [chstroke@126.com](mailto:chstroke@126.com).

**RESUMEN / SUMMARY:** - BACKGROUND: MiR-106a is frequently down-regulated in various types of human cancer. However the underlying mechanism of miR-106a involved in glioma remains elusive. METHODS: The association of miR-106a with glioma grade and patient survival was analyzed. The biological function and target of miR-106a were determined by bioinformatic analysis and cell experiments (Western blot, luciferase reporter, cell cycle, intracellular ATP production and glucose uptake assay). Finally, rescue expression of its target SLC2A3 was used to test the role of SLC2A3 in miR-106a-mediated cell glycolysis and proliferation. RESULTS: Here we showed that miR-106a was a tumor suppressor miRNA was involved in GBM cell glucose uptake and proliferation. Decreased miR-106a in GBM tissues and conferred a poor survival of GBM patients. SLC2A3 was identified as a core target of miR-106a in GBM cells. Inhibition of SLC2A3 by miR-106a attenuated cell proliferation and inhibited glucose uptake. In addition, for each biological process we identified ontology-associated transcripts that significantly correlated with SLC2A3 expression. Finally, the expression of SLC2A3 largely abrogated miR-106a-mediated cell proliferation and

glucose uptake in GBM cells. CONCLUSIONS: Taken together, miR-106a and SLC2A3 could be potential therapeutic approaches for GBM.

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[883]

**TÍTULO / TITLE:** - Protective properties of radio-chemoresistant glioblastoma stem cell clones are associated with metabolic adaptation to reduced glucose dependence.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 18;8(11):e80397. doi: 10.1371/journal.pone.0080397.

•• Enlace al texto completo (gratis o de pago) [1371/journal.pone.0080397](#)

**AUTORES / AUTHORS:** - Ye F; Zhang Y; Liu Y; Yamada K; Tso JL; Menjivar JC; Tian JY; Yong WH; Schae D; Mischel PS; Cloughesy TF; Nelson SF; Liao LM; McBride W; Tso CL

**INSTITUCIÓN / INSTITUTION:** - Department of Surgery/Surgical Oncology, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, California, United States of America ; Department of Neurosurgery, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China.

**RESUMEN / SUMMARY:** - Glioblastoma stem cells (GSC) are a significant cell model for explaining brain tumor recurrence. However, mechanisms underlying their radiochemoresistance remain obscure. Here we show that most clonogenic cells in GSC cultures are sensitive to radiation treatment (RT) with or without temozolomide (TMZ). Only a few single cells survive treatment and regain their self-repopulating capacity. Cells re-populated from treatment-resistant GSC clones contain more clonogenic cells compared to those grown from treatment-sensitive GSC clones, and repeated treatment cycles rapidly enriched clonogenic survival. When compared to sensitive clones, resistant clones exhibited slower tumor development in animals. Upregulated genes identified in resistant clones via comparative expression microarray analysis characterized cells under metabolic stress, including blocked glucose uptake, impaired insulin/Akt signaling, enhanced lipid catabolism and oxidative stress, and suppressed growth and inflammation. Moreover, many upregulated genes highlighted maintenance and repair activities, including detoxifying lipid peroxidation products, activating lysosomal autophagy/ubiquitin-proteasome pathways, and enhancing telomere maintenance and DNA repair, closely resembling the anti-aging effects of caloric/glucose restriction (CR/GR), a nutritional intervention that is known to increase lifespan and stress resistance in model organisms. Although treatment-introduced genetic mutations were detected in resistant clones, all resistant and sensitive clones were subclassified to either proneural (PN) or mesenchymal (MES) glioblastoma subtype based on their expression profiles. Functional assays demonstrated the association of treatment resistance with energy stress, including reduced glucose uptake, fatty acid oxidation (FAO)-dependent ATP maintenance, elevated reactive oxygen species (ROS) production and autophagic activity, and increased AMPK activity and NAD(+) levels accompanied by upregulated mRNA levels of SIRT1/PGC-1alpha axis and DNA repair genes. These data support the view that treatment resistance may arise from quiescent GSC exhibiting a GR-like phenotype, and suggest that targeting stress response pathways of resistant GSC may provide a novel strategy in combination with standard treatment for glioblastoma.

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[884]

**TÍTULO / TITLE:** - Emergency excision of cardiac myxoma and endovascular coiling of intracranial aneurysm after cerebral infarction.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Neurol Med. 2013;2013:839270. doi: 10.1155/2013/839270. Epub 2013 Sep 16.

●● Enlace al texto completo (gratis o de pago) [1155/2013/839270](#)

**AUTORES / AUTHORS:** - Al-Said Y; Al-Rached H; Baeesa S; Kurdi K; Zabani I; Hassan A

**INSTITUCIÓN / INSTITUTION:** - Neurosciences Department, King Faisal Specialist Hospital and Research Center, Jeddah 21499, Saudi Arabia.

**RESUMEN / SUMMARY:** - Cardiac myxoma is the most common primary tumor of the heart, located mainly in the left atrium. Cerebral embolization or intracranial aneurysm formation as a consequence of left atrial myxomas has been well documented, whereas myxoma embolization causing the combination of cerebral infarction and intracranial myxomatous aneurysm is rare. We report herein, a 67-year-old female with a cardiac myxoma who experienced a left hemispheric embolic ischemic stroke and in addition was found to have right internal carotid artery aneurysm. The patient underwent emergency surgical excision of left atrial myxoma 2 hours after the stroke onset and endovascular coiling of the aneurysm a week later. Although the timing of cardiac surgery is controversial in patients who have had recent ischemic stroke, we recommend immediate resection of cardiac myxoma, if feasible, and early endovascular treatment of associated intracranial myxomatous aneurysms.

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[885]

**TÍTULO / TITLE:** - mTOR Complex 2 Controls Glycolytic Metabolism in Glioblastoma through FoxO Acetylation and Upregulation of c-Myc.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Metab. 2013 Nov 5;18(5):726-39. doi: 10.1016/j.cmet.2013.09.013. Epub 2013 Oct 17.

●● Enlace al texto completo (gratis o de pago) [1016/j.cmet.2013.09.013](#)

**AUTORES / AUTHORS:** - Masui K; Tanaka K; Akhavan D; Babic I; Gini B; Matsutani T; Iwanami A; Liu F; Villa GR; Gu Y; Campos C; Zhu S; Yang H; Yong WH; Cloughesy TF; Mellinghoff IK; Cavenee WK; Shaw RJ; Mischel PS

**INSTITUCIÓN / INSTITUTION:** - Ludwig Institute for Cancer Research, University of California, San Diego, La Jolla, CA 92093, USA.

**RESUMEN / SUMMARY:** - Aerobic glycolysis (the Warburg effect) is a core hallmark of cancer, but the molecular mechanisms underlying it remain unclear. Here, we identify an unexpected central role for mTORC2 in cancer metabolic reprogramming where it controls glycolytic metabolism by ultimately regulating the cellular level of c-Myc. We show that mTORC2 promotes inactivating phosphorylation of class IIa histone deacetylases, which leads to the acetylation of FoxO1 and FoxO3, and this in turn releases c-Myc from a suppressive miR-34c-dependent network. These central features of activated mTORC2 signaling, acetylated FoxO, and c-Myc levels are highly intercorrelated in clinical samples and with shorter survival of GBM patients. These results identify a specific, Akt-independent role for mTORC2 in regulating glycolytic metabolism in cancer.

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[886]

**TÍTULO / TITLE:** - Tumor metabolism of malignant gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Nov 8;5(4):1469-84. doi: 10.3390/cancers5041469.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5041469](#)

**AUTORES / AUTHORS:** - Ru P; Williams TM; Chakravarti A; Guo D

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Ohio State University Comprehensive Cancer Center & Arthur G James Cancer Hospital, Columbus, OH 43012, USA. [deliang.guo@osumc.edu](mailto:deliang.guo@osumc.edu).

**RESUMEN / SUMMARY:** - Constitutively activated oncogenic signaling via genetic mutations such as in the EGFR/PI3K/Akt and Ras/RAF/MEK pathways has been recognized as a major driver for tumorigenesis in most cancers. Recent insights into tumor metabolism have further revealed that oncogenic signaling pathways directly promote metabolic reprogramming to upregulate biosynthesis of lipids, carbohydrates, protein, DNA and RNA, leading to enhanced growth of human tumors. Therefore, targeting cell metabolism has become a novel direction for drug development in oncology. In malignant gliomas, metabolism pathways of glucose, glutamine and lipid are significantly reprogrammed. Moreover, molecular mechanisms causing these metabolic changes are just starting to be unraveled. In this review, we will summarize recent studies revealing critical gene alterations that lead to metabolic changes in malignant gliomas, and also discuss promising therapeutic strategies via targeting the key players in metabolic regulation.

[887]

**TÍTULO / TITLE:** - Benign cutaneous plexiform hybrid tumor of perineurioma and cellular neurothekeoma arising from the nose.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Diagn Pathol. 2013 Oct 8;8:165. doi: 10.1186/1746-1596-8-165.

●● Enlace al texto completo (gratis o de pago) [1186/1746-1596-8-165](#)

**AUTORES / AUTHORS:** - Yamada S; Kitada S; Nabeshima A; Noguchi H; Sasaguri Y; Hisaoka M

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Cell Biology, University of Occupational and Environmental Health, 1-1 Iseigaoka, Kitakyushu, Yahatanishi-ku 807-8555, Japan. [sousuke@med.uoeh-u.ac.jp](mailto:sousuke@med.uoeh-u.ac.jp).

**RESUMEN / SUMMARY:** - Very recently, Requena et al. have demonstrated the detailed clinicopathological features of 9 cases of a benign cutaneous plexiform nerve sheath tumor with hybrid characteristics of perineurioma and cellular neurothekeoma, given the name as a benign cutaneous plexiform hybrid tumor of perineurioma and cellular neurothekeoma, all of which were peculiarly located on the lips. Herein we described the first case of that arising from the nose, but not the lip, representing a histological hybridoma of perineurioma and cellular neurothekeoma after thorough consideration especially with its immunohistochemical profile.

[888]

**TÍTULO / TITLE:** - Effectiveness of lumbar drain versus hyperventilation to facilitate transsphenoidal pituitary (suprasellar) adenoma resection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Anesth Pain Med. 2013 Spring;2(4):159-63. doi: 10.5812/aapm.6510. Epub 2013 Mar 26.

●● Enlace al texto completo (gratis o de pago) [5812/aapm.6510](#)

**AUTORES / AUTHORS:** - Aghamohamadi D; Ahmadvand A; Salehpour F; Jafari R; Panahi F; Sharifi G; Meshkini A; Safaeian A

**INSTITUCIÓN / INSTITUTION:** - Department of Anesthesiology, School of Medicine, Imam Reza Teaching Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

**RESUMEN / SUMMARY:** - BACKGROUND: Developing controlled hypercarbia is a known scheme of lowering the suprasellar part of the adenoma in order to assist the surgeon, which acts through raising the ICP and therefore the CSF pressure. OBJECTIVES: The purpose of this study is to compare the effect of introducing a lumbar drain with that of controlled hypercapnia on the quality of transsphenoidal pituitary tumor resection and CSF leak. PATIENTS AND METHODS: Fifty two patients with pituitary adenoma who underwent transsphenoidal hypophysectomy by the same surgeon were included. They were randomly divided into two groups. A lumbar drain catheter introduced into the L3-L4 subarachnoid space under local anesthesia in all patients. The same anesthesia was performed in both groups. In the study group, we used a saline injection into the subarachnoid space versus hypoventilation in the control group in order to increase the ICP according to the surgeon's request. The surgeon's satisfaction during the tumor resection and the resection time were assessed during the surgery. The CSF catheter was closed and sent with the patient for CSF drainage. If there was no CSF leak, the catheter removed 24 hours later. With evidence of a CSF leak, we used the catheter as a lumbar drain. The time taken for the leakage control was assessed. RESULTS: The satisfaction came from 21 (87.5%) and 2 (9.1%) for surgeon in the first and the second group respectively ( $P = 0.0001$ ). CSF leakage time in the first and the second group was  $1.6 \pm 0.24$  and  $5 \pm 0.50$  respectively. It revealed a significant difference between the two groups ( $P = 0.001$ ). The mean resection time was  $13.54 \pm 0.66$  minutes in the study group; and  $30.91 \pm 0.98$  minutes in the control group. CONCLUSIONS: In summary, the method described here for ICP manipulation is an effective procedure for a better visualization of the pituitary tumor during transphenoidal resection by surgeon and beneficial in managing the CSF leak following surgery.

[889]

**TÍTULO / TITLE:** - Resection of a malignant paraganglioma located behind the retrohepatic segment of the inferior vena cava.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Surg. 2013 Oct 29;13(1):49.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2482-13-49](#)

**AUTORES / AUTHORS:** - Jia C; Wang X; Dai C; Bu X; Peng S; Xu F; Xu Y; Zhao Y

**RESUMEN / SUMMARY:** - BACKGROUND: Resection of a retrocaval paraganglioma is technically challenging due to limited tumor accessibility and proximity to the vena cava. CASE PRESENTATION: A large, malignant paraganglioma was found behind the retrohepatic segment of the inferior vena cava of a 60-year-old male. During resection of this rare paraganglioma, the left lateral lobe of the liver, a portion of the caudate lobe of the liver, and the gallbladder were also removed. Unfortunately, the patient died six months after surgery due to hepatic metastasis. CONCLUSION: This

case demonstrates that a partial hepatectomy may be necessary to improve tumor accessibility during resection of a retrocaval paraganglioma, particularly if the tumor is proximal to the vena cava. Furthermore, palliative treatments may help prevent tumor recurrence and metastasis of malignant paragangliomas.

[890]

**TÍTULO / TITLE:** - Glioma-derived macrophage migration inhibitory factor (MIF) promotes mast cell recruitment in a STAT5-dependent manner.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Oncol. 2013 Sep 18. pii: S1574-7891(13)00137-3. doi: 10.1016/j.molonc.2013.09.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.molonc.2013.09.002](#)

**AUTORES / AUTHORS:** - Polajeva J; Bergstrom T; Edqvist PH; Lundquist A; Sjosten A; Nilsson G; Smits A; Bergqvist M; Ponten F; Westermark B; Pejler G; Forsberg Nilsson K; Tchougounova E

**INSTITUCIÓN / INSTITUTION:** - Uppsala University, Department of Immunology, Genetics and Pathology, Rudbeck Laboratory, SE-751 85 Uppsala, Sweden. Electronic address: [jelena.polajeva@igp.uu.se](mailto:jelena.polajeva@igp.uu.se).

**RESUMEN / SUMMARY:** - Recently, glioma research has increased its focus on the diverse types of cells present in brain tumors. We observed previously that gliomas are associated with a profound accumulation of mast cells (MCs) and here we investigate the underlying mechanism. Gliomas express a plethora of chemoattractants. First, we demonstrated pronounced migration of human MCs toward conditioned medium from cultures of glioma cell lines. Subsequent cytokine array analyses of media from cells, cultured in either serum-containing or -free conditions, revealed a number of candidates which were secreted in high amounts in both cell lines. Among these, we then focused on macrophage migration inhibitory factor (MIF), which has been reported to be pro-inflammatory and -tumorigenic. Infiltration of MCs was attenuated by antibodies that neutralized MIF. Moreover, a positive correlation between the number of MCs and the level of MIF in a large cohort of human glioma tissue samples was observed. Further, both glioma-conditioned media and purified MIF promoted differential phosphorylation of a number of signaling molecules, including signal transducer and activator of transcription 5 (STAT5), in MCs. Inhibition of pSTAT5 signaling significantly attenuated the migration of MCs toward glioma cell-conditioned medium shown to contain MIF. In addition, analysis of tissue microarrays (TMAs) of high-grade gliomas revealed a direct correlation between the level of pSTAT5 in MCs and the level of MIF in the medium. In conclusion, these findings indicate the important influence of signaling cascades involving MIF and STAT5 on the recruitment of MCs to gliomas.

[891]

**TÍTULO / TITLE:** - miR-21 in the Extracellular Vesicles (EVs) of Cerebrospinal Fluid (CSF): A Platform for Glioblastoma Biomarker Development.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 21;8(10):e78115. doi: 10.1371/journal.pone.0078115.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0078115](#)

**AUTORES / AUTHORS:** - Akers JC; Ramakrishnan V; Kim R; Skog J; Nakano I; Pingle S; Kalinina J; Hua W; Kesari S; Mao Y; Breakefield XO; Hochberg FH; Van Meir EG; Carter BS; Chen CC

**INSTITUCIÓN / INSTITUTION:** - Center for Theoretical and Applied Neuro-Oncology, University of California, San Diego, California, United States of America.

**RESUMEN / SUMMARY:** - Glioblastoma cells secrete extra-cellular vesicles (EVs) containing microRNAs (miRNAs). Analysis of these EV miRNAs in the bio-fluids of afflicted patients represents a potential platform for biomarker development. However, the analytic algorithm for quantitative assessment of EV miRNA remains under-developed. Here, we demonstrate that the reference transcripts commonly used for quantitative PCR (including GAPDH, 18S rRNA, and hsa-miR-103) were unreliable for assessing EV miRNA. In this context, we quantitated EV miRNA in absolute terms and normalized this value to the input EV number. Using this method, we examined the abundance of miR-21, a highly over-expressed miRNA in glioblastomas, in EVs. In a panel of glioblastoma cell lines, the cellular levels of miR-21 correlated with EV miR-21 levels ( $p < 0.05$ ), suggesting that glioblastoma cells actively secrete EVs containing miR-21. Consistent with this hypothesis, the CSF EV miR-21 levels of glioblastoma patients ( $n=13$ ) were, on average, ten-fold higher than levels in EVs isolated from the CSF of non-oncologic patients ( $n=13$ ,  $p < 0.001$ ). Notably, none of the glioblastoma CSF harbored EV miR-21 level below 0.25 copies per EV in this cohort. Using this cut-off value, we were able to prospectively distinguish CSF derived from glioblastoma and non-oncologic patients in an independent cohort of twenty-nine patients (Sensitivity=87%; Specificity=93%; AUC=0.91,  $p < 0.01$ ). Our results suggest that CSF EV miRNA analysis of miR-21 may serve as a platform for glioblastoma biomarker development.

[892]

**TÍTULO / TITLE:** - Intracranial Glioblastoma with Drop Metastases to the Spine After Stereotactic Biopsy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg A Cent Eur Neurosurg. 2013 Nov 22.

●● Enlace al texto completo (gratis o de pago) [1055/s-0033-1363157](#)

**AUTORES / AUTHORS:** - Albert G; Wassef S; Dahdaleh NS; Lindley T; Bruch L; Hitchon P

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Arkansas for Medical Sciences' College of Medicine, Little Rock, Arkansas, United States.

[893]

**TÍTULO / TITLE:** - Hexokinase-2-mediated aerobic glycolysis is integral to cerebellar neurogenesis and pathogenesis of medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Metab. 2013 Jan 23;1(1):2.

●● Enlace al texto completo (gratis o de pago) [1186/2049-3002-1-2](#)

**AUTORES / AUTHORS:** - Gershon TR; Crowther AJ; Tikunov A; Garcia I; Annis R; Yuan H; Miller CR; Macdonald J; Olson J; Deshmukh M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University of North Carolina, Chapel Hill, NC, 27599, USA. [gershont@neurology.unc.edu](mailto:gershont@neurology.unc.edu).

**RESUMEN / SUMMARY:** - BACKGROUND: While aerobic glycolysis is linked to unconstrained proliferation in cancer, less is known about its physiological role. Why this metabolic program that promotes tumor growth is preserved in the genome has thus been unresolved. We tested the hypothesis that aerobic glycolysis derives from developmental processes that regulate rapid proliferation. METHODS: We performed an integrated analysis of metabolism and gene expression in cerebellar granule neuron progenitors (CGNPs) with and without Sonic Hedgehog (Shh), their endogenous mitogen. Because our analysis highlighted Hexokinase-2 (Hk2) as a key metabolic regulator induced by Shh, we studied the effect of conditional genetic Hk2 deletion in CGNP development. We then crossed Hk2 conditional knockout mice with transgenic SmoM2 mice that develop spontaneous medulloblastoma and determined changes in SmoM2-driven tumorigenesis. RESULTS: We show that Shh and phosphoinositide 3-kinase (PI3K) signaling combine to induce an Hk2-dependent glycolytic phenotype in CGNPs. This phenotype is recapitulated in medulloblastoma, a malignant tumor of CGNP origin. Importantly, cre-mediated ablation of Hk2 abrogated aerobic glycolysis, disrupting CGNP development and Smoothed-induced tumorigenesis. Comparing tumorigenesis in medulloblastoma-prone SmoM2 mice with and without functional Hk2, we demonstrate that loss of aerobic glycolysis reduces the aggressiveness of medulloblastoma, causing tumors to grow as indolent lesions and allowing long-term survival of tumor bearing mice. CONCLUSIONS: Our investigations demonstrate that aerobic glycolysis in cancer derives from developmental mechanisms that persist in tumorigenesis. Moreover, we demonstrate in a primary tumor model the anti-cancer potential of blocking aerobic glycolysis by targeting Hk2. See commentary article: <http://www.biomedcentral.com/1741-7007/11/3>.

[894]

**TÍTULO / TITLE:** - Hexokinase-2-mediated aerobic glycolysis is integral to cerebellar neurogenesis and pathogenesis of medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Metab. 2013 Jan 23;1. pii: 2.

**AUTORES / AUTHORS:** - Gershon TR; Crowther AJ; Tikunov A; Garcia I; Annis R; Yuan H; Miller CR; Macdonald J; Olson J; Deshmukh M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University of North Carolina, Chapel Hill, NC 27599, USA ; Neuroscience Center, University of North Carolina, Chapel Hill, NC 27599, USA ; Lineberger Comprehensive Cancer Center, University of North Carolina, Chapel Hill, NC 27599, USA ; UNC School of Medicine, 170 Manning Drive CB7025, Chapel Hill, NC 27599, USA.

**RESUMEN / SUMMARY:** - BACKGROUND: While aerobic glycolysis is linked to unconstrained proliferation in cancer, less is known about its physiological role. Why this metabolic program that promotes tumor growth is preserved in the genome has thus been unresolved. We tested the hypothesis that aerobic glycolysis derives from developmental processes that regulate rapid proliferation. METHODS: We performed an integrated analysis of metabolism and gene expression in cerebellar granule neuron progenitors (CGNPs) with and without Sonic Hedgehog (Shh), their endogenous mitogen. Because our analysis highlighted Hexokinase-2 (Hk2) as a key metabolic regulator induced by Shh, we studied the effect of conditional genetic Hk2 deletion in CGNP development. We then crossed Hk2 conditional knockout mice with transgenic SmoM2 mice that develop spontaneous medulloblastoma and determined

changes in SmoM2-driven tumorigenesis. RESULTS: We show that Shh and phosphoinositide 3-kinase (PI3K) signaling combine to induce an Hk2-dependent glycolytic phenotype in CGNPs. This phenotype is recapitulated in medulloblastoma, a malignant tumor of CGNP origin. Importantly, cre-mediated ablation of Hk2 abrogated aerobic glycolysis, disrupting CGNP development and Smoothed-induced tumorigenesis. Comparing tumorigenesis in medulloblastoma-prone SmoM2 mice with and without functional Hk2, we demonstrate that loss of aerobic glycolysis reduces the aggressiveness of medulloblastoma, causing tumors to grow as indolent lesions and allowing long-term survival of tumor bearing mice. CONCLUSIONS: Our investigations demonstrate that aerobic glycolysis in cancer derives from developmental mechanisms that persist in tumorigenesis. Moreover, we demonstrate in a primary tumor model the anti-cancer potential of blocking aerobic glycolysis by targeting Hk2.

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[895]

**TÍTULO / TITLE:** - Primary human chorionic gonadotropin secreting germinoma of the corpus callosum.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Surg Neurol Int. 2013 Oct 8;4:137. doi: 10.4103/2152-7806.119537.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.119537](#)

**AUTORES / AUTHORS:** - Chuan Aaron FS; Dawn CQ; Kenneth CT; Hoe NW; Yen SS; Chee Kian T

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, National Cancer Centre, 11 Hospital Drive, Singapore 169610.

**RESUMEN / SUMMARY:** - BACKGROUND: Primary intracranial germinomas are a rare subset of intracranial tumors derived from mis-incorporated germ cells within the folding neural plate during embryogenesis. Though known to arise from midline structures in the central nervous system (CNS), occurrence within the corpus callosum is exceedingly rare. CASE DESCRIPTION: We present a rare case of secreting primary intracranial germinoma with extensive intraventricular metastasis presenting as a multi-cystic butterfly lesion in the genu of the corpus callosum in a young boy. CONCLUSION: Intracranial germ cell tumors must be considered for any multi-cystic lesion arising from midline structures in the CNS in the preadult population.

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[896]

**TÍTULO / TITLE:** - Bevacizumab for glioblastoma-a promising drug or not?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Nov 7;5(4):1456-68. doi: 10.3390/cancers5041456.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5041456](#)

**AUTORES / AUTHORS:** - Nagane M; Nishikawa R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Kyorin University Faculty of Medicine, 6-20-2 Shinkawa, Mitaka-shi, Tokyo 181-8611, Japan. [rnishika@saitama-med.ac.jp](mailto:rnishika@saitama-med.ac.jp).

**RESUMEN / SUMMARY:** - Two double blind, placebo-controlled, and randomized phase III studies were conducted, and the results including OS's were reported at the ASCO Meeting in June 2013, which was the beginning of confusion surrounding this topic.

This is a review article not only summarizing the previous evidence, but also looking beyond.

[897]

**TÍTULO / TITLE:** - Effects of salidroside on glioma formation and growth inhibition together with improvement of tumor microenvironment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin J Cancer Res. 2013 Oct;25(5):520-526.

●● Enlace al texto completo (gratis o de pago) [3978/j.issn.1000-9604.2013.10.01](#)

**AUTORES / AUTHORS:** - Zhang Y; Yao Y; Wang H; Guo Y; Zhang H; Chen L

**INSTITUCIÓN / INSTITUTION:** - Department of Gastric Surgery, Wuwei Tumor Hospital, Wuwei 733000, China;

**RESUMEN / SUMMARY:** - OBJECTIVE: To test the effects of salidroside on formation and growth of glioma together with tumor microenvironment. METHODS: Salidroside extracted from *Rhodiola rosea* was purified and treated on human glioma cells U251 at the concentration of 20 microg/mL. 3-(4,5-dimethylthiazol-2-yl)-2,5-dephenyltetrazolium bromide (MTT) assay for cytotoxicity and flow cytometry (FCM) for cell cycle analysis were performed. Then for in vivo study, xenotransplantation tumor model in nude mice was generated and treated with salidroside at the concentration of 50 mg/kg.d for totally 20 d. Body weight and tumor size were detected every 2 d after the treatment. The levels of 8-isoprostane, superoxide dismutase (SOD) and malondialdehyde (MDA), special markers for oxidative stress, were detected while immunofluorescence staining was performed for astrocyte detection. RESULTS: For in vitro study, salidroside could decrease the viability of human glioma cells U251 and the growth of U251 cells at G0/G1 checkpoint during the cell cycle. For in vivo study, salidroside could also inhibit the growth of human glioma tissue in nude mice. The body weight of these nude mice treated with salidroside did not decrease as quickly as control group. In the tumor xenotransplantation nude mice model, mice were found of inhibition of oxidative stress by detection of biomarkers. Furthermore, overgrowth of astrocytes due to the stimulation of oxidative stress in the cortex of brain was inhibited after the treatment of salidroside. CONCLUSIONS: Salidroside could inhibit the formation and growth of glioma both in vivo and in vitro and improve the tumor microenvironment via inhibition of oxidative stress and astrocytes.

[898]

**TÍTULO / TITLE:** - Inhibition of caveolin-1 restores myeloid cell function in human glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 9;8(10):e77397. doi: 10.1371/journal.pone.0077397.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0077397](#)

**AUTORES / AUTHORS:** - Shimato S; Anderson LM; Asslaber M; Bruce JN; Canoll P; Anderson DE; Anderson RC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Gabriele Bartoli Brain Tumor Research Laboratory, Columbia University, New York, New York, United States of America.

**RESUMEN / SUMMARY:** - BACKGROUND: Gliomas are the most common primary brain tumor in both children and adults. The prognosis for glioblastoma (GBM), the most common type of malignant glioma, has remained dismal, with median survival a little over one year despite maximal therapy with surgery, chemotherapy, and radiation. Although immunotherapy has become increasingly successful against many systemic tumors, clinical efficacy against brain tumors has been limited. One reason for this is an incomplete understanding of the local immunologic tumor microenvironment, particularly the function of large numbers of infiltrating myeloid derived cells. Monocytes/microglia are myeloid derived immunomodulatory cells, and they represent the predominant infiltrating immune cell population in gliomas. Our group has previously demonstrated using complementary in vitro and in vivo approaches that GBM tumor cells polarize tumor-associated myeloid cells (TAMs) and suppress their immunostimulatory function. METHODS AND RESULTS: To better understand the mechanisms responsible for this immunosuppression, we used gene expression profiling of stimulated monocytes in the presence or absence of GBM tumor cells. Our analysis identified caveolin-1 (CAV1), a plasma membrane molecule with pleiotropic functions, as significantly up-regulated in monocytes in the presence of GBMs. We validated these findings ex vivo by confirming up-regulation of CAV1 in TAMs isolated from GBMs immediately after surgical resection. Finally, we demonstrate that siRNA inhibition of CAV1 restores myeloid cell function, as measured by TNF-alpha secretion, in the presence of GBMs. CONCLUSIONS: Restoration of TAM function through pharmacologic blockage of CAV1 may facilitate more successful immunotherapeutic strategies directed against a variety of solid human tumors infiltrated by TAMs.

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[899]

**TÍTULO / TITLE:** - NF-kappaB-Induced IL-6 Ensures STAT3 Activation and Tumor Aggressiveness in Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Nov 11;8(11):e78728. doi: 10.1371/journal.pone.0078728.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0078728](#)

**AUTORES / AUTHORS:** - McFarland BC; Hong SW; Rajbhandari R; Twitty GB Jr; Gray GK; Yu H; Benveniste EN; Nozell SE

**INSTITUCIÓN / INSTITUTION:** - Department of Cell, Developmental and Integrative Biology, University of Alabama at Birmingham, Birmingham, Alabama, United States of America.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most aggressive, neurologically destructive and deadly tumor of the central nervous system (CNS). In GBM, the transcription factors NF-kappaB and STAT3 are aberrantly activated and associated with tumor cell proliferation, survival, invasion and chemoresistance. In addition, common activators of NF-kappaB and STAT3, including TNF-alpha and IL-6, respectively, are abundantly expressed in GBM tumors. Herein, we sought to elucidate the signaling crosstalk that occurs between the NF-kappaB and STAT3 pathways in GBM tumors. Using cultured GBM cell lines as well as primary human GBM xenografts, we elucidated the signaling crosstalk between the NF-kappaB and STAT3 pathways utilizing approaches that either a) reduce NF-kappaB p65 expression, b) inhibit NF-kappaB activation, c) interfere with IL-6 signaling, or d) inhibit STAT3 activation. Using the clinically relevant human GBM xenograft model, we assessed the efficacy of

inhibiting NF-kappaB and/or STAT3 alone or in combination in mice bearing intracranial xenograft tumors in vivo. We demonstrate that TNF-alpha-induced activation of NF-kappaB is sufficient to induce IL-6 expression, activate STAT3, and elevate STAT3 target gene expression in GBM cell lines and human GBM xenografts in vitro. Moreover, the combined inhibition of NF-kappaB and STAT3 signaling significantly increases survival of mice bearing intracranial tumors. We propose that in GBM, the activation of NF-kappaB ensures subsequent STAT3 activation through the expression of IL-6. These data verify that pharmacological interventions to effectively inhibit the activity of both NF-kappaB and STAT3 transcription factors must be used in order to reduce glioma size and aggressiveness.

[900]

**TÍTULO / TITLE:** - Incidental Superior Hypophygeal Artery Aneurysm Embedded within Pituitary Adenoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Sep;54(3):250-252. Epub 2013 Sep 30.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.54.3.250](#)

**AUTORES / AUTHORS:** - Choi HS; Kim MS; Jung YJ; Kim OL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Yeungnam University College of Medicine, Daegu, Korea.

**RESUMEN / SUMMARY:** - Intra-cranial aneurysm can be incidental findings in patients with pituitary adenomas, and are usually located outside the pituitary region. However, the coexistence of intrasellar (not intracranial) aneurysms with pituitary adenomas is extremely rare. We report a patient with an incidental superior hypophygeal aneurysm embedded within a non-functional pituitary adenoma which was treated by transphenoidal surgery after endovascular coil embolization.

[901]

**TÍTULO / TITLE:** - Immune-checkpoint blockade and active immunotherapy for glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Nov 1;5(4):1379-412. doi: 10.3390/cancers5041379.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5041379](#)

**AUTORES / AUTHORS:** - Ahn BJ; Pollack IF; Okada H

**INSTITUCIÓN / INSTITUTION:** - Department of Immunology, University of Pittsburgh School of Medicine, Pittsburgh, PA 15213, USA. [okadah@upmc.edu](mailto:okadah@upmc.edu).

**RESUMEN / SUMMARY:** - Cancer immunotherapy has made tremendous progress, including promising results in patients with malignant gliomas. Nonetheless, the immunological microenvironment of the brain and tumors arising therein is still believed to be suboptimal for sufficient antitumor immune responses for a variety of reasons, including the operation of "immune-checkpoint" mechanisms. While these mechanisms prevent autoimmunity in physiological conditions, malignant tumors, including brain tumors, actively employ these mechanisms to evade from immunological attacks. Development of agents designed to unblock these checkpoint steps is currently one of the most active areas of cancer research. In this review, we summarize recent progresses in the field of brain tumor immunology with particular foci in the area of immune-checkpoint mechanisms and development of active

immunotherapy strategies. In the last decade, a number of specific monoclonal antibodies designed to block immune-checkpoint mechanisms have been developed and show efficacy in other cancers, such as melanoma. On the other hand, active immunotherapy approaches, such as vaccines, have shown encouraging outcomes. We believe that development of effective immunotherapy approaches should ultimately integrate those checkpoint-blockade agents to enhance the efficacy of therapeutic approaches. With these agents available, it is going to be quite an exciting time in the field. The eventual success of immunotherapies for brain tumors will be dependent upon not only an in-depth understanding of immunology behind the brain and brain tumors, but also collaboration and teamwork for the development of novel trials that address multiple layers of immunological challenges in gliomas.

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[902]

**TÍTULO / TITLE:** - Recurrent and self-remitting sixth cranial nerve palsy: pathophysiological insight from skull base chondrosarcoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Dec;12(6):633-6. doi: 10.3171/2013.9.PEDS13356. Epub 2013 Oct 18.

●● Enlace al texto completo (gratis o de pago) [3171/2013.9.PEDS13356](#)

**AUTORES / AUTHORS:** - Frassanito P; Massimi L; Rigante M; Tamburrini G; Conforti G; Di Rocco C; Caldarelli M

**INSTITUCIÓN / INSTITUTION:** - Departments of Pediatric Neurosurgery and.

**RESUMEN / SUMMARY:** - Palsy of the abducens nerve is a neurological sign that has a wide range of causes due to the nerve's extreme vulnerability. Need of immediate neuroimaging is a matter of debate in the literature, despite the risks of delaying the diagnosis of a skull base tumor. The authors present 2 cases of skull base tumors in which the patients presented with recurrent and self-remitting episodes of sixth cranial nerve palsy (SCNP). In both cases the clinical history exceeded 1 year. In a 17-year-old boy the diagnosis was made because of the onset of headache when the tumor reached a very large size. In a 12-year-old boy the tumor was incidentally diagnosed when it was still small. In both patients surgery was performed and the postoperative course was uneventful. Pathological diagnosis of the tumor was consistent with that of a chondrosarcoma in both cases. Recurrent self-remitting episodes of SCNP, resembling transitory ischemic attacks, may be the presenting sign of a skull base tumor due to the anatomical relationships of these lesions with the petroclival segment of the sixth cranial nerve. Physicians should promptly recommend neuroimaging studies if SCNP presents with this peculiar course.

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[903]

**TÍTULO / TITLE:** - Epithelioid angiosarcoma of the septum pellucidum.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Pathol. 2013;2013:603671. doi: 10.1155/2013/603671. Epub 2013 Sep 19.

●● Enlace al texto completo (gratis o de pago) [1155/2013/603671](#)

**AUTORES / AUTHORS:** - Baldovini C; Martinoni M; Marucci G

**INSTITUCIÓN / INSTITUTION:** - Section of Pathology M. Malpighi at Bellaria Hospital, Department of Biomedical and Neuro Motor Sciences, University of Bologna, Via Altura 3, 40139 Bologna, Italy.

**RESUMEN / SUMMARY:** - Primary cerebral intra-axial epithelioid angiosarcoma is an extremely rare malignancy. To the best of our knowledge we describe the first case of epithelioid angiosarcoma arisen in the septum pellucidum of a 54-years-old man. Albeit extremely rare, this neoplasia is a potential source of misdiagnosis for other aggressive malignant tumors, and it should be taken into consideration.

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[904]

**TÍTULO / TITLE:** - MicroRNA in Human Glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Oct 23;5(4):1306-31. doi: 10.3390/cancers5041306.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5041306](#)

**AUTORES / AUTHORS:** - Li M; Li J; Liu L; Li W; Yang Y; Yuan J

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Tropical Disease Control (Sun Yat-sen University), Chinese Ministry of Education, Guangzhou 510080, China.  
[limf@mail.sysu.edu.cn](mailto:limf@mail.sysu.edu.cn).

**RESUMEN / SUMMARY:** - Glioma represents a serious health problem worldwide. Despite advances in surgery, radiotherapy, chemotherapy, and targeting therapy, the disease remains one of the most lethal malignancies in humans, and new approaches to improvement of the efficacy of anti-glioma treatments are urgently needed. Thus, new therapeutic targets and tools should be developed based on a better understanding of the molecular pathogenesis of glioma. In this context, microRNAs (miRNAs), a class of small, non-coding RNAs, play a pivotal role in the development of the malignant phenotype of glioma cells, including cell survival, proliferation, differentiation, tumor angiogenesis, and stem cell generation. This review will discuss the biological functions of miRNAs in human glioma and their implications in improving clinical diagnosis, prediction of prognosis, and anti-glioma therapy.

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[905]

**TÍTULO / TITLE:** - Ependymomas: development of immunotherapeutic strategies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Neurother. 2013 Oct;13(10):1089-98. doi: 10.1586/14737175.2013.840420.

●● Enlace al texto completo (gratis o de pago) [1586/14737175.2013.840420](#)

**AUTORES / AUTHORS:** - Pollack IF; Jakacki RI; Butterfield LH; Okada H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA.

**RESUMEN / SUMMARY:** - Ependymomas are among the most challenging childhood brain tumors. Although 50-70% of ependymomas are cured with surgery and irradiation, a significant percentage of tumors recur. Ependymomas that are not amenable to complete resection at diagnosis have a particularly poor prognosis, and the vast majority of affected children experience tumor recurrence. Although transient responses have been observed in recurrent tumors treated with re-irradiation and several chemotherapy regimens, long-term disease control is rarely achieved. Children with recurrent disease commonly experience cumulative neurological morbidity from repeated surgical and adjuvant therapy interventions and almost universally succumb to refractory tumor progression. Accordingly, conceptually new treatment approaches are needed, both to decrease the risk of tumor recurrence and to enhance disease

control in those children who experience recurrent disease. This article reviews the current application of risk-based treatment stratification at diagnosis, the rationale for exploring the role of novel therapeutic strategies such as immunotherapy at recurrence and the concept behind a vaccine-based trial for these tumors.

[906]

**TÍTULO / TITLE:** - Megalencephalic Leukoencephalopathy with Subcortical Cysts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Sultan Qaboos Univ Med J. 2013 Nov;13(4):585-586. Epub 2013 Nov 8.

**AUTORES / AUTHORS:** - Koul R; Al-Thihli K; Al-Azri F; Al-Futaisi A

**INSTITUCIÓN / INSTITUTION:** - Departments of Child Health, Sultan Qaboos University, Muscat, Oman.

[907]

**TÍTULO / TITLE:** - Occurrence of a spinal intradural arachnoid cyst after epiduroscopic neural decompression.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Korean J Anesthesiol. 2013 Sep;65(3):270-2. doi: 10.4097/kjae.2013.65.3.270.

●● [Enlace al texto completo \(gratis o de pago\) 4097/kjae.2013.65.3.270](#)

**AUTORES / AUTHORS:** - Cho EJ; Jeon K; Kim YH; Moon DE

**INSTITUCIÓN / INSTITUTION:** - Department of Anesthesiology and Pain Medicine, School of Medicine, The Catholic University of Korea, Seoul, Korea.

[908]

**TÍTULO / TITLE:** - Large cerebellar mass lesion: A rare intracranial manifestation of blastomycosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Surg Neurol Int. 2013 Oct 15;4:141. doi: 10.4103/2152-7806.119882.

●● [Enlace al texto completo \(gratis o de pago\) 4103/2152-7806.119882](#)

**AUTORES / AUTHORS:** - Munich SA; Johnson AK; Ahuja SK; Venizelos A; Byrne RW

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Rush University Medical Center, Chicago, IL, USA.

**RESUMEN / SUMMARY:** - BACKGROUND: Blastomyces dermatitidis is a dimorphic fungus found endemically in the Mississippi and Ohio River basins and in the Midwestern and Canadian provinces that border the Great Lakes. Unlike other fungal infections, it most commonly affects immunocompetent hosts. Blastomycosis typically manifests as pulmonary infection, but may affect nearly any organ, including the skin, bone, and genitourinary system. Central nervous system (CNS) blastomycosis is rare, but potentially fatal manifestation of this disease. When it does occur, it most commonly presents as acute or chronic meningitis. CASE DESCRIPTION: We present a case of a patient who suffered intractable nausea and vomiting for several months before discovery of a large cerebellar blastomycoma causing mass effect and obstructive hydrocephalus. The enhancing lesion with unusual peripheral cystic structures is a unique radiographic appearance of CNS blastomycosis. CONCLUSION:

We review this patient's purely intraparenchymal manifestation of CNS blastomycosis and describe the unique imaging characteristics encountered.

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[909]

**TÍTULO / TITLE:** - Spinal intradural cystic venous angioma originating from a nerve root in the cauda equina.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Spine. 2013 Dec;19(6):716-20. doi: 10.3171/2013.8.SPINE121012. Epub 2013 Oct 4.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.8.SPINE121012](#)

**AUTORES / AUTHORS:** - Nishimura Y; Hara M; Natsume A; Nakajima Y; Fukuyama R; Wakabayashi T; Ginsberg HJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Nagoya University, Nagoya, Japan;

**RESUMEN / SUMMARY:** - A spinal intradural extramedullary venous angioma is extremely rare and has not been previously reported. In this paper, the authors report on this entity with morphological and immunohistochemical evidence, and discuss the surgical strategy for its treatment. A 54-year-old woman presented to Nagoya University Hospital complaining of left-sided pain in the hip, thigh, and inguinal and perianal regions, with progressive worsening during the previous 2 weeks. Lumbar spine MRI showed an intradural extramedullary cyst at the level of T12-L1, which extended from the conus medullaris to the cauda equina. The cyst wall was not enhanced on T1-weighted MRI with Gd. Intraoperatively, a midline dural opening allowed the authors to easily visualize a dark-reddish cyst behind the spinal nerve rootlets in the cauda equina adjacent to the conus medullaris. The cyst was believed to originate from one of the spinal nerve rootlets in the cauda equina and a cluster of veins was identified on the cyst wall. The cyst was resected with the affected nerve rootlet. The surgery left no detectable neurological deficit. Based on the morphological and immunohistochemical evidence, the lesion was diagnosed as a venous angioma. No tumor recurrence was confirmed based on MRI at the time of the 2-year follow up. This is the first report of an intradural extramedullary cystic venous angioma that was successfully resected.

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[910]

**TÍTULO / TITLE:** - Primary intracranial leiomyosarcoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Arch Iran Med. 2013 Oct;16(10):606-7. doi: 0131610/AIM.0012.

**AUTORES / AUTHORS:** - Alijani B; Yousefzade S; Aramnia A; Mesbah A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Poursina Hospital, Guilan University of Medical Sciences, Rasht, [Iran.dr.babak.alij@gmail.com](mailto:Iran.dr.babak.alij@gmail.com).

**RESUMEN / SUMMARY:** - Primary intracranial leiomyosarcomas are rare tumors that arise from the mesenchymal cells of the dura mater or cerebral blood vessels. Here we report the case of an extra axial leiomyosarcoma in the right parieto-occipital region of a 19-year-old male who had normal clinical and laboratory findings. Diagnostic imaging showed bony destruction, dural involvement and no parenchymal invasion. No primary site was found after metastasis work up. Specific serology tests were negative. The patient underwent a craniotomy, total tumor resection, duraplasty and

skull reconstruction. He received radiotherapy and after 18 months of follow-up, no clinical and radiological signs of recurrence have been found.

[911]

**TÍTULO / TITLE:** - Downregulation of 14q32 microRNAs in Primary Human Desmoplastic Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Oncol. 2013 Sep 25;3:254. doi: 10.3389/fonc.2013.00254.

●● Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00254](#)

**AUTORES / AUTHORS:** - Lucon DR; Rocha Cde S; Craveiro RB; Dilloo D; Cardinalli IA; Cavalcanti DP; Aguiar Sdos S; Maurer-Morelli C; Yunes JA

**INSTITUCIÓN / INSTITUTION:** - Centro Infantil Boldrini , Campinas , Brazil ; Departamento de Genética Médica, Faculdade de Ciências Médicas, Universidade Estadual de Campinas , Campinas , Brazil.

**RESUMEN / SUMMARY:** - Medulloblastoma (MB) is one of the most common pediatric cancers, likely originating from abnormal development of cerebellar progenitor neurons. MicroRNA (miRNA) has been shown to play an important role in the development of the central nervous system. Microarray analysis was used to investigate miRNA expression in desmoplastic MB from patients diagnosed at a young age (1 or 2 years old). Normal fetal or newborn cerebellum was used as control. A total of 84 differentially expressed miRNAs (64 downregulated and 20 upregulated) were found. Most downregulated miRNAs (32/64) were found to belong to the cluster of miRNAs at the 14q32 locus, suggesting that this miRNA locus is regulated as a module in MB. Possible mechanisms of 14q32 miRNAs downregulation were investigated by the analysis of publicly available gene expression data sets. First, expression of estrogen-related receptor-gamma (ESRRG), a reported positive transcriptional regulator of some 14q32 miRNAs, was found downregulated in desmoplastic MB. Second, expression of the parentally imprinted gene MEG3 was lower in MB in comparison to normal cerebellum, suggesting a possible epigenetic silencing of the 14q32 locus. miR-129-5p (11p11.2/7q32.1), miR-206 (6p12.2), and miR-323-3p (14q32.2), were chosen for functional studies in DAOY cells. Overexpression of miR-129-5p using mimics decreased DAOY proliferation. No effect was found with miR-206 or miR-323 mimics.

[912]

**TÍTULO / TITLE:** - Letter to the Editor: Angiocentric glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Dec;12(6):666. doi: 10.3171/2010.1.PEDS09527. Epub 2013 Oct 11.

●● Enlace al texto completo (gratis o de pago) [3171/2010.1.PEDS09527](#)

**AUTORES / AUTHORS:** - Koral K

**INSTITUCIÓN / INSTITUTION:** - University of Texas Southwestern Medical Center, Dallas, TX.

[913]

**TÍTULO / TITLE:** - Posterior fossa teratoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosciences (Riyadh). 2013 Oct;18(4):371-4.

**AUTORES / AUTHORS:** - Algahtani HA; Al-Rabia MW; Al-Maghrabi HQ; Kutub HY  
**INSTITUCIÓN / INSTITUTION:** - College of Medicine, King Saud bin Abdulaziz University for Health Sciences, PO Box 21483, Jeddah 21723, Kingdom of Saudi Arabia. Tel. +966 (2) 6240000 Ext. 21298/22070. Fax. +966 (2) 6240000 Ext. 22765. E-mail: [grdresearches@gmail.com](mailto:grdresearches@gmail.com).

**RESUMEN / SUMMARY:** - Germ cell tumors comprise approximately 2-5% of all childhood brain tumors. They arise predominantly in the pineal and suprasellar region, but may occur throughout the brain. Teratomas are generally divided into gonadal and extragonadal types. A posterior fossa teratoma is a rare occurrence. The focus of this discussion is a 5-year-old boy with posterior fossa teratoma who recovered completely after medical and surgical intervention. We also present his interesting imaging and pathological findings.

[914]

**TÍTULO / TITLE:** - A large left atrial myxoma causing multiple cerebral infarcts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

- Enlace a la Editora de la Revista <http://bmi.com/search.dtl>

- Cita: British Medical J. (BMJ): <> Case Rep. 2013 Nov 27;2013. pii: bcr2013010007. doi: 10.1136/bcr-2013-010007.

- Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-010007](#)

**AUTORES / AUTHORS:** - Kebede S; Edmunds E; Raybould A

**INSTITUCIÓN / INSTITUTION:** - Department of Medicine, Hywel Dda Health Board, Carmarthen, UK.

**RESUMEN / SUMMARY:** - A 52-year-old man presented with a history of sudden onset diplopia. On neurological examination, the only abnormality was a right-sided oculomotor (third nerve) palsy. A brain CT was performed and reported as showing no abnormality. He was discharged to be investigated as an outpatient. He presented 1 month later with a new expressive dysphasia and confusional state. MRI was performed which revealed multiple cerebral infarcts. He was discharged on secondary stroke prevention medication. Six months elapsed, before a transthoracic echocardiogram was performed. This showed a large left atrial myxoma. The patient underwent an emergency resection and made a good postoperative recovery. This case report showed the importance of considering a cardiogenic source of emboli in patients who present with cerebral infarcts. Performing echocardiography early will help to detect treatable conditions such as atrial myxoma, and prevent further complications.

[915]

**TÍTULO / TITLE:** - E1a promotes c-Myc-dependent replicative stress: Implications in glioblastoma radiosensitization.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Cycle. 2013 Oct 11;13(1).

**AUTORES / AUTHORS:** - Valero ML; Cimas FJ; Arias L; Melgar-Rojas P; Garcia E; Callejas-Valera JL; Cano JG; Serrano Oviedo L; de la Cruz-Morcillo MA; Sanchez-Perez I; Sanchez-Prieto R

**INSTITUCIÓN / INSTITUTION:** - Laboratorio de Oncología Molecular; Centro Regional de Investigaciones Biomedicas; University of Castile-La Mancha; Albacete, España.

**RESUMEN / SUMMARY:** - The E1a gene from adenovirus is known to be a potent inducer of chemo/radiosensitivity in a wide range of tumors. However, the molecular bases of its radiosensitizer properties are still poorly understood. In an attempt to study this effect, U87MG cells, derived from a radio-resistant tumor as glioblastoma, were infected with lentivirus carrying E1a gene developing an acute sensitivity to ionizing radiation. The induction of radiosensitivity correlated with a marked G2/M phase accumulation and a potent apoptotic response. Our findings demonstrate that c-Myc plays a pivotal role in E1a-associated radiosensitivity through the induction of a replicative stress situation, as our data support by genetic approaches, based in interference and overexpression in U87MG cells. In fact, we present evidence showing that Chk1 is a novel transcriptional target of E1a gene through the effect exerted by this adenoviral protein onto c-Myc. Moreover, c-Myc upregulation also explains the marked phosphorylation of H2AX associated to E1a expression in the absence of DNA damage. Indeed, all these observations were applicable to other experimental models, such as T98G, LN-405 and A172, rendering the same pattern in terms of radiosensitivity, cell cycle distribution, upregulation of Chk1, c-Myc, and phosphorylation pattern of H2AX. In summary, our data propose a novel mechanism to explain how E1a mediates radiosensitivity through the signaling axis E1a-->c-Myc--> replicative stress situation. This novel mechanism of E1a-mediated radiosensitivity could be the key to open new possibilities in the current therapy of glioblastoma.

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[916]

**TÍTULO / TITLE:** - Juvenile hypothyroidism presenting with hypertrichosis, multicystic ovaries, and pituitary adenoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2013 Oct;17(Suppl 1):S178-80. doi: 10.4103/2230-8210.119564.

●● Enlace al texto completo (gratis o de pago) [4103/2230-8210.119564](#)

**AUTORES / AUTHORS:** - Raychaudhuri M; Sanyal D; Halder PP; Apurba G

**INSTITUCIÓN / INSTITUTION:** - DM (Endocrinology), Consultant Endocrinologist, RTIICS and Institute of Child Health, Kolkata, India.

**RESUMEN / SUMMARY:** - Primary hypothyroidism may present with atypical features in children. Here we report a 6-year-old female child with primary hypothyroidism presenting with a combination of several atypical features in the form of hypertrichosis, bilateral cystic ovaries, and feedback pituitary adenoma.

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[917]

**TÍTULO / TITLE:** - A Novel Interaction between Pyk2 and MAP4K4 Is Integrated with Glioma Cell Migration.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Signal Transduct. 2013;2013:956580. doi: 10.1155/2013/956580. Epub 2013 Sep 15.

●● Enlace al texto completo (gratis o de pago) [1155/2013/956580](#)

**AUTORES / AUTHORS:** - Loftus JC; Yang Z; Kloss J; Dhruv H; Tran NL; Riggs DL

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry and Molecular Biology, Mayo Clinic Arizona, 13400 East Shea Boulevard, Scottsdale, AZ 85259, USA.

**RESUMEN / SUMMARY:** - Glioma cell migration correlates with Pyk2 activity, but the intrinsic mechanism that regulates the activity of Pyk2 is not fully understood. Previous

studies have supported a role for the N-terminal FERM domain in the regulation of Pyk2 activity as mutations in the FERM domain inhibit Pyk2 phosphorylation. To search for novel protein-protein interactions mediated by the Pyk2 FERM domain, we utilized a yeast two-hybrid genetic selection to identify the mammalian Ste20 homolog MAP4K4 as a binding partner for the Pyk2 FERM domain. MAP4K4 coimmunoprecipitated with Pyk2 and was a substrate for Pyk2 but did not coimmunoprecipitate with the closely related focal adhesion kinase FAK. Knockdown of MAP4K4 expression inhibited glioma cell migration and effectively blocked Pyk2 stimulation of glioma cell. Increased expression of MAP4K4 stimulated glioma cell migration; however, this stimulation was blocked by knockdown of Pyk2 expression. These data support that the interaction of MAP4K4 and Pyk2 is integrated with glioma cell migration and suggest that inhibition of this interaction may represent a potential therapeutic strategy to limit glioblastoma tumor dispersion.

[918]

**TÍTULO / TITLE:** - Glioblastoma mimicking an arteriovenous malformation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Neurol. 2013 Sep 30;4:144. doi: 10.3389/fneur.2013.00144.

●● Enlace al texto completo (gratis o de pago) [3389/fneur.2013.00144](#)

**AUTORES / AUTHORS:** - Khanna A; Venteicher AS; Walcott BP; Kahle KT; Mordes DA; William CM; Ghogawala Z; Ogilvy CS

**INSTITUCIÓN / INSTITUTION:** - Harvard Medical School, Boston, MA, USA.

**RESUMEN / SUMMARY:** - Abnormal cerebral vasculature can be a manifestation of a vascular malformation or a neoplastic process. We report the case of a patient with angiography-negative subarachnoid hemorrhage (SAH) who re-presented 3 years later with a large intraparenchymal hemorrhage. Although imaging following the intraparenchymal hemorrhage was suggestive of arteriovenous malformation, the patient was ultimately found to have an extensive glioblastoma associated with abnormal tumor vasculature. The case emphasizes the need for magnetic resonance imaging to investigate angiography-negative SAH in suspicious cases to rule out occult etiologies, such as neoplasm. We also discuss diagnostic pitfalls when brain tumors are associated with hemorrhage and abnormal vasculature.

[919]

**TÍTULO / TITLE:** - Malignant hemispheric cerebral infarction associated with idiopathic systemic capillary leak syndrome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Neurol. 2013 Oct 2;5(3):175-82. doi: 10.1159/000355637.

●● Enlace al texto completo (gratis o de pago) [1159/000355637](#)

**AUTORES / AUTHORS:** - Miyata K; Mikami T; Mikuni N; Aisaka W; Irifune H; Narimatsu E

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Sapporo Medical University, Sapporo, Japan; Department of Emergency Medicine, Sapporo Medical University, Sapporo, Japan.

**RESUMEN / SUMMARY:** - Idiopathic systemic capillary leak syndrome (ISCLS) is a rare condition that is characterized by unexplained episodic capillary hyperpermeability due

to a shift of fluid and protein from the intravascular to the interstitial space. This results in diffuse general swelling, fetal hypovolemic shock, hypoalbuminemia, and hemoconcentration. Although ISCLS rarely induces cerebral infarction, we experienced a patient who deteriorated and was comatose as a result of massive cerebral infarction associated with ISCLS. In this case, severe hypotensive shock, general edema, hemiparesis, and aphasia appeared after serious antecedent gastrointestinal symptoms. Progressive life-threatening ischemic cerebral edema required decompressive hemicraniectomy. The patient experienced another episode of severe hypotension and limb edema that resulted in multiple extremity compartment syndrome. Treatment entailed forearm and calf fasciotomies. Cerebral edema in the ischemic brain progresses rapidly in patients suffering from ISCLS. Strict control of fluid volume resuscitation and aggressive diuretic therapy may be needed during the post-leak phase of fluid remobilization.

[920]

**TÍTULO / TITLE:** - Cerebral salt wasting syndrome in craniopharyngioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Anaesth. 2013 Jul;57(4):404-5. doi: 10.4103/0019-5049.118533.

●● Enlace al texto completo (gratis o de pago) [4103/0019-5049.118533](#)

**AUTORES / AUTHORS:** - Santra S; Chakraborty J; Das B

**INSTITUCIÓN / INSTITUTION:** - Department of Anaesthesiology, Bangur Institute of Neurosciences, IPGIMER, Kolkata, West Bengal, India.

[921]

**TÍTULO / TITLE:** - Is glioblastoma an epigenetic malignancy?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Sep 3;5(3):1120-39. doi: 10.3390/cancers5031120.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5031120](#)

**AUTORES / AUTHORS:** - Maleszewska M; Kaminska B

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Molecular Neurobiology, Neurobiology Center, The Nencki Institute of Experimental Biology, 3 Pasteur Str., Warsaw 02-093, Poland. [B.Kaminska@nencki.gov.pl](mailto:B.Kaminska@nencki.gov.pl).

**RESUMEN / SUMMARY:** - Epigenetic modifications control gene expression by regulating the access of nuclear proteins to their target DNA and have been implicated in both normal cell differentiation and oncogenic transformation. Epigenetic abnormalities can occur both as a cause and as a consequence of cancer. Oncogenic transformation can deeply alter the epigenetic information enclosed in the pattern of DNA methylation or histone modifications. In addition, in some cancers epigenetic dysfunctions can drive oncogenic transformation. Growing evidence emphasizes the interplay between metabolic disturbances, epigenomic changes and cancer, i.e., mutations in the metabolic enzymes SDH, FH, and IDH may contribute to cancer development. Epigenetic-based mechanisms are reversible and the possibility of "resetting" the abnormal cancer epigenome by applying pharmacological or genetic strategies is an attractive, novel approach. Gliomas are incurable with all current therapeutic approaches and new strategies are urgently needed. Increasing evidence suggests the role of epigenetic events in development and/or progression of gliomas.

In this review, we summarize current data on the occurrence and significance of mutations in the epigenetic and metabolic enzymes in pathobiology of gliomas. We discuss emerging therapies targeting specific epigenetic modifications or chromatin modifying enzymes either alone or in combination with other treatment regimens.

[922]

**TÍTULO / TITLE:** - Investigation of ACE genome insertion/deletion correlation with immunohistochemical profile in pituitary adenomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(4):464-9. doi: 10.5137/1019-5149.JTN.7423-12.0.

●● Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.7423-12.0](#)

**AUTORES / AUTHORS:** - Altas M; Bayrak OF; Serefhan A; Silav G; Coskun KK; Cerci A; Isik N; Elmaci I

**INSTITUCIÓN / INSTITUTION:** - Mustafa Kemal University, Faculty of Medicine, Department of Neurosurgery, Antakya, Turkey.

**RESUMEN / SUMMARY:** - AIM: The deletion polymorphism of the angiotensin-converting enzyme (ACE) genome causes neoplastic development in several organs by increasing the angiotensin 2 (A2) formation. In this study, we aimed to identify the ACE genome insertion/deletion polymorphism in pituitary adenomas and to compare it with the control group. MATERIAL AND METHODS: Patients operated for pituitary adenomas were included in the study. Genomic DNA was extracted from tumoral tissues and peripheral blood samples of the patients by using the Miller method. Primary sequence was selected via targeting the polymorphic region of intron 16 of ACE genome 17q23. DNA samples were multiplied by PCR using HACE3s and HACE3as primers. RESULTS: Twenty-one operated cases were studied. In the study group; 44 % of the patients were identified as D/D, 33% of them as I/D and 23% of them as I/I. In 60%, D allele was identified. According to immunohistochemical investigation, we found that 100% of the patients with Cushing adenoma were D/D alleles. CONCLUSION: Presence of high rate of ACE genome deletion in patients with pituitary adenoma and grade 3-4 patients suggest that ACE genome polymorphism can be a risk factor for the development of pituitary adenomas.

[923]

**TÍTULO / TITLE:** - Emerging biomarkers in glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancers (Basel). 2013 Aug 22;5(3):1103-19. doi: 10.3390/cancers5031103.

●● Enlace al texto completo (gratis o de pago) [3390/cancers5031103](#)

**AUTORES / AUTHORS:** - McNamara MG; Sahebjam S; Mason WP

**INSTITUCIÓN / INSTITUTION:** - Pencer Brain Tumor Centre, Princess Margaret Cancer Centre, 610 University Avenue, Toronto, Ontario M5G 2M9, Canada.

[warren.mason@uhn.ca](mailto:warren.mason@uhn.ca).

**RESUMEN / SUMMARY:** - Glioblastoma, the most common primary brain tumor, has few available therapies providing significant improvement in survival. Molecular signatures associated with tumor aggressiveness as well as with disease progression and their relation to differences in signaling pathways implicated in gliomagenesis

have recently been described. A number of biomarkers which have potential in diagnosis, prognosis and prediction of response to therapy have been identified and along with imaging modalities could contribute to the clinical management of GBM. Molecular biomarkers including O(6)-methylguanine-DNA-methyltransferase (MGMT) promoter and deoxyribonucleic acid (DNA) methylation, loss of heterozygosity (LOH) of chromosomes 1p and 19q, loss of heterozygosity 10q, isocitrate dehydrogenase (IDH) mutations, epidermal growth factor receptor (EGFR), epidermal growth factor, latrophilin, and 7 transmembrane domain-containing protein 1 on chromosome 1 (ELTD1), vascular endothelial growth factor (VEGF), tumor suppressor protein p53, phosphatase and tensin homolog (PTEN), p16INK4a gene, cytochrome c oxidase (CcO), phospholipid metabolites, telomerase messenger expression (hTERT messenger ribonucleic acid [mRNA]), microRNAs (miRNAs), cancer stem cell markers and imaging modalities as potential biomarkers are discussed. Inclusion of emerging biomarkers in prospective clinical trials is warranted in an effort for more effective personalized therapy in the future.

[924]

**TÍTULO / TITLE:** - Synchronous malignant otitis externa and squamous cell carcinoma of the external auditory canal.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Otolaryngol. 2013;2013:837169. doi: 10.1155/2013/837169. Epub 2013 Sep 30.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/837169](#)

**AUTORES / AUTHORS:** - Chin RY; Nguyen TB

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology Head and Neck Surgery, Nepean Hospital, The University of Sydney, Sydney, NSW 2747, Australia.

**RESUMEN / SUMMARY:** - Objectives. To discuss the management of a squamous cell carcinoma in the presence of malignant otitis externa. Study Design. We present only the third reported case in the literature of a synchronous tumour with malignant otitis externa in the literature. Methods. A case report and review of malignant otitis externa and squamous cell carcinomas of the external auditory canal are discussed. Results. A 66-year-old female is presented here with a 2-month history of a painful, discharging left ear refractory to standard antibiotic therapy. Computerised tomography, magnetic resonance imaging, technetium 99 m, and gallium citrate Ga67 scans were consistent with malignant otitis externa. Biopsy in the operating theatre revealed a synchronous squamous cell carcinoma of the external auditory canal. Primary resection of the tumour and surrounding tissues was performed with concomitant treatment with intravenous antibiotics. Conclusions. This is only the third case to be reported in the literature and highlights several important diagnostic and management issues of these two rare conditions. Both conditions may present in a similar manner on clinical assessment and radiological investigations. Aggressive management with surgical resection and treatment with appropriate intravenous antibiotics is necessary to give the best chance for cure.

[925]

**TÍTULO / TITLE:** - Resistant prolactinoma: Is it monoclonal or polyclonal?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2013 Oct;17(Suppl 1):S139-41. doi: 10.4103/2230-8210.119534.

●● Enlace al texto completo (gratis o de pago) [4103/2230-8210.119534](https://doi.org/10.4103/2230-8210.119534)

**AUTORES / AUTHORS:** - Kumar KV; Prusty P

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology, Command Hospital, Lucknow, Uttar Pradesh, India.

**RESUMEN / SUMMARY:** - Prolactinomas are solitary benign neoplasms and resistance to dopamine agonists occur in a small percentage of prolactinomas. Multiple pituitary adenomas are reported in less than 1% of pituitary adenomas and rarely result in resistant prolactinoma. We recently encountered an interesting patient of hyperprolactinemia with multiple pituitary microadenomas. Dopamine agonist use resulted in prolactin normalization and subsequent pregnancy resulted in drug withdrawal. Repeat evaluation after delivery showed a macroprolactinoma and dopamine agonist therapy resulted in biochemical cure without reduction in tumor size. We report the case for its presentation with multiple microadenomas progressing to macroprolactinoma suggesting polyclonal in origin.

[926]

**TÍTULO / TITLE:** - Multifocal thoracic chordoma mimicking a paraganglioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cancer Res Ther. 2013 Jul-Sep;9(3):497-9. doi: 10.4103/0973-1482.119312.

●● Enlace al texto completo (gratis o de pago) [4103/0973-1482.119312](https://doi.org/10.4103/0973-1482.119312)

**AUTORES / AUTHORS:** - Conzo G; Gambardella C; Pasquali D; Ciancia G; Avenia N; Pietra CD; Napolitano S; Palazzo A; Mauriello C; Parmeggiani D; Pettinato G; Napolitano V; Santini L

**INSTITUCIÓN / INSTITUTION:** - Department of Anaesthesiologic, Surgical and Emergency Science, VII Division of General and Endocrine Surgery, Second University of Naples, Naples, Italy.

**RESUMEN / SUMMARY:** - Chordoma of thoracic vertebrae is a very rare locally invasive neoplasm with low grade malignancy arising from embryonic notochordal remnants. Radical surgery remains the cornerstone of the treatment. We describe a case of multifocal T1-T2 chordoma, without bone and disc involvement, incidentally misdiagnosed as a paraganglioma, occurring in a 47-year-old male asymptomatic patient. Neoplasm was radically removed by an endocrine surgeon through a right extended cervicotomy. A preoperative reliable diagnosis of chordoma, as in the reported case, is often difficult. Radical surgery can provide a favorable outcome but, given the high rates of local recurrence of this neoplasm, a strict and careful follow-up is recommended. Although very rare, chordoma should be suggested in the differential diagnosis of the paravertebral cervical masses of unknown origin. Spine surgeon consultation and a FNB should be routinely included in the multidisciplinary preoperative work-up of these neoplasms.

[927]

**TÍTULO / TITLE:** - Chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids and fatal B-cell lymphoma-reply.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - JAMA. Acceso gratuito al texto completo.

- Enlace a la Editora de la Revista <http://jama.ama-assn.org/search.dtl>
  - Cita: JAMA: <> Neurol. 2013 Nov 1;70(11):1459-60. doi: 10.1001/jamaneurol.2013.4757.
  - Enlace al texto completo (gratis o de pago) [1001/jamaneurol.2013.4757](http://jama.ama-assn.org/search.dtl)
- AUTORES / AUTHORS:** - De Graaff HJ; Wattjes MP; Rozemuller AJ; Petzold A; Killestein J
- INSTITUCIÓN / INSTITUTION:** - MS Center Amsterdam, Department of Neurology, VU University Medical Center, Amsterdam, the Netherlands.
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[928]

**TÍTULO / TITLE:** - Chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids and fatal B-cell lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - JAMA. Acceso gratuito al texto completo.

- Enlace a la Editora de la Revista <http://jama.ama-assn.org/search.dtl>
- Cita: JAMA: <> Neurol. 2013 Nov 1;70(11):1459. doi: 10.1001/jamaneurol.2013.4074.
- Enlace al texto completo (gratis o de pago) [1001/jamaneurol.2013.4074](http://jama.ama-assn.org/search.dtl)

**AUTORES / AUTHORS:** - Zhang H; Wu J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, First Hospital of Jilin University, Changchun, China.

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[929]

**TÍTULO / TITLE:** - Nanotherapeutic approaches for brain cancer management.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nanomedicine. 2013 Oct 14. pii: S1549-9634(13)00555-8. doi: 10.1016/j.nano.2013.10.001.

- Enlace al texto completo (gratis o de pago) [1016/j.nano.2013.10.001](http://jama.ama-assn.org/search.dtl)

**AUTORES / AUTHORS:** - Del Burgo LS; Hernandez RM; Orive G; Pedraz JL

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Pharmacy and Pharmaceutical Technology, Faculty of Pharmacy, University of the Basque Country, Vitoria-Gasteiz, España; Networking Biomedical Research Center on Bioengineering, Biomaterials and Nanomedicine, CIBER-BBN, SLFPB-EHU, Vitoria-Gasteiz, España.

**RESUMEN / SUMMARY:** - Around the world, cancer remains one of the most important causes of morbidity and mortality. Worldwide, approximately 238,000 new cases of brain and other central nervous system tumors are diagnosed every year. Nanotherapeutic approaches hold tremendous potential for diagnosis and treatment of brain cancer, including the ability to target complex molecular cargoes to the tumor sites and the capacity of crossing the blood-brain barrier and accessing to the brain after systemic administration. A new generation of “smart” nanoparticles has been designed as novel targeted delivery devices for new therapies including gene therapy, anti-angiogenic and thermotherapy. This review highlights the latest research, opportunities and challenges for developing novel nanotherapeutics for treating brain cancers.

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[930]

**TÍTULO / TITLE:** - Giant pituitary adenoma: can it grow bigger than this?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://bmj.com/search.dtl>

●● Cita: British Medical J. (BMJ): <> Case Rep. 2013 Nov 21;2013. pii: bcr2013201738. doi: 10.1136/bcr-2013-201738.

●● Enlace al texto completo (gratis o de pago) [1136/bcr-2013-201738](http://1136/bcr-2013-201738)

**AUTORES / AUTHORS:** - Garg K; Satyarthee GD; Singh M; Sharma BS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, All India Institute of Medical Sciences, New Delhi, India.

[931]

**TÍTULO / TITLE:** - Glioma mimicking a hypertensive intracerebral hemorrhage.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Aug;54(2):125-7. doi: 10.3340/jkns.2013.54.2.125. Epub 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.54.2.125](http://3340/jkns.2013.54.2.125)

**AUTORES / AUTHORS:** - Choi G; Park DH; Kang SH; Chung YG

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Korea University Medical Center, Korea University College of Medicine, Seoul, Korea.

**RESUMEN / SUMMARY:** - Here, we report a rare case of an anaplastic astrocytoma masquerading as a hypertensive basal ganglia hemorrhage. A 69-year-old woman who had been under medical management for hypertension during the past 3 years suddenly developed right hemiparesis with dysarthria. Brain computed tomography (CT) scans with contrast and CT angiograms revealed an intracerebral hemorrhage (ICH) in the left basal ganglia, without an underlying lesion. She was treated conservatively, but underwent a ventriculoperitoneal shunt operation 3 months after the initial attack due to deteriorated mental status and chronic hydrocephalus. Three months later, her mental status deteriorated further. Magnetic resonance imaging (MRI) with gadolinium demonstrated an irregular enhanced mass in which the previous hemorrhage occurred. The final histological diagnosis which made by stereotactic biopsy was an anaplastic astrocytoma. In the present case, the diagnosis of a high grade glioma was delayed due to tumor bleeding mimicking hypertensive ICH. Thus, a careful review of neuroradiological images including MRI with a suspicion of tumor bleeding is needed even in the patients with past medical history of hypertension.

[932]

**TÍTULO / TITLE:** - Paraneoplastic cerebellar degeneration associated with lymphoepithelial carcinoma of the tonsil.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Neurol. 2013 Oct 17;13(1):147.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2377-13-147](http://1186/1471-2377-13-147)

**AUTORES / AUTHORS:** - Henke C; Rieger J; Hartmann S; Middendorp M; Steinmetz H; Ziemann U

**RESUMEN / SUMMARY:** - BACKGROUND: Paraneoplastic cerebellar degeneration (PCD) is a classical tumor-associated, immune-mediated disease typically associated with gynecological malignancies, small-cell lung-cancer or lymphoma. CASE PRESENTATION: Here we present the case of a 38-year old male with an over 12 months rapidly progressive cerebellar syndrome. Extensive diagnostic workup revealed selective hypermetabolism of the right tonsil in whole-body PET. Histological

examination after tonsillectomy demonstrated a lymphoepithelial carcinoma of the tonsil and the tongue base strongly suggesting a paraneoplastic cause of the cerebellar syndrome. To the best of our knowledge this is the first case of an association of a lymphoepithelial carcinoma, a rare pharyngeal tumor, with PCD. CONCLUSIONS: In cases of classical paraneoplastic syndromes an extensive search for neoplasms should be performed including whole-body PET to detect tumors early in the course of the disease.

[933]

**TÍTULO / TITLE:** - Ganglioneuroma, base of tongue: a rare entity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Diagn Res. 2013 Sep;7(9):2008-9. doi: 10.7860/JCDR/2013/6042.3387. Epub 2013 Sep 10.

●● Enlace al texto completo (gratis o de pago) [7860/JCDR/2013/6042.3387](#)

**AUTORES / AUTHORS:** - Mahajan N; Bharti JN; Singh M; Agarwal S; Khurana N

**INSTITUCIÓN / INSTITUTION:** - Senior Resident, Department of Pathology, Maulana Azad Medical College, New Delhi, India.

**RESUMEN / SUMMARY:** - We have discussed the case of a solitary polypoid ganglioneuroma in a 45-year-old male patient, at the base of tongue, which mimicked a malignancy. The interest of this case lay in the rarity of its incidence at the base of tongue and its gross resemblance to the more common malignant polypoidal growths at this site. The presence of neural elements and ganglion cells at this site makes it important for an inexperienced histopathologist to differentiate it from other neural lesions of the tongue, in order to avoid a misdiagnosis and this can prevent the clinician from administering an inappropriate treatment. Exhaustive search revealed only a very few case reports on the tongue.

[934]

**TÍTULO / TITLE:** - Glioblastoma multiforme: A bigger challenge in resource-limited countries.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Aug;4(Suppl 1):S3-4. doi: 10.4103/0976-3147.116419.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.116419](#)

**AUTORES / AUTHORS:** - Aung L

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Hematology-Oncology, Department of Pediatric Subspecialties, KK Women's and Children's Hospital, 100 Bukit Timah Road, Singapore.

[935]

**TÍTULO / TITLE:** - Evidence for new targets and synergistic effect of metronomic celecoxib/fluvoastatin combination in pilocytic astrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol Commun. 2013 May 20;1(1):17.

●● Enlace al texto completo (gratis o de pago) [1186/2051-5960-1-17](#)

**AUTORES / AUTHORS:** - Mercurio S; Padovani L; Colin C; Carre M; Tchoghandjian A; Scavarda D; Lambert S; Baeza-Kallee N; Fernandez C; Chappe C; Andre N; Figarella-Branger D

**INSTITUCIÓN / INSTITUTION:** - Aix-Marseille Universite, Inserm, CRO2 UMR\_S 911, 27 bd Jean Moulin, 13385, Marseille, cedex 05, France. [dominique.figarella-branger@univ-amu.fr](mailto:dominique.figarella-branger@univ-amu.fr).

**RESUMEN / SUMMARY:** - BACKGROUND: Pilocytic astrocytomas occur predominantly in childhood. In contrast to the posterior fossa location, hypothalamo-chiasmatic pilocytic astrocytomas display a worse prognosis often leading to multiple surgical procedures and/or several lines of chemotherapy and radiotherapy to achieve long-term control. Hypothalamo-chiasmatic pilocytic astrocytomas and cerebellar pilocytic astrocytomas have a distinctive gene signature and several differentially expressed genes (ICAM1, CRK, CD36, and IQGAP1) are targets for available drugs: fluvastatin and/or celecoxib. RESULTS: Quantification by RT-Q-PCR of the expression of these genes was performed in a series of 51 pilocytic astrocytomas and 10 glioblastomas: they were all significantly overexpressed in hypothalamo-chiasmatic pilocytic astrocytomas relative to cerebellar pilocytic astrocytomas, and CRK and ICAM1 were significantly overexpressed in pilocytic astrocytomas versus glioblastomas. We used two commercially available glioblastoma cell lines and three pilocytic astrocytoma explant cultures to investigate the effect of celecoxib/fluvastatin alone or in combination. Glioblastoma cell lines were sensitive to both drugs and a combination of 100 µM celecoxib and 240 µM fluvastatin was the most synergistic. This synergistic combination was used on the explant cultures and led to massive cell death of pilocytic astrocytoma cells. As a proof of concept, a patient with a refractory multifocal pilocytic astrocytoma was successfully treated with the fluvastatin/celecoxib combination used for 18 months. It was well tolerated and led to a partial tumor response. CONCLUSION: This study reports evidence for new targets and synergistic effect of celecoxib/fluvastatin combination in pilocytic astrocytoma. Because it is non-toxic, this new strategy offers hope for the treatment of patients with refractory pilocytic astrocytoma.

[936]

**TÍTULO / TITLE:** - Reduction of MLH1 and PMS2 confers temozolomide resistance and is associated with recurrence of glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Oct 14.

**AUTORES / AUTHORS:** - Shinsato Y; Furukawa T; Yunoue S; Yonezawa H; Minami K; Nishizawa Y; Ikeda R; Kawahara K; Yamamoto M; Hirano H; Tokimura H; Arita K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School of Medical and Dental Sciences Kagoshima University, Kagoshima, Japan.

**RESUMEN / SUMMARY:** - Although there is a relationship between DNA repair deficiency and temozolomide (TMZ) resistance in glioblastoma (GBM), it remains unclear which molecule is associated with GBM recurrence. We isolated three TMZ-resistant human GBM cell lines and examined the expression of O6-methylguanine-DNA methyltransferase (MGMT) and mismatch repair (MMR) components. We used immunohistochemical analysis to compare MutL homolog 1 (MLH1), postmeiotic segregation increased 2 (PMS2) and MGMT expression in primary and recurrent GBM specimens obtained from GBM patients during TMZ treatment. We found a reduction in MLH1 expression and a subsequent reduction in PMS2 protein levels in TMZ-resistant cells. Furthermore, MLH1 or PMS2 knockdown conferred TMZ resistance. In recurrent

GBM tumours, the expression of MLH1 and PMS2 was reduced when compared to primary tumours.

[937]

**TÍTULO / TITLE:** - Small cell lung cancer presenting with a left iliac fossa mass.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://bmj.com/search.dtl>

●● Cita: British Medical J. (BMJ): <> Case Rep. 2013 Nov 14;2013. pii: bcr2013200857. doi: 10.1136/bcr-2013-200857.

●● Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-200857](#)

**AUTORES / AUTHORS:** - Jethwa H; Savage L

**INSTITUCIÓN / INSTITUTION:** - NHS, London, UK.

**RESUMEN / SUMMARY:** - We report a 59-year-old lifelong smoker with severe chronic obstructive pulmonary disease who presented with an acute onset 3-day history of left iliac fossa pain and abdominal distension. Clinical examination revealed a palpable mass in the left iliac fossa. The differential diagnosis was that of a diverticular abscess or colonic tumour. She subsequently underwent a CT scan which showed extensive metastatic liver disease from a primary lung tumour, with hepatomegaly abutting the anterior abdominal wall in the left iliac fossa.

[938]

**TÍTULO / TITLE:** - ZAC1 and SSTR2 are downregulated in non-functioning pituitary adenomas but not in somatotropinomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Oct 2;8(10):e77406. doi: 10.1371/journal.pone.0077406.

●● Enlace al texto completo (gratuito o de pago) [1371/journal.pone.0077406](#)

**AUTORES / AUTHORS:** - Viera Neto L; Wildemberg LE; Colli LM; Kasuki L; Marques NV; Moraes AB; Gasparetto EL; Takiya CM; Castro M; Gadelha MR

**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine and Endocrine Unit, Medical School and Clementino Fraga Filho University Hospital, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil ; Endocrinology Unit, Federal Hospital of Lagoa, Rio de Janeiro, Brazil.

**RESUMEN / SUMMARY:** - INTRODUCTION: There are few data regarding ZAC1 expression in clinically non-functioning pituitary adenomas (NFPA). Because somatotropinomas and NFPA behave differently with respect to tumor shrinkage during somatostatin analogs (SA) therapy, we sought to compare the ZAC1 and somatostatin receptor (sstr) types 1, 2, 3 and 5 mRNA expression in these two pituitary adenoma subtypes and in normal human pituitaries. METHODS: ZAC1 and SSTR mRNA expression levels were evaluated using real-time RT-PCR (TaqMan) in 20 NFPA and compared with the expression levels in 23 somatotropinomas and five normal pituitaries. The NFPA invasiveness was evaluated using magnetic resonance imaging with Hardy's modified criteria. Ki-67 and p53 were evaluated using immunohistochemistry. RESULTS: A total of 20 patients with NFPA [6 males, median age 56 years (range: 30-78)], 23 with acromegaly [12 males, median age 43 years (range: 24-57)] and five normal pituitaries [4 males, median age 48 years (range: 36-54)] were included. Four of the patients (20%) had Hardy's grade 2 tumors; all of the

others had Hardy's grade 3 tumors. The Ki-67 median expression was 2.35 (range: 0.2-9.23), and only four of the tumors (20%) were positive for p53. The ZAC1 mRNA expression was significantly lower in NFPA than in somatotropinomas and in normal pituitaries ( $p < 0.001$  for both), as well as the SSTR2 ( $p = 0.001$  and  $0.01$ , respectively). The SSTR3 expression was higher in the NFPA than in the somatotropinomas and in the normal pituitaries ( $p = 0.03$  and  $0.02$ , respectively). No correlation was found between the ZAC1 mRNA expression and the tumor invasiveness, Ki-67 and p53. CONCLUSION: ZAC1 and SSTR2 are underexpressed and SSTR3 is overexpressed in NFPA compared to those in somatotropinomas and in normal pituitaries, which might explain the lack of tumor shrinkage that is observed in response to commercially available SA therapy in patients with NFPA.

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[939]

**TÍTULO / TITLE:** - An automatic brain tumor segmentation tool.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Conf Proc IEEE Eng Med Biol Soc. 2013 Jul;2013:3339-42. doi: 10.1109/EMBC.2013.6610256.

- Enlace al texto completo (gratis o de pago) [1109/EMBC.2013.6610256](#)

**AUTORES / AUTHORS:** - Diaz I; Boulanger P; Greiner R; Hoehn B; Rowe L; Murtha A

**RESUMEN / SUMMARY:** - This paper introduces an automatic brain tumor segmentation method (ABTS) for segmenting multiple components of brain tumor using four magnetic resonance image modalities. ABTS's four stages involve automatic histogram multi-thresholding and morphological operations including geodesic dilation. Our empirical results, on 16 real tumors, show that ABTS works very effectively, achieving a Dice accuracy compared to expert segmentation of 81% in segmenting edema and 85% in segmenting gross tumor volume (GTV).

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[940]

**TÍTULO / TITLE:** - Seizure as an initial presentation of human immunodeficiency virus: acute toxoplasmosis mimicking glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

- Enlace a la Editora de la Revista <http://bmj.com/search.dtl>

●● Cita: British Medical J. (BMJ): <> Case Rep. 2013 Nov 14;2013. pii: bcr2013200795. doi: 10.1136/bcr-2013-200795.

- Enlace al texto completo (gratis o de pago) [1136/bcr-2013-200795](#)

**AUTORES / AUTHORS:** - Parekh P; Boggs JP; Silverberg M; Marik P

**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine, Eastern Virginia Medical School, Norfolk, Virginia, USA.

**RESUMEN / SUMMARY:** - We present a case of a 46-year-old man with a history significant only for hypertension and depression that presented with a new onset seizure resulting from a right parietal lobe mass. Further evaluation determined the parietal mass to be central nervous system toxoplasmosis, which was the initial presentation of his underlying HIV/AIDS. This case provided a diagnostic challenge and demonstrates the importance of a thorough evaluation as it pertains to a newly diagnosed brain lesion.

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[941]

**TÍTULO / TITLE:** - Role of MYC in Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cold Spring Harb Perspect Med. 2013 Nov 1;3(11). pii: a014308. doi: 10.1101/cshperspect.a014308.

●● [Enlace al texto completo \(gratis o de pago\) 1101/cshperspect.a014308](#)

**AUTORES / AUTHORS:** - Roussel MF; Robinson GW

**INSTITUCIÓN / INSTITUTION:** - Department of Tumor Cell Biology, St. Jude Children's Research Hospital, Memphis, Tennessee 38105.

**RESUMEN / SUMMARY:** - Since its discovery as an oncogene carried by the avian acute leukemia virus MC29 in myelocytomatosis (Roussel et al. 1979) and its cloning (Vennstrom et al. 1982), c-MYC (MYC), as well as its paralogs MYCN and MYCL1, has been shown to play essential roles in cycling progenitor cells born from proliferating zones during embryonic development, and in all proliferating cells after birth. MYC deletion induces cell-cycle exit or cell death, depending on the cell type and milieu, whereas MYC and MYCN amplification or overexpression promotes cell proliferation and occurs in many cancers. Here, we review the relationship of MYC family proteins to the four molecularly distinct medulloblastoma subgroups, discuss the possible roles MYC plays in each of these subgroups and in the developing cells of the posterior fossa, and speculate on possible therapeutic strategies targeting MYC.

[942]

**TÍTULO / TITLE:** - Glioblastoma multiforme: relationship to subventricular zone and recurrence.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuroradiol J. 2013 Nov;26(5):542-7. Epub 2013 Nov 7.

**AUTORES / AUTHORS:** - Kimura M; Lee Y; Miller R; Castillo M

**INSTITUCIÓN / INSTITUTION:** - Clinica de Diagnostico por Imagem; Rio de Janeiro, RJ, Brazil - [detekimura@hotmail.com](mailto:detekimura@hotmail.com).

**RESUMEN / SUMMARY:** - Neurogenesis in the adult mammalian brain is active in two areas: the subgranular zone in the dentate gyrus of the hippocampus and the subventricular zone. Cancer stem cells have been isolated from malignant brain tumors and it is widely believed they arise from transformed endogenous stem cells. We sought to determine if the initial location of glioblastoma (GB) as seen on conventional MRI and its relationship to the subventricular zone (SVZ) predicts the pattern of recurrence. We analyzed the initial (prior to any treatment) and last follow-up MR studies in 49 patients with GB. On post contrast images all non-treated GB were divided into three groups according to the relationship of their enhancing margins to the SVZ: Group I (directly in contact with the SVZ), Group II (in the subcortical [SC] region) and Group III (in both the SVZ and SC regions). Recurrences or continuous growth seen as enhancing areas on follow-up studies were characterized as local, spread, or distant according to their contact with the surgical bed and correlated with the locations of the initial tumors. Local and spread patterns of recurrence occurred with nearly equal frequency (45 and 43% each, respectively) and distant in 12%. In Group I, 80% showed a spread pattern, 20% a local pattern, and none a distant pattern. In Group II, 45% showed a spread pattern, 35% a local pattern, and a 20% distant one. In Group III, 58% showed a local pattern, 33% a spread pattern, and 8% distant one. Unlike other reports, the location of GB in relation to the SVZ in our patients did not predict the pattern of tumor recurrence and/or extension in our patients.

[943]

**TÍTULO / TITLE:** - Paraganglioma as a rare cause of left ventricular thrombus in the setting of preserved ejection fraction: discussing the literature.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://bmj.com/search.dtl>

●● Cita: British Medical J. (BMJ): <> Case Rep. 2013 Nov 19;2013. pii: bcr2013202001. doi: 10.1136/bcr-2013-202001.

●● Enlace al texto completo (gratis o de pago) [1136/bcr-2013-202001](#)

**AUTORES / AUTHORS:** - Shafiq A; Nguyen P; Hudson MP; Rabbani B

**INSTITUCIÓN / INSTITUTION:** - Henry Ford Hospital, Detroit, Michigan, USA.

**RESUMEN / SUMMARY:** - Paragangliomas and pheochromocytomas are catecholamine-secreting tumours which if remain undiagnosed may cause severe morbidity and mortality. In rare circumstances these tumours can cause left ventricular (LV) thrombi to form by inducing cardiomyopathy and subsequent embolic complications. After a thorough literature review, six previous cases were found that presented the formation of an LV thrombus in the setting of a pheochromocytoma or paraganglioma. A majority of these cases were associated with significant wall motion abnormalities and their cardiac ejection fraction (EF) was compromised. This is a rare case of a patient developing LV thrombi in the setting of a paraganglioma with normal cardiac EF. We present this case to compare the similarities and differences of our case with previously reported cases and emphasise the importance of suspecting these LV thrombi in patients with these neuroendocrine tumours.

[944]

**TÍTULO / TITLE:** - De novo glioblastoma in the territory of a prior middle cerebral artery infarct.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Neurol Med. 2013;2013:356526. doi: 10.1155/2013/356526. Epub 2013 Oct 10.

●● Enlace al texto completo (gratis o de pago) [1155/2013/356526](#)

**AUTORES / AUTHORS:** - Wojtasiewicz TJ; Ducruet AF; Noticewala SS; Canoll P; McKhann GM 2nd

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, College of Physicians and Surgeons, Neurological Institute of New York, Columbia University, 710 W 168<sup>th</sup> Street, New York, NY 10032, USA.

**RESUMEN / SUMMARY:** - We report a case of a patient who developed glioblastoma in the territory of a previous infarction. Two years after an ischemic stroke, the patient presented with a cystic, necrotic, and heterogeneously enhancing mass. Open biopsy and debulking of the mass with histological analysis revealed the mass to be glioblastoma. Though several cases of posttraumatic GBM have been reported, this is the first proposed case of GBM after an ischemic stroke. From this case, we suggest that the ischemic stroke, like other forms of cortical injury, may predispose to glioblastoma formation.

[945]

**TÍTULO / TITLE:** - Double-labelling immunohistochemistry for MGMT and a “cocktail” of non-tumourous elements is a reliable, quick and easy technique for inferring methylation status in glioblastomas and other primary brain tumours.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Neuropathol Commun. 2013 Jun 10;1(1):22.

●● Enlace al texto completo (gratis o de pago) [1186/2051-5960-1-22](#)

**AUTORES / AUTHORS:** - Burke E; Grobler M; Elderfield K; Bond F; Crocker M; Taylor R; Bridges LR

**INSTITUCIÓN / INSTITUTION:** - Cellular Pathology, St George’s Hospital, Blackshaw Road, London SW17 0QT, UK. [leslie.bridges@stgeorges.nhs.uk](mailto:leslie.bridges@stgeorges.nhs.uk).

**RESUMEN / SUMMARY:** - BACKGROUND: Our aim was to develop a new protocol for MGMT immunohistochemistry with good agreement between observers and good correlation with molecular genetic tests of tumour methylation. We examined 40 primary brain tumours (30 glioblastomas and 10 oligodendroglial tumours) with our new technique, namely double-labelling immunohistochemistry for MGMT and a “cocktail” of non-tumour antigens (CD34, CD45 and CD68). We compared the results with single-labelling immunohistochemistry for MGMT and methylation-specific multiplex ligation-dependent probe amplification (MS-MLPA, a recognised molecular genetic technique which we applied as the gold-standard for the methylation status). RESULTS: Double-labelling immunohistochemistry for MGMT produced a visual separation of tumourous and non-tumourous elements on the same histological slide, making it quick and easy to determine whether tumour cell nuclei were MGMT-positive or MGMT-negative (and thereby infer the methylation status of the tumour). We found good agreement between observers (kappa 0.76) and within observer (kappa 0.84). Furthermore, double-labelling showed good specificity (80%), sensitivity (73.33%), positive predictive value (PPV, 83.33%) and negative predictive value (NPV, 68.75%) compared to MS-MLPA. Double-labelling was quicker and easier to assess than single-labelling and it outperformed quantitative computerised image analysis of MGMT single-labelling in terms of sensitivity, specificity, PPV and NPV. CONCLUSIONS: Double-labelling immunohistochemistry for MGMT and a cocktail of non-tumourous elements provides a “one look” method for determining whether tumour cell nuclei are MGMT-positive or MGMT-negative. This can be used to infer the methylation status of the tumour. There is good observer agreement and good specificity, sensitivity, PPV and NPV compared to a molecular gold-standard.

[946]

**TÍTULO / TITLE:** - Challenge of Giant pituitary tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World Neurosurg. 2013 Oct 9. pii: S1878-8750(13)01300-4. doi: 10.1016/j.wneu.2013.10.014.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.10.014](#)

**AUTORES / AUTHORS:** - Goel A

**INSTITUCIÓN / INSTITUTION:** - Professor and Head, Department of Neurosurgery, King Edward Memorial Hospital and Seth G. S. Medical College, Parel, Mumbai, INDIA. Electronic address: [atulgoel62@hotmail.com](mailto:atulgoel62@hotmail.com).

[947]

**TÍTULO / TITLE:** - Neurothekeoma of the toe.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Foot Ankle Spec. 2013 Dec;6(6):479-81. doi: 10.1177/1938640013507106. Epub 2013 Oct 9.

●● Enlace al texto completo (gratis o de pago) [1177/1938640013507106](#)

**AUTORES / AUTHORS:** - Wiemeyer S; Hafer G

**INSTITUCIÓN / INSTITUTION:** - Department of Trauma, Hand and Reconstructive Surgery, Niels-Stensen-Kliniken, Marienhospital Osnabruck, Osnabruck, Germany (SW).

**RESUMEN / SUMMARY:** - Neurothekeomas are benign connective tissue tumors probably of nerve sheath origin. Making diagnosis is often difficult, because of many histological similar looking tumors. Immunostaining of S-100 protein is a helpful method for differentiation. We report a case of subungual neurothekeoma affecting the little toe, which is to our knowledge the first to be described in the literature. In spite of an incomplete excision of the tumor with tails reaching to the base of the specimen, no recurrence after 1-year follow-up was observed. Levels of Evidence: Therapeutic, Level IV: Case Study.

[948]

**TÍTULO / TITLE:** - Hypothalamic glioma masquerading as craniopharyngioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Jul;4(3):323-5. doi: 10.4103/0976-3147.118790.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.118790](#)

**AUTORES / AUTHORS:** - Vyas S; Prabhakar N; Tewari MK; Radotra BD; Khandelwal N  
**INSTITUCIÓN / INSTITUTION:** - Department of Radiodiagnosis, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

**RESUMEN / SUMMARY:** - Hypothalamic glioma account for 10-15% of supratentorial tumors in children. They usually present earlier (first 5 years of age) than craniopharyngioma. Hypothalamic glioma poses a diagnostic dilemma with craniopharyngioma and other hypothalamic region tumors, when they present with atypical clinical or imaging patterns. Neuroimaging modalities especially MRI plays a very important role in scrutinizing the lesions in the hypothalamic region. We report a case of a hypothalamic glioma masquerading as a craniopharyngioma on imaging along with brief review of both the tumors.

[949]

**TÍTULO / TITLE:** - Spinal neurocytoma with extensive syringohydromyelia.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://bmj.com/search.dtl>

●● Cita: British Medical J. (BMJ): <> Case Rep. 2013 Oct 16;2013. pii: bcr2013201285. doi: 10.1136/bcr-2013-201285.

●● Enlace al texto completo (gratis o de pago) [1136/bcr-2013-201285](#)

**AUTORES / AUTHORS:** - Hanafiah M; Low SF; Sridharan R; Young B

**INSTITUCIÓN / INSTITUTION:** - Radiology Department, MARA University of Technology Clinical Training Centre, Sungai Buloh, Selangor, Malaysia.

[950]

**TÍTULO / TITLE:** - Predictors of central nervous system involvement in diffuse large B-cell lymphoma: a divining rod is wanted.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rev Bras Hematol Hemoter. 2013;35(4):235-6. doi: 10.5581/1516-8484.20130063.

●● Enlace al texto completo (gratis o de pago) [5581/1516-8484.20130063](#)

**AUTORES / AUTHORS:** - Ferreri AJ

**INSTITUCIÓN / INSTITUTION:** - San Raffaele Scientific Institute, Milan, Italy.

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[951]

**TÍTULO / TITLE:** - Suprasellar mature cystic teratoma: an unusual location for an uncommon tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Neurol Med. 2013;2013:180497. doi: 10.1155/2013/180497. Epub 2013 Oct 2.

●● Enlace al texto completo (gratis o de pago) [1155/2013/180497](#)

**AUTORES / AUTHORS:** - Sweiss RB; Shweikeh F; Sweiss FB; Zyck S; Dalvin L; Siddiqi J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Arrowhead Regional Medical Center, 400 N. Pepper Avenue Colton, CA 92324, USA.

**RESUMEN / SUMMARY:** - Intracranial germ cell tumors are uncommon and account for only 0.3-3.4% of all intracranial tumors. Teratomas are a subset of these neoplasms, and their finding in brain structures is exceptionally rare, and occurrence within the skull base is quite novel. The authors report the case of a 57-year-old male patient who presented with vision changes, incontinence, ataxia, and altered mental status of 1 week's duration. Imaging revealed a large intrasellar mass with suprasellar extension, involvement of the ventricular system, and marked hydrocephalus with the enlargement of the lateral and third ventricles. The patient underwent a pterional craniotomy/transsylvian approach for resection of the mass. Postoperative histological examination of the resected mass was confirmatory for a mature cystic teratoma. This was followed by radiotherapy, stereotactic radiosurgery, and adjuvant radiotherapy. At the most recent followup, approximately 4 years later, the patient is doing well with improved vision since the operation. This report highlights our experience with a teratoma in a very unusual location, and we review the relevant literature.

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[952]

**TÍTULO / TITLE:** - Nanoprobes Visualizing Gliomas by Crossing the Blood Brain Tumor Barrier.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Small. 2013 Sep 17. doi: 10.1002/sml.201301673.

●● Enlace al texto completo (gratis o de pago) [1002/sml.201301673](#)

**AUTORES / AUTHORS:** - Gao X; Li C

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Smart Drug Delivery, Ministry of Education, School of Pharmacy, Fudan University 826 Zhangheng Rd., Shanghai, 201203, China.

**RESUMEN / SUMMARY:** - The difficulty in delineating the glioma margins in brain is a major obstacle for its completed resection, which leads to the disproportionately high recurrence and mortality. Besides the fast exertion rate, inadequate sensitivity and non-

targeting specificity, the main reason leading to failure of small molecular probes to define gliomas is their incapability to efficiently cross the blood brain tumor barrier (BBTB). Nanoprobes (NPs) show promise to precisely delineate the geographically irregular tumor margins due to their tunable size/circulation lifetime that maximize their passive intratumoral accumulation and their convenience for surface modification that increases the BBTB transcytosis efficacy, imaging sensitivity and receptor targeting specificity. In this work, the characteristics of the BBTB are addressed from biological and physiological perspectives, strategies are presented to deliver NPs across the BBTB, recent developments of NPs are reviewed for glioma visualization and finally the difficulty and promise for clinical translation of NPs are described. Overall, NPs hold great potential for glioma imaging and treatment by pre-surgically delineating tumor margins and intra-operatively guiding tumor excision.

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[953]

**TÍTULO / TITLE:** - Acquired stuttering due to recurrent anaplastic astrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - British Medical J (BMJ). Acceso gratuito al texto completo.

●● Enlace a la Editora de la Revista <http://bmi.com/search.dtl>

●● Cita: British Medical J. (BMJ): <> Case Rep. 2013 Nov 19;2013. pii: bcr2013009562. doi: 10.1136/bcr-2013-009562.

●● Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-009562](#)

**AUTORES / AUTHORS:** - Peters KB; Turner S

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurology and Surgery, Duke University Medical Center, Durham, North Carolina, USA.

**RESUMEN / SUMMARY:** - Acquired (neurogenic) stuttering is a rare phenomenon seen after cerebral infarction or brain injury. Aetiology of this symptom is unclear, but recent evidence supports that it is a disturbance in the left hemispheric neural network involving the interplay between the cortex and basal ganglia. We present the case of a patient who develops acquired stuttering after a recurrence of a right temporoparietal anaplastic astrocytoma (WHO grade III). We also review other cases of acquired stuttering and known anatomical correlates.

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