

#01#

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

### GLIOMAS AND RELATED TUMORS

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

Abril - Mayo 2013 / April - May 2013

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[1]

**TÍTULO / TITLE:** - Cancer. Silencing a metabolic oncogene.

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

**REVISTA / JOURNAL:** - Science. 2013 May 3;340(6132):558-9. doi: 10.1126/science.1238523.

●●Enlace al texto completo (gratis o de pago) [1126/science.1238523](#)

**AUTORES / AUTHORS:** - Kim J; DeBerardinis RJ

**INSTITUCIÓN / INSTITUTION:** - Children's Medical Center Research Institute, University of Texas Southwestern Medical Center, Dallas, TX 75390, USA.

[2]

**TÍTULO / TITLE:** - An inhibitor of mutant IDH1 delays growth and promotes differentiation of glioma cells.

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

**REVISTA / JOURNAL:** - Science. 2013 May 3;340(6132):626-30. doi: 10.1126/science.1236062. Epub 2013 Apr 4.

●●Enlace al texto completo (gratis o de pago) [1126/science.1236062](#)

**AUTORES / AUTHORS:** - Rohle D; Popovici-Muller J; Palaskas N; Turcan S; Grommes C; Campos C; Tsoi J; Clark O; Oldrini B; Komisopoulou E; Kunii K; Pedraza A; Schalm S; Silverman L; Miller A; Wang F; Yang H; Chen Y; Kernytsky A; Rosenblum MK; Liu W; Biller SA; Su SM; Brennan CW; Chan TA; Graeber TG; Yen KE; Mellinghoff IK

**INSTITUCIÓN / INSTITUTION:** - Human Oncology and Pathogenesis Program, Memorial Sloan-Kettering Cancer Center, New York, NY 10065, USA.

**RESUMEN / SUMMARY:** - The recent discovery of mutations in metabolic enzymes has rekindled interest in harnessing the altered metabolism of cancer cells for cancer therapy. One potential drug target is isocitrate dehydrogenase 1 (IDH1), which is mutated in multiple human cancers. Here, we examine the role of mutant IDH1 in fully transformed cells with endogenous IDH1 mutations. A selective R132H-IDH1 inhibitor (AGI-5198) identified through a high-throughput screen blocked, in a dose-dependent manner, the ability of the mutant enzyme (mIDH1) to produce R-2-hydroxyglutarate (R-2HG). Under conditions of near-complete R-2HG inhibition, the mIDH1 inhibitor induced demethylation of histone H3K9me3 and expression of genes associated with gliogenic differentiation. Blockade of mIDH1 impaired the growth of IDH1-mutant—but not IDH1-wild-type—glioma cells without appreciable changes in genome-wide DNA methylation. These data suggest that mIDH1 may promote glioma growth through mechanisms beyond its well-characterized epigenetic effects.

[3]

**TÍTULO / TITLE:** - Glioblastoma stem cells generate vascular pericytes to support vessel function and tumor growth.

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

**REVISTA / JOURNAL:** - Cell. 2013 Mar 28;153(1):139-52. doi: 10.1016/j.cell.2013.02.021.

●●Enlace al texto completo (gratis o de pago) [1016/j.cell.2013.02.021](http://1016/j.cell.2013.02.021)

**AUTORES / AUTHORS:** - Cheng L; Huang Z; Zhou W; Wu Q; Donnola S; Liu JK; Fang X; Sloan AE; Mao Y; Lathia JD; Min W; McLendon RE; Rich JN; Bao S

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

**RESUMEN / SUMMARY:** - Glioblastomas (GBMs) are highly vascular and lethal brain tumors that display cellular hierarchies containing self-renewing tumorigenic glioma stem cells (GSCs). Because GSCs often reside in perivascular niches and may undergo mesenchymal differentiation, we interrogated GSC potential to generate vascular pericytes. Here, we show that GSCs give rise to pericytes to support vessel function and tumor growth. In vivo cell lineage tracing with constitutive and lineage-specific fluorescent reporters demonstrated that GSCs generate the majority of vascular pericytes. Selective

elimination of GSC-derived pericytes disrupts the neovasculature and potently inhibits tumor growth. Analysis of human GBM specimens showed that most pericytes are derived from neoplastic cells. GSCs are recruited toward endothelial cells via the SDF-1/CXCR4 axis and are induced to become pericytes predominantly by transforming growth factor beta. Thus, GSCs contribute to vascular pericytes that may actively remodel perivascular niches. Therapeutic targeting of GSC-derived pericytes may effectively block tumor progression and improve antiangiogenic therapy.

[4]

**TÍTULO / TITLE:** - Medicine. (Poly)combing the pediatric cancer genome for answers.

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

**REVISTA / JOURNAL:** - Science. 2013 May 17;340(6134):823-4. doi: 10.1126/science.1239223.

●●Enlace al texto completo (gratis o de pago) [1126/science.1239223](#)

**AUTORES / AUTHORS:** - Morgan MA; Shilatifard A

**INSTITUCIÓN / INSTITUTION:** - Stowers Institute for Medical Research, 1000 East 50<sup>th</sup> Street, Kansas City, MO 64110, USA.

[5]

**TÍTULO / TITLE:** - Images in clinical medicine. Persistent hemichorea.

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

**REVISTA / JOURNAL:** - N Engl J Med. 2013 May 16;368(20):e26. doi: 10.1056/NEJMicm1204276.

●●Enlace al texto completo (gratis o de pago) [1056/NEJMicm1204276](#)

**AUTORES / AUTHORS:** - Kuwahara H

**INSTITUCIÓN / INSTITUTION:** - Tokyo Metropolitan Bokutoh Hospital, Tokyo, Japan.

[6]

**TÍTULO / TITLE:** - Tumor-stromal interactions in medulloblastoma.

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

**REVISTA / JOURNAL:** - N Engl J Med. 2013 May 16;368(20):1942-3. doi: 10.1056/NEJMcibr1302851.

●●Enlace al texto completo (gratis o de pago) [1056/NEJMcibr1302851](#)

**AUTORES / AUTHORS:** - Pollack IF

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Children's Hospital of Pittsburgh of UPMC, University of Pittsburgh School of Medicine, Pittsburgh, USA.

[7]

**TÍTULO / TITLE:** - Whole-genome sequencing identifies genetic alterations in pediatric low-grade gliomas.

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

**REVISTA / JOURNAL:** - Nat Genet. 2013 Apr 14;45(6):602-12. doi: 10.1038/ng.2611. Epub 2013 Apr 14.

●●Enlace al texto completo (gratis o de pago) [1038/ng.2611](http://1038/ng.2611)

**AUTORES / AUTHORS:** - Zhang J; Wu G; Miller CP; Tatevossian RG; Dalton JD; Tang B; Orisme W; Punchihewa C; Parker M; Qaddoumi I; Boop FA; Lu C; Kandoth C; Ding L; Lee R; Huether R; Chen X; Hedlund E; Nagahawatte P; Rusch M; Boggs K; Cheng J; Becksfort J; Ma J; Song G; Li Y; Wei L; Wang J; Shurtleff S; Easton J; Zhao D; Fulton RS; Fulton LL; Dooling DJ; Vadodaria B; Mulder HL; Tang C; Ochoa K; Mullighan CG; Gajjar A; Kriwacki R; Sheer D; Gilbertson RJ; Mardis ER; Wilson RK; Downing JR; Baker SJ; Ellison DW

**INSTITUCIÓN / INSTITUTION:** - Department of Computational Biology, St. Jude Children's Research Hospital, Memphis, Tennessee, USA.

**RESUMEN / SUMMARY:** - The most common pediatric brain tumors are low-grade gliomas (LGGs). We used whole-genome sequencing to identify multiple new genetic alterations involving BRAF, RAF1, FGFR1, MYB, MYBL1 and genes with histone-related functions, including H3F3A and ATRX, in 39 LGGs and low-grade glioneuronal tumors (LGGNTs). Only a single non-silent somatic alteration was detected in 24 of 39 (62%) tumors. Intragenic duplications of the portion of FGFR1 encoding the tyrosine kinase domain (TKD) and rearrangements of MYB were recurrent and mutually exclusive in 53% of grade II diffuse LGGs. Transplantation of Trp53-null neonatal astrocytes expressing FGFR1 with the duplication involving the TKD into the brains of nude mice generated high-grade astrocytomas with short latency and 100% penetrance. FGFR1 with the duplication induced FGFR1 autophosphorylation and upregulation of the MAPK/ERK and PI3K pathways, which could be blocked by specific inhibitors. Focusing on the therapeutically challenging diffuse LGGs, our study of 151 tumors has discovered genetic alterations and potential therapeutic targets across the entire range of pediatric LGGs and LGGNTs.

[8]

**TÍTULO / TITLE:** - alphavbeta3 Integrin and Fibroblast growth factor receptor 1 (FGFR1): Prognostic factors in a phase I-II clinical trial associating continuous administration of Tipifarnib with radiotherapy for patients with newly diagnosed glioblastoma.

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

**REVISTA / JOURNAL:** - Eur J Cancer. 2013 Apr 5. pii: S0959-8049(13)00172-X. doi: 10.1016/j.ejca.2013.02.033.

●●Enlace al texto completo (gratis o de pago) [1016/j.ejca.2013.02.033](http://1016/j.ejca.2013.02.033)

**AUTORES / AUTHORS:** - Ducassou A; Uro-Coste E; Verrelle P; Filleron T; Benouaich-Amiel A; Lubrano V; Sol JC; Delisle MB; Favre G; Ken S; Laprie A; De Porre P; Toulas C; Poublanc M; Cohen-Jonathan Moyal E

**INSTITUCIÓN / INSTITUTION:** - Institut Claudius Regaud, Departement de Radiotherapie, Toulouse F-31000, France.

**RESUMEN / SUMMARY:** - BACKGROUND: Based on our previous results showing the involvement of the farnesylated form of RhoB in glioblastoma radioresistance, we designed a phase II trial associating the farnesyltransferase inhibitor Tipifarnib with radiotherapy in patients with glioblastoma and studied the prognostic values of the proteins which we have previously shown control this pathway. PATIENTS AND METHODS: Patients were treated with 200mg Tipifarnib (recommended dose (RD)) given continuously during radiotherapy. Twenty-seven patients were included in the phase II whose primary end-point was time to progression (TTP). Overall survival (OS) and biomarker analysis were secondary end-points. Expressions of alphavbeta3, alphavbeta5 integrins, FAK, ILK, fibroblast growth factor 2 (FGF2) and fibroblast growth factor receptor 1 (FGFR1) were studied by immuno-histochemistry in the tumour of the nine patients treated at the RD during the previously performed phase I and on those of the phase II patients. We evaluated the correlation of the expressions of these proteins with the clinical outcome. RESULTS: For the phase II patients median TTP was 23.1weeks (95%CI=[15.4; 28.2]) while the median OS was 80.3weeks (95%CI=[57.8; 102.7]). In the pooled phase I and II population, median OS was 60.4w (95%CI=[47.3; 97.6]) while median TTP was 18.1w (95%CI=[16.9; 25.6]). FGFR1 over-expression (HR=4.65; 95%CI=[1.02; 21.21], p=0.047) was correlated with shorter TTP while FGFR1 (HR=4.1 (95% CI=[1.09-15.4]; p=0.036)) and alphavbeta3 (HR=10.38 (95%CI=[2.70; 39.87], p=0.001)) over-expressions were associated with reduced OS. CONCLUSION: Association of 200mg Tipifarnib with radiotherapy shows promising OS but no increase in TTP compared to historical data. FGFR1 and alphavbeta3 integrin are independent bad prognostic factors of OS and TTP.

[9]

**TÍTULO / TITLE:** - Putting a halt on PRC2 in pediatric glioblastoma.

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

**REVISTA / JOURNAL:** - Nat Genet. 2013 May 29;45(6):587-9. doi: 10.1038/ng.2647.

●●Enlace al texto completo (gratis o de pago) [1038/ng.2647](http://1038/ng.2647)

**AUTORES / AUTHORS:** - Voigt P; Reinberg D

**INSTITUCIÓN / INSTITUTION:** - Howard Hughes Medical Institute and the Department of Biochemistry and Molecular Pharmacology, New York University School of Medicine, New York, New York, USA.

**RESUMEN / SUMMARY:** - Two new studies show that the known histone H3 alteration p.Lys27Met in pediatric glioma leads to globally diminished trimethylation at histone H3 lysine 27. The mutant histone H3 acts as a selective inhibitor of the PRC2 chromatin-modifying complex by binding and presumably sequestering it, shedding light on how this variant may contribute to the etiology of these highly malignant brain tumors.

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[10]

**TÍTULO / TITLE:** - Steroid Injection for Morton Neuroma-Data-Based Justification: Commentary on an article by Colin E. Thomson, BSc(Hons), PhD, et al.: "Methylprednisolone Injections for the Treatment of Morton Neuroma. A Patient-Blinded Randomized Trial".

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

**REVISTA / JOURNAL:** - J Bone Joint Surg Am. 2013 May 1;95(9):e641-2. doi: 10.2106/JBJS.M.00172.

●●Enlace al texto completo (gratis o de pago) [2106/JBJS.M.00172](#)

**AUTORES / AUTHORS:** - Smith RW

**INSTITUCIÓN / INSTITUTION:** - Harbor General Hospital, Torrance, California.

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[11]

**TÍTULO / TITLE:** - Evaluation of Memory Impairment in Aging Adult Survivors of Childhood Acute Lymphoblastic Leukemia Treated With Cranial Radiotherapy.

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

**REVISTA / JOURNAL:** - J Natl Cancer Inst. 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1093/jnci/djt089](#)

**AUTORES / AUTHORS:** - Armstrong GT; Reddick WE; Petersen RC; Santucci A; Zhang N; Srivastava D; Ogg RJ; Hillenbrand CM; Sabin N; Krasin MJ; Kun L; Pui CH; Hudson MM; Robison LL; Krull KR

**INSTITUCIÓN / INSTITUTION:** - Affiliations of authors: Department of Epidemiology and Cancer Control (GTA, AS, LLR, KRK), Department of Radiological Sciences (WER, RJO, CMH, NS, MJK, LK), Department of Biostatistics (NS, DS), and Department of Oncology (C-HP, MMH), St. Jude Children's Research Hospital, Memphis, TN; Department of Neurology (RCP), Mayo Clinic, Rochester, MN.

**RESUMEN / SUMMARY:** - BackgroundCranial radiotherapy (CRT) is a known risk factor for neurocognitive impairment in survivors of childhood cancer and may increase risk for mild cognitive impairment and dementia in adulthood.MethodsWe performed a cross-sectional evaluation of survivors of

childhood acute lymphoblastic leukemia (ALL) treated with 18 Gy (n = 127) or 24 Gy (n = 138) CRT. Impairment (age-adjusted score >1 standard deviation below expected mean, two-sided exact binomial test) on the Wechsler Memory Scale IV (WMS-IV) was measured. A subset of survivors (n = 85) completed structural and functional neuroimaging. Results Survivors who received 24 Gy, but not 18 Gy, CRT had impairment in immediate (impairment rate = 33.8%, 95% confidence interval [CI] = 25.9% to 42.4%; P < .001) and delayed memory (impairment rate = 30.2%, 95% CI = 22.6% to 38.6%; P < .001). The mean score for long-term narrative memory among survivors who received 24 Gy CRT was equivalent to that for individuals older than 69 years. Impaired immediate memory was associated with smaller right (P = .02) and left (P = .008) temporal lobe volumes, and impaired delayed memory was associated with thinner parietal and frontal cortices. Lower hippocampal volumes and increased functional magnetic resonance imaging activation were observed with memory impairment. Reduced cognitive status (Brief Cognitive Status Exam from the WMS-IV) was identified after 24 Gy (18.5%, 95% CI = 12.4% to 26.1%; P < .001), but not 18 Gy (8.7%, 95% CI = 4.4% to 15.0%; P = .11), CRT, suggesting a dose-response effect. Employment rates were equivalent (63.8% for 24 Gy CRT and 63.0% for 18 Gy CRT). Conclusions Adult survivors who received 24 Gy CRT had reduced cognitive status and memory, with reduced integrity in neuroanatomical regions essential in memory formation, consistent with early onset mild cognitive impairment.

[12]

**TÍTULO / TITLE:** - Methylprednisolone injections for the treatment of morton neuroma: a patient-blinded randomized trial.

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

**REVISTA / JOURNAL:** - J Bone Joint Surg Am. 2013 May 1;95(9):790-8. doi: 10.2106/JBJS.I.01780.

●●Enlace al texto completo (gratis o de pago) [2106/JBJS.I.01780](#)

**AUTORES / AUTHORS:** - Thomson CE; Beggs I; Martin DJ; McMillan D; Edwards RT; Russell D; Yeo ST; Russell IT; Gibson JN

**INSTITUCIÓN / INSTITUTION:** - Health Sciences, Queen Margaret University, Queen Margaret University Drive, Edinburgh EH21 6UU, Scotland. E-mail address for C.E. Thomson: [cthomson@qmu.ac.uk](mailto:cthomson@qmu.ac.uk).

**RESUMEN / SUMMARY:** - BACKGROUND: Morton neuroma is a common cause of neuralgia affecting the web spaces of the toes. Corticosteroid injections are commonly administered as a first-line therapy, but the evidence for their effectiveness is weak. Our primary research aim was to determine whether corticosteroid injection is an effective treatment for Morton neuroma compared with an anesthetic injection as a placebo control. METHODS: We performed a pragmatic, patient-blinded randomized trial set within hospital orthopaedic

outpatient clinics in Edinburgh, United Kingdom. One hundred and thirty-one participants with Morton neuroma (mean age, fifty-three years; 111 [85%] female) were randomized to receive either corticosteroid and anesthetic (1 mL methylprednisolone [40 mg] and 1 mL 2% lignocaine) or anesthetic alone (2 mL 1% lignocaine). An ultrasonographic image was obtained before treatment, and injections were performed with the needle placed under ultrasonographic guidance. The primary outcome was the difference in patient global assessment of foot health between the two groups at three months after injection. This was measured with use of a 100-unit visual analog scale (VAS) anchored by “best imaginable health state” and “worst imaginable health state.” RESULTS: Compared with the control group, global assessment of foot health in the corticosteroid group was significantly better at three months (mean difference, 14.1 scale points [95% confidence interval, 5.5 to 22.8 points];  $p = 0.002$ ). The difference between the groups was also significant at one month. Significant and nonsignificant improvements associated with the corticosteroid injection were observed for measures of pain, function, and patient global assessment of general health at one and three months after injection. The size of the neuroma as determined by ultrasonography did not significantly influence the treatment effect. CONCLUSIONS: Corticosteroid injections for Morton neuroma can be of symptomatic benefit for at least three months. LEVEL OF EVIDENCE: Therapeutic Level I. See Instructions for Authors for a complete description of levels of evidence.

[13]

**TÍTULO / TITLE:** - The histone H3.3K27M mutation in pediatric glioma reprograms H3K27 methylation and gene expression.

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

**REVISTA / JOURNAL:** - Genes Dev. 2013 May 1;27(9):985-90. doi: 10.1101/gad.217778.113. Epub 2013 Apr 19.

●●Enlace al texto completo (gratis o de pago) [1101/gad.217778.113](#)

**AUTORES / AUTHORS:** - Chan KM; Fang D; Gan H; Hashizume R; Yu C; Schroeder M; Gupta N; Mueller S; James CD; Jenkins R; Sarkaria J; Zhang Z

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry and Molecular Biology.

**RESUMEN / SUMMARY:** - Recent studies have identified a Lys 27-to-methionine (K27M) mutation at one allele of H3F3A, one of the two genes encoding histone H3 variant H3.3, in 60% of high-grade pediatric glioma cases. The median survival of this group of patients after diagnosis is approximately 1 yr. Here we show that the levels of H3K27 di- and trimethylation (H3K27me2 and H3K27me3) are reduced globally in H3.3K27M patient samples due to the expression of the H3.3K27M mutant allele. Remarkably, we also observed that H3K27me3 and Ezh2 (the catalytic subunit of H3K27 methyltransferase) at chromatin are dramatically increased locally at hundreds of gene loci in

H3.3K27M patient cells. Moreover, the gain of H3K27me3 and Ezh2 at gene promoters alters the expression of genes that are associated with various cancer pathways. These results indicate that H3.3K27M mutation reprograms epigenetic landscape and gene expression, which may drive tumorigenesis.

[14]

**TÍTULO / TITLE:** - An unusual case of cystic interstitial lung disease.

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

**REVISTA / JOURNAL:** - Lancet. 2013 Apr 6;381(9873):1246. doi: 10.1016/S0140-6736(13)60179-8.

●●Enlace al texto completo (gratis o de pago) [1016/S0140-6736\(13\)60179-8](#)

**AUTORES / AUTHORS:** - Stefani A; Rossi G; Pecchi A; Bertolini F; Falasca A; Aramini B; Morandi U

**INSTITUCIÓN / INSTITUTION:** - Division of Thoracic Surgery, Modena University Hospital, Modena, Italy. [alessandro.stefani@unimore.it](mailto:alessandro.stefani@unimore.it)

[15]

**TÍTULO / TITLE:** - Clinical trial participation and outcome for patients with glioblastoma: Multivariate analysis from a comprehensive dataset.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Jun;20(6):783-9. doi: 10.1016/j.jocn.2012.09.013. Epub 2013 Apr 29.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.09.013](#)

**AUTORES / AUTHORS:** - Field KM; Drummond KJ; Yilmaz M; Tacey M; Compston D; Gibbs P; Rosenthal MA

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, Royal Melbourne Hospital, Victoria, Australia; Ludwig Institute for Cancer Research (Parkville Branch), Victoria, Australia; BioGrid Australia, Level 6 North, Royal Melbourne Hospital, Grattan Street, Parkville, Victoria 3050, Australia. Electronic address: [Kathryn.field@mh.org.au](mailto:Kathryn.field@mh.org.au).

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common malignant brain tumor in adults. Although multiple clinical and tumor-related variables affect survival outcomes, the effect of clinical trial participation has not been explored. The aim of this study was to determine whether clinical trial participation improves outcome for patients with GBM. Data from patients with GBM were accessed from a dataset collected over 12 years (1998-2010) at two institutions. Univariable and multivariate logistic regression analyses were performed to look for relationships between clinical trial participation, other baseline clinical and sociodemographic variables and overall survival (OS). In total, 542 patients were identified and included in the analysis; median age was

62years. Sixty-one patients (11%) were enrolled in a clinical trial. Clinical trial enrollment was associated with improved median survival (14.5months compared to 6.3months,  $p < 0.001$ ) and this difference remained significant in multivariate analysis (hazard ratio 0.67,  $p = 0.046$ ). Age, poor performance status and operation type were also independent predictors for OS in multivariate analysis. Disease site, socioeconomic status and co-morbidity did not affect survival outcome. This is the first study in patients with GBM to suggest a survival benefit from clinical trial participation, independent of age and performance status; while also confirming the importance of other previously reported prognostic factors. This should encourage clinicians to offer trial therapies to patients with GBM and encourage patients to participate in available studies.

[16]

**TÍTULO / TITLE:** - Exosomes reflect the hypoxic status of glioma cells and mediate hypoxia-dependent activation of vascular cells during tumor development.

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

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 Apr 30;110(18):7312-7. doi: 10.1073/pnas.1220998110. Epub 2013 Apr 15.

●●Enlace al texto completo (gratis o de pago) [1073/pnas.1220998110](https://doi.org/10.1073/pnas.1220998110)

**AUTORES / AUTHORS:** - Kucharzewska P; Christianson HC; Welch JE; Svensson KJ; Fredlund E; Ringner M; Morgelin M; Bourseau-Guilmain E; Bengzon J; Belting M

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Sciences, Section of Oncology, Lund University, SE-221 85 Lund, Sweden.

**RESUMEN / SUMMARY:** - Hypoxia, or low oxygen tension, is a major regulator of tumor development and aggressiveness. However, how cancer cells adapt to hypoxia and communicate with their surrounding microenvironment during tumor development remain important questions. Here, we show that secreted vesicles with exosome characteristics mediate hypoxia-dependent intercellular signaling of the highly malignant brain tumor glioblastoma multiforme (GBM). In vitro hypoxia experiments with glioma cells and studies with patient materials reveal the enrichment in exosomes of hypoxia-regulated mRNAs and proteins (e.g., matrix metalloproteinases, IL-8, PDGFs, caveolin 1, and lysyl oxidase), several of which were associated with poor glioma patient prognosis. We show that exosomes derived from GBM cells grown at hypoxic compared with normoxic conditions are potent inducers of angiogenesis *ex vivo* and *in vitro* through phenotypic modulation of endothelial cells. Interestingly, endothelial cells were programmed by GBM cell-derived hypoxic exosomes to secrete several potent growth factors and cytokines and to stimulate pericyte PI3K/AKT signaling activation and migration. Moreover, exosomes derived from hypoxic

compared with normoxic conditions showed increased autocrine, promigratory activation of GBM cells. These findings were correlated with significantly enhanced induction by hypoxic compared with normoxic exosomes of tumor vascularization, pericyte vessel coverage, GBM cell proliferation, as well as decreased tumor hypoxia in a mouse xenograft model. We conclude that the proteome and mRNA profiles of exosome vesicles closely reflect the oxygenation status of donor glioma cells and patient tumors, and that the exosomal pathway constitutes a potentially targetable driver of hypoxia-dependent intercellular signaling during tumor development.

[17]

**TÍTULO / TITLE:** - Health-related quality of life in elderly patients with newly diagnosed glioblastoma treated with short-course radiation therapy plus concomitant and adjuvant temozolomide.

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

**REVISTA / JOURNAL:** - Int J Radiat Oncol Biol Phys. 2013 Jun 1;86(2):285-91. doi: 10.1016/j.ijrobp.2013.02.013.

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

[1016/j.ijrobp.2013.02.013](#)

**AUTORES / AUTHORS:** - Minniti G; Scaringi C; Baldoni A; Lanzetta G; De Sanctis V; Esposito V; Enrici RM

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Sant' Andrea Hospital, University Sapienza, Rome, Italy; Department of Neurological Sciences, Neuromed Institute, Pozzilli (IS), Italy. Electronic address: [gminniti@ospedalesantandrea.it](mailto:gminniti@ospedalesantandrea.it).

**RESUMEN / SUMMARY:** - PURPOSE: To describe the quality of life (QOL) in elderly patients with glioblastoma (GBM) treated with an abbreviated course of radiation therapy (RT; 40 Gy in 15 fractions) plus concomitant and adjuvant temozolomide (TMZ). METHODS AND MATERIALS: Health-related QOL (HRQOL) was assessed by European Organisation for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire Core-30 (QLQ-C30, version 3) and EORTC Quality of Life Questionnaire Brain Cancer Module (QLQ-BN20). Changes from baseline in the score of 9 preselected domains (global QLQ, social functioning, cognitive functioning, emotional functioning, physical functioning, motor dysfunction, communication deficit, fatigue, insomnia) were determined 4 weeks after RT and thereafter every 8 weeks during the treatment until disease progression. The proportion of patients with improved HRQOL scores, defined as a change of 10 points or more, and duration of changes were recorded. RESULTS: Sixty-five patients completed the questionnaires at baseline. The treatment was consistently associated with improvement or stability in most of the preselected HRQOL domains. Global health improved over time; mean score differed by 9.6 points between baseline

and 6-month follow-up (P=.03). For social functioning and cognitive functioning, mean scores improved over time, with a maximum difference of 10.4 points and 9.5 points between baseline and 6-month follow-up (P=.01 and P=.02), respectively. By contrast, fatigue worsened over time, with a difference in mean score of 5.6 points between baseline and 4-month follow-up (P=.02).  
CONCLUSIONS: A short course of RT in combination with TMZ in elderly patients with GBM was associated with survival benefit without a negative effect on HRQOL until the time of disease progression.

[18]

**TÍTULO / TITLE:** - Intensive Chemotherapy and Immunotherapy in Patients With Newly Diagnosed Primary CNS Lymphoma: CALGB 50202 (Alliance 50202).

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

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 Apr 8.

●●Enlace al texto completo (gratis o de pago) [1200/JCO.2012.46.9957](https://doi.org/10.1200/JCO.2012.46.9957)

**AUTORES / AUTHORS:** - Rubenstein JL; Hsi ED; Johnson JL; Jung SH; Nakashima MO; Grant B; Cheson BD; Kaplan LD

**INSTITUCIÓN / INSTITUTION:** - James L. Rubenstein and Lawrence D. Kaplan, Helen Diller Comprehensive Cancer Center, University of California, San Francisco, San Francisco, CA; Eric D. Hsi and Megan O. Nakashima, Cleveland Clinic, Cleveland, OH; Jeffrey L. Johnson and Sin-Ho Jung, Alliance Statistics and Data Center, Duke Comprehensive Cancer Center, Duke University, Durham, NC; Barbara Grant, University of Vermont, Burlington, VT; and Bruce D. Cheson, Georgetown University Hospital, Washington, DC.

**RESUMEN / SUMMARY:** - PURPOSEConcerns regarding neurocognitive toxicity of whole-brain radiotherapy (WBRT) have motivated development of alternative, dose-intensive chemotherapeutic strategies as consolidation in primary CNS lymphoma (PCNSL). We performed a multicenter study of high-dose consolidation, without WBRT, in PCNSL. Objectives were to determine: one, rate of complete response (CR) after remission induction therapy with methotrexate, temozolomide, and rituximab (MT-R); two, feasibility of a two-step approach using high-dose consolidation with etoposide plus cytarabine (EA); three, progression-free survival (PFS); and four, correlation between clinical and molecular prognostic factors and outcome. PATIENTS AND METHODSForty-four patients with newly diagnosed PCNSL were treated with induction MT-R, and patients who achieved CR received EA consolidation. We performed a prospective analysis of molecular prognostic biomarkers in PCNSL in the setting of a clinical trial. ResultsThe rate of CR to MT-R was 66%. The overall 2-year PFS was 0.57, with median follow-up of 4.9 years. The 2-year time to progression was 0.59, and for patients who completed consolidation, it was 0.77. Patients age > 60 years did as well as younger patients, and the most significant clinical prognostic variable was treatment delay. High BCL6

expression correlated with shorter survival. CONCLUSIONCALGB 50202 demonstrates for the first time to our knowledge that dose-intensive consolidation for PCNSL is feasible in the multicenter setting and yields rates of PFS and OS at least comparable to those of regimens involving WBRT. On the basis of these encouraging results, an intergroup study has been activated comparing EA consolidation with myeloablative chemotherapy in this randomized trial in PCNSL, in which neither arm involves WBRT.

[19]

**TÍTULO / TITLE:** - Genome-wide RNAi screens in human brain tumor isolates reveal a novel viability requirement for PHF5A.

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

**REVISTA / JOURNAL:** - Genes Dev. 2013 May 1;27(9):1032-45. doi: 10.1101/gad.212548.112.

●●Enlace al texto completo (gratis o de pago) [1101/gad.212548.112](http://1101/gad.212548.112)

**AUTORES / AUTHORS:** - Hubert CG; Bradley RK; Ding Y; Toledo CM; Herman J; Skutt-Kakaria K; Girard EJ; Davison J; Berndt J; Corrin P; Hardcastle J; Basom R; Delrow JJ; Webb T; Pollard SM; Lee J; Olson JM; Paddison PJ

**INSTITUCIÓN / INSTITUTION:** - Clinical Research Division.

**RESUMEN / SUMMARY:** - To identify key regulators of human brain tumor maintenance and initiation, we performed multiple genome-wide RNAi screens in patient-derived glioblastoma multiforme (GBM) stem cells (GSCs). These screens identified the plant homeodomain (PHD)-finger domain protein PHF5A as differentially required for GSC expansion, as compared with untransformed neural stem cells (NSCs) and fibroblasts. Given PHF5A's known involvement in facilitating interactions between the U2 snRNP complex and ATP-dependent helicases, we examined cancer-specific roles in RNA splicing. We found that in GSCs, but not untransformed controls, PHF5A facilitates recognition of exons with unusual C-rich 3' splice sites in thousands of essential genes. PHF5A knockdown in GSCs, but not untransformed NSCs, astrocytes, or fibroblasts, inhibited splicing of these genes, leading to cell cycle arrest and loss of viability. Notably, pharmacologic inhibition of U2 snRNP activity phenocopied PHF5A knockdown in GSCs and also in NSCs or fibroblasts overexpressing MYC. Furthermore, PHF5A inhibition compromised GSC tumor formation in vivo and inhibited growth of established GBM patient-derived xenograft tumors. Our results demonstrate a novel viability requirement for PHF5A to maintain proper exon recognition in brain tumor-initiating cells and may provide new inroads for novel anti-GBM therapeutic strategies.

[20]

**TÍTULO / TITLE:** - The MET Oncogene in Glioblastoma Stem Cells: Implications as a Diagnostic Marker and a Therapeutic Target.

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

**REVISTA / JOURNAL:** - Cancer Res. 2013 Jun 1;73(11):3193-9. doi: 10.1158/0008-5472.CAN-12-4039. Epub 2013 May 21.

●●Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-12-4039](#)

**AUTORES / AUTHORS:** - Boccaccio C; Comoglio PM

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliation: IRCC - Institute for Cancer Research at Candiolo, Center for Experimental Clinical Molecular Oncology, University of Turin Medical School, Candiolo, Italy.

**RESUMEN / SUMMARY:** - The MET oncogene, a crucial regulator of the genetic program known as “invasive growth” or “epithelial-mesenchymal transition,” has recently emerged as a functional marker of glioblastoma stem cells. Here, we review findings that associate MET expression and activity with a specific, genetically defined glioblastoma stem cell subtype, and data showing how MET sustains the stem cell phenotype in glioblastoma and other tumors. Finally, we discuss issues related to identification of tumorigenic clones driven by MET in the context of genetically heterogeneous tumors and strategies aimed at eradicating cancer stem cells. Cancer Res; 73(11); 3193-9. ©2013 AACR.

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[21]

**TÍTULO / TITLE:** - RNA-binding protein PCBP2 modulates glioma growth by regulating FHL3.

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

**REVISTA / JOURNAL:** - J Clin Invest. 2013 May 1;123(5):2103-18. doi: 10.1172/JCI61820. Epub 2013 Apr 15.

●●Enlace al texto completo (gratis o de pago) [1172/JCI61820](#)

**AUTORES / AUTHORS:** - Han W; Xin Z; Zhao Z; Bao W; Lin X; Yin B; Zhao J; Yuan J; Qiang B; Peng X

**RESUMEN / SUMMARY:** - PCBP2 is a member of the poly©-binding protein (PCBP) family, which plays an important role in posttranscriptional and translational regulation by interacting with single-stranded poly© motifs in target mRNAs. Several PCBP family members have been reported to be involved in human malignancies. Here, we show that PCBP2 is upregulated in human glioma tissues and cell lines. Knockdown of PCBP2 inhibited glioma growth in vitro and in vivo through inhibition of cell-cycle progression and induction of caspase-3-mediated apoptosis. Thirty-five mRNAs were identified as putative PCBP2 targets/interactors using RIP-ChIP protein-RNA interaction arrays in a human glioma cell line, T98G. Four-and-a-half LIM domain 3 (FHL3) mRNA was downregulated in human gliomas and was identified as a PCBP2 target. Knockdown of PCBP2 enhanced the expression of FHL3 by stabilizing its

mRNA. Overexpression of FHL3 attenuated cell growth and induced apoptosis. This study establishes a link between PCBP2 and FHL3 proteins and identifies a new pathway for regulating glioma progression.

[22]

**TÍTULO / TITLE:** - Risk of First and Recurrent Stroke in Childhood Cancer Survivors Treated With Cranial and Cervical Radiation Therapy.

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

**REVISTA / JOURNAL:** - Int J Radiat Oncol Biol Phys. 2013 Apr 23. pii: S0360-3016(13)00265-4. doi: 10.1016/j.ijrobp.2013.03.004.

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

[1016/j.ijrobp.2013.03.004](#)

**AUTORES / AUTHORS:** - Mueller S; Sear K; Hills NK; Chettout N; Afghani S; Gastelum E; Haas-Kogan D; Fullerton HJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University of California, San Francisco, California; Department of Pediatrics, University of California, San Francisco, California; Department of Neurosurgery, University of California, San Francisco, California. Electronic address: [muellers@neuropeds.ucsf.edu](mailto:muellers@neuropeds.ucsf.edu).

**RESUMEN / SUMMARY:** - **PURPOSE:** To assess, in a retrospective cohort study, rates and predictors of first and recurrent stroke in patients treated with cranial irradiation (CRT) and/or cervical irradiation at  $\leq 18$  years of age. **METHODS AND MATERIALS:** We performed chart abstraction (n=383) and phone interviews (n=104) to measure first and recurrent stroke in 383 patients who received CRT and/or cervical radiation at a single institution between 1980 and 2009. Stroke was defined as a physician diagnosis and symptoms consistent with stroke. Incidence of first stroke was number of first strokes per person-years of observation after radiation. We used survival analysis techniques to determine cumulative incidence of first and recurrent stroke. **RESULTS:** Among 325 subjects with sufficient follow-up data, we identified 19 first strokes (13 ischemic, 4 hemorrhagic, 2 unknown subtype) occurring at a median age of 24 years (interquartile range 17-33 years) in patients treated with CRT. Imaging was reviewed when available (n=13), and the stroke was confirmed in 12. Overall rate of first stroke was 625 (95% confidence interval [CI] 378-977) per 100,000 person-years. The cumulative incidence of first stroke was 2% (95% CI 0.01%-5.3%) at 5 years and 4% (95% CI 2.0%-8.4%) at 10 years after irradiation. With each 100-cGy increase in the radiation dose, the stroke hazard increased by 5% (hazard ratio 1.05; 95% CI 1.01-1.09; P=.02). We identified 6 recurrent strokes; 5 had available imaging that confirmed the stroke. Median time to recurrence was 15 months (interquartile range 6 months-3.2 years) after first stroke. The cumulative incidence of recurrent stroke was 38% (95% CI 17%-69%) at 5 years and 59% (95% CI 27%-92%) at 10 years after first stroke. **CONCLUSION:** Cranial irradiation puts childhood cancer survivors at high risk

of both first and recurrent stroke. Stroke prevention strategies for these survivors are needed.

[23]

**TÍTULO / TITLE:** - Results of the NeuroBlate System first-in-humans Phase I clinical trial for recurrent glioblastoma.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Jun;118(6):1202-19. doi: 10.3171/2013.1.JNS1291. Epub 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [3171/2013.1.JNS1291](#)

**AUTORES / AUTHORS:** - Sloan AE; Ahluwalia MS; Valerio-Pascua J; Manjila S; Torchia MG; Jones SE; Sunshine JL; Phillips M; Griswold MA; Clampitt M; Brewer C; Jochum J; McGraw MV; Diorio D; Ditz G; Barnett GH

**INSTITUCIÓN / INSTITUTION:** - Brain Tumor & Neuro-Oncology Center and Department of Neurosurgery, and.

**RESUMEN / SUMMARY:** - Object Laser interstitial thermal therapy has been used as an ablative treatment for glioma; however, its development was limited due to technical issues. The NeuroBlate System incorporates several technological advances to overcome these drawbacks. The authors report a Phase I, thermal dose-escalation trial assessing the safety and efficacy of NeuroBlate in recurrent glioblastoma multiforme (rGBM). Methods Adults with suspected supratentorial rGBM of 15- to 40-mm dimension and a Karnofsky Performance Status score of  $\geq 60$  were eligible. After confirmatory biopsy, treatment was delivered using a rigid, gas-cooled, side-firing laser probe. Treatment was monitored using real-time MRI thermometry, and proprietary software providing predictive thermal damage feedback was used by the surgeon, along with control of probe rotation and depth, to tailor tissue coagulation. An external data safety monitoring board determined if toxicity at lower levels justified dose escalation. Results Ten patients were treated at the Case Comprehensive Cancer Center (Cleveland Clinic and University Hospitals-Case Medical Center). Their average age was 55 years (range 34-69 years) and the median preoperative Karnofsky Performance Status score was 80 (range 70-90). The mean tumor volume was  $6.8 \pm 5 \text{ cm}^3$  (range 2.6-19  $\text{cm}^3$ ), the percentage of tumor treated was  $78\% \pm 12\%$  (range 57%-90%), and the conformality index was  $1.21 \pm 0.33$  (range 1.00-2.04). Treatment-related necrosis was evident on MRI studies at 24 and 48 hours. The median survival was 316 days (range 62-767 days). Three patients improved neurologically, 6 remained stable, and 1 worsened. Steroid-responsive treatment-related edema occurred in all patients but one. Three had Grade 3 adverse events at the highest dose. Conclusions NeuroBlate represents new technology for delivering laser interstitial thermal therapy, allowing controlled thermal ablation of deep

hemispheric rGBM. Clinical trial registration no.: NCT00747253 ( ClinicalTrials.gov ).

[24]

**TÍTULO / TITLE:** - A Prospective Randomized Controlled Trial of Plantar Versus Dorsal Incisions for Operative Treatment of Primary Morton's Neuroma.

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

**REVISTA / JOURNAL:** - Foot Ankle Int. 2013 Apr 5.

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

[1177/1071100713484300](#)

**AUTORES / AUTHORS:** - Akermark C; Crone H; Skoog A; Weidenhielm L

**INSTITUCIÓN / INSTITUTION:** - Department of Orthopaedics, Lakarcentrum, Stockholm, Sweden.

**RESUMEN / SUMMARY:** - BACKGROUND: There are a great number of studies on the outcome of surgery for Morton's neuroma. However, there is a lack of controlled trials to determine the outcome in general and for the 2 most used surgical approaches. This prospective and randomized trial studied the outcome and adverse events of resected primary Morton's neuromas, comparing plantar and dorsal incisions. METHODS: Seventy-six patients were randomized to treatment with either a plantar or a dorsal incision by 2 senior surgeons. Questionnaires were evaluated and physical examinations performed at baseline and at 3 and 12 months postoperatively by the treating surgeon and at a mean of 34 months (range, 28-42 months) by an independent surgeon. The follow-up rate was 93%. RESULTS: Histological examination of specimens verified resection of nerves in all cases except 1, which was in the dorsal group (artery). The main outcome variable, pain at daily activities, was significantly reduced by 96% (plantar) and 97% (dorsal) and restrictions in daily activities were reduced by 77% (plantar) and 67% (dorsal) at the final follow-up. Scar tenderness was noted by 3% (plantar) and 0% (dorsal) at the final evaluation. Clinically good results with surgery were noted in 87% (plantar) and 83% (dorsal) of cases. There were 5 complications in the plantar group and 6 in the dorsal group, with a difference in type of complications. CONCLUSIONS: This study demonstrated 87% (plantar) and 83% (dorsal) clinically good outcomes and no significant differences between the procedures in regard to pain, restrictions in daily activities, and scar tenderness. However, there was a difference between the groups in the type of complications. LEVEL OF EVIDENCE: Level I, prospective randomized trial.

[25]

**TÍTULO / TITLE:** - Patterns of exposure to infectious diseases and social contacts in early life and risk of brain tumours in children and adolescents: an International Case-Control Study (CEFALO).

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

**REVISTA / JOURNAL:** - Br J Cancer. 2013 May 7. doi: 10.1038/bjc.2013.201.

●●Enlace al texto completo (gratis o de pago) [1038/bjc.2013.201](http://1038/bjc.2013.201)

**AUTORES / AUTHORS:** - Andersen TV; Schmidt LS; Poulsen AH; Feychting M; Roosli M; Tynes T; Aydin D; Prochazka M; Lannering B; Klæboe L; Eggen T; Kuehni CE; Schmiegelow K; Schuz J

**INSTITUCIÓN / INSTITUTION:** - Danish Cancer Society Research Center, Danish Cancer Society, Strandboulevard 49, Copenhagen 2100, Denmark.

**RESUMEN / SUMMARY:** - Background: Infectious diseases and social contacts in early life have been proposed to modulate brain tumour risk during late childhood and adolescence. Methods: CEFALO is an interview-based case-control study in Denmark, Norway, Sweden and Switzerland, including children and adolescents aged 7-19 years with primary intracranial brain tumours diagnosed between 2004 and 2008 and matched population controls. Results: The study included 352 cases (participation rate: 83%) and 646 controls (71%). There was no association with various measures of social contacts: daycare attendance, number of childhours at daycare, attending baby groups, birth order or living with other children. Cases of glioma and embryonal tumours had more frequent sick days with infections in the first 6 years of life compared with controls. In 7-19 year olds with 4+ monthly sick day, the respective odds ratios were 2.93 (95% confidence interval: 1.57-5.50) and 4.21 (95% confidence interval: 1.24-14.30). Interpretation: There was little support for the hypothesis that social contacts influence childhood and adolescent brain tumour risk. The association between reported sick days due to infections and risk of glioma and embryonal tumour may reflect involvement of immune functions, recall bias or inverse causality and deserve further attention. British Journal of Cancer advance online publication 7 May 2013; doi:10.1038/bjc.2013.201 [www.bjcancer.com](http://www.bjcancer.com).

[26]

**TÍTULO / TITLE:** - Mesenchymal glioma stem cells are maintained by activated glycolytic metabolism involving aldehyde dehydrogenase 1A3.

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

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 May 21;110(21):8644-9. doi: 10.1073/pnas.1221478110. Epub 2013 May 6.

●●Enlace al texto completo (gratis o de pago) [1073/pnas.1221478110](http://1073/pnas.1221478110)

**AUTORES / AUTHORS:** - Mao P; Joshi K; Li J; Kim SH; Li P; Santana-Santos L; Luthra S; Chandran UR; Benos PV; Smith L; Wang M; Hu B; Cheng SY; Sobol RW; Nakano I

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery and James Comprehensive Cancer Center, The Ohio State University, Columbus, OH 43210.

**RESUMEN / SUMMARY:** - Tumor heterogeneity of high-grade glioma (HGG) is recognized by four clinically relevant subtypes based on core gene signatures. However, molecular signaling in glioma stem cells (GSCs) in individual HGG subtypes is poorly characterized. Here we identified and characterized two mutually exclusive GSC subtypes with distinct dysregulated signaling pathways. Analysis of mRNA profiles distinguished proneural (PN) from mesenchymal (Mes) GSCs and revealed a pronounced correlation with the corresponding PN or Mes HGGs. Mes GSCs displayed more aggressive phenotypes in vitro and as intracranial xenografts in mice. Further, Mes GSCs were markedly resistant to radiation compared with PN GSCs. The glycolytic pathway, comprising aldehyde dehydrogenase (ALDH) family genes and in particular ALDH1A3, were enriched in Mes GSCs. Glycolytic activity and ALDH activity were significantly elevated in Mes GSCs but not in PN GSCs. Expression of ALDH1A3 was also increased in clinical HGG compared with low-grade glioma or normal brain tissue. Moreover, inhibition of ALDH1A3 attenuated the growth of Mes but not PN GSCs. Last, radiation treatment of PN GSCs up-regulated Mes-associated markers and down-regulated PN-associated markers, whereas inhibition of ALDH1A3 attenuated an irradiation-induced gain of Mes identity in PN GSCs. Taken together, our data suggest that two subtypes of GSCs, harboring distinct metabolic signaling pathways, represent intertumoral glioma heterogeneity and highlight previously unidentified roles of ALDH1A3-associated signaling that promotes aberrant proliferation of Mes HGGs and GSCs. Inhibition of ALDH1A3-mediated pathways therefore might provide a promising therapeutic approach for a subset of HGGs with the Mes signature.

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[27]

**TÍTULO / TITLE:** - Unusual Case of Recurrent Extraneural Metastatic Medulloblastoma in a Young Adult: Durable Complete Remission With Ewing Sarcoma Chemotherapy Regimen and Consolidation With Autologous Bone Marrow Transplantation and Local Radiation.

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

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 May 28.

●●Enlace al texto completo (gratis o de pago) [1200/JCO.2012.42.6700](#)

**AUTORES / AUTHORS:** - Clement J; Varlotta J; Rybka W; Frauenhoffer E; Drabick JJ

**INSTITUCIÓN / INSTITUTION:** - Pennsylvania State University Milton S. Hershey Medical Center, Hershey, PA.

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[28]

**TÍTULO / TITLE:** - Activation of PI3K/Akt pathway by CD133-p85 interaction promotes tumorigenic capacity of glioma stem cells.

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

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 Apr 23;110(17):6829-34. doi: 10.1073/pnas.1217002110. Epub 2013 Apr 8.

●●Enlace al texto completo (gratis o de pago) [1073/pnas.1217002110](https://doi.org/10.1073/pnas.1217002110)

**AUTORES / AUTHORS:** - Wei Y; Jiang Y; Zou F; Liu Y; Wang S; Xu N; Xu W; Cui C; Xing Y; Liu Y; Cao B; Liu C; Wu G; Ao H; Zhang X; Jiang J

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Glycoconjugates Research, Ministry of Public Health, Department of Biochemistry and Molecular Biology, Shanghai Medical College of Fudan University, Shanghai 200032, People's Republic of China.

**RESUMEN / SUMMARY:** - The biological significance of a known normal and cancer stem cell marker CD133 remains elusive. We now demonstrate that the phosphorylation of tyrosine-828 residue in CD133 C-terminal cytoplasmic domain mediates direct interaction between CD133 and phosphoinositide 3-kinase (PI3K) 85 kDa regulatory subunit (p85), resulting in preferential activation of PI3K/protein kinase B (Akt) pathway in glioma stem cell (GSC) relative to matched nonstem cell. CD133 knockdown potently inhibits the activity of PI3K/Akt pathway with an accompanying reduction in the self-renewal and tumorigenicity of GSC. The inhibitory effects of CD133 knockdown could be completely rescued by expression of WT CD133, but not its p85-binding deficient Y828F mutant. Analysis of glioma samples reveals that CD133 Y828 phosphorylation level is correlated with histopathological grade and overlaps with Akt activation. Our results identify the CD133/PI3K/Akt signaling axis, exploring the fundamental role of CD133 in glioma stem cell behavior.

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[29]

**TÍTULO / TITLE:** - Using a preclinical mouse model of high-grade astrocytoma to optimize p53 restoration therapy.

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

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 Apr 16;110(16):E1480-9. doi: 10.1073/pnas.1219142110. Epub 2013 Mar 29.

●●Enlace al texto completo (gratis o de pago) [1073/pnas.1219142110](https://doi.org/10.1073/pnas.1219142110)

**AUTORES / AUTHORS:** - Shchors K; Persson AI; Rostker F; Tihan T; Lyubynska N; Li N; Swigart LB; Berger MS; Hanahan D; Weiss WA; Evan GI

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Neurology, Neurological Surgery, and Pediatrics, Sandler Neurosciences Center, and Brain Tumor Research Center, University of California, San Francisco, CA 94158, USA.

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**RESUMEN / SUMMARY:** - Based on clinical presentation, glioblastoma (GBM) is stratified into primary and secondary types. The protein 53 (p53) pathway is functionally incapacitated in most GBMs by distinctive type-specific mechanisms. To model human gliomagenesis, we used a GFAP-HRas(V12) mouse model crossed into the p53ER(TAM) background, such that either one or both copies of endogenous p53 is replaced by a conditional p53ER(TAM) allele. The p53ER(TAM) protein can be toggled reversibly in vivo between wild-type and inactive conformations by administration or withdrawal of 4-hydroxytamoxifen (4-OHT), respectively. Surprisingly, gliomas that develop in GFAP-HRas(V12);p53(+/KI) mice abrogate the p53 pathway by mutating p19(ARF)/MDM2 while retaining wild-type p53 allele. Consequently, such tumors are unaffected by restoration of their p53ER(TAM) allele. By contrast, gliomas arising in GFAP-HRas(V12);p53(KI/KI) mice develop in the absence of functional p53. Such tumors retain a functional p19(ARF)/MDM2-signaling pathway, and restoration of p53ER(TAM) allele triggers p53-tumor-suppressor activity. Congruently, growth inhibition upon normalization of mutant p53 by a small molecule, Prima-1, in human GBM cultures also requires p14(ARF)/MDM2 functionality. Notably, the antitumoral efficacy of p53 restoration in tumor-bearing GFAP-HRas(V12);p53(KI/KI) animals depends on the duration and frequency of p53 restoration. Thus, intermittent exposure to p53ER(TAM) activity mitigated the selective pressure to inactivate the p19(ARF)/MDM2/p53 pathway as a means of resistance, extending progression-free survival. Our results suggest that intermittent dosing regimes of drugs that restore wild-type tumor-suppressor function onto mutant, inactive p53 proteins will prove to be more efficacious than traditional chronic dosing by similarly reducing adaptive resistance.

[30]

**TÍTULO / TITLE:** - Correction for Sievert et al., Paradoxical activation and RAF inhibitor resistance of BRAF protein kinase fusions characterizing pediatric astrocytomas.

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

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 May 21;110(21):8750. doi: 10.1073/pnas.1307863110. Epub 2013 May 7.

●●Enlace al texto completo (gratis o de pago) [1073/pnas.1307863110](https://doi.org/10.1073/pnas.1307863110)

[31]

**TÍTULO / TITLE:** - Testing new susceptibility genes in the cohort of apparently sporadic pheochromocytoma/paraganglioma patients with clinical characteristics of hereditary syndromes.

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

**REVISTA / JOURNAL:** - Clin Endocrinol (Oxf). 2013 Apr 1. doi: 10.1111/cen.12218.

●●Enlace al texto completo (gratis o de pago) [1111/cen.12218](https://doi.org/10.1111/cen.12218)

**AUTORES / AUTHORS:** - Peczkowska M; Kowalska A; Sygut J; Waligorski D; Malinoc A; Janaszek-Sitkowska H; Prejbisz A; Januszewicz A; Neumann HP

**INSTITUCIÓN / INSTITUTION:** - Department of Hypertension, Institute of Cardiology, Warsaw, Poland.

**RESUMEN / SUMMARY:** - BACKGROUND: Pheochromocytoma (PCC) and paraganglioma (PGL) can occur sporadically or as a part of familial cancer syndromes. Red flags of hereditary syndromes are young age and multifocal tumours. We hypothesized that such patients are candidates for further molecular diagnosis in case of normal results in 'classical' genes. MATERIAL AND METHODS: We selected patients with PCC/PGL under the age of 40 and/or with multiple tumours. First, we tested the genes RET, VHL, NF1, SDHB, SDHC and SDHD. Patients without mutations in these genes were tested for mutations in MAX, TMEM127 and SDHAF2. RESULTS: In 153 patients included, mutations were detected in the classical genes in 72 patients (47%) [RET-22 (14%), VHL-13 (9%), NF1-3 (2%), SDHB-13 (9%), SDHC-3 (2%), SDHD-16 (11%), SDHB large deletions- 2 (1%)]. One patient with MAXc.223C>T (p.R75X) mutation was detected. It was a male with bilateral, metachronous pheochromocytomas diagnosed in 36 and 40 years of age. Remarkably, he showed in the period before the MAX gene was detected, a RET p. Y791F variant. During 10-year follow-up, we did not find any thyroid abnormalities. LOH examination of tumour tissue showed somatic loss of the wild-type allele of MAX. CONCLUSION: Analysis of the MAX gene should be performed in selected patients, especially those with bilateral adrenal pheochromocytoma in whom mutations of the classical genes are absent. Our study provides with further support that Y791F RET is a polymorphism.

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[32]

**TÍTULO / TITLE:** - Gamma Knife surgery for the treatment of patients with asymptomatic meningiomas.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 May 24.

●●Enlace al texto completo (gratis o de pago) [3171/2013.4.JNS121746](https://doi.org/10.3171/2013.4.JNS121746)

**AUTORES / AUTHORS:** - Salvetti DJ; Nagaraja TG; Levy C; Xu Z; Sheehan J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of Virginia, Charlottesville, Virginia.

**RESUMEN / SUMMARY:** - Object Increasingly, meningiomas are detected incidentally, prior to symptom development. While these lesions are traditionally managed conservatively until symptoms develop or lesion growth occurs, it is conceivable that patients at high risk for symptom development may benefit

from earlier intervention prior to the appearance of symptoms. However, little research has been performed to determine whether Gamma Knife surgery (GKS) can alter the rate of symptom development in such patients. Methods A retrospective case study was performed by screening the University of Virginia GKS database for patients treated for asymptomatic meningiomas. From the patient's medical records, pertinent demographic and treatment information was obtained. Yearly follow-up MRI had been performed to assess tumor control and detect signs of radiation-induced injury. Clinical follow-up via neurological examination had been performed to assess symptom development. Results Forty-two patients, 33 females (78.6%) and 9 males (21.4%), with 42 asymptomatic meningiomas were included in the analysis. The median age at GKS was 53 years. The most common lesion location was the cerebral convexities (10 lesions [23.8%]), and the median lesion size was 4.0 ml. The median duration of imaging and clinical follow-ups was 59 and 76 months, respectively. During the follow-up period, 1 tumor (2.4%) increased in size, 2 patients (4.8%) demonstrated symptoms, and 1 patient (2.4%) exhibited possible signs of radiation-induced injury. Thus, actuarial tumor control rates were 100%, 95.7%, and 95.7% for 2, 5, and 10 years, respectively. Actuarial symptom control at 5 and 10 years was 97% and 93.1%, respectively. Overall progression-free survival was 91.1% and 77.8% at 5 and 10 years, respectively. Conclusions Compared with published rates of symptom development in patients with untreated meningiomas, results in this study indicated that patients with asymptomatic lesions may benefit from prophylactic radiosurgery prior to the appearance of symptoms. Additionally, GKS is a treatment option that offers low morbidity.

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[33]

**TÍTULO / TITLE:** - Glioblastoma: Histone mutations take the MYCN.

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

**REVISTA / JOURNAL:** - Nat Rev Cancer. 2013 Jun;13(6):382-3. doi: 10.1038/nrc3527. Epub 2013 Apr 25.

●●Enlace al texto completo (gratis o de pago) [1038/nrc3527](#)

**AUTORES / AUTHORS:** - McCarthy N

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[34]

**TÍTULO / TITLE:** - Inhibition of DYRK1A destabilizes EGFR and reduces EGFR-dependent glioblastoma growth.

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

**REVISTA / JOURNAL:** - J Clin Invest. 2013 Jun 3;123(6):2475-87. doi: 10.1172/JCI63623. Epub 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1172/JCI63623](#)

**AUTORES / AUTHORS:** - Pozo N; Zahonero C; Fernandez P; Linares JM; Ayuso A; Hagiwara M; Perez A; Ricoy JR; Hernandez-Lain A; Sepulveda JM; Sanchez-Gomez P

**RESUMEN / SUMMARY:** - Glioblastomas (GBMs) are very aggressive tumors that are resistant to conventional chemo- and radiotherapy. New molecular therapeutic strategies are required to effectively eliminate the subpopulation of GBM tumor-initiating cells that are responsible for relapse. Since EGFR is altered in 50% of GBMs, it represents one of the most promising targets; however, EGFR kinase inhibitors have produced poor results in clinical assays, with no clear explanation for the observed resistance. We uncovered a fundamental role for the dual-specificity tyrosine phosphorylation-regulated kinase, DYRK1A, in regulating EGFR in GBMs. We found that DYRK1A was highly expressed in these tumors and that its expression was correlated with that of EGFR. Moreover, DYRK1A inhibition promoted EGFR degradation in primary GBM cell lines and neural progenitor cells, sharply reducing the self-renewal capacity of normal and tumorigenic cells. Most importantly, our data suggest that a subset of GBMs depends on high surface EGFR levels, as DYRK1A inhibition compromised their survival and produced a profound decrease in tumor burden. We propose that the recovery of EGFR stability is a key oncogenic event in a large proportion of gliomas and that pharmacological inhibition of DYRK1A could represent a promising therapeutic intervention for EGFR-dependent GBMs.

[35]

**TÍTULO / TITLE:** - Increased Subventricular Zone Radiation Dose Correlates With Survival in Glioblastoma Patients After Gross Total Resection.

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

**REVISTA / JOURNAL:** - Int J Radiat Oncol Biol Phys. 2013 Mar 26. pii: S0360-3016(13)00182-X. doi: 10.1016/j.ijrobp.2013.02.014.

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

[1016/j.ijrobp.2013.02.014](#)

**AUTORES / AUTHORS:** - Chen L; Guerrero-Cazares H; Ye X; Ford E; McNutt T; Kleinberg L; Lim M; Chaichana K; Quinones-Hinojosa A; Redmond K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The Johns Hopkins University, Baltimore, Maryland; Duke University School of Medicine, Durham, North Carolina.

**RESUMEN / SUMMARY:** - PURPOSE: Neural progenitor cells in the subventricular zone (SVZ) have a controversial role in glioblastoma multiforme (GBM) as potential tumor-initiating cells. The purpose of this study was to examine the relationship between radiation dose to the SVZ and survival in GBM patients. METHODS AND MATERIALS: The study included 116 patients with primary GBM treated at the Johns Hopkins Hospital between 2006 and 2009. All

patients underwent surgical resection followed by adjuvant radiation therapy with intensity modulated radiation therapy (60 Gy/30 fractions) and concomitant temozolomide. Ipsilateral, contralateral, and bilateral SVZs were contoured on treatment plans by use of coregistered magnetic resonance imaging and computed tomography. Multivariate Cox regression was used to examine the relationship between mean SVZ dose and progression-free survival (PFS), as well as overall survival (OS). Age, Karnofsky Performance Status score, and extent of resection were used as covariates. The median age was 58 years (range, 29-80 years). RESULTS: Of the patients, 12% underwent biopsy, 53% had subtotal resection (STR), and 35% had gross total resection (GTR). The Karnofsky Performance Status score was less than 90 in 54 patients and was 90 or greater in 62 patients. The median ipsilateral, contralateral, and bilateral mean SVZ doses were 48.7 Gy, 34.4 Gy, and 41.5 Gy, respectively. Among patients who underwent GTR, a mean ipsilateral SVZ dose of 40 Gy or greater was associated with a significantly improved PFS compared with patients who received less than 40 Gy (15.1 months vs 10.3 months; P=.028; hazard ratio, 0.385 [95% confidence interval, 0.165-0.901]) but not in patients undergoing STR or biopsy. The subgroup of GTR patients who received an ipsilateral dose of 40 Gy or greater also had a significantly improved OS (17.5 months vs 15.6 months; P=.027; hazard ratio, 0.385 [95% confidence interval, 0.165-0.895]). No association was found between SVZ radiation dose and PFS and OS among patients who underwent STR or biopsy. CONCLUSION: A mean radiation dose of 40 Gy or greater to the ipsilateral SVZ was associated with a significantly improved PFS and OS in patients with GBM after GTR.

[36]

**TÍTULO / TITLE:** - Transcriptional Regulation of Serine/Threonine Protein Kinase (AKT) Genes by Glioma-associated Oncogene Homolog 1.

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

**REVISTA / JOURNAL:** - J Biol Chem. 2013 May 24;288(21):15390-401. doi: 10.1074/jbc.M112.425249. Epub 2013 Apr 10.

●●Enlace al texto completo (gratis o de pago) [1074/jbc.M112.425249](#)

**AUTORES / AUTHORS:** - Agarwal NK; Qu C; Kunkulla K; Liu Y; Vega F

**INSTITUCIÓN / INSTITUTION:** - From the Department of Hematopathology, The University of Texas M. D. Anderson Cancer Center, Houston, Texas 77030.

**RESUMEN / SUMMARY:** - Aberrant activation of Hedgehog signaling has been described in a growing number of cancers, including malignant lymphomas. Here, we report that canonical Hedgehog signaling modulates the transcriptional expression of AKT genes and that AKT1 is a direct transcriptional target of GLI1. We identified two putative binding sites for GLI1 in the AKT1 promoter region and confirmed their functionality using chromatin immunoprecipitation, luciferase reporter, and site-directed mutagenesis assays.

Moreover, we provide evidence that GLI1 contributes to the survival of diffuse large B-cell lymphoma (DLBCL) cells and that this effect occurs in part through promotion of the transcription of AKT genes. This finding is of interest as constitutive activation of AKT has been described in DLBCL, but causative factors that explain AKT expression in this lymphoma type are not completely known. In summary, we demonstrated the existence of a novel cross-talk at the transcriptional level between Hedgehog signaling and AKT with biological significance in DLBCL.

[37]

**TÍTULO / TITLE:** - Glioblastoma: The histones have it.

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

**REVISTA / JOURNAL:** - Nat Rev Cancer. 2013 May;13(5):294. doi: 10.1038/nrc3517. Epub 2013 Apr 8.

●●Enlace al texto completo (gratis o de pago) [1038/nrc3517](#)

**AUTORES / AUTHORS:** - McCarthy N

[38]

**TÍTULO / TITLE:** - Longitudinal Restriction Spectrum Imaging Is Resistant to Pseudoresponse in Patients with High-Grade Gliomas Treated with Bevacizumab.

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

**REVISTA / JOURNAL:** - AJNR Am J Neuroradiol. 2013 Apr 11.

●●Enlace al texto completo (gratis o de pago) [3174/ajnr.A3506](#)

**AUTORES / AUTHORS:** - Kothari PD; White NS; Farid N; Chung R; Kuperman JM; Girard HM; Shankaranarayanan A; Kesari S; McDonald CR; Dale AM

**INSTITUCIÓN / INSTITUTION:** - School of Medicine; Departments of Radiology, Neurosciences, and Psychiatry; Multimodal Imaging Laboratory; and Translational Neuro-Oncology Laboratories, Moores Cancer Center; University of California, San Diego, La Jolla, California; and GE Healthcare, Milwaukee, Wisconsin.

**RESUMEN / SUMMARY:** - BACKGROUND AND PURPOSE:Antiangiogenic therapies, such as bevacizumab, decrease contrast enhancement and FLAIR hyperintensity in patients with high-grade gliomas in a manner that may not correlate with actual tumor response. This study evaluated the ability of an advanced DWI technique, restriction spectrum imaging, to improve conspicuity within regions of restricted diffusion compared with ADC in patients treated with bevacizumab and to demonstrate that unlike ADC, restriction spectrum imaging is less affected by bevacizumab-induced reductions in FLAIR hyperintensity.MATERIALS AND METHODS:Restriction spectrum imaging cellularity maps and DWI were available for 12 patients with recurrent high-

grade gliomas at baseline and following initiation of bevacizumab. VOIs were drawn for regions of restricted diffusion, surrounding FLAIR hyperintensity, and normal-appearing white matter; and intensity values within regions of restricted diffusion and FLAIR hyperintensity were normalized to normal-appearing white matter. Normalized values were compared between restriction spectrum imaging cellularity maps and ADC at baseline and on treatment by using repeated-measures ANOVA. RESULTS: All patients exhibited decreases in contrast enhancement and FLAIR hyperintensity following treatment. Normalized intensity values were higher on restriction spectrum imaging cellularity maps compared with ADC in regions of restricted diffusion, whereas intensity values were higher on ADC compared with restriction spectrum imaging cellularity maps in regions of FLAIR hyperintensity. Bevacizumab-induced decreases in FLAIR hyperintensity had a greater effect on ADC than on the restriction spectrum imaging cellularity maps, with the relative sensitivity of ADC to changes in FLAIR hyperintensity being >20 times higher than that on restriction spectrum imaging cellularity maps. CONCLUSIONS: Restriction spectrum imaging is less influenced by reductions in FLAIR hyperintensity compared with ADC, which may confer an advantage of restriction spectrum imaging over ADC for interpreting tumor response on imaging following antiangiogenic therapy.

[39]

**TÍTULO / TITLE:** - Genomic analysis of diffuse pediatric low-grade gliomas identifies recurrent oncogenic truncating rearrangements in the transcription factor MYBL1.

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

**REVISTA / JOURNAL:** - Proc Natl Acad Sci U S A. 2013 May 14;110(20):8188-93. doi: 10.1073/pnas.1300252110. Epub 2013 Apr 30.

●●Enlace al texto completo (gratis o de pago) [1073/pnas.1300252110](https://doi.org/10.1073/pnas.1300252110)

**AUTORES / AUTHORS:** - Ramkissoon LA; Horowitz PM; Craig JM; Ramkissoon SH; Rich BE; Schumacher SE; McKenna A; Lawrence MS; Bergthold G; Brastianos PK; Tabak B; Ducar MD; Van Hummelen P; Macconail LE; Pouissant-Young T; Cho YJ; Taha H; Mahmoud M; Bowers DC; Margraf L; Tabori U; Hawkins C; Packer RJ; Hill DA; Pomeroy SL; Eberhart CG; Dunn IF; Goumnerova L; Getz G; Chan JA; Santagata S; Hahn WC; Stiles CD; Ligon AH; Kieran MW; Beroukhi R; Ligon KL

**INSTITUCIÓN / INSTITUTION:** - Departments of Medical Oncology, Cancer Biology, and Pediatric Oncology, Center for Cancer Genome Discovery, and Center for Molecular Oncologic Pathology, Dana-Farber Cancer Institute, Boston, MA 02115.

**RESUMEN / SUMMARY:** - Pediatric low-grade gliomas (PLGGs) are among the most common solid tumors in children but, apart from BRAF kinase mutations

or duplications in specific subclasses, few genetic driver events are known. Diffuse PLGGs comprise a set of uncommon subtypes that exhibit invasive growth and are therefore especially challenging clinically. We performed high-resolution copy-number analysis on 44 formalin-fixed, paraffin-embedded diffuse PLGGs to identify recurrent alterations. Diffuse PLGGs exhibited fewer such alterations than adult low-grade gliomas, but we identified several significantly recurrent events. The most significant event, 8q13.1 gain, was observed in 28% of diffuse astrocytoma grade II and resulted in partial duplication of the transcription factor MYBL1 with truncation of its C-terminal negative-regulatory domain. A similar recurrent deletion-truncation breakpoint was identified in two angiocentric gliomas in the related gene v-myb avian myeloblastosis viral oncogene homolog (MYB) on 6q23.3. Whole-genome sequencing of a MYBL1-rearranged diffuse astrocytoma grade II demonstrated MYBL1 tandem duplication and few other events. Truncated MYBL1 transcripts identified in this tumor induced anchorage-independent growth in 3T3 cells and tumor formation in nude mice. Truncated transcripts were also expressed in two additional tumors with MYBL1 partial duplication. Our results define clinically relevant molecular subclasses of diffuse PLGGs and highlight a potential role for the MYB family in the biology of low-grade gliomas.

[40]

**TÍTULO / TITLE:** - Cognitive rehabilitation for early post-surgery inpatients affected by primary brain tumor: a randomized, controlled trial.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1153-](#)

[Z](#)

**AUTORES / AUTHORS:** - Zucchella C; Capone A; Codella V; De Nunzio AM; Vecchione C; Sandrini G; Pace A; Pierelli F; Bartolo M

**INSTITUCIÓN / INSTITUTION:** - Neurorehabilitation Unit, IRCCS Neurological Mediterranean Institute NEUROMED, Via Atinense 18, 86077, Pozzilli, Isernia, Italy.

**RESUMEN / SUMMARY:** - Cognitive impairment is one of the most common neurological disorders in neuro-oncological patients and exerts a deep negative impact on quality of life interfering with familiar, social and career-related activities. To test the effectiveness of early cognitive rehabilitation treatment for inpatients affected by primary brain tumors. Out of 109 consecutive patients enrolled in the study, 58 patients were randomly assigned to a rehabilitation group or to a control group. The rehabilitation consisted of 16 one-hour individual sessions of therapist-guided cognitive training, spread over 4 weeks, combining computer exercises and metacognitive training. Patients in the control group received usual care without cognitive training. All patients were

evaluated by means of a comprehensive neuropsychological battery at the admission (T0) and after 4 weeks (T1). Patients in the rehabilitation group showed a significant improvement of cognitive functions. In particular, the domains that benefited most from the training were visual attention and verbal memory. The control group exhibited only a slightly, not statistically relevant, enhancement of cognitive performances. Cognitive rehabilitation for neuro-oncological inpatients resulted in a significant enhancement of cognitive performances after the training, also providing a foundation for early administration. Future research should be aimed to clarify the patients' characteristics that predict neuropsychological improvement, to identify the most effective elements in rehabilitative programs and to study the effects of treatment extension to everyday life.

[41]

**TÍTULO / TITLE:** - BLyS levels correlate with vaccine-induced antibody titers in patients with glioblastoma lymphodepleted by therapeutic temozolomide.

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

**REVISTA / JOURNAL:** - Cancer Immunol Immunother. 2013 Jun;62(6):983-7. doi: 10.1007/s00262-013-1405-y. Epub 2013 Apr 17.

●●Enlace al texto completo (gratis o de pago) [1007/s00262-013-1405-](#)

[y](#)

**AUTORES / AUTHORS:** - Sanchez-Perez L; Choi BD; Reap EA; Sayour EJ; Norberg P; Schmittling RJ; Archer GE; Herndon JE 2nd; Mitchell DA; Heimberger AB; Bigner DD; Sampson JH

**INSTITUCIÓN / INSTITUTION:** - Duke Brain Tumor Immunotherapy Program, Division of Neurosurgery, Department of Surgery, Duke University Medical Center, Durham, NC, 27710, USA.

**RESUMEN / SUMMARY:** - B lymphocyte stimulator (BLyS) is a cytokine involved in differentiation and survival of follicular B cells along with humoral response potentiation. Lymphopenia is known to precipitate dramatic elevation in serum BLyS; however, the use of this effect to enhance humoral responses following vaccination has not been evaluated. We evaluated BLyS serum levels and antigen-specific antibody titers in 8 patients undergoing therapeutic temozolomide (TMZ)-induced lymphopenia, with concomitant vaccine against a tumor-specific mutation in the epidermal growth factor receptor (EGFRvIII). Our studies demonstrate that TMZ-induced lymphopenia corresponded with spikes in serum BLyS that directly preceded the induction of anti-EGFRvIII antigen-specific antibody titers, in some cases as high as 1:2,000,000. Our data are the first clinical observation of BLyS serum elevation and greatly enhanced humoral immune responses as a consequence of chemotherapy-induced lymphopenia. These observations should be considered for the development of future vaccination strategies in the setting of malignancy.

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[42]

**TÍTULO / TITLE:** - The impact of improved treatment strategies on overall survival in glioblastoma patients.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Jun;155(6):959-63. doi: 10.1007/s00701-013-1693-1. Epub 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1693-](#)

[1](#)

**AUTORES / AUTHORS:** - Slotty PJ; Siantidis B; Beez T; Steiger HJ; Sabel M

**INSTITUCIÓN / INSTITUTION:** - Neurochirurgische Klinik, Heinrich-Heine-Universität Dusseldorf, Moorenstr. 5, 40225, Dusseldorf, Germany, [slotty@med.uni-duesseldorf.de](mailto:slotty@med.uni-duesseldorf.de).

**RESUMEN / SUMMARY:** - BACKGROUND: The introduction of ALA-Fluorescence-guided surgery (FGS) followed by concomitant radiochemotherapy according to the Stupp-protocol is representative of the major changes in glioblastoma therapy in the past years. We were interested in the impact of this new first-line treatment on the overall survival of patients suffering from newly diagnosed primary glioblastoma in a retrospective single-centre study. METHOD: For this retrospective analysis, data was derived from a prospective single-centre database. Patients were divided into three treatment groups: A (FGS-/radiochemotherapy-), B (FGS-/radiochemotherapy+) and C (FGS+/radiochemotherapy+). Further stratification was applied regarding MGMT-methylation status and degree of resection. Statistical analysis was performed to determine factors (treatment regime, age, gender, performance status, MGMT promoter methylation status) significantly influencing overall survival (OAS). RESULTS: Two hundred and fifty-three patients suffering from primary glioblastoma treated by cytoreductive surgery between 2002 and 2009 were included in this survey. Median OAS differed significantly between the treatment groups (A = 8.8, B = 16.6, C = 20.1,  $p < 0.01$ ). Resection data was available in all 253 patients. The usage of FGS highly significantly correlated with a complete resection ( $p < 0.01$ ). Complete resection was positively correlated with an increase in OAS (complete 20.3 months vs. incomplete 9.3 months,  $p < 0.01$ ). CONCLUSIONS: FGS and radiochemotherapy according to the Stupp protocol have induced an impressive improvement in overall survival in glioblastoma patients. This effect is not limited to clinical trials, but is reproducible in daily routine.

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[43]

**TÍTULO / TITLE:** - WT1 microdeletion and slowly progressing focal glomerulosclerosis in a patient with male pseudohermaphroditism, childhood leukemia, Wilms tumor and cerebellar angioblastoma.

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

**REVISTA / JOURNAL:** - Clin Nephrol. 2013 May;79(5):414-8.

**AUTORES / AUTHORS:** - Buglyo G; Mehes G; Vargha G; Biro S; Matyus J

**INSTITUCIÓN / INSTITUTION:** - Department of Human Genetics, Department of Pathology and st Department of Internal Medicine, University of Debrecen, Debrecen, Hungary.

**RESUMEN / SUMMARY:** - The Wilms tumor 1 (WT1) gene is currently in focus by pediatric nephrologists as its mutations are associated with nephrotic syndrome, especially as part of complex clinical entities like Denys-Drash or Frasier syndrome. Renal failure may also develop in young WAGR patients, whose condition is attributed to a deletion at chromosomal region 11p13. However, only limited data exist on WT1 microdeletions. A 30-year-old male patient, with a history of genital malformations, a Wilms tumor manifested during the treatment of acute lymphoid leukemia (ALL) at the age of 4, and a cerebellar angioblastoma, was referred with proteinuria and a reduced glomerular filtration rate (GFR). Kidney biopsy revealed FSGS. Although all WT1 exons were amplified with polymerase chain reaction (PCR) and sequenced, none of them showed a mutation. However, an formalin-fixed, paraffin- embedded (FFPE) tissue sample of the patient's childhood Wilms tumor showed WT1- positivity restricted to the renal tumor cells, so the WT1 gene was investigated further. Using quantitative reverse transcription PCR (qRT-PCR), the gene was found to be present in only one copy in the patient's genomic DNA sample, while both copies were detected in both parents. In the patient's sister, the proximal region of WT1 was shown to have an extra copy. Evidence suggests that a heterozygous microdeletion of the gene WT1 is responsible for the patient's disease. It seems reasonable to assume a possible abnormality affecting meiotic crossing over at the WT1 locus in one of the parents.

[44]

**TÍTULO / TITLE:** - Limited plastic potential of the left ventral premotor cortex in speech articulation: Evidence From intraoperative awake mapping in glioma patients.

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

**REVISTA / JOURNAL:** - Hum Brain Mapp. 2013 Apr 24. doi: 10.1002/hbm.22275.

●●Enlace al texto completo (gratis o de pago) [1002/hbm.22275](#)

**AUTORES / AUTHORS:** - van Geemen K; Herbet G; Moritz-Gasser S; Duffau H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Gui de Chauliac Hospital, Montpellier University Medical Centre, Montpellier, France.

**RESUMEN / SUMMARY:** - Objectives: Despite previous lesional and functional neuroimaging studies, the actual role of the left ventral premotor cortex (vPMC), i.e., the lateral part of the precentral gyrus, is still poorly known. Experimental design: We report a series of eight patients with a glioma involving the left vPMC, who underwent awake surgery with intraoperative cortical and subcortical language mapping. The function of the vPMC, its subcortical connections, and its reorganization potential are investigated in the light of surgical findings and language outcome after resection. Principal observations: Electrostimulation of both the vPMC and subcortical white matter tract underneath the vPMC, that is, the anterior segment of the lateral part of the superior longitudinal fascicle (SLF), induced speech production disturbances with anarthria in all cases. Moreover, although some degrees of redistribution of the vPMC have been found in four patients, allowing its partial resection with no permanent speech disorders, this area was nonetheless still detected more medially in the precentral gyrus in the eight patients, despite its invasion by the glioma. Moreover, a direct connection of the vPMC with the SLF was preserved in all cases. Conclusions: Our original data suggest that the vPMC plays a crucial role in the speech production network and that its plastic potential is limited. We propose that this limitation is due to an anatomical constraint, namely the necessity for the left vPMC to remain connected to the lateral SLF. Beyond fundamental implications, such knowledge may have clinical applications, especially in surgery for tumors involving this cortico-subcortical circuit. Hum Brain Mapp, 2013. © 2013 Wiley Periodicals, Inc.

[45]

**TÍTULO / TITLE:** - Combined chronic lymphocytic leukemia and prolactinoma: a rare occurrence in a patient presenting with pituitary apoplexy.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 May 17.

●●Enlace al texto completo (gratis o de pago) [3171/2013.4.JNS122041](#)

**AUTORES / AUTHORS:** - Krisht KM; Palmer CA; Couldwell WT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Clinical Neurosciences Center, and.

**RESUMEN / SUMMARY:** - The authors describe a rare case of combined pituitary chronic lymphocytic leukemia (CLL) and prolactinoma in a 77-year-old man presenting with apoplexy. This case highlights the importance of evaluating the pituitary gland in patients with CLL who present with clinical manifestations of apoplexy as well as the need to carefully evaluate pathological specimens from the gland for the presence of lymphocytic cells in those patients. This is the first reported case of a combined CLL-prolactinoma pituitary lesion presenting with apoplexy.

[46]

**TÍTULO / TITLE:** - Comparison of Survival between Cerebellar and Supratentorial Glioblastoma Patients: Surveillance, Epidemiology, and End Results (SEER) Analysis.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Apr 23.

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

[1227/01.neu.0000430288.85680.37](https://doi.org/10.1227/01.neu.0000430288.85680.37)

**AUTORES / AUTHORS:** - Jeswani S; Nuno M; Folkerts V; Mukherjee D; Black KL; Patil CG

**INSTITUCIÓN / INSTITUTION:** - 1Center for Neurosurgical Outcomes Research, Maxine Dunitz Neurosurgical Institute Department of Neurosurgery, Cedars-Sinai Medical Center.

**RESUMEN / SUMMARY:** - BACKGROUND:: Cerebellar glioblastoma multiforme (cGBM) is rare, and although there is a general sentiment that these tumors have worse prognosis than supratentorial GBM (sGBM), few studies have been published to support this belief. OBJECTIVE:: To investigate the effect of cerebellar location on survival through a case control design comparing overall survival time between cGBM and sGBM patients. METHODS:: Surveillance, Epidemiology, and End Results (SEER) registry was used to identify 132 patients with cGBM (1973-2008). Each cGBM patient was matched with an sGBM patient from among 20,848 sGBM patients on the basis of age, extent of resection, decade of diagnosis, and radiation therapy using propensity score matching. RESULTS:: Within the cGBM, 37% were over 65 years of age, 62% were men and 87% were Caucasian. Most patients underwent surgery and radiation (74%) while only 26% underwent surgical resection only. The median survival time for cGBM and sGBM matched cohort was 8 months; however, the survival distributions differed (log-rank  $p=0.04$ ). Survival time for cGBM versus sGBM at 2 years was 21.5% vs. 8.0%, and 12.7% vs. 5.3% at 3 years. Multivariate analysis of survival among cGBM patients showed that younger age ( $p<0.0001$ ) and having radiation therapy ( $p<0.0001$ ) were significantly associated with reduced hazard of mortality. Among all patients, multivariate analysis showed that tumor location ( $p=0.03$ ), age ( $p<0.0001$ ), tumor size ( $p=0.009$ ), radiation ( $p<0.0001$ ), and resection ( $p<0.0001$ ) were associated with survival time in the unmatched cohort. CONCLUSION:: Median survival time for cGBM and sGBM patients was 8 months, but cGBM patients had a survival time advantage as the study progressed. These findings suggest that cGBM patients should be treated as aggressively as sGBM patients with surgical resection and radiation therapy.

[47]

**TÍTULO / TITLE:** - beta1 Integrin Targeting Potentiates Antiangiogenic Therapy and Inhibits the Growth of Bevacizumab-Resistant Glioblastoma.

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

**REVISTA / JOURNAL:** - Cancer Res. 2013 May 15;73(10):3145-54. doi: 10.1158/0008-5472.CAN-13-0011. Epub 2013 May 3.

●●Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-0011](#)

**AUTORES / AUTHORS:** - Carbonell WS; Delay M; Jahangiri A; Park CC; Aghi MK  
**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Departments of Neurosurgery and Radiation Oncology, University of California, San Francisco, San Francisco, California.

**RESUMEN / SUMMARY:** - Antiangiogenic therapies like bevacizumab offer promise for cancer treatment, but acquired resistance, which often includes an aggressive mesenchymal phenotype, can limit the use of these agents. Upregulation of beta1 integrin (ITGB1) occurs in some bevacizumab-resistant glioblastomas (BRG) whereby, mediating tumor-microenvironment interactions, we hypothesized that it may mediate a mesenchymal-type resistance to antiangiogenic therapy. Immunostaining analyses of beta1 integrin and its downstream effector kinase FAK revealed upregulation in 75% and 86% of BRGs, respectively, compared with pretreatment paired specimens. Furthermore, flow cytometry revealed eight-fold more beta1 integrin in primary BRG cells compared with cells from bevacizumab-naive glioblastomas (BNG). Fluorescence recovery after photobleaching of cells engineered to express a beta1-GFP fusion protein indicated that the mobile beta1 integrin fraction was doubled, and half-life of beta1 integrin turnover in focal adhesions was reduced markedly in BRG cells compared with bevacizumab-responsive glioblastoma multiforme cells. Hypoxia, which was increased with acquisition of bevacizumab resistance, was associated with increased beta1 integrin expression in cultured BNG cells. BRGs displayed an aggressive mesenchymal-like phenotype in vitro. We found that growth of BRG xenograft tumors was attenuated by the beta1 antibody, OS2966, allowing a 20-fold dose reduction of bevacizumab per cycle in this model. Intracranial delivery of OS2966 through osmotic pumps over 28 days increased tumor cell apoptosis, decreased tumor cell invasiveness, and blunted the mesenchymal morphology of tumor cells. We concluded that beta1 integrin upregulation in BRGs likely reflects an onset of hypoxia caused by antiangiogenic therapy, and that beta1 inhibition is well tolerated in vivo as a tractable strategy to disrupt resistance to this therapy. Cancer Res; 73(10); 3145-54. ©2013 AACR.

[48]

**TÍTULO / TITLE:** - BRAF V600E Mutation Identifies a Subset of Low-Grade Diffusely Infiltrating Gliomas in Adults.

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

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 May 10;31(14):e233-6. doi: 10.1200/JCO.2012.46.0220. Epub 2013 Apr 1.

●●Enlace al texto completo (gratis o de pago) [1200/JCO.2012.46.0220](#)

**AUTORES / AUTHORS:** - Chi AS; Batchelor TT; Yang D; Dias-Santagata D; Borger DR; Ellisen LW; Iafrate AJ; Louis DN

**INSTITUCIÓN / INSTITUTION:** - Stephen E. and Catherine Pappas Center for Neuro-Oncology, Massachusetts General Hospital, 55 Fruit St, Yawkey 9E, Boston, MA 02114; [chi.andrew@mgh.harvard.edu](mailto:chi.andrew@mgh.harvard.edu).

[49]

**TÍTULO / TITLE:** - Predictors of long-term survival in patients with glioblastoma multiforme: advancements from the last quarter century.

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

**REVISTA / JOURNAL:** - Cancer Invest. 2013 Jun;31(5):287-308. doi: 10.3109/07357907.2013.789899. Epub 2013 Apr 24.

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

[3109/07357907.2013.789899](#)

**AUTORES / AUTHORS:** - Chaudhry NS; Shah AH; Ferraro N; Snelling BM; Bregy A; Madhavan K; Komotar RJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of Miami Miller School of Medicine, Miami, FL, USA.

**RESUMEN / SUMMARY:** - Over the last quarter century there has been significant progress toward identifying certain characteristics and patterns in GBM patients to predict survival times and outcomes. We sought to identify clinical predictors of survival in GBM patients from the past 24 years. We examined patient survival related to tumor locations, surgical treatment, postoperative course, radiotherapy, chemotherapy, patient age, GBM recurrence, imaging characteristics, serum, and molecular markers. We present predictors that may increase, decrease, or play no significant role in determining a GBM patient's long-term survival or affect the quality of life.

[50]

**TÍTULO / TITLE:** - MGMT promoter methylation status and prognosis of patients with primary or recurrent glioblastoma treated with carmustine wafers.

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

**REVISTA / JOURNAL:** - Br J Neurosurg. 2013 May 11.

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

[3109/02688697.2013.791664](#)

**AUTORES / AUTHORS:** - Gutenberg A; Bock HC; Bruck W; Doerner L; Mehdorn HM; Roggendorf W; Westphal M; Felsberg J; Reifenberger G; Giese A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Georg August University Gottingen , Gottingen , Germany.

**RESUMEN / SUMMARY:** - The prognostic role of O6-methylguanine-DNA methyltransferase (MGMT) promoter methylation in glioblastoma patients treated with carmustine (BCNU) wafer implantation is unclear. Here, we report on a retrospective study of 47 patients with either newly diagnosed (30 patients) or recurrent (17 patients) glioblastoma (WHO grade IV) treated with BCNU (bis-chloroethylnitrosourea) wafers. Thirteen of the newly diagnosed patients received local BCNU and irradiation only (first-line BCNU), while 17 patients additionally received concomitant and adjuvant temozolomide (TMZ) radiochemotherapy (first-line BCNU + TMZ). Of the 17 patients treated for recurrent glioblastoma (second-line BCNU), 16 had received radiotherapy with concomitant and adjuvant TMZ as an initial treatment. Median overall survival (OS) did not significantly differ between 19 patients with MGMT promoter methylated tumors when compared to 28 patients with unmethylated tumors (18.9 vs 15.0 months;  $p = 0.1054$ ). In the first-line BCNU + TMZ group, MGMT promoter methylation was associated with longer OS (21.0 vs 11.1 months,  $p = 0.0127$ ), while no significant survival differences were detected in the other two subgroups. Progression-free survival did not significantly differ between patients with and without MGMT promoter methylated tumors in the entire patient cohort or any of the three subgroups. The first-line BCNU + TMZ group showed no significant difference in OS when compared to the first-line BCNU group (18.9 vs 14.7 months), but tended to have more therapy-related adverse effects (53% vs 24%,  $p = 0.105$ ). In summary, MGMT promoter methylation showed a non-significant trend toward longer survival in our patient cohort. The combination of TMZ radiochemotherapy with local delivery of BCNU did not provide a significant survival benefit compared to local BCNU alone, but was associated with a higher rate of adverse effects. Owing to the small number of patients investigated, however, these findings would need to be corroborated in larger patient cohorts.

[51]

**TÍTULO / TITLE:** - Flying Solo: Chemotherapy Without Radiation for Primary CNS Lymphoma.

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

**REVISTA / JOURNAL:** - J Clin Oncol. 2013 May 28.

●●Enlace al texto completo (gratis o de pago) [1200/JCO.2013.48.9138](#)

**AUTORES / AUTHORS:** - Batchelor TT

**INSTITUCIÓN / INSTITUTION:** - Massachusetts General Hospital Cancer Center and Harvard Medical School, Boston, MA.

[52]

**TÍTULO / TITLE:** - Prognostic value of residual fluorescent tissue in glioblastoma patients after gross total resection in 5-aminolevulinic Acid-guided surgery.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Jun;72(6):915-21. doi: 10.1227/NEU.0b013e31828c3974.

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

[1227/NEU.0b013e31828c3974](#)

**AUTORES / AUTHORS:** - Aldave G; Tejada S; Pay E; Marigil M; Bejarano B; Idoate MA; Diez-Valle R

**INSTITUCIÓN / INSTITUTION:** - \*Department of Neurosurgery, Clinica Universidad de Navarra, Pamplona, España; double daggerDepartment of Pathology, Clinica Universidad de Navarra, Pamplona, España.

**RESUMEN / SUMMARY:** - BACKGROUND: : There is evidence in the literature supporting that fluorescent tissue signal in fluorescence-guided surgery extends farther than tissue highlighted in gadolinium in T1 sequence magnetic resonance imaging (MRI), which is the standard to quantify the extent of resection. OBJECTIVE: : To study whether the presence of residual fluorescent tissue after surgery carries a different prognosis for glioblastoma (GBM) cases with complete resection confirmed by MRI. METHODS: : A retrospective review in our center found 118 consecutive patients with high-grade gliomas operated on with the use of fluorescence-guided surgery with 5-aminolevulinic acid. Within that series, the 52 patients with newly diagnosed GBM and complete resection of enhancing tumor (CRET) in early MRI were selected for analysis. We studied the influence of residual fluorescence in the surgical field on overall survival and neurological complication rate. Multivariate analysis included potential relevant factors: age, Karnofsky Performance Scale, O-methylguanine methyltransferase methylation promoter status, tumor eloquent location, preoperative tumor volume, and adjuvant therapy. RESULTS: : The median overall survival was 27.0 months (confidence interval = 22.4-31.6) in patients with nonresidual fluorescence (n = 25) and 17.5 months (confidence interval = 12.5-22.5) for the group with residual fluorescence (n = 27) (P = .015). The influence of residual fluorescence was maintained in the multivariate analysis with all covariables, hazard ratio = 2.5 (P = .041). The neurological complication rate was 18.5% in patients with nonresidual fluorescence and 8% for the group with residual fluorescence (P = .267). CONCLUSION: : GBM patients with CRET in early MRI and no fluorescent residual tissue had longer overall survival than patients with CRET and residual fluorescent tissue. ABBREVIATIONS: : 5-ALA, 5-aminolevulinic acidCRET, complete resection of enhancing tumorDC, dendritic cellEOR, extent of resectionFGS, fluorescence-guided surgeryGBM, glioblastomaGTR, gross total resectionKPS, Karnofsky Performance ScaleMGMT, O-methylguanine methyltransferaseOS, overall survivalT1Gd, gadolinium in T1 sequence.

[53]

**TÍTULO / TITLE:** - Uncertainty, mood states, and symptom distress in patients with primary brain tumors: Analysis of a conceptual model using structural equation modeling.

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

**REVISTA / JOURNAL:** - Cancer. 2013 May 9. doi: 10.1002/cncr.28121.

●●Enlace al texto completo (gratis o de pago) [1002/cncr.28121](#)

**AUTORES / AUTHORS:** - Lin L; Chiang HH; Acquaye AA; Vera-Bolanos E; Gilbert MR; Armstrong TS

**INSTITUCIÓN / INSTITUTION:** - Department of Family Health, School of Nursing, The University of Texas Health Science Center at Houston, Houston, Texas.

**RESUMEN / SUMMARY:** - **BACKGROUND:** Patients with primary brain tumors (PBTs) face uncertainty related to prognosis, symptoms, treatment response, and toxicity. The authors of this report examined the direct/indirect relations among patients' uncertainty, mood states, and symptoms. **METHODS:** In total, 186 patients with PBTs were accrued at various points in the illness trajectory. Data-collection tools included an investigator-completed clinician checklist, a patient-completed demographic data sheet, the Mishel Uncertainty in Illness Scale-Brain Tumor Form (MUIS-BT), the MD Anderson Symptom Inventory-Brain Tumor Module (MDASI-BT), and the Profile of Mood States-Short Form (POMS-SF). Structural equation modeling was used to explore correlations among variables. **RESULTS:** Participants were primarily white (80%) men (53%) with a variety of brain tumors. They ranged in age from 19 to 80 years (mean +/- standard deviation, 44.2 +/- 12.6 years). Lower functional status and earlier point in the illness trajectory were associated with greater uncertainty (P < .01 for both). Uncertainty (P < .05), except in the model of "confusion," and the 5 negative mood states measured by the POMS-SF were directly associated with symptom severity perceived by patients (P < .01 for all). The impact of uncertainty on perceived symptom severity also was mediated significantly by mood states. **CONCLUSIONS:** The results from the study clearly demonstrated distinct pathways for the relations between uncertainty-mood states-symptom severity for patients with PBTs. Uncertainty in patients with PBTs is higher for those who have a poor performance status and directly impacts negative mood states, which mediate patient-perceived symptom severity. This conceptual model suggests that interventions designed to reduce uncertainty or that target mood states may help lessen patients' perception of symptom severity, which, in turn, may result in better treatment outcomes and quality of life. Cancer 2013; © 2013 American Cancer Society.

[54]

**TÍTULO / TITLE:** - Macroprolactinemia in patients with prolactinomas: prevalence and clinical significance.

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

**REVISTA / JOURNAL:** - Exp Clin Endocrinol Diabetes. 2013 Apr;121(4):201-5. doi: 10.1055/s-0032-1333232. Epub 2013 Apr 17.

●●Enlace al texto completo (gratis o de pago) [1055/s-0032-1333232](#)

**AUTORES / AUTHORS:** - Elenkova A; Genov N; Abadzhieva Z; Kirilov G; Vasilev V; Kalinov K; Zacharieva S

**INSTITUCIÓN / INSTITUTION:** - Clinical Centre of Endocrinology and Gerontology, Medical University, Sofia. [atanaskae@yahoo.com](mailto:atanaskae@yahoo.com)

**RESUMEN / SUMMARY:** - BACKGROUND: Data on the prevalence of macroprolactinemia in patients with prolactinomas is quite limited as the presence of high-molecular prolactin forms is suspected mainly in subjects with mild hyperprolactinemia and negative pituitary imaging. OBJECTIVE: The main objective of this observational case-control study was to assess the prevalence and clinical significance of macroprolactinemia among patients with prolactinomas. METHODS: The study population consisted of 239 subjects: 131 prolactinoma patients and 108 sex-, age- and ethnicity- matched healthy controls. Macroprolactinemia was defined by a PRL recovery after PEG precipitation of <40%. RESULTS: The prevalence of macroprolactinemia among newly diagnosed prolactinoma patients did not differ statistically from the prevalence in the control group (3.5 vs. 3.7%; p=1.000) but was lower although non-significantly than the subgroup of patients treated with dopamine agonists (DA) (3.5 vs.10.8%; p=0.072). Significant association between disruptions of ovarian function and serum levels of the monomeric as well as high-molecular prolactin isoform was found. CONCLUSIONS: In few cases, the presence of typical hyperprolactinemia-related clinical symptoms and their disappearance after treatment with DA suggests biological activity of macroprolactin comparable with that of monomeric prolactin isoform. Decrease of macroprolactin levels after DA treatment could suggest tumoral origin of the high-molecular isoform in these rare cases. Although macroprolactinemia is considered a benign condition, pituitary imaging, DA treatment, and prolonged follow-up may be necessary in certain cases. An individualized approach to the management of patients with macroprolactinemia should be applied.

[55]

**TÍTULO / TITLE:** - Phase 1/1b study of lonafarnib and temozolomide in patients with recurrent or temozolomide refractory glioblastoma.

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

**REVISTA / JOURNAL:** - Cancer. 2013 Apr 30. doi: 10.1002/cncr.28031.

●●Enlace al texto completo (gratis o de pago) [1002/cncr.28031](#)

**AUTORES / AUTHORS:** - Yust-Katz S; Liu D; Yuan Y; Liu V; Kang S; Groves M; Puduvalli V; Levin V; Conrad C; Colman H; Hsu S; Yung WK; Gilbert MR

**INSTITUCIÓN / INSTITUTION:** - Department of Neuro-Oncology, University of Texas MD Anderson Cancer Center, Houston, Texas.

**RESUMEN / SUMMARY:** - BACKGROUND: Lonafarnib is an oral selective farnesyltransferase inhibitor, a class of drugs which have shown activity in preclinical glioma models. Temozolomide (TMZ) is an alkylating agent that is the first-line chemotherapy for glioblastoma. METHODS: The current study combined the cytotoxic agent TMZ with the cytostatic agent lonafarnib for patients with recurrent glioblastoma to establish a maximum tolerated dose (MTD) of the combination and its preliminary efficacy. Three dose cohorts of lonafarnib were studied in the phase 1 component of the trial (100 mg twice daily [bid], 150 mg bid, and 200 bid) with dose-dense schedule of TMZ (150 mg/m<sup>2</sup> daily) administered in an alternating weekly schedule. After establishing the MTD of lonafarnib, a subsequent expansion phase 1b was undertaken to evaluate efficacy, primarily measured by 6-month progression-free survival (PFS-6). RESULTS: Fifteen patients were enrolled into the phase 1 component and 20 patients into the phase 1b component. The MTD of lonafarnib in combination with TMZ was 200 mg bid. Among the patients enrolled into the study, 34 were eligible for 6-month progression evaluation and 35 patients were evaluable for time-to-progression analysis. The PFS-6 rate was 38% (95% confidence interval [CI] = 22%, 56%) and the median PFS was 3.9 months (95% CI = 2.5, 8.4). The median disease-specific survival was 13.7 months (95% CI = 8.9, 22.1). Hematologic toxicities, particularly lymphopenia, were the most common grade 3 and 4 adverse events. There were no treatment-related deaths. CONCLUSIONS: These results demonstrate that TMZ can be safely combined with a farnesyltransferase inhibitor and that this regimen is active, although the current study cannot determine the relative contributions of the 2 agents or the contribution of the novel administration schedule. Cancer 2013. © 2013 American Cancer Society.

[56]

**TÍTULO / TITLE:** - A comprehensive next generation sequencing based genetic testing strategy to improve diagnosis of inherited pheochromocytoma and paraganglioma.

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

**REVISTA / JOURNAL:** - J Clin Endocrinol Metab. 2013 May 10.

●●Enlace al texto completo (gratuito o de pago) [1210/jc.2013-1319](#)

**AUTORES / AUTHORS:** - Rattenberry E; Vialard L; Yeung A; Bair H; McKay K; Jafri M; Canham N; Cole TR; Denes J; Hodgson SV; Irving R; Izatt L; Korbonits M; Kumar AV; Laloo F; Morrison PJ; Woodward ER; Macdonald F; Wallis Y; Maher ER

**INSTITUCIÓN / INSTITUTION:** - 1Centre for Rare Diseases and Personalised Medicine, School of Clinical and Experimental Medicine, College of Medical and Dental Sciences, University of Birmingham, Edgbaston, Birmingham, B15 2TH.

**RESUMEN / SUMMARY:** - Context:Pheochromocytomas and paragangliomas are notable for the high frequency of inherited cases, many of which present as apparently sporadic tumors.Objective:The objective of this study was to establish a comprehensive next generation sequencing (NGS)-based strategy for the diagnosis of pheochromocytoma and paraganglioma patients by testing simultaneously for mutations in MAX, RET, SDHA, SDHB, SDHC, SDHD, SDHAF2, TMEM127 and VHL.Design:After designing and establishing the methodology for the assay, it was validated on DNA samples with known genotype and then patients were studied prospectively.Setting:The study was performed in a diagnostic genetics laboratory.Patients:DNA samples from 205 individuals affected with PPGL/HNPGL (adrenal or extra-adrenal pheochromocytoma/head and neck paraganglioma) were analyzed. A proof of principle study was performed using 85 samples known to contain a variant in one or more of the genes to be tested, followed by prospective analysis of an additional 120 samples.Main Outcome Measure(s):We assessed the ability to use an NGS-based method to perform comprehensive analysis of genes implicated in inherited PPGL/HNPGL.Result:The proof of principle study showed that the NGS assay and analysis gave a sensitivity of 98.7%. A pathogenic mutation was identified in 16.6% of the prospective analysis cohort of 120 patients.Conclusions:A comprehensive NGS-based strategy for the analysis of genes associated with predisposition to PPGL and HNPGL was established, validated and introduced into diagnostic service. The new assay allows simultaneous analysis of nine genes and allows more rapid and cost-effective mutation detection than the previously used conventional Sanger sequencing based methodology.

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[57]

**TÍTULO / TITLE:** - Efficacy of therapeutic play for pediatric brain tumor patients during external beam radiotherapy.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 13.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2099-](#)

[3](#)

**AUTORES / AUTHORS:** - Tsai YL; Tsai SC; Yen SH; Huang KL; Mu PF; Liou HC; Wong TT; Lai IC; Liu P; Lou HL; Chiang IT; Chen YW

**INSTITUCIÓN / INSTITUTION:** - Division of Radiation Oncology, Cancer Center, Taipei Veterans General Hospital, Taipei, Taiwan.

**RESUMEN / SUMMARY:** - OBJECTIVE: External beam radiotherapy (EBRT) is frequently used to improve disease control for pediatric brain tumor patients.

However, to facilitate the radiotherapy (RT) procedure, “forced” type interventions including conscious sedation or general anesthesia are frequently used to manage patients’ fear and anxiety. The aim of this study was to investigate the effects of therapeutic play (TP) in reducing anxiety for pediatric brain tumor patients treated by EBRT. METHODS: Between April 1st and September 30th, 2009, 19 young brain tumor patients, aged 3-15 years and recommended for RT, were recruited: ten to a control group and nine to the study intervention group. The study group was introduced with TP during EBRT. The Beck Youth Anxiety Inventory and the Faces Anxiety Scale were used to evaluate patients’ psychological levels of anxiety. The heart rate variability and salivary cortisol concentrations were used to indicate the patients’ physical levels of anxiety. Both the psychological and physiological tests were administered to all subjects before and after the RT procedure. RESULTS: The study group had significantly lower anxiety scores and expressed fewer negative emotions than did the control group before EBRT. CONCLUSIONS: TP can not only improve the quality of medical services but can also reduce costs and staffing demands. In addition, it can help lower young patients’ anxiety and fear during medical procedures. As a result, it further decreases the potential negative impacts of hospitalization on these young patients.

[58]

**TÍTULO / TITLE:** - Cytoplasmic staining of OCT4 is a highly sensitive marker of adrenal medullary-derived tissue.

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

**REVISTA / JOURNAL:** - Am J Surg Pathol. 2013 May;37(5):727-33. doi: 10.1097/PAS.0b013e3182793dc2.

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

[1097/PAS.0b013e3182793dc2](#)

**AUTORES / AUTHORS:** - Alexander RE; Cheng L; Grignon DJ; Idrees M

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Laboratory Medicine, Indiana University School of Medicine, Indianapolis, IN 46202, USA.

**RESUMEN / SUMMARY:** - OCT4 immunostaining has become an essential resource in diagnosing germ cell neoplasia. OCT4 is a transcription factor with a characteristic nuclear staining pattern specific to germ cell neoplasms. Our institution has observed that paraganglionic tissue consistently displayed intense cytoplasmic staining by utilizing monoclonal OCT4 antibody, and we intended to determine whether OCT4 could provide additional diagnostic utility in adrenal tumors. We used monoclonal and polyclonal OCT4 antibodies for comparison of staining patterns and intensities. Thirty-eight pheochromocytomas (8 metastatic), 22 adrenal cortical carcinomas (2 metastatic), 15 metastatic tumors to the adrenal glands, and 10 normal adrenal glands containing cortical and medullary tissue were immunostained with

OCT4. A 4-tier system (0 to 3), for recording intensity and extent of cytoplasmic staining, was used. All 30 primary pheochromocytomas displayed strong and diffuse (3+3) cytoplasmic immunoreexpression. Six of 8 metastatic pheochromocytomas showed strong immunoreexpression (3+3), whereas the remaining 2 showed moderate intensity (2+3). All 22 adrenal cortical carcinomas, including metastatic cases, were completely negative. Only 2 metastatic tumors to the adrenal gland showed weak, cytoplasmic positivity: a small cell carcinoma and a Merkel cell carcinoma. Controls stained in an appropriate nuclear manner. Immunoelectron microscopy demonstrated the antibody interacting with neurosecretory granules. To our knowledge, the cytoplasmic expression of OCT4 in adrenal medulla and pheochromocytoma has not been specifically studied. The goal of this study is to analyze the immunoreactivity of adrenal cortical carcinoma and pheochromocytoma to OCT4 and determine the sensitivity and specificity of this particular staining pattern and to compare monoclonal and polyclonal antibodies.

[59]

**TÍTULO / TITLE:** - Insulin-like growth factor 2 mRNA binding protein 3 expression is an independent prognostic factor in pediatric pilocytic and pilomyxoid astrocytoma.

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

**REVISTA / JOURNAL:** - J Neuropathol Exp Neurol. 2013 May;72(5):442-9. doi: 10.1097/NEN.0b013e31829023dd.

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

[1097/NEN.0b013e31829023dd](#)

**AUTORES / AUTHORS:** - Barton VN; Donson AM; Birks DK; Kleinschmidt-DeMasters BK; Handler MH; Foreman NK; Rush SZ

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, University of Colorado, Aurora, CO, USA.

**RESUMEN / SUMMARY:** - Prognostic factors in pilocytic astrocytomas (PAs) and pilomyxoid astrocytomas (PMAs) include extent of resection, location, and age, but no molecular markers have been established. Insulin-like growth factor 2 mRNA binding protein 3 (IMP3, IGF2BP3) is predictive of an unfavorable prognosis in other tumors, including high-grade astrocytomas, but its role in PA/PMA is unknown. This study aimed to determine the expression and prognostic value of IMP3 in pediatric PA/PMAs. Insulin-like growth factor 2 mRNA binding protein 3 protein expression was examined by immunohistochemistry in 77 pediatric PAs (n = 70) and PMAs (n = 7) and scored on a subjective scale. Strong diffuse staining for IMP3 was observed in 31% (24 of 77) of tumors and associated with a shorter progression-free survival (hazard ratio, 2.63; p = 0.008). This cohort confirmed previously identified prognostic factors, including extent of resection, age, and tumor

location. Currently, only clinical factors are weighed to stratify risk for patients and to identify those who should receive further therapy. Multivariate analyses identified IMP3 expression as an independent prognostic factor when combined with high-/low-risk stratification (hazard ratio, 2.45;  $p = 0.016$ ). High IMP3, as assessed by immunohistochemistry, has potential use as an additional predictor of poor prognosis in pediatric PA/PMAs and warrants evaluation in larger cohorts.

[60]

**TÍTULO / TITLE:** - Diffuse leptomeningeal neuroepithelial tumor: 9 pediatric cases with chromosome 1p/19q deletion status and IDH1 (R132H) immunohistochemistry.

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

**REVISTA / JOURNAL:** - Am J Surg Pathol. 2013 May;37(5):763-71. doi: 10.1097/PAS.0b013e31827bf4cc.

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

[1097/PAS.0b013e31827bf4cc](#)

**AUTORES / AUTHORS:** - Schniederjan MJ; Alghamdi S; Castellano-Sanchez A; Mazewski C; Brahma B; Brat DJ; Brathwaite CD; Janss AJ

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Laboratory Administration, Children's Healthcare of Atlanta, Emory University School of Medicine, 1001 Johnson Ferry Rd NE, Atlanta, GA 30322, USA.

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**RESUMEN / SUMMARY:** - Leptomeningeal dissemination in children is typical of high-grade, and occasionally low-grade, neoplasms. Rare cases of widely disseminated oligodendroglia-like leptomeningeal tumors, sometimes with associated spinal cord lesions, have been described that respond to treatment and follow an indolent course. Whether these lesions represent an established tumor category or are a unique entity remains to be established. We present 9 pediatric cases of such diffuse leptomeningeal neuroepithelial tumors (DLNT), 8 with assessment of 2 common genetic alterations seen in oligodendrogliomas, 1p and 19q chromosomal deletions and isocitrate dehydrogenase-1 (IDH1) R132H mutations. Four patients were male and 5 female, with a mean age at presentation of 4 years (range, 2 to 7 y). All presented with signs of increased intracranial pressure and diffuse contrast enhancement of the leptomeninges by magnetic resonance imaging. Three had a cervical or upper thoracic spinal cord tumor, and another had a small cerebellar lesion. Leptomeningeal biopsies showed a thickened and fibrotic arachnoid infiltrated by monotonous cells with round nuclei and prominent perinuclear clearing. All cases were strongly immunoreactive for S100 protein, and most showed faint granular synaptophysin reactivity. Six of 8 cases showed deletions of chromosome arm 1p by fluorescence in situ hybridization, 2 of which also had loss of 19q. None

of the lesions reacted with IDH1-R132H antibodies. Although the clinicopathologic features show overlap of these DLNT lesions with oligodendroglioma and extraventricular neurocytoma, they do not exactly match either one, suggesting that DLNTs are a distinct tumor entity.

[61]

**TÍTULO / TITLE:** - Incidental 11C-Choline PET/CT Brain Uptake due to Meningioma in a Patient Studied for Prostate Cancer: Correlation With MRI and Imaging Fusion.

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

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Mar 21.

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

[1097/RLU.0b013e31827a22f7](#)

**AUTORES / AUTHORS:** - Bertagna F; Bosio G; Pinelli L; Treglia G; Giubbini R

**INSTITUCIÓN / INSTITUTION:** - From the \*Department of Nuclear Medicine and daggerNeuroradiology, University of Brescia and Spedali Civili Brescia, Brescia; and double daggerDepartment of Nuclear Medicine, Catholic University of Sacred Heart, Rome, Italy.

**RESUMEN / SUMMARY:** - We report a case of a 75-year-old male patient treated with radiotherapy in 1999 for prostate cancer. Due to a rise in prostate-specific antigen, he underwent C-choline PET/CT. The study was negative for secondary lesions but revealed an incidental pathologic focal brain uptake. A subsequent magnetic resonance examination confirmed the presence of a brain lesion typical for meningioma.

[62]

**TÍTULO / TITLE:** - Primary central nervous system malignant lymphoma in a patient with rheumatoid arthritis receiving low-dose methotrexate treatment.

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

**REVISTA / JOURNAL:** - Br J Neurosurg. 2013 May 25.

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

[3109/02688697.2013.798857](#)

**AUTORES / AUTHORS:** - Fukushima M; Katayama Y; Yokose N; Kura Y; Sawada U; Kotani A; Yoshino A

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Neurological Surgery, Nihon University School of Medicine, Itabashi, Tokyo, Japan.

**RESUMEN / SUMMARY:** - We report the first case of primary central nervous system lymphoma (PCNSL) developing in a patient with rheumatoid arthritis (RA) undergoing low-dose methotrexate therapy (LD-MTX). The characteristic clinical management and course in our experience of the present case illustrate

the important points about PCNSL in methotrexate-associated lymphoproliferative disorders (MTX-LPD). The number of cases of MTX-LPD in RA patients may increase in the future, since current treatment strategies for RA recommend starting MTX use in early stage RA, and recent insights have tended to show an increase with higher doses.

[63]

**TÍTULO / TITLE:** - Epithelioid GBMs show a high percentage of BRAF V600E mutation.

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

**REVISTA / JOURNAL:** - Am J Surg Pathol. 2013 May;37(5):685-98. doi: 10.1097/PAS.0b013e31827f9c5e.

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

[1097/PAS.0b013e31827f9c5e](#)

**AUTORES / AUTHORS:** - Kleinschmidt-DeMasters BK; Aisner DL; Birks DK; Foreman NK

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, The University of Colorado Health Sciences Center, Aurora, CO 80045, USA. [bk.demasters@ucdenver.edu](mailto:bk.demasters@ucdenver.edu)).

**RESUMEN / SUMMARY:** - BRAF V600E mutation has been identified in up to 2/3 of pleomorphic xanthoastrocytomas (PXAs), World Health Organization grade II, as well as in varying percentages of PXAs with anaplastic features (PXA-A), gangliogliomas, extracerebellar pilocytic astrocytomas, and, rarely, giant cell glioblastoma multiforme (GC-GBMs). GC-GBMs and epithelioid GBMs (E-GBMs) can be histologically challenging to distinguish from PXA-A. We undertook this study specifically to address whether these 2 tumor types also showed the mutation. We tested our originally reported cohort of 8 E-GBMs and 2 rhabdoid GBMs (R-GBM) as well as 5 new E-GBMs (1 pediatric, 4 adult) and 9 GC-GBMs (2 pediatric, 7 adult) (n=24) for BRAF V600E mutational status. Twenty-one of 24 had sufficient material for IDH-1 immunostaining, which is usually absent in PXAs, PXA-As, and primary GBMs but present in secondary GBMs. Patients ranged in age from 4 to 67 years. BRAF V600E mutation was identified in 7/13 of E-GBMs, including 3 of our original cases; patients with mutation were aged 10 to 50 years. None of the 9 GC-GBMs or 2 R-GBMs manifested this mutation, including pediatric patients. The sole secondary E-GBM was the single case manifesting positive IDH-1 immunoreactivity. A high percentage of E-GBMs manifest BRAF V600E mutation, paralleling PXAs. All R-GBMs and GC-GBMs were negative, although larger multi-institutional cohorts will have to be tested to extend this result. BRAF V600E mutational analyses should be performed on E-GBMs, particularly in all pediatric and young-aged adults, given the potential for BRAF inhibitor therapy in this subset of GBM patients.

[64]

**TÍTULO / TITLE:** - Early and late postoperative seizure outcome in 97 patients with supratentorial meningioma and preoperative seizures: a retrospective study.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 24.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1156-](#)

[9](#)

**AUTORES / AUTHORS:** - Zheng Z; Chen P; Fu W; Zhu J; Zhang H; Shi J; Zhang J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Second Affiliated Hospital, School of Medicine, Zhejiang University, 88 Jiefang Road, Hangzhou, 310009, People's Republic of China.

**RESUMEN / SUMMARY:** - We identified factors associated with early and late postoperative seizure control in patients with supratentorial meningioma plus preoperative seizures. In this retrospective study, univariate analysis and multivariate logistic regression analysis compared 24 clinical variables according to the occurrence of early ( $\leq 1$  week) or late ( $> 1$  week) postoperative seizures. Sixty-two of 97 patients (63.9 %) were seizure free for the entire postoperative follow-up period (29.5  $\pm$  11.8 months), while 13 patients (13.4 %) still had frequent seizures at the end of follow-up. Fourteen of 97 patients (14.4 %) experienced early postoperative seizures, and emergence of new postoperative neurological deficits was the only significant risk factor (odds ratio = 7.377). Thirty-three patients (34.0 %) experienced late postoperative seizures at some time during follow-up, including 12 of 14 patients with early postoperative seizures. Associated risk factors for late postoperative seizures included tumor progression (odds ratio = 7.012) and new permanent postoperative neurological deficits (odds ratio = 4.327). Occurrence of postoperative seizures in patients with supratentorial meningioma and preoperative seizure was associated with new postoperative neurological deficits. Reduced cerebral or vascular injury during surgery may lead to fewer postoperative neurological deficits and better seizure outcome.

[65]

**TÍTULO / TITLE:** - Pseudoprogession in patients with glioblastoma: added value of arterial spin labeling to dynamic susceptibility contrast perfusion MR imaging.

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

**REVISTA / JOURNAL:** - Acta Radiol. 2013 Apr 16.

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

[1177/0284185112474916](#)

**AUTORES / AUTHORS:** - Choi YJ; Kim HS; Jahng GH; Kim SJ; Suh DC

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology and Research Institute of Radiology, University of Ulsan College of Medicine, Asan Medical Center, Seoul.

**RESUMEN / SUMMARY:** - Background Pseudoprogession is a treatment-related reaction with an increase in contrast-enhancing lesion size, followed by subsequent improvement. Differentiating tumor recurrence from pseudoprogession remains a problem in neuro-oncology. Purpose To validate the added value of arterial spin labeling (ASL), compared with dynamic susceptibility contrast (DSC) perfusion magnetic resonance imaging (MRI) alone, in distinguishing early tumor progression from pseudoprogession in patients with newly diagnosed glioblastoma multiforme (GBM). Material and Methods We retrospectively evaluated 117 consecutive patients with newly diagnosed GBM who underwent surgical resection and concurrent chemoradiotherapy (CCRT) as standard treatment modality. Sixty-two patients who developed contrast-enhancing lesions were assessed by both ASL and DSC perfusion MRI and classified into groups of early tumor recurrence (n = 34) or pseudoprogession (n = 28) based on pathologic analysis or clinical-radiologic follow-up. We used a qualitative analysis and semi-quantitative grade system on the basis of the tumor perfusion signal intensity into those equal to white matter (grade I), gray matter (grade II), and blood vessels (grade III) on ASL imaging. ASL grade was correlated with histogram parameters derived from DSC perfusion MRI. Results Pseudoprogession was observed in 15 (53.6%) patients with ASL grade I, 13 (46.4%) with grade II, and 0 (0%) with grade III, with early tumor progression observed in seven (20.6%) patients with ASL grade I, 11 (32.3%) with grade II, and 16 (47.1%) with grade III (P = 0.0022). DSC perfusion histogram parameters differed significantly among ASL grades. ASL grade was an independent predictor differentiating pseudoprogession from early tumor progression (odds ratio, 4.73; P = 0.0017). On qualitative review, adjunctive ASL produced eight (12.9%) more accurate results than DSC perfusion MRI alone. Conclusion ASL improves the diagnostic accuracy of DSC perfusion MRI in differentiating pseudoprogession from early tumor progression.

[66]

**TÍTULO / TITLE:** - Clinical features and treatment of intracranial chordoid meningioma: a report of 30 cases.

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

**REVISTA / JOURNAL:** - Histopathology. 2013 Jun;62(7):1002-17. doi: 10.1111/his.12113. Epub 2013 Apr 26.

●●Enlace al texto completo (gratis o de pago) [1111/his.12113](#)

**AUTORES / AUTHORS:** - Wang XQ; Mei GH; Zhao L; Li ST; Gong Y; Zhong J; Chen H; Jiang CC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai, China.

**RESUMEN / SUMMARY:** - AIMS: To discuss the clinical characteristics and prognosis of chordoid meningioma (CM). METHODS AND RESULTS: Tumour samples of CM from 30 patients were re-examined. The postoperative outcomes were analyzed on the basis of clinical observations. The survival probabilities were calculated using the Kaplan-Meier method. Thirty-two operations were performed in 30 cases, including 27 operations for total removal and five operations for subtotal removal. The median follow-up period was 34.0 months. Tumour recurred in five patients, with a median recurrence time of 32.0 months. No systemic manifestations of Castleman's syndrome were found. The majority (80%) of tumours were found in the supratentorial compartments. The MIB-1 labelling index (MIB-1 LI) varied from 1% to 10%. In univariate analyses, the presence of aggressive factors ( $P = 0.001$ ) and the extent of resection ( $P = 0.037$ ) were related to progression-free survival (PFS). The MIB-1 LI ( $P = 0.50$ ) and postoperative radiotherapy ( $P = 0.62$ ) were not related to PFS. CONCLUSIONS: Chordoid meningioma is a rare subtype of meningioma, and is often found supratentorially. There is an absence of association with Castleman's syndrome. Aggressive factors and the extent of resection are helpful in predicting recurrence. It might be more pertinent to downgrade CM to grade I, unless it shows aggressive factors.

[67]

**TÍTULO / TITLE:** - Nobiletin induces inhibitions of Ras activity and mitogen-activated protein kinase kinase/extracellular signal-regulated kinase signaling to suppress cell proliferation in C6 rat glioma cells.

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

**REVISTA / JOURNAL:** - Biol Pharm Bull. 2013;36(4):540-7.

**AUTORES / AUTHORS:** - Aoki K; Yokosuka A; Mimaki Y; Fukunaga K; Yamakuni T

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmacotherapy, Graduate School of Pharmaceutical Sciences, Tohoku University.

**RESUMEN / SUMMARY:** - Ras, a small G-protein, physiologically directs cell proliferation and cell cycle via regulation of mitogen-activated protein kinase kinase (MEK)/extracellular signal-regulated kinase (ERK) signaling cascade. Dysregulation of Ras/MEK/ERK signaling has been reported to cause tumorigenesis and gliomas. Nobiletin, a citrus flavonoid, has been shown to have anti-tumor cells action. However, it remains elusive whether nobiletin could affect Ras activity. In this study, we provide the first evidence that nobiletin suppresses the proliferation by inhibiting Ras activity in C6 glioma cells, a rat glioma cell line. First, Ras pull-down assay showed that nobiletin inhibits Ras activity in a concentration-dependent manner in C6 cells. Second,

farnesyltransferase inhibitor I, a Ras inhibitor, and U0126, a MEK inhibitor, induced an inhibition of the cell proliferation in C6 cells, while the cell proliferation was inhibited by nobiletin as well. Third, western blotting revealed that nobiletin showed inhibitory effects on MEK and ERK phosphorylation levels in a concentration-dependent manner. Finally, such an inhibitory effect on the level of ERK phosphorylation by nobiletin was appreciably prevented by Go6976, a selective inhibitor of conventional protein kinase Cs (PKCs) showing Ca(2+)-sensitivity, while GF109203X, a general inhibitor for PKCs, and BAPTA, a cell-permeable Ca(2+) chelator, to a lesser extent, suppressed a reduction of the phosphorylation. These findings suggest that the proliferation of C6 cells is Ras- and MEK/ERK signaling-dependent, and that nobiletin suppresses the cell proliferation by inhibiting Ras activity and MEK/ERK signaling cascade probably via a Ca(2+)-sensitive PKC-dependent mechanism. Thus, the natural compound has potential to be a therapeutic agent for glioma.

[68]

**TÍTULO / TITLE:** - Childhood craniopharyngioma: hypothalamus-sparing surgery decreases the risk of obesity.

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

**REVISTA / JOURNAL:** - J Clin Endocrinol Metab. 2013 Jun;98(6):2376-82. doi: 10.1210/jc.2012-3928. Epub 2013 Apr 30.

●●Enlace al texto completo (gratis o de pago) [1210/jc.2012-3928](#)

**AUTORES / AUTHORS:** - Elowe-Gruau E; Beltrand J; Brauner R; Pinto G; Samara-Boustani D; Thalassinou C; Busiah K; Laborde K; Boddaert N; Zerah M; Alapetite C; Grill J; Touraine P; Sainte-Rose C; Polak M; Puget S

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology Gynecology and Diabetology, Hopital Necker-Enfants Malades, 149 rue de Sevres, 75015 Paris, France. [michel.polak@nck.aphp.fr](mailto:michel.polak@nck.aphp.fr).

**RESUMEN / SUMMARY:** - Context: Craniopharyngioma is a brain tumor whose high local recurrence rate has for a long time led to a preference for extensive surgery. Limited surgery minimizing hypothalamic damage may decrease the severe obesity rate at the expense of the need for radiotherapy to complete the treatment. Objective: We compared weight gain and local recurrence rates after extensive resection surgery (ERS) and hypothalamus-sparing surgery (HSS). Design: Our observational study compared a historical cohort managed with ERS between 1985 and 2002 to a prospective cohort managed with HSS between 2002 and 2010. Setting: The patients were treated in a pediatric teaching hospital in Paris, France. Patients: Thirty-seven boys and 23 girls were managed with ERS (median age, 8 years); 38 boys and 27 girls were managed with HSS (median age, 9.3 years). Main outcome measures: Data were collected before and 6 months to 7 years after surgery. Body mass index (BMI) Z-score was used to assess obesity and the number of surgical procedures to

assess local recurrence rate. Results: Mean BMI Z-score before surgery was comparable in the 2 cohorts (0.756 after ERS vs 0.747 after HSS;  $P = .528$ ). At any time after surgery, mean BMI Z-score was significantly lower after HSS (eg, 1.889 SD vs 2.915 SD,  $P = .004$  at 1 year). At last follow-up, the HSS cohort had a significantly lower prevalence of severe obesity (28% vs 54%,  $P < .05$ ) and higher prevalence of normal BMI (38% vs 17%,  $P < .01$ ). Mean number of surgical procedures was not significantly different in the 2 cohorts. Conclusions: Hypothalamus-sparing surgery decreases the occurrence of severe obesity without increasing the local recurrence rate.

[69]

**TÍTULO / TITLE:** - NADP(+)-dependent IDH1(R132) mutation and its relevance for glioma patient survival.

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

**REVISTA / JOURNAL:** - Med Hypotheses. 2013 Jun;80(6):728-31. doi: 10.1016/j.mehy.2013.02.022. Epub 2013 Mar 29.

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

[1016/j.mehy.2013.02.022](http://1016/j.mehy.2013.02.022)

**AUTORES / AUTHORS:** - Baldewpersad Tewarie NM; Burgers IA; Dawood Y; den Boon HC; den Brok MG; Klunder JH; Koopmans KB; Rademaker E; van den Broek HB; van den Bersselaar SM; Witjes JJ; Van Noorden CJ; Atai NA

**INSTITUCIÓN / INSTITUTION:** - Department of Cell Biology and Histology, Academic Medical Center, University of Amsterdam, 1105 AZ Amsterdam, The Netherlands.

**RESUMEN / SUMMARY:** - The isocitrate dehydrogenase 1 (IDH1) mutation occurs in high frequency in glioma and secondary glioblastoma (GBM). Mutated IDH1 produces the oncometabolite 2-hydroxyglutarate rather than alpha-ketoglutarate or isocitrate. The oncometabolite is considered to be the major cause of the association between the IDH1 mutation and gliomagenesis. On the other hand, the IDH1 mutation in GBM is associated with prolonged patient survival. This association is not well understood yet but IDH1 involvement in epigenetic silencing of O-6-methylguanine-DNA methyltransferase (MGMT), a DNA repair enzyme is considered to be an important mechanism. However, it was shown recently that the IDH1 mutation and MGMT silencing are independent prognostic factors. Here, we hypothesize that the IDH1 mutation reduces the capacity to produce NADPH and thus reduces the capacity to scavenge reactive oxygen species that are generated during irradiation and chemotherapy. IDH1 activity is responsible for two-thirds of the NADPH production capacity in normal brain, whereas the IDH1 mutation reduces this capacity by almost 40%. Therefore, we hypothesize that the reduced NADPH production capacity due to the IDH1 mutation renders GBM cells more

vulnerable to irradiation and chemotherapy thus prolonging survival of the patients.

[70]

**TÍTULO / TITLE:** - Pathology of Spinal Ependymomas: An Institutional Experience Over 25 Years in 134 Patients.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 May 10.

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

[1227/01.neu.0000430764.02973.78](https://doi.org/10.1227/01.neu.0000430764.02973.78)

**AUTORES / AUTHORS:** - Tarapore PE; Modera P; Naujokas A; Oh MC; Amin B; Tihan T; Parsa AT; Ames CP; Chou D; Mummaneni PV; Weinstein PR

**INSTITUCIÓN / INSTITUTION:** - 1Departments of Neurosurgery and 2Pathology, University of California, San Francisco.

**RESUMEN / SUMMARY:** - BACKGROUND:: Ependymomas comprise approximately 40% of primary intraspinal tumors. Current WHO grading may not correlate with observed progression-free survival (PFS). OBJECTIVE:: This retrospective study of prospectively collected data examines whether PFS is influenced by histological grade or by extent of resection. It also analyzes usage and effectiveness of postoperative adjuvant radiotherapy. METHODS:: We reviewed 134 consecutive patients with ependymomas of all grades. Pathology slides were re-reviewed and the histological grades were confirmed by a single neuropathologist. Postoperative residual or recurrence was evaluated with follow-up MRI. RESULTS:: There were 85 male and 49 female patients, ranging from 10 to 79 (median 41) years of age. Thirty were WHO grade I, 101 were grade II, and 3 were grade III tumors. Kaplan Meier analysis of PFS demonstrated a mean duration of 6 years for grade I, 14.9 years for grade II, and 3.7 years for grade III ( $p < .001$ ). In grade II ependymomas, mean PFS was 11.2 years with STR and 17.8 years with GTR ( $p < .01$ ). PFS of patients who underwent STR was not significantly changed by adjuvant radiotherapy ( $p < .36$ ). CONCLUSION:: Patients with grade II ependymoma have significantly longer PFS than patients with grade I ependymoma. Extent of resection did not affect PFS in grade I ependymoma but it did in grade II. Contrary to their higher grade, WHO grade II ependymoma carries a better prognosis than WHO grade I ependymoma.

[71]

**TÍTULO / TITLE:** - Cytological diagnosis of metastatic glioblastoma in the pleural effusion of a lung transplant patient.

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

**REVISTA / JOURNAL:** - Diagn Cytopathol. 2013 Apr 3. doi: 10.1002/dc.22993.

●●Enlace al texto completo (gratis o de pago) [1002/dc.22993](https://doi.org/10.1002/dc.22993)

**AUTORES / AUTHORS:** - Nauen DW; Li QK

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, The Johns Hopkins Hospitals, Baltimore, Maryland.

**RESUMEN / SUMMARY:** - The extracranial metastasis of glioblastoma is a rare event. We report the case of a patient who developed metastatic glioblastoma in pleural effusion 15 months after lung transplant, with emphasis on differential diagnosis based on cytological material. In our case, tumor cells had pleomorphic nuclei, prominent nucleoli, and fine vesicular chromatin. Some were arranged in a poorly formed pseudo-glandular architecture, mimicking a poorly differentiated adenocarcinoma. The cytological diagnosis of metastatic glioblastoma is difficult and depends critically on clinical history and suspicion, particularly in the transplant setting. Review of the literature indicates that transmission/metastasis of intracranial malignancy occurs rarely following organ transplantation, with some debate on the suitability for transplant of organs from affected donors. Although the situation is uncommon, this report of the cytological findings of extracranial glioblastoma may extend our current knowledge and provide additional differential diagnostic information for this entity. Diagn. Cytopathol. 2013. © 2013 Wiley Periodicals, Inc.

[72]

**TÍTULO / TITLE:** - Pearls and oysters: The utility of cytology and flow cytometry in the diagnosis of leptomeningeal leukemia.

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

**REVISTA / JOURNAL:** - Neurology. 2013 Apr 2;80(14):e156-9. doi: 10.1212/WNL.0b013e31828ab295.

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

[1212/WNL.0b013e31828ab295](https://doi.org/10.1212/WNL.0b013e31828ab295)

**AUTORES / AUTHORS:** - Gold DR; Nadel RE; Vangelakos CG; Davis MJ; Livingston MY; Heath JE; Reich SG; Gojo I; Morales RE; Weiner WJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University of Pennsylvania, Philadelphia, PA, USA. [Daniel.Gold@uphs.upenn.edu](mailto:Daniel.Gold@uphs.upenn.edu)

**RESUMEN / SUMMARY:** - Diagnosis of leptomeningeal leukemia (and more broadly, leptomeningeal metastasis [LM]) is based on:

[73]

**TÍTULO / TITLE:** - Protein kinase D2 regulates migration and invasion of U87MG glioblastoma cells in vitro.

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

**REVISTA / JOURNAL:** - Exp Cell Res. 2013 Apr 4. pii: S0014-4827(13)00152-3. doi: 10.1016/j.yexcr.2013.03.029.

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

[1016/j.yexcr.2013.03.029](#)

**AUTORES / AUTHORS:** - Bernhart E; Damm S; Wintersperger A; Devaney T; Zimmer A; Raynham T; Ireson C; Sattler W

**INSTITUCIÓN / INSTITUTION:** - Institute of Molecular Biology and Biochemistry, Medical University of Graz, Graz, Austria.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common malignant brain tumor, which, despite combined modality treatment, reoccurs and is invariably fatal for affected patients. Recently, a member of the serine/threonine protein kinase D (PRKD) family, PRKD2, was shown to be a potent mediator of glioblastoma growth. Here we studied the role of PRKD2 in U87MG glioblastoma cell migration and invasion in response to sphingosine-1-phosphate (S1P), an activator of PRKD2 and a GBM mitogen. Time-lapse microscopy demonstrated that random cell migration was significantly diminished in response to PRKD2 silencing. The pharmacological PRKD family inhibitor CRT0066101 decreased chemotactic migration and invasion across uncoated or matrigel-coated Transwell inserts. Silencing of PRKD2 attenuated migration and invasion of U87MG cells even more effectively. In terms of downstream signaling, CRT0066101 prevented PRKD2 autophosphorylation and inhibited p44/42 MAPK and to a smaller extent p54/46 JNK and p38 MAPK activation. PRKD2 silencing impaired activation of p44/42 MAPK and p54/46 JNK, downregulated nuclear c-Jun protein levels and decreased c-JunS73 phosphorylation without affecting the NFkappaB pathway. Finally, qPCR array analyses revealed that silencing of PRKD2 downregulates mRNA levels of integrin alpha-2 and -4 (ITGA2 and -4), plasminogen activator urokinase (PLAU), plasminogen activator urokinase receptor (PLAUR), and matrix metalloproteinase 1 (MMP1). Findings of the present study identify PRKD2 as a potential target to interfere with glioblastoma cell migration and invasion, two major determinants contributing to recurrence of glioblastoma after multimodality treatment.

[74]

**TÍTULO / TITLE:** - Glycogen synthase kinase 3beta inhibition sensitizes human glioblastoma cells to temozolomide by affecting O6-methylguanine DNA methyltransferase promoter methylation via c-Myc signaling.

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

**REVISTA / JOURNAL:** - Carcinogenesis. 2013 May 28.

●●Enlace al texto completo (gratuito o de pago) [1093/carcin/bgt182](#)

**AUTORES / AUTHORS:** - Pyko IV; Nakada M; Sabit H; Lei T; Furuyama N; Hayashi Y; Kawakami K; Minamoto T; Fedulau AS; Hamada J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Division of Neuroscience, Graduate School of Medical Science, Kanazawa University, 13-1 Takara-machi, 920-8641, Kanazawa, Ishikawa, Japan.

**RESUMEN / SUMMARY:** - Glycogen synthase kinase 3beta (GSK3beta) is a serine/threonine protein kinase involved in human cancers including glioblastoma. We have previously demonstrated that GSK3beta inhibition enhances temozolomide effect in glioma cells. In this report, we investigated the molecular mechanisms of sensitization of glioblastoma cells to temozolomide by GSK3beta inhibition, focusing on O6-methylguanine DNA methyltransferase (MGMT) gene silencing. Glioblastoma tissues from patients treated with the GSK3beta-inhibiting drugs were subjected to immunohistochemistry and methylation-specific polymerase chain reaction (MSP) assay. Human glioblastoma cell lines T98G, U138, U251 and U87 were treated with a small-molecule GSK3beta inhibitor, AR-A014418 or GSK3beta-specific siRNA. The combined effect of temozolomide and AR-A014418 on cell proliferation was determined by AlamarBlue assay and an isobologram method. MGMT promoter methylation was estimated by MSP and MethyLight assay. MGMT gene expression was evaluated by real-time quantitative reverse transcriptase-polymerase chain reaction. c-Myc and DNA (cytosine-5)-methyltransferase 3<sup>a</sup> (DNMT3A) binding to the MGMT promoter was estimated by chromatin immunoprecipitation assay. GSK3beta inhibition decreased phosphorylation of glycogen synthase and reduced MGMT expression, and increased MGMT promoter methylation in clinical tumors. In glioblastoma cell lines, GSK3beta inhibition decreased cell viability, enhanced temozolomide effect, and downregulated MGMT expression with relevant changes in the methylation levels of the MGMT promoter. Here, we showed for the first time that c-Myc binds to the MGMT promoter with consequent recruitment of DNMT3A, regulating the levels of MGMT promoter methylation. The results of this study suggest that GSK3beta inhibition enhances temozolomide effect by silencing MGMT expression via c-Myc-mediated promoter methylation.

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[75]

**TÍTULO / TITLE:** - CXCL13 plus interleukin-10 are highly specific for the diagnosis of CNS lymphoma.

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

**REVISTA / JOURNAL:** - Blood. 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1182/blood-2013-01-476333](http://1182/blood-2013-01-476333)

**AUTORES / AUTHORS:** - Rubenstein JL; Wong VS; Kadoch C; Gao HX; Barajas R; Chen L; Josephson SA; Scott B; Douglas V; Maiti M; Kaplan LD; Treseler PA; Cha S; Hwang JH; Cinque P; Cyster JG; Lowell C

**INSTITUCIÓN / INSTITUTION:** - Division of Hematology/Oncology, Helen Diller Comprehensive Cancer Center, University of California, San Francisco, CA, United States;

**RESUMEN / SUMMARY:** - Establishing the diagnosis of focal brain lesions in patients with unexplained neurologic symptoms represents a significant challenge. The goal of this study is to provide evidence supporting functional roles for CXCL13 and IL-10 in CNS lymphomas and to evaluate the potential utility of each as prognostic and diagnostic biomarkers. We demonstrate for the first time that elevated CXCL13 concentration in CSF is prognostic and that CXCL13 and CXCL12 mediate chemotaxis of lymphoma cells isolated from CNS lymphoma lesions. Expression of the activated form of Janus kinase I (phospho-JAK-1) was identified in most cases, supporting a role for IL-10 in pro-survival signaling. We determined the concentration of CXCL13 and IL-10 in CSF of CNS lymphoma patients and control cohorts including inflammatory and degenerative neurologic disease in a multicenter study involving 220 patients. Bivariate elevated CXCL13 plus IL-10 was 99.3% specific for primary and secondary CNS lymphoma, with sensitivity significantly greater than reference standard CSF tests. These results identify CXCL13, IL-10 as well as phospho-JAK-1 as potentially important biomarkers of CNS lymphoma pathogenesis which merit further evaluation and support incorporation of CXCL13 and IL-10 into diagnostic algorithms for the work-up of focal brain lesions in which lymphoma is a consideration.

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[76]

**TÍTULO / TITLE:** - Targeting cancer stem cells for treatment of glioblastoma multiforme.

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

**REVISTA / JOURNAL:** - Cell Transplant. 2013;22(4):731-9. doi: 10.3727/096368912X655136.

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

[3727/096368912X655136](#)

**AUTORES / AUTHORS:** - Cho DY; Lin SZ; Yang WK; Lee HC; Hsu DM; Lin HL; Chen CC; Liu CL; Lee WY; Ho LH

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Neuropsychiatry Center, China Medical University Hospital, Taichung, Taiwan, ROC.

**RESUMEN / SUMMARY:** - Cancer stem cells (CSCs) in glioblastoma multiforme (GBM) are radioresistant and chemoresistant, which eventually results in tumor recurrence. Targeting CSCs for treatment is the most crucial issue. There are five methods for targeting the CSCs of GBM. One is to develop a new chemotherapeutic agent specific to CSCs. A second is to use a radiosensitizer to enhance the radiotherapy effect on CSCs. A third is to use immune cells to attack the CSCs. In a fourth method, an agent is used to promote CSCs to

differentiate into normal cells. Finally, ongoing gene therapy may be helpful. New therapeutic agents for targeting a signal pathway, such as epidermal growth factor (EGF) and vascular epidermal growth factor (VEGF) or protein kinase inhibitors, have been used for GBM but for CSCs the effects still require further evaluation. Nonsteroidal anti-inflammatory drugs (NSAIDs) such as cyclooxygenase-2 (Cox-2) inhibitors have proven to be effective for increasing radiation sensitivity of CSCs in culture. Autologous dendritic cells (DCs) are one of the promising immunotherapeutic agents in clinical trials and may provide another innovative method for eradication of CSCs. Bone-morphogenetic protein 4 (BMP4) is an agent used to induce CSCs to differentiate into normal glial cells. Research on gene therapy by viral vector is also being carried out in clinical trials. Targeting CSCs by eliminating the GBM tumor may provide an innovative way to reduce tumor recurrence by providing a synergistic effect with conventional treatment. The combination of conventional surgery, chemotherapy, and radiotherapy with stem cell-orientated therapy may provide a new promising treatment for reducing GBM recurrence and improving the survival rate.

[77]

**TÍTULO / TITLE:** - Mystery Case: Central neurocytoma: Characterization by MRI and MRS.

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

**REVISTA / JOURNAL:** - Neurology. 2013 May 7;80(19):e195-6. doi: 10.1212/WNL.0b013e3182918c1b.

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

[1212/WNL.0b013e3182918c1b](#)

**AUTORES / AUTHORS:** - Hsu JH; Hsu SS; Fu JH; Lai PH; Nita DA

**INSTITUCIÓN / INSTITUTION:** - From the Departments of Radiology (J.H.H., J.H.F., P.H.L.) and Neurosurgery (S.S.H.), Kaohsiung Veterans General Hospital, Kaohsiung; and School of Medicine (P.H.L.), National Yang-Ming University, Taipei, Taiwan.

**RESUMEN / SUMMARY:** - A 29-year-old man presented with dizziness and headache for 2 months. MRI revealed a mass in the lateral ventricle with attachment of septum pellucidum (figure, A and B). Magnetic resonance spectroscopy (MRS) (repetition time 1,600 ms, echo time [TE] 135 ms) showed high glycine, decreased N-acetylaspartate, and increased choline (figure, C). Central neurocytoma was diagnosed by histologic examination (figure, D).

[78]

**TÍTULO / TITLE:** - Clinical and laboratorial characterization and post-surgical follow-up of 87 patients with non-functioning pituitary macroadenomas.

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

**REVISTA / JOURNAL:** - Arq Neuropsiquiatr. 2013 May;71(5):307-12.

**AUTORES / AUTHORS:** - Mello PA; Naves LA; Pereira Neto A; Oliveira EH; Ferreira IC; Araujo Junior AS; Onishi FJ; Casulari LA

**RESUMEN / SUMMARY:** - Objective: It was to assess the main characteristics of patients undergoing pituitary tumor surgery. Method: Eighty-seven patients (44 men; 44.8+/-13 years old) were included. Results: The main symptoms were visual alterations (87.3%), headache (70.1%), diminished libido (34.4%), galactorrhea (22.9%) and hair loss (19.5%). The axes affected were gonadotropic (72.6%), thyrotropic (48.4%) and corticotropic (38.7%), without significant changes after surgery. The average largest tumor diameter was 3.1 cm before surgery and 1.56 cm after surgery. The most frequent postoperative complications were hydro-electrolyte and acid-base disorders (12%), diabetes insipidus (9%), visual field alterations (9%), liquoric fistula (8%) and nasal obstruction (7%). The patients were affected by more than one complication. Conclusion: Although a decrease in tumor volume was achieved through surgery, hormonal deficiencies persisted in most of the patients and new surgical approaches were necessary for dealing with tumor recurrence or persistence.

[79]

**TÍTULO / TITLE:** - Hyperprolactinaemia associated with increased thyroid volume and autoimmune thyroiditis in patients with prolactinoma.

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

**REVISTA / JOURNAL:** - Clin Endocrinol (Oxf). 2013 Apr 1. doi: 10.1111/cen.12217.

●●Enlace al texto completo (gratis o de pago) [1111/cen.12217](#)

**AUTORES / AUTHORS:** - Sayki Arslan M; Sahin M; Topaloglu O; Tatal E; Karakose M; Gungunes A; Cakal E; Ozbek M; Delibasi T

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology and Metabolic Diseases, Diskapi Yildirim Beyazid Training and Research Hospital, Ankara, Turkey.

**RESUMEN / SUMMARY:** - OBJECTIVE: The aim of this investigation was to evaluate the effects of hyperprolactinaemia on thyroid function, volume and nodularity in patients with prolactinoma. CONTEXT: Hyperprolactinaemia has been associated with various autoimmune diseases; however, the data on the correlation between the level of prolactin (PRL) and thyroid disorders have not been adequately clarified. DESIGN: Case-control study. PATIENTS: Forty-eight subjects with new diagnosis of hyperprolactinaemia (group 1) and 39 subjects undergoing treatment for prolactinoma (group 2) were recruited from our outpatient clinic. Fifty-two healthy subjects were included as a control group (group 3). MEASUREMENTS: The serum PRL, thyroid-stimulating hormone

(TSH), thyroxine (free T4), thyroidal microsome (anti-TPO) and antithyroglobulin antibodies (TgAb) levels were evaluated, and ultrasonographic thyroid volume was calculated. RESULTS: The frequencies of positive anti-TPO and TgAb were significantly higher in group 1 than in groups 2 and 3 ( $P = 0.008$ ). Also, the percentage of patients with thyroid heterogeneity were significantly higher in groups 1 and 2 than in group 3 ( $P < 0.05$ ). The percentage of patients with thyroid nodules were higher in group 1 than in groups 2 and 3 ( $p_{1-2} = 0.03$ ,  $p_{1-3} = 0.05$  and  $p_{2-3} = 0.637$ ). The mean thyroid volume was significantly higher in group 1 ( $P = 0.001$ ), and a positive correlation was found between thyroid volume and the level of PRL ( $r = 0.616$ ;  $P = 0.0001$ ). Prolactin had a significant effect on the total volume according to stepwise multiple linear regression analysis (adjusted  $R^2$  is 0.268;  $P < 0.0001$ ). CONCLUSIONS: Patients with hyperprolactinaemia have significantly increased thyroid volume, thyroid autoimmunity and nodule prevalence.

[80]

**TÍTULO / TITLE:** - A Child With Concurrent Acute Lymphoblastic Leukemia and a Brain Tumor: Diagnostic and Therapeutic Implications.

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

**REVISTA / JOURNAL:** - J Pediatr Hematol Oncol. 2013 Apr 11.

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

[1097/MPH.0b013e318286d518](#)

**AUTORES / AUTHORS:** - Panagopoulou P; Hatzipantelis ES; Sidi V; Papakonstantinou E; Anastasiou A; Kolioukas DE

**INSTITUCIÓN / INSTITUTION:** - Departments of \*Pediatric Oncology daggerRadiology, Hippokration General Hospital, Thessaloniki, Greece.

[81]

**TÍTULO / TITLE:** - Histone Deacetylase Inhibitors Interact with MDA-7/IL-24 to Kill Primary Human Glioblastoma Cells.

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

**REVISTA / JOURNAL:** - Mol Pharmacol. 2013 May 9.

●●Enlace al texto completo (gratis o de pago) [1124/mol.113.086553](#)

**AUTORES / AUTHORS:** - Hamed HA; Yacoub A; Park MA; Archer K; Das SK; Sarkar D; Grant S; Fisher PB; Dent P

**INSTITUCIÓN / INSTITUTION:** - VCU.

**RESUMEN / SUMMARY:** - We presently demonstrate that histone deacetylase inhibitors (HDACIs) enhance toxicity of melanoma differentiation associated gene-7/interleukin 24 (mda-7/IL-24) in invasive primary human GBM cells. Additionally, a method is described to augment efficacy of adenoviral delivery of mda-7/IL-24 in these cells. HDACIs synergized with MDA-7/IL-24 killing GBM

cells. Enhanced lethality correlated with increased autophagy that was dependent on expression of ceramide synthase 6. HDACIs interacted with MDA-7/IL-24 prolonging generation of ROS and Ca<sup>2+</sup>. Quenching of ROS and Ca<sup>2+</sup> blocked HDACI and MDA-7/IL-24 killing. In vivo MDA-7/IL-24 prolonged survival of animals carrying orthotopic tumors and HDACIs enhanced survival further. A serotype 5/3 adenovirus more effectively delivers mda-7/IL-24 to GBM tumors than a serotype 5 virus. Hence, we constructed a serotype 5/3 adenovirus that conditionally replicates in tumor cells expressing MDA-7/IL-24, in which the adenoviral E1A gene was driven by the cancer-specific promoter progression elevated gene-3 (Ad.5/3-PEG-E1A-mda-7; also called Ad.5/3-CTV). Ad.5/3-CTV increased survival of mice carrying GBM tumors to a significantly greater extent than did a non-replicative virus Ad.5/3-mda-7. Ad.5/3-CTV exhibited no toxicity in the brains of Syrian hamsters. Collectively our data demonstrates that HDACIs enhance MDA-7/IL-24 lethality and adenoviral delivery of mda-7/IL-24 combined with tumor specific viral replication is an effective pre-clinical GBM therapeutic.

[82]

**TÍTULO / TITLE:** - Nerve injury induces glial cell line-derived neurotrophic factor (gdnf) expression in schwann cells through purinergic signaling and the pkc-pkd pathway.

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

**REVISTA / JOURNAL:** - Glia. 2013 Apr 2. doi: 10.1002/glia.22491.

●●Enlace al texto completo (gratis o de pago) [1002/glia.22491](#)

**AUTORES / AUTHORS:** - Xu P; Rosen KM; Hedstrom K; Rey O; Guha S; Hart C; Corfas G

**INSTITUCIÓN / INSTITUTION:** - F.M. Kirby Neurobiology Center, Children's Hospital Boston, Boston, MA; Department of Neurology, Harvard Medical School, Boston, MA.

**RESUMEN / SUMMARY:** - Upon peripheral nerve injury, specific molecular events, including increases in the expression of selected neurotrophic factors, are initiated to prepare the tissue for regeneration. However, the mechanisms underlying these events and the nature of the cells involved are poorly understood. We used the injury-induced upregulation of glial cell-derived neurotrophic factor (GDNF) expression as a tool to gain insights into these processes. We found that both myelinating and nonmyelinating Schwann cells are responsible for the dramatic increase in GDNF expression after injury. We also demonstrate that the GDNF upregulation is mediated by a signaling cascade involving activation of Schwann cell purinergic receptors, followed by protein kinase C signaling which activates protein kinase D (PKD), which leads to increased GDNF transcription. Given the potent effects of GDNF on survival and repair of injured peripheral neurons, we propose that targeting these

pathways may yield therapeutic tools to treat peripheral nerve injury and neuropathies.

[83]

**TÍTULO / TITLE:** - The antipsychotic agent chlorpromazine induces autophagic cell death by inhibiting Akt/mTOR pathway in human U-87MG glioma cells.

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

**REVISTA / JOURNAL:** - Carcinogenesis. 2013 May 20.

●●Enlace al texto completo (gratis o de pago) [1093/carcin/bqt169](#)

**AUTORES / AUTHORS:** - Shin SY; Lee KS; Choi YK; Lim HJ; Lee HG; Lim Y; Lee YH

**INSTITUCIÓN / INSTITUTION:** - Department of Biological Science, College of Biological Science and Biotechnology, Research Center for Transcription Control, Konkuk University, Seoul 143-701, Republic of Korea.

**RESUMEN / SUMMARY:** - 2-chloro-10-[3(-dimethylamino)propyl]phenothiazine mono hydrochloride (chlorpromazine; CPZ) is an antipsychotic agent, that was originally developed to control psychotic disorders. The cytotoxic properties of the CPZ are well known, but its mechanism of action is poorly understood. Here, we investigated the role of apoptosis and autophagy in CPZ-induced cytotoxicity in U-87MG glioma cells. CPZ treatment inhibited cell proliferation and long-term clonogenic survival. Additionally, CPZ triggered autophagy, as indicated by electron microscopy and accumulation of the membrane form of LC3 (LC3-II); however, CPZ did not induce apoptosis. Inhibition of autophagy by expression of Beclin 1 siRNA in U-87MG cells attenuated CPZ-induced LC3-II formation. Furthermore, U-87MG cells expressing Beclin1 siRNA attenuated CPZ-induced cell death. CPZ inhibited phosphatidylinositol 3-kinase (PI3K)/AKT/ mTOR pathway in U-87MG cells. Treatment with LY294002, a PI3K inhibitor, alone increased the accumulation of LC3-II and potentiated the effect of CPZ. By contrast, exogenous expression of AKT partially inhibited CPZ-induced LC3-II formation. When U-87MG cells were implanted into the brain of athymic nude mouse, CPZ triggered autophagy and inhibited xenograft tumor growth. These results provided the first evidence that CPZ-induced cytotoxicity is mediated through autophagic cell death in PTEN-null U-87MG glioma cells by inhibiting PI3K/AKT/mTOR pathway.

[84]

**TÍTULO / TITLE:** - Neurocognitive functioning and health-related quality of life in patients with radiologically suspected meningiomas.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 3.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1132-](https://doi.org/10.1007/s11060-013-1132-4)

[4](#)

**AUTORES / AUTHORS:** - van Nieuwenhuizen D; Ambachtsheer N; Heimans JJ; Reijneveld JC; Peerdeman SM; Klein M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology - HP.2F 35, VU University Medical Center, PO Box 7057, 1007 MB, Amsterdam, The Netherlands, [d.vannieuwenhuizen@vumc.nl](mailto:d.vannieuwenhuizen@vumc.nl).

**RESUMEN / SUMMARY:** - Few data are available concerning the neurocognitive outcome and health-related quality of life (HRQOL) following neurosurgery in meningioma patients, and even less is known about neurocognitive functioning and HRQOL in untreated patients with stable lesions. The present study aims at quantifying the nature and extent of neurocognitive deficits and HRQOL in suspected WHO grade I meningioma patients who have not received surgery and/or radiotherapy and compare outcome to that of healthy controls.

Neurocognitive functioning was assessed by using a standardized test battery in 21 radiologically suspected WHO grade I meningioma patients with a wait-and-scan approach. HRQOL was assessed with the MOS SF-36 questionnaire. These patients were matched for age, sex, and education with 21 healthy controls. Associations between neurocognitive functioning on the one hand and HRQOL and tumor characteristics on the other were determined. Compared to healthy controls, meningioma patients had lower psychomotor speed ( $p = 0.011$ ) and working memory capacity ( $p = 0.034$ ) and furthermore attained lower levels of self-perceived general health and vitality. Neurocognitive functioning in untreated patients was not related to tumor volume, edema or tumor lateralization. No correlations were found between psychomotor speed or working memory and HRQOL. Untreated meningioma patients with stable lesions have limitations in neurocognitive functioning and HRQOL. In deciding upon a treatment strategy these reductions in functioning should be taken into consideration and communicated with the patient.

[85]

**TÍTULO / TITLE:** - Clinicopathological Investigation of Vascular Endothelial Growth Factor and von Hippel-Lindau Gene-Related Protein Expression in Immunohistochemically Negative Pituitary Adenoma - Possible Involvement in Tumor Aggressiveness.

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

**REVISTA / JOURNAL:** - Endocr Res. 2013 May 3.

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

[3109/07435800.2013.774411](https://doi.org/10.1007/s11060-013-1132-4)

**AUTORES / AUTHORS:** - Shimoda Y; Ogawa Y; Watanabe M; Tominaga T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tohoku University Graduate School of Medicine, Sendai, Japan.

**RESUMEN / SUMMARY:** - Objectives. Immunohistochemically negative pituitary adenoma is known to be relatively indolent, but a few aggressive and highly vascular cases have been reported, which sometimes show high expression of vascular endothelial growth factor (VEGF). Methods. The present study investigated the relationship between high expression of VEGF and the clinical character of pituitary adenomas in 30 cases of immunohistochemically negative pituitary adenomas using immunohistochemical staining with monoclonal VEGF antibody and related upstream factors, including von Hippel-Lindau gene-related protein (pVHL). Correlations between the histological findings and the clinical characteristics were investigated. Results. Immunohistochemical staining using VEGF antibody showed high expression in 7 (23.3%) and low expression in 23 (76.7%) cases, and pVHL staining showed high expression in 24 (80%) and low expression in 6 (20%) cases. The pVHL low expression group showed significantly higher expression of VEGF ( $p = 0.005019$ ), and significantly higher recurrence or regrowth rate ( $p = 0.04535$ ) than the pVHL high expression group, whereas Ki-67 labeling index of  $>3\%$  also showed significant correlation with recurrence or regrowth rate ( $p = 0.01745$ ). However, there was no significant correlation between pVHL staining and Ki-67 labeling index ( $p = 0.49978$ ). Conclusion. Low expression of pVHL with high expression of VEGF may be involved in the unusual aggressive clinical course in some pituitary adenomas.

[86]

**TÍTULO / TITLE:** - miR-124 inhibits STAT3 signaling to enhance T cell-mediated immune clearance of glioma.

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

**REVISTA / JOURNAL:** - Cancer Res. 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-12-4318](https://doi.org/10.1158/0008-5472.CAN-12-4318)

**AUTORES / AUTHORS:** - Wei J; Wang F; Kong LY; Xu S; Doucette T; Ferguson SD; Yang Y; McEnery K; Jethwa K; Gjyshi O; Qiao W; Levine NB; Lang FF; Rao G; Fuller GN; Calin GA; Heimberger AB

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery, The University of Texas M.D. Anderson Cancer Center.

**RESUMEN / SUMMARY:** - MicroRNAs (miRs) have been shown to modulate critical gene transcripts involved in tumorigenesis, but their role in tumor-mediated immune suppression is largely unknown. On the basis of miRNA gene expression in gliomas using tissue microarrays, in situ hybridization, and molecular modeling, miR-124 was identified as a lead candidate for modulating signal transducer and activator of transcription 3 (STAT3) signaling, a key pathway mediating immune suppression in the tumor microenvironment. miR-124 is absent in all grades and pathological types of gliomas. Upon up

regulating miR-124 in glioma cancer stem cells (gCSCs), the STAT3 pathway was inhibited, and miR-124 reversed gCSC-mediated immune suppression of T-cell proliferation and induction of Foxp3+ regulatory T-cells (Tregs). Treatment of T-cells from immunosuppressed glioblastoma patients with miR-124 induced marked effector response including up regulation of IL-2, IFN-gamma, and tumor necrosis factor (TNF)-alpha. Both systemic administration of miR-124 or adoptive miR-124-transfected T-cell transfers exerted potent anti-glioma therapeutic effects in clonotypic and genetically engineered murine models of glioblastoma and enhanced effector responses in the local tumor microenvironment. These therapeutic effects were ablated in both CD4+ and CD8+ depleted mice and nude mouse systems, indicating that the therapeutic effect of miR-124 depends on the presence of a T-cell-mediated antitumor immune response. Our findings highlight the potential application of miR-124 as a novel immunotherapeutic agent for neoplasms and serve as a model for identifying miRNAs that can be exploited as immune therapeutics.

[87]

**TÍTULO / TITLE:** - The pleiotrophin-ALK axis is required for tumorigenicity of glioblastoma stem cells.

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

**REVISTA / JOURNAL:** - Oncogene. 2013 May 20. doi: 10.1038/onc.2013.168.

●●Enlace al texto completo (gratis o de pago) [1038/onc.2013.168](#)

**AUTORES / AUTHORS:** - Koyama-Nasu R; Haruta R; Nasu-Nishimura Y; Taniue K; Katou Y; Shirahige K; Todo T; Ino Y; Mukasa A; Saito N; Matsui M; Takahashi R; Hoshino-Okubo A; Sugano H; Manabe E; Funato K; Akiyama T

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Molecular and Genetic Information, Institute of Molecular and Cellular Biosciences, The University of Tokyo, Bunkyo-ku, Tokyo, Japan.

**RESUMEN / SUMMARY:** - Increasing evidence suggests that brain tumors arise from the transformation of neural stem/precursor/progenitor cells. Much current research on human brain tumors is focused on the stem-like properties of glioblastoma. Here we show that anaplastic lymphoma kinase (ALK) and its ligand pleiotrophin are required for the self-renewal and tumorigenicity of glioblastoma stem cells (GSCs). Furthermore, we demonstrate that pleiotrophin is transactivated directly by SOX2, a transcription factor essential for the maintenance of both neural stem cells and GSCs. We speculate that the pleiotrophin-ALK axis may be a promising target for the therapy of glioblastoma. Oncogene advance online publication, 20 May 2013; doi:10.1038/onc.2013.168.

[88]

**TÍTULO / TITLE:** - AIP Mutation Identified in a Patient with Acromegaly Caused by Pituitary Somatotroph Adenoma with Neuronal Choristoma.

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

**REVISTA / JOURNAL:** - Exp Clin Endocrinol Diabetes. 2013 May;121(5):295-9. doi: 10.1055/s-0032-1331697. Epub 2013 May 14.

●●Enlace al texto completo (gratis o de pago) [1055/s-0032-1331697](#)

**AUTORES / AUTHORS:** - Nishizawa H; Fukuoka H; Iguchi G; Inoshita N; Yamada S; Takahashi Y

**INSTITUCIÓN / INSTITUTION:** - Division of Diabetes and Endocrinology, Department of Internal Medicine, Kobe University Graduate School of Medicine, Chuo-ku, Kobe, Japan.

**RESUMEN / SUMMARY:** - Pituitary adenoma with neuronal choristoma (PANCH) is a rare condition that includes ganglion cells and GH-producing tumor that is characterized by sparsely granulated somatotroph cell type. However, the pathophysiology of this condition remains to be elucidated. We report a case of 46-year-old woman with acromegaly caused by PANCH. The patient had a large and invasive macroadenoma that was resistant to preoperative therapy with somatostatin analogue (SSA) and dopamine agonist. Histological examination showed typical diffuse, chromophobe-type adenoma containing ganglion cells, and sparsely granulated somatotroph cell type, which were consistent with PANCH. Genetic analysis showed heterozygous germline missense mutation in the AIP gene that results in Y261X amino acid substitution. The clinical characteristics of acromegaly associated with AIP mutations are reportedly macroadenomas with tumor extension and invasion, lower decreases in GH and IGF-I and less tumor shrinkage with SSA treatment, and sparsely granulated somatotroph cell type, which are comparable with those observed in PANCH. Taken together, the mutation in AIP gene may explain the clinical characteristics and pathogenesis of PANCH.

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[89]

**TÍTULO / TITLE:** - Reduced efficiency of functional brain network underlying intellectual decline in patients with low-grade glioma.

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

**REVISTA / JOURNAL:** - Neurosci Lett. 2013 May 24;543:27-31. doi: 10.1016/j.neulet.2013.02.062. Epub 2013 Apr 2.

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

[1016/j.neulet.2013.02.062](#)

**AUTORES / AUTHORS:** - Xu H; Ding S; Hu X; Yang K; Xiao C; Zou Y; Chen Y; Tao L; Liu H; Qian Z

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Brain Hospital Affiliated to Nanjing Medical University, 264 Guangzhou Road, Nanjing 210000, China.

**RESUMEN / SUMMARY:** - Low-grade glioma (LGG) patients are typically accompanied by varying degrees of intellectual impairments. However, the neural mechanisms underlying intellectual decline have not yet been well understood. The aim of this study is to investigate the relationship between possibly altered functional brain network properties and intellectual decline in LGG patients. Chinese revised Wechsler adult intelligence scale (WAIS-RC) was used to assess the intelligence of 21 LGG patients and 20 healthy controls, matched in age, gender and education. Resting-state functional magnetic resonance imaging (fMRI) was performed for all the subjects to analyze functional network characteristics with graph theory. The LGG patients showed significantly poor performance on intelligence test than controls ( $P < 0.05$ ). Compared with controls, the patients displayed disturbed small-world manner (increased characteristic path length  $L$  and normalized characteristic path length  $\lambda$ ) and decreased global efficiency  $E_{glob}$ . Specially, we found that  $E_{glob}$  was positively correlated with intelligence quotient (IQ) test scores in LGG group. Furthermore, network hubs, which could significantly affect the network efficiency, were in the right insula and right posterior cingulate cortex in controls, while in the right thalamus and right posterior cingulate cortex in the patients. From the perspective of brain network, our results provided evidence of reduced global efficiency for poorer intellectual performance in LGG patients, which contributed to understanding the basis of intellectual impairments.

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[90]

**TÍTULO / TITLE:** - Autologous Tumor Lysate-pulsed Dendritic Cell Immunotherapy for Pediatric Patients with Newly Diagnosed or Recurrent High-grade Gliomas.

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

**REVISTA / JOURNAL:** - Anticancer Res. 2013 May;33(5):2047-56.

**AUTORES / AUTHORS:** - Lasky JL 3rd; Panosyan EH; Plant A; Davidson T; Yong WH; Prins RM; Liao LM; Moore TB

**INSTITUCIÓN / INSTITUTION:** - Clinical Assistant Professor, Pediatrics and Neurosurgery, Harbor-UCLA Medical Center/LA Biomed, David Geffen School of Medicine UCLA. 1000 W. Carson St. Building N-25, Box 468, Torrance, CA 90502, U.S.A. [jlasky@labiomed.org](mailto:jlasky@labiomed.org).

**RESUMEN / SUMMARY:** - Immunotherapy has the potential to improve clinical outcomes with little toxicity for pediatric patients with brain tumors. We conducted a pilot feasibility study of tumor lysate-pulsed dendritic cell (DC) vaccination in pediatric patients (1 to 18 years old) with newly diagnosed or recurrent high-grade glioma (HGG). A total of nine DC vaccine doses, each containing  $1 \times 10^6$  cells per dose were administered to three out of the seven originally enrolled patients. Toxicities were limited to mild side-effects, except in one case of elevated alkaline phosphatase, which resolved without clinical

consequences. Two patients with primary lesions amongst the three vaccinated were alive at the time of writing, both without evidence of disease. Pre- and post-vaccination tumor samples from a patient with an anaplastic oligoastrocytoma that recurred failed to demonstrate immune cell infiltration by immunohistochemistry. Peripheral cytokine levels were evaluated in one patient following DC vaccination and demonstrated some changes in relation to vaccination. DC vaccine is tolerable and feasible with some limitations for pediatric patients with HGG. Dendritic cell based immunotherapy may provide some clinical benefit in pediatric patients with glioma, especially for patients with minimal residual disease, but further investigation of this modality is required.

[91]

**TÍTULO / TITLE:** - The Endogenous Tryptophan Metabolite and NAD<sup>+</sup> Precursor Quinolinic Acid Confers Resistance of Gliomas to Oxidative Stress.

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

**REVISTA / JOURNAL:** - Cancer Res. 2013 Jun 1;73(11):3225-3234. Epub 2013 Apr 2.

●●Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-12-3831](http://1158/0008-5472.CAN-12-3831)

**AUTORES / AUTHORS:** - Sahm F; Oezen I; Opitz CA; Radlwimmer B; von Deimling A; Ahrendt T; Adams S; Bode HB; Guillemin GJ; Wick W; Platten M

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Clinical Cooperation Unit Neuroimmunology and Brain Tumor Immunology, German Cancer Research Center (DKFZ); Departments of Neuropathology and Neurooncology, University Hospital Heidelberg; National Center for Tumor Diseases; Division of Molecular Genetics, German Cancer Research Center (DKFZ), Heidelberg; Merck Stiftungsprofessur für Molekulare Biotechnologie, Fachbereich Biowissenschaften, Goethe Universität, Frankfurt, Germany; and Australian School of Advanced Medicine, Macquarie University, North Ryde, New South Wales, Australia.

**RESUMEN / SUMMARY:** - Quinolinic acid is a product of tryptophan degradation and may serve as a precursor for NAD<sup>+</sup>, an important enzymatic cofactor for enzymes such as the DNA repair protein PARP. Pathologic accumulation of quinolinic acid has been found in neurodegenerative disorders including Alzheimer and Huntington disease, where it is thought to be toxic for neurons by activating the N-methyl-D-aspartate (NMDA) receptor and inducing excitotoxicity. Although many tumors including gliomas constitutively catabolize tryptophan, it is unclear whether quinolinic acid is produced in gliomas and whether it is involved in tumor progression. Here, we show that quinolinic acid accumulated in human gliomas and was associated with a malignant phenotype. Quinolinic acid was produced by microglial cells, as expression of the quinolinic acid-producing enzyme 3-hydroxyanthranilate oxygenase (3-

HAO) was confined to microglia in glioma tissue. Human malignant glioma cells, but not nonneoplastic astrocytes, expressed quinolinic acid phosphoribosyltransferase (QPRT) to use quinolinic acid for NAD<sup>+</sup> synthesis and prevent apoptosis when de novo NAD<sup>+</sup> synthesis was blocked. Oxidative stress, temozolomide, and irradiation induced QPRT in glioma cells. QPRT expression increased with malignancy. In recurrent glioblastomas after radiochemotherapy, QPRT expression was associated with a poor prognosis in two independent datasets. Our data indicate that neoplastic transformation in astrocytes is associated with a QPRT-mediated switch in NAD<sup>+</sup> metabolism by exploiting microglia-derived quinolinic acid as an alternative source of replenishing intracellular NAD<sup>+</sup> pools. The elevated levels of QPRT expression increase resistance to oxidative stress induced by radiochemotherapy, conferring a poorer prognosis. These findings have implications for therapeutic approaches inducing intracellular NAD<sup>+</sup> depletion, such as alkylating agents or direct NAD<sup>+</sup> synthesis inhibitors, and identify QPRT as a potential therapeutic target in malignant gliomas. *Cancer Res*; 73(11); 3225-34. ©2013 AACR.

[92]

**TÍTULO / TITLE:** - The positive correlation between DJ-1 and beta-catenin expression shows prognostic value for patients with glioma.

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

**REVISTA / JOURNAL:** - *Neuropathology*. 2013 May 28. doi: 10.1111/neup.12041.

●●Enlace al texto completo (gratis o de pago) [1111/neup.12041](#)

**AUTORES / AUTHORS:** - Wang C; Fang M; Zhang M; Li W; Guan H; Sun Y; Xie S; Zhong X

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Medical College, Jinan University.

**RESUMEN / SUMMARY:** - The relationship between DJ-1 and beta-catenin, and its impact on the prognosis for glioma patients has not been fully understood. This study determined the effect of DJ-1 on beta-catenin and the prognostic significance of this interaction in glioma patients. We collected tumor specimens from 88 glioma patients and determined the expression of DJ-1, beta-catenin and PTEN by using immunohistochemical staining. The involvement of DJ-1 and beta-catenin in glioma cell lines was evaluated by immunohistochemistry and Western blotting. High DJ-1 expression (37.5%) and high beta-catenin expression (34.1%) in glioma specimens were significantly associated with high grade and poor prognosis in glioma patients. However, only high levels of DJ-1 (P = 0.014) was a strong independent prognostic factor, correlated with a reduced overall survival time. In vitro DJ-1 expression was positively correlated with the expression levels of beta-catenin and p-Akt, and negatively correlated with PTEN expression in U87, U251 MG, SWO-38 and SHG44 human glioma cell lines. After the knockdown of DJ-1, Akt, p-Akt or beta-catenin expression

levels were not affected in the PTEN-null cell lines (U87 and U251 MG). However, in the SWO-38 cell line, which has wild-type PTEN protein, the level of PTEN increased while Akt/p-Akt and beta-catenin levels were reduced. Furthermore, beta-catenin staining weakened in SWO-38 cells after DJ-1 levels decreased according to immunocytochemical analysis. In conclusion, DJ-1 and beta-catenin may contribute to the development and recurrence of glioma and are valuable prognostic factors for glioma patients. DJ-1 may regulate beta-catenin expression via PTEN and p-Akt.

[93]

**TÍTULO / TITLE:** - Clinicopathological characteristics and treatment of rhabdoid glioblastoma.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 May 3.

●●Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS121773](#)

**AUTORES / AUTHORS:** - Babu R; Hatef J; McLendon RE; Cummings TJ; Sampson JH; Friedman AH; Adamson C

**INSTITUCIÓN / INSTITUTION:** - Departments of Surgery (Division of Neurosurgery).

**RESUMEN / SUMMARY:** - Object Rhabdoid glioblastoma (GB) is an exceedingly rare tumor in which some of the tumor cells possess rhabdoid features such as eccentric nuclei, abundant eosinophilic cytoplasm, and pseudopapillary formations. These tumors are exceptionally aggressive, and leptomeningeal dissemination is common. In the 9 previously reported cases, the longest survival was only 9 months, with a median survival of 17.8 weeks. The authors report the clinicopathological characteristics of 4 cases of rhabdoid GB and demonstrate the utility of intensive temozolomide and adjuvant therapy in these tumors. The authors also review the literature to provide the most comprehensive understanding of these rare tumors to date. Methods A retrospective review was performed of patients treated for GB at the Duke University Medical Center between 2004 and 2012. One of two experienced neuropathologists identified 4 cases as being rhabdoid GBs. Immunohistochemistry and fluorescence in situ hybridization analyses were performed in all cases. Kaplan-Meier analysis was used to assess overall survival, with the log-rank test being used to evaluate differences between survival curves. An extensive review of the literature was also performed. Results The median age of patients with rhabdoid GB was 30 years. Clinical presentation varied with location, with headache being a presenting symptom in 90% of patients. All lesions were supratentorial, and 45.5% of the cases involved the temporal lobe. Leptomeningeal dissemination occurred in 63.6% of patients, with 1 patient having extracranial metastasis to the scalp and lungs. Fluorescence in situ hybridization revealed epidermal growth factor receptor

gain or amplification in all study cases. The median survival in the authors' cohort was significantly higher than that of all previously reported cases (27.5 vs 4.5 months,  $p = 0.003$ ). Postoperative treatment in the authors' cohort included radiotherapy with concurrent temozolomide, bevacizumab, interleukin 13, CCNU, and/or etoposide. Conclusions Enhanced survival in the authors' 4 patients suggests that the current standard of care for the treatment of GB may be beneficial in rhabdoid GB cases, with postoperative radiotherapy and concomitant temozolomide treatment followed by adjuvant therapy. Due to the rapid tumor dissemination associated with these lesions, aggressive and timely therapy is warranted, with frequent surveillance and/or continued therapy despite stable disease. Additionally, patients should undergo full craniospinal imaging to monitor the development of distant metastatic disease.

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[94]

**TÍTULO / TITLE:** - Cushing's disease due to mixed pituitary adenoma-gangliocytoma of the posterior pituitary gland presenting with *Aspergillus* sp. sinus infection.

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

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [5414/NP300616](#)

**AUTORES / AUTHORS:** - Bridenstine M; Kerr JM; Lillehei KO; Kleinschmidt-Demasters BK

**RESUMEN / SUMMARY:** - Gangliocytic lesions of the pituitary gland producing Cushing's disease are extremely rare entities that may exist with or without a pituitary adenoma. The latter have been designated mixed pituitary adenoma-gangliocytomas, the majority of which produce growth hormone, not adrenocorticotropin (ACTH), and are localized to the anterior gland. We now report an immunocompetent woman with hypercortisolism who presented with an intranasal aspergilloma eroding the bony sellar floor. The fungal ball was contiguous with, and extended into, a large neurohypophyseal-centered mass. Transsphenoidal resection revealed a gangliocytic lesion of the posterior gland with small clusters of intimately admixed ACTH-immunoreactive adenoma cells as the cause of her Cushing's disease. Rare transitional sizes and shapes of cells coupled with immunohistochemical findings supported interpretation as advanced neuronal metaplasia within an ACTH adenoma. This mixed ACTH adenoma-gangliocytoma is the first example to present clinically with an opportunistic infection.

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[95]

**TÍTULO / TITLE:** - Perioperative management of a neurosurgical patient with a meningioma and recent coronary artery stent.

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

**REVISTA / JOURNAL:** - J Clin Anesth. 2013 May;25(3):228-31. doi: 10.1016/j.jclinane.2012.11.007. Epub 2013 Mar 22.

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

[1016/j.jclinane.2012.11.007](#)

**AUTORES / AUTHORS:** - Rouine-Rapp K; McDermott MW

**INSTITUCIÓN / INSTITUTION:** - Department of Anesthesia and Perioperative Care, University of California, San Francisco, San Francisco, CA 94143-0648, USA. Electronic address: [rouinerk@anesthesia.ucsf.edu](mailto:rouinerk@anesthesia.ucsf.edu).

**RESUMEN / SUMMARY:** - Patients who undergo placement of a drug-eluting coronary artery stent are prescribed dual antiplatelet therapy for one year. Early cessation of this therapy is a risk factor for a major adverse cardiac event, especially in high-risk patients. The perioperative physician team must evaluate the risk of surgical bleeding relative to the thrombotic risk during the perioperative period in patients taking dual antiplatelet therapy who must undergo intracranial neurosurgery. A 67 year old woman presented with right-sided hearing loss. Neurologic examination was significant for early papilledema and decreased hearing in the right ear. Magnetic resonance imaging showed a > 5 cm contrast-enhancing mass within her right-middle fossa with surrounding vasogenic edema and midline shift. Additional medical history was significant for diabetes, hypertension, and placement of a drug-eluting stent for coronary artery disease three months before her initial presentation. Medications included aspirin and clopidogrel. She underwent embolization of the middle meningeal arterial supply to the meningioma, then was admitted to the hospital for perioperative management of her antiplatelet therapy and telemetry monitoring. Her clopidogrel was stopped and aspirin continued perioperatively. An intravenous infusion of the antiplatelet drug, eptifibatid, replaced clopidogrel and was continued until 8 hours prior to surgical incision. During resection of the meningioma, no unusual surgical bleeding was noted. The patient was discharged on postoperative day 3 with satisfactory recovery.

[96]

**TÍTULO / TITLE:** - Factors associated with survival for patients with glioblastoma with poor pre-operative functional status.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Jun;20(6):818-23. doi: 10.1016/j.jocn.2012.07.016. Epub 2013 Apr 29.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.07.016](#)

**AUTORES / AUTHORS:** - Chaichana KL; Martinez-Gutierrez JC; De la Garza-Ramos R; Weingart JD; Olivi A; Gallia GL; Lim M; Brem H; Quinones-Hinojosa A

**INSTITUCIÓN / INSTITUTION:** - Neuro-Oncology Outcomes Laboratory, Department of Neurosurgery, Johns Hopkins University, 600 North Wolfe Street, Meyer 8-184, Baltimore, MD 21202, USA. Electronic address: [Kaisorn@jhmi.edu](mailto:Kaisorn@jhmi.edu).

**RESUMEN / SUMMARY:** - Patients with glioblastoma (GB) are known to have poor prognoses, and among these patients, those with poor neurological function have an even poorer prognosis. Consequently, aggressive surgeries and adjuvant therapies are often withheld because of this dismal outlook. The effects of aggressive therapies in this small subset of patients remain unknown. The goal of this study was to evaluate outcomes and factors associated with survival for poor functioning patients who underwent aggressive resection of their GB. Adult patients who underwent surgical resection of an intracranial primary GB at an academic tertiary-care institution between 1997 and 2007 were retrospectively reviewed. Patients with a Karnofsky Performance Scale (KPS) score of 60 were included. A total of 100 patients with primary GB met the inclusion criteria. The average age (+/-standard deviation) and KPS score of this cohort were 54+/-15years and 53+/-12, respectively. No patient (0%) experienced perioperative mortality, and 0 (0%), 10 (10%), and 3 (3%) of patients incurred a new or increasing language, motor, and visual deficit, respectively. At last follow-up, 88 (88%) patients died with a median survival of 6.6months. The factors associated with improved survival were age <65year (p=0.005), tumor size >2cm (p=0.01), radical tumor resection (p=0.01), and temozolomide (p=0.001). This study identifies a subset of patients with poor functional status who may benefit from aggressive surgical resection.

[97]

**TÍTULO / TITLE:** - Case-control study of paternal occupation and social class with risk of childhood central nervous system tumours in Great Britain, 1962-2006.

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

**REVISTA / JOURNAL:** - Br J Cancer. 2013 Mar 14;108(9):1907-14. doi: 10.1038/bjc.2013.171. Epub 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [1038/bjc.2013.171](http://1038/bjc.2013.171)

**AUTORES / AUTHORS:** - Keegan TJ; Bunch KJ; Vincent TJ; King JC; O'Neill KA; Kendall GM; Mccarthy A; Fear NT; Murphy MF

**INSTITUCIÓN / INSTITUTION:** - Furness Building, Lancaster Medical School, Lancaster University, LA1 4YG Lancaster, UK.

**RESUMEN / SUMMARY:** - Background:Paternal occupational exposures have been proposed as a risk factor for childhood central nervous system (CNS) tumours. This study investigates possible associations between paternal occupational exposure and childhood CNS tumours in Great Britain.Methods:The National Registry of Childhood Tumours provided all cases of childhood CNS tumours born and diagnosed in Great Britain from 1962 to

2006. Controls without cancer were matched on sex, period of birth and birth registration sub-district. Fathers' occupations were assigned to one or more of 33 exposure groups. A measure of social class was also derived from father's occupation at the time of the child's birth. Results: Of 11 119 cases of CNS tumours, 5 722 (51%) were astrocytomas or other gliomas, 2 286 (21%) were embryonal and 985 (9%) were ependymomas. There was an increased risk for CNS tumours overall with exposure to animals, odds ratio (OR) 1.40 (95% confidence intervals (CIs) 1.01, 1.94) and, after adjustment for occupational social class (OSC), with exposure to lead, OR 1.18 (1.01, 1.39). Exposure to metal-working oil mists was associated with reduced risk of CNS tumours, both before and after adjustment for OSC, OR 0.87 (0.75, 0.99). Risk of ependymomas was raised for exposure to solvents, OR 1.73 (1.02, 2.92). For astrocytomas and other gliomas, risk was raised with high social contact, although this was only statistically significant before adjustment for OSC, OR 1.15 (1.01, 1.31). Exposure to paints and metals appeared to reduce the risk of astrocytomas and embryonal tumours, respectively. However, as these results were the result of a number of statistical tests, it is possible they were generated by chance. Higher social class was a risk factor for all CNS tumours, OR 0.97 (0.95, 0.99). This was driven by increased risk for higher social classes within the major subtype astrocytoma, OR 0.95 (0.91, 0.98). Conclusion: Our results provide little evidence that paternal occupation is a significant risk factor for childhood CNS tumours, either overall or for specific subtypes. However, these analyses suggest that OSC of the father may be associated with risk of some childhood CNS cancers.

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[98]

**TÍTULO / TITLE:** - Clinic-pathological description of three paediatric medulloblastoma cases with MLL2/3 gene mutations.

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

**REVISTA / JOURNAL:** - Neuropathol Appl Neurobiol. 2013 May 10. doi: 10.1111/nan.12060.

●●Enlace al texto completo (gratis o de pago) [1111/nan.12060](http://1111/nan.12060)

**AUTORES / AUTHORS:** - Lopez GY; Grant GA; Fuchs HE; Leithe LG; Gururangan S; Bigner DD; Yan H; McLendon RE; He Y

**INSTITUCIÓN / INSTITUTION:** - The Preston Robert Tisch Brain Tumor Center, DUMC 3156, Durham, NC 27710; The Pediatric Brain Tumor Foundation Institute, DUMC 3156, Durham, NC 27710; Department of Pathology, DUMC 3156, Durham, NC 27710; Duke University Medical Center, DUMC 3156, Durham, NC 27710.

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[99]

**TÍTULO / TITLE:** - Expression of T-helper-associated cytokines in the serum of pituitary adenoma patients preoperatively and postoperatively.

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

**REVISTA / JOURNAL:** - Med Hypotheses. 2013 Jun;80(6):781-6. doi: 10.1016/j.mehy.2013.03.011. Epub 2013 Apr 4.

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

[1016/j.mehy.2013.03.011](#)

**AUTORES / AUTHORS:** - Qiu L; Yang J; Wang H; Zhu Y; Wang Y; Wu Q

**INSTITUCIÓN / INSTITUTION:** - Department of Otorhinolaryngology, The Second Hospital of Anhui Medical University, Hefei 230601, PR China. Electronic address: [916qlb@sina.com](mailto:916qlb@sina.com).

**RESUMEN / SUMMARY:** - Pituitary adenomas are benign tumors, However, 30% of them may develop into invasive tumors by invading the surrounding tissues. The studies have shown that several cytokines were expressed in human anterior pituitary adenomas, therefore, we speculate that the cytokines are important in human anterior pituitary tumorigenesis. The current study is designed to investigate expression profiles of cytokines in the serum of patients with pituitary adenomas. This was done by selecting 75 cases with pituitary adenoma, including invasive and non-invasive pituitary adenomas and collected blood samples of preoperative, 1month, 3months, and 6months after surgery, respectively. We used the cell flow instrument to detect the level of Lymphocytes and subsets and immunoglobulin and complement in the peripheral blood, and by ELISA detecting the content of cytokines (IL-17, IL-4, IL-5, TNF-alpha, INF-gamma) in the serum of pituitary adenoma patients. The results show that the level of IL-4, IL-5 and IL-17 was increased substantially before surgery but they decreased substantially after surgery, IFN-gamma, TNF-a was increased after surgery, the ratio of Th1/Th2 (IFN-gamma/IL-4) was significantly lower before surgery and increased distinctly post-operation. These data indicated that there is some cross-regulation among Th1, Th2 and Th17 subsets and that cytokines are important in tissue inflammatory lesions of pituitary adenomas and promoting invasive development.

[100]

**TÍTULO / TITLE:** - Chromatin regulator PRC2 is a key regulator of epigenetic plasticity in glioblastoma.

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

**REVISTA / JOURNAL:** - Cancer Res. 2013 May 29.

●●Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-0109](#)

**AUTORES / AUTHORS:** - Natsume A; Ito M; Katsushima K; Ohka F; Hatanaka A; Shinjo K; Sato S; Takahashi S; Ishikawa Y; Takeuchi I; Shimogawa H; Uesugi M; Okano H; Kim SU; Wakabayashi T; Issa JP; Sekido Y; Kondo Y

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery, Nagoya University.

**RESUMEN / SUMMARY:** - Tumor cell plasticity contributes to functional and morphological heterogeneity. To uncover the underlying mechanisms of this plasticity, we examined glioma stem-like cells (GSC) where we found that the biological interconversion between GSCs and differentiated non-GSCs is functionally plastic and accompanied by gain or loss of PRC2, a complex that modifies chromatin structure. PRC2 mediates lysine 27 trimethylation on histone H3 and in GSC it affected pluripotency or development associated genes (e.g. Nanog, Wnt1, BMP5) together with alterations in the subcellular localization of EZH2, a catalytic component of PRC2. Intriguingly, exogenous expression of EZH2-dNLS, which lacks nuclear localization sequence, impaired the repression of Nanog expression under differentiation conditions. RNAi-mediated attenuation or pharmacological inhibition of EZH2 had little to no effect on apoptosis or BrdU incorporation in GSCs, but it disrupted morphological interconversion and impaired GSC integration into the brain tissue, thereby improving survival of GSC-bearing mice. Pathological analysis of human glioma specimens revealed that the number of tumor cells with nuclear EZH2 is larger around tumor vessels and the invasive front, suggesting that nuclear EZH2 may help reprogram tumor cells in close proximity to this microenvironment. Our results indicate that epigenetic regulation by PRC2 is a key mediator of tumor cell plasticity, which is required for the adaptation of glioblastoma cells to their microenvironment. Thus, PRC2-targeted therapy may reduce tumor cell plasticity and tumor heterogeneity, offering a new paradigm for glioma treatment.

[101]

**TÍTULO / TITLE:** - Sox2 requirement in Sonic hedgehog-associated medulloblastoma.

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

**REVISTA / JOURNAL:** - Cancer Res. 2013 Apr 17.

●●Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-0238](https://doi.org/10.1158/0008-5472.CAN-13-0238)

**AUTORES / AUTHORS:** - Ahlfeld J; Favaro R; Pagella P; Kretschmar HA; Nicolis S; Schuller U

**INSTITUCIÓN / INSTITUTION:** - Center for Neuropathology, Ludwig-Maximilians-University.

**RESUMEN / SUMMARY:** - The transcription factor Sox2 has been demonstrated to play essential roles during embryonic development as well as in cancer. In order to more precisely understand tumor biology and to identify potential therapeutical targets we thoroughly investigated the expression and function of Sox2 in medulloblastoma, a malignant embryonic brain tumor that initiates in the posterior fossa and eventually spreads throughout the entire cerebrospinal

axis. We examined a large series of tumor samples (n=188) to show that SOX2 is specifically expressed in Sonic hedgehog (SHH)-associated medulloblastoma with an interesting preponderance in adolescent and adult cases. We further demonstrate that cerebellar granule neuron precursors (CGNPs), which are believed to serve as the cell of origin for this medulloblastoma subgroup, express Sox2 in early stages. Also, Shh-associated medulloblastoma can be initiated from such Sox2-positive CGNPs in mice. Independent of their endogenous Sox2 expression, constitutive activation of Shh-signaling in CGNPs resulted in significantly enhanced proliferation and ectopic expression of Sox2 in vitro and Sox2-positive medulloblastoma in vivo. Genetic ablation of Sox2 from murine medulloblastoma did not affect survival, most likely due to a compensatory overexpression of Sox3. However, acute deletion of Sox2 from primary cultures of CGNPs with constitutive Shh-signaling significantly decreased proliferation whereas overexpression of Sox2 enhanced proliferation of murine medulloblastoma cells. We conclude that Sox2 is a marker for Shh-dependent medulloblastomas where it is required and sufficient to drive tumor cell proliferation.

[102]

**TÍTULO / TITLE:** - Apoptosis induction in human glioblastoma multiforme T98G cells upon temozolomide and quercetin treatment.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0785-](#)

[0](#)

**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, [jjgil@poczta.umcs.lublin.pl](mailto:jjgil@poczta.umcs.lublin.pl).

**RESUMEN / SUMMARY:** - Glioblastoma multiforme is the most aggressive primary brain tumour. At the cellular and molecular levels, several mechanisms responsible for apoptosis or autophagy induction are blocked. Identification of molecular targets stimulating cells to initiate programmed cell death should be performed for therapeutic purposes. A promising solution is the combination of temozolomide and quercetin. The aim of our study was to evaluate the effect of both drugs, applied alone and in combinations, on apoptosis and autophagy induction in human glioblastoma multiforme T98G cells. Our results clearly indicate that quercetin and temozolomide induce apoptosis very significantly, having no effect on autophagy induction. At the molecular level, it was correlated with caspase 3 and 9 activation, cytochrome c release from the mitochondrion and a decrease in the mitochondrial membrane potential. Both

drugs are also potent Hsp27 and Hsp72 inhibitors. This suggests that the apoptotic signal goes through an internal pathway. Increased expression of caspase 12 and the presence of several granules in the cytoplasm after temozolomide treatment with or without quercetin preceding appearance of apoptosis may suggest that apoptosis is initiated by ER stress. Additionally, it was accompanied by changes in the nuclear morphology from circular to 'croissant like'.

[103]

**TÍTULO / TITLE:** - "No effect of humanized CCR monoclonal antibody (Mogamulizumab) on treatment-resistant adult T cell leukemia with meningeal infiltration"

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

**REVISTA / JOURNAL:** - Leuk Lymphoma. 2013 May 23.

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

[3109/10428194.2013.807511](#)

**AUTORES / AUTHORS:** - Tsutsumi Y; Shimono J; Miyashita N; Teshima T

[104]

**TÍTULO / TITLE:** - Factors influencing delayed extubation after infratentorial craniotomy for tumour resection: a prospective cohort study of 800 patients in a Chinese neurosurgical centre.

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

**REVISTA / JOURNAL:** - J Int Med Res. 2013 Feb;41(1):208-17. doi: 10.1177/0300060513475964. Epub 2013 Jan 23.

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

[1177/0300060513475964](#)

**AUTORES / AUTHORS:** - Cai YH; Zeng HY; Shi ZH; Shen J; Lei YN; Chen BY; Zhou JX

**INSTITUCIÓN / INSTITUTION:** - Department of Critical Care Medicine, Beijing Tiantan Hospital, Capital Medical University, Beijing, China.

**RESUMEN / SUMMARY:** - OBJECTIVES: To investigate prospectively the rate of, and factors influencing, delayed extubation following infratentorial craniotomy in a Chinese neurosurgical centre. METHODS: Patients undergoing infratentorial craniotomy for tumour resection were prospectively enrolled and stratified according to whether extubation was attempted in the operating theatre (early extubation) or not (delayed extubation). Pre- and intraoperative variables were collected and analysed. Multiple logistic regression analysis was performed, to identify factors related to delayed extubation. RESULTS: The study included 800 patients, 398 (49.8%) of whom underwent delayed extubation. The overall rate of extubation failure was 3.6%. Independent factors related to delayed

extubation were: preoperative lower cranial nerve dysfunction; hydrocephalus; tumour location; duration of surgery  $\geq 6$  h; estimated blood loss  $\geq 1000$  ml. Compared with patients in the early extubation group, those in the delayed extubation group had a higher rate of pneumonia, longer intensive care unit and postoperative hospital stays, and higher hospitalization costs. CONCLUSIONS: Brain stem and lower cranial nerve function were the main factors affecting extubation decision-making. Further research is required, to establish criteria for delayed extubation following infratentorial craniotomy.

[105]

**TÍTULO / TITLE:** - Efficacy and safety of second-line fotemustine in elderly patients with recurrent glioblastoma.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1125-](#)

[3](#)

**AUTORES / AUTHORS:** - Santoni M; Scoccianti S; Lolli I; Fabrini MG; Silvano G; Detti B; Perrone F; Savio G; Iacovelli R; Burattini L; Berardi R; Cascinu S

**INSTITUCIÓN / INSTITUTION:** - Clinica di Oncologia Medica, AOU "Ospedali Riuniti", Universita Politecnica delle Marche, via Tronto 10/A, 60100, Ancona, Italy, [mattymo@alice.it](mailto:mattymo@alice.it).

**RESUMEN / SUMMARY:** - Fotemustine (FTM) is a common treatment option for glioblastoma patients refractory to temozolomide (TMZ). Although elderly patients represent a large component of glioblastoma population, the feasibility and the efficacy of second-line FTM are not available in those patients. We retrospectively analyzed the records of glioblastoma patients older than 65 years, receiving FTM at a dose of 70-100 mg/m<sup>2</sup> of FTM every week for 3 consecutive weeks (induction phase) and then every 3 weeks (70-100 mg/m<sup>2</sup>), as second-line treatment. Between January 2004 and December 2011, 65 glioblastoma patients (median age, 70 years; range, 65-79 years) were eligible for this analysis. Sixty-five patients received a total of 364 FTM cycles, with a median of 4 cycles for each patient. After induction, we observed 1 complete response (1.5 %), 12 partial responses (18.5 %), 18 stable diseases (27.7 %), and 34 patients' progressions (47.7 %). Disease control rate was 43.1 %. Median survival from the beginning of FTM therapy was 7.1 months, while the median progression-free survival was 4.2 months, and the 6-months progression free survival rate was 35.4 %. The most relevant grade 3-4 toxicity events were thrombocytopenia (15.3 %) and neutropenia (9.2 %). In the univariate and multivariate analysis, time from radiotherapy to FTM, number of TMZ and FTM cycles and disease control resulted independent prognostic factors. This study showed that FTM is a valuable therapeutic option for elderly glioblastoma patients, with a safe toxicity profile.

[106]

**TÍTULO / TITLE:** - Intrathecal granulocyte colony-stimulating factor modulate glial cell line-derived neurotrophic factor and vascular endothelial growth factor A expression in glial cells after experimental spinal cord ischemia.

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

**REVISTA / JOURNAL:** - Neuroscience. 2013 Jul 9;242:39-52. doi: 10.1016/j.neuroscience.2013.02.017. Epub 2013 Mar 30.

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

[1016/j.neuroscience.2013.02.017](#)

**AUTORES / AUTHORS:** - Chen CH; Huang SY; Chen NF; Feng CW; Hung HC; Sung CS; Jean YH; Wen ZH; Chen WF

**INSTITUCIÓN / INSTITUTION:** - Doctoral Degree Program in Marine Biotechnology, National Sun Yat-sen University and Academia Sinica, Kaohsiung, Taiwan; Department of Marine Biotechnology and Resources, Asia-Pacific Ocean Research Center, National Sun Yat-sen University, Kaohsiung, Taiwan.

**RESUMEN / SUMMARY:** - The hematopoietic growth factor, granulocyte colony-stimulating factor (G-CSF), has become one of the few growth factors approved for clinical use. It has therapeutic potential for numerous neurodegenerative diseases; however, at present the cellular effects of G-CSF on the central nervous system remain unclear and in need of investigation. In the present study, we used spinal cord ischemia, a neurodegenerative model, to examine the effects of intrathecal (i.t.) G-CSF on glial cell (microglia and astrocyte) activation and neuroprotective factor expression, including glial cell line-derived neurotrophic factor (GDNF) and vascular endothelial growth factor A (VEGF-A) protein expression. Our results indicate that i.t. G-CSF could enhance ischemia-induced microglial activation and inhibit ischemia-induced astrocyte activation. Both GDNF and VEGF-A are upregulated after injury, and i.t. G-CSF could enhance GDNF and VEGF-A expressions after injury. Interestingly, our results indicate that performing i.t. G-CSF alone on normal animals could have the effect of microglial and astrocyte activation and enhanced GDNF and VEGF-A expressions. Furthermore, through laser scanning confocal microscopy, we found that astrocytes may contribute to the majority of GDNF and VEGF-A expressions of G-CSF after spinal cord ischemia. Overall, this G-CSF-induced upregulation suggests that activation of endogenous neuroprotective mechanisms could resist neurodegenerative insults. These observations demonstrate the cellular mechanism of i.t. G-CSF after spinal cord ischemia and confirm the neuroprotective effect of G-CSF after spinal cord ischemia injury.

[107]

**TÍTULO / TITLE:** - Fibroblast growth factor-2 up-regulates the expression of nestin through the Ras-Raf-ERK-Sp1 signaling axis in C6 glioma cells.

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

**REVISTA / JOURNAL:** - Biochem Biophys Res Commun. 2013 May 17;434(4):854-60. doi: 10.1016/j.bbrc.2013.04.031. Epub 2013 Apr 20.

●●Enlace al texto completo (gratis o de pago) [1016/j.bbrc.2013.04.031](http://1016/j.bbrc.2013.04.031)

**AUTORES / AUTHORS:** - Chang KW; Huang YL; Wong ZR; Su PH; Huang BM; Ju TK; Yang HY

**INSTITUCIÓN / INSTITUTION:** - Institute of Molecular and Cellular Biology, National Taiwan University, Taipei 106, Taiwan.

**RESUMEN / SUMMARY:** - Nestin is a 240-kDa intermediate filament protein expressed mainly in neural and myogenic stem cells. Although a substantial number of studies have focused on the expression of nestin during development of the central nervous system, little is known about the factors that induce and regulate its expression. Fibroblast growth factor-2 (FGF-2) is an effective mitogen and stimulates the proliferation and differentiation of a subset of nestin-expressing cells, including neural progenitor cells, glial precursor cells, and smooth muscle cells. To assess whether FGF-2 is a potent factor that induces the expression of nestin, C6 glioma cells were used. The results showed that nestin expression was up-regulated by FGF-2 via de novo RNA and protein synthesis. Our RT-PCR results showed that C6 glioma cells express FGFR1/3, and FGFRs is required for FGF-2-induced nestin expression. Further signaling analysis also revealed that FGF-2-induced nestin expression is mediated through FGFR-MAPK-ERK signaling axis and the transcriptional factor Sp1. These findings provide new insight into the regulation of nestin in glial system and enable the further studies on the function of nestin in glial cells.

[108]

**TÍTULO / TITLE:** - Uncorrected traumatic coagulopathy is associated with severe brain swelling during decompressive surgery to evacuate a supratentorial intradural mass lesion in patients with traumatic brain injury.

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

**REVISTA / JOURNAL:** - Neurol Res. 2013 Feb 28.

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

[1179/1743132813Y.0000000187](http://1179/1743132813Y.0000000187)

**AUTORES / AUTHORS:** - Wang K; Xue Y; Chen X; Zhou B; Lou M

**RESUMEN / SUMMARY:** - **OBJECTIVE:** This study investigated the relationship between traumatic coagulopathy and severe brain swelling (SBS) during decompressive surgery to evacuate a supratentorial intradural mass lesion in patients with traumatic brain injury (TBI). **METHODS:** A retrospective study was conducted in 96 patients who consecutively suffered from isolated TBI and underwent decompressive surgery to evacuate a supratentorial traumatic mass

lesion by unilateral craniotomy. Their medical history, radiographic information, and surgical notes were reviewed. The relationship between traumatic coagulopathy and intraoperative SBS was evaluated. RESULTS: Fifty-six patients presented with traumatic coagulopathy according to their preoperative coagulation panels. Thirty of them had the disorder corrected before surgery while the remaining patients did not. Twenty-four patients developed intraoperative SBS, and 22 (91.7%) of them were related to new or progressive formation of distal intracranial lesions during the surgery. Patients with uncorrected coagulopathy demonstrated a significantly higher risk of intraoperative SBS than those with corrected and no coagulopathy (61.5% vs 11.4%,  $P < 0.001$ ). There was no significant difference in the incidence of intraoperative SBS between patients with corrected and no coagulopathy (13.3% versus 10.0%,  $PP > 0.05$ ). Multivariate logistic regression analysis showed that uncorrected coagulopathy was an independent risk factor and related to an 11.5-fold increased risk of intraoperative SBS. CONCLUSIONS: Intraoperative SBS is not a rare event during decompressive surgery to evacuate a supratentorial intradural mass lesion in patients with TBI. Such surgery should be cautiously considered and performed given the existence of uncorrected traumatic coagulopathy, which is associated with an increased risk of intraoperative SBS.

[109]

**TÍTULO / TITLE:** - Noncarboplatin-induced Sensorineural Hearing Loss in a Patient With an Intracranial Nongerminomatous Germ Cell Tumor.

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

**REVISTA / JOURNAL:** - J Pediatr Hematol Oncol. 2013 May 3.

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

[1097/MPH.0b013e318287310e](#)

**AUTORES / AUTHORS:** - Vitanza N; Shaw TM; Gardner SL; Allen JC; Harter DH; Karajannis MA

**INSTITUCIÓN / INSTITUTION:** - \*NYU Langone Medical Center, Hassenfeld Children's Center for Cancer and Blood Disorders daggerDepartment of Neurosurgery, NYU Langone Medical Center, New York, NY.

**RESUMEN / SUMMARY:** - Treatment for intracranial germ cell tumors includes platinum-based chemotherapy and external beam radiation therapy, which are risk factors for hearing loss. In patients who experience significant sensorineural ototoxicity due to cochlear hair cell injury, dose reduction of chemotherapy may be necessary. This report describes an adolescent male, with excellent treatment response for an intracranial nongerminomatous germ cell tumor, who developed sensorineural hearing loss, which was central rather than cochlear in origin and unrelated to carboplatin. This patient highlights the

need to carefully differentiate the type and etiology of sensorineural hearing loss in patients with brain tumors receiving ototoxic chemotherapy.

[110]

**TÍTULO / TITLE:** - Utility of FDG-PETCT and magnetic resonance spectroscopy in differentiating between cerebral lymphoma and non-malignant CNS lesions in HIV-infected patients.

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

**REVISTA / JOURNAL:** - Eur J Radiol. 2013 Apr 8. pii: S0720-048X(13)00137-X. doi: 10.1016/j.ejrad.2013.03.008.

●●Enlace al texto completo (gratis o de pago) [1016/j.ejrad.2013.03.008](http://1016/j.ejrad.2013.03.008)

**AUTORES / AUTHORS:** - Westwood TD; Hogan C; Julyan PJ; Coutts G; Bonington S; Carrington B; Taylor B; Khoo S; Bonington A

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, The Christie NHS Foundation Trust, Wilmslow Road, Manchester, United Kingdom. Electronic address: [tdwestwood@googlemail.com](mailto:tdwestwood@googlemail.com).

**RESUMEN / SUMMARY:** - BACKGROUND AND PURPOSE: In HIV infected patients, MRI cannot reliably differentiate between central nervous system (CNS) lymphoma and non-malignant CNS lesions, particularly cerebral toxoplasmosis (CTOX). This study prospectively investigates the utility of FDG PET-CT and magnetic resonance spectroscopy (MRS) in discriminating CNS lymphoma from non-malignant CNS lesions in HIV infected patients, and assesses the ability of FDG PET-CT to guide the use of early brain biopsy. METHODS: 10 HIV patients with neurological symptoms and contrast enhancing lesions on MRI were commenced on anti-toxoplasmosis therapy before undergoing FDG PET-CT and MRS. Brain biopsies were sought in those with FDG PET-CT suggestive of CNS lymphoma, and in those with a negative FDG PET-CT scan who failed to respond to therapy. Final diagnosis was based on histology or treatment response. RESULTS: Two patients were confirmed to have CNS lymphoma and FDG PET-CT was consistent with this diagnosis in both. Six patients had cerebral toxoplasmosis in all of whom FDG PET-CT was consistent with non-malignant disease. One patient had progressive multifocal leukoencephalopathy (PML), FDG PET-CT was equivocal. One patient had a haemorrhagic brain metastasis and FDG PET-CT wrongly suggested non-malignant disease. MRS was performed successfully in eight subjects: three results were suggestive of CNS lymphoma (one true positive, two false positive), four suggested CTOX (two false negative, two true negative), one scan was equivocal. CONCLUSION: FDG PET-CT correctly identified all cases of CNS lymphoma and CTOX, supporting its use in this situation. MRS was unhelpful in our cohort.

[111]

**TÍTULO / TITLE:** - Connexin43 confers Temozolomide resistance in human glioma cells by modulating the mitochondrial apoptosis pathway.

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

**REVISTA / JOURNAL:** - Neuropharmacology. 2013 May 18. pii: S0028-3908(13)00211-6. doi: 10.1016/j.neuropharm.2013.05.002.

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

[1016/j.neuropharm.2013.05.002](#)

**AUTORES / AUTHORS:** - Gielen PR; Aftab Q; Ma N; Chen VC; Hong X; Lozinsky S; Naus CC; Sin WC

**INSTITUCIÓN / INSTITUTION:** - Department of Cellular and Physiological Science, Life Science Institute, University of British Columbia, 2350 Health Science Mall, Vancouver, BC V6T 1Z3, Canada; Department of Tumor Immunology, Nijmegen Centre for Molecular Life Sciences, Radboud University Nijmegen Medical Centre, 6500 HB Nijmegen, Netherlands.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most aggressive astrocytoma, and therapeutic options are generally limited to surgical resection, radiotherapy, and Temozolomide (TMZ) chemotherapy. TMZ is a DNA alkylating agent that causes DNA damage and induces cell death. Unfortunately, glioma cells often develop resistance to TMZ treatment, with DNA de-methylation of the MGMT promoter identified as the primary reason. However, the contributions from proteins that normally protect cells against cytotoxic stress in TMZ-induced apoptosis have not been extensively explored. Here, we showed that increasing the level of the gap junction protein, Cx43, in human LN18 and LN229 glioma cells enhances resistance to TMZ treatment while knockdown of Cx43 in these same cells sensitizes them to TMZ treatment. By expressing a channel-dead or a C-terminal truncation mutant of Cx43, we show that Cx43-mediated TMZ resistance involves both channel dependent and independent functions. Expression of Cx43 in LN229 cells decreases TMZ-induced apoptosis, as determined by Annexin V staining. Cx43-mediated chemoresistance appears to be acting via a mitochondrial apoptosis pathway as manifested by the reduction in Bax/Bcl-2 ratio and the release of cytochrome C. Our findings highlight additional mechanisms and proteins that contribute to TMZ resistance, and raise the possibility of increasing TMZ efficiency by targeting Cx43 protein. This article is part of a Special Issue entitled 'Connexin based channels'.

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[112]

**TÍTULO / TITLE:** - The Effect of Gabapentin Premedication on Postoperative Nausea, Vomiting, and Pain in Patients on Preoperative Dexamethasone Undergoing Craniotomy for Intracranial Tumors.

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

**REVISTA / JOURNAL:** - J Neurosurg Anesthesiol. 2013 Apr 17.

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

[1097/ANA.0b013e31829327eb](https://doi.org/10.1097/ANA.0b013e31829327eb)

**AUTORES / AUTHORS:** - Misra S; Parthasarathi G; Vilanilam GC

**INSTITUCIÓN / INSTITUTION:** - Departments of Anesthesiology and Neurosurgery, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Trivandrum, Kerala, India.

**RESUMEN / SUMMARY:** - BACKGROUND:: In patients undergoing craniotomy, the incidence of postoperative nausea and vomiting (PONV) is 55% to 70% and that of moderate to severe postoperative pain is 60% to 84%. We hypothesized that gabapentin plus dexamethasone would be superior, compared with placebo and dexamethasone in reducing the incidences of PONV and pain after craniotomy. METHODS:: Patients undergoing craniotomy received either placebo (group D) or gabapentin (600 mg) (group GD) premedication orally, 2 hours before induction of anesthesia. In addition, all patients received 4 mg of intravenous dexamethasone on the morning of surgery and continued receiving it after every 8 hours. The 24-hour incidence of nausea, emesis, or PONV (nausea, emesis, or both) (primary outcome) and postoperative pain scores (secondary outcome) were analyzed with the chi test and the Wilcoxon rank-sum test as applicable. RESULTS:: A significant difference was observed between the groups in the incidence of nausea [odds ratio (OR), 0.23; 95% confidence interval (CI), 0.07, 0.80; P=0.02], PONV (OR, 0.3; 95% CI, 0.08, 0.8; P=0.02), and the requirement for antiemetics (OR, 0.30; 95% CI, 0.09, 0.9; P=0.03). The number of emetic episodes were also reduced in group GD, but this did not assume statistical significance (OR, 0.34; 95% CI, 0.10, 1.1; P=0.06). However, there was no significant difference in either the postoperative pain scores or the opioid consumption between the 2 groups. CONCLUSIONS:: A dosage of 600 mg of gabapentin plus 4 mg of dexamethasone significantly reduced the 24-hour incidence of nausea and PONV. However, there was no reduction in either the postoperative pain scores or opioid consumption.

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[113]

**TÍTULO / TITLE:** - Cell-based Immunotherapy Against Gliomas: From Bench to Bedside.

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

**REVISTA / JOURNAL:** - Mol Ther. 2013 May 7. doi: 10.1038/mt.2013.80.

●●Enlace al texto completo (gratis o de pago) [1038/mt.2013.80](https://doi.org/10.1038/mt.2013.80)

**AUTORES / AUTHORS:** - Bovenberg MS; Degeling MH; Tannous BA

**INSTITUCIÓN / INSTITUTION:** - 1] Department of Neurology, Experimental Therapeutics and Molecular Imaging Laboratory, Neuroscience Center, Massachusetts General Hospital, Boston, Massachusetts, USA [2] Program in

Neuroscience, Harvard Medical School, Boston, Massachusetts, USA [3]  
Department of Neurosurgery, Leiden University Medical Center, Leiden, The Netherlands.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) comprises 51% of all gliomas and is the most malignant form of brain tumors with a median survival of 18-21 months. Standard-of-care treatment includes maximal surgical resection of the tumor mass in combination with radiation and chemotherapy. However, as the poor survival rate indicates, these treatments have not been effective in preventing disease progression. Cellular immunotherapy is currently being explored as therapeutic approach to treat malignant brain tumors. In this review, we discuss advances in active, passive, and vaccine-based immunotherapeutic strategies for gliomas both at the bench and in the clinic. *Molecular Therapy* (2013); doi:10.1038/mt.2013.80.

[114]

**TÍTULO / TITLE:** - Long-term outcome of centrally located low-grade glioma in children.

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

**REVISTA / JOURNAL:** - *Cancer*. 2013 Apr 26. doi: 10.1002/cncr.28110.

●●Enlace al texto completo (gratis o de pago) [1002/cncr.28110](#)

**AUTORES / AUTHORS:** - Terashima K; Chow K; Jones J; Ahern C; Jo E; Ellezam B; Paulino AC; Okcu MF; Su J; Adesina A; Mahajan A; Dauser R; Whitehead W; Lau C; Chintagumpala M

**INSTITUCIÓN / INSTITUTION:** - Texas Children's Cancer and Hematology Centers, The Dan L. Duncan Cancer Center, Houston, Texas.

**RESUMEN / SUMMARY:** - BACKGROUND: Optimal management of children with centrally located low-grade glioma (LGG) is unclear. Initial interventions in most children are chemotherapy in younger and radiation therapy (RT) in older children. A better understanding of the inherent risk factors along with the effects of interventions on long-term outcome can lead to reassessment of the current approaches to minimize long-term morbidity. METHODS: To reassess the current treatment strategies of centrally located LGG, we compared the long-term survival and morbidity of different treatment regimens. Medical records of patients primarily treated at Texas Children's Cancer and Hematology Centers between 1987 and 2008 were reviewed. RESULTS: Forty-seven patients with a median follow-up of 79 months were included in the analysis. The 5-year overall survival and progression-free survival (PFS) for all patients were 96% and 53%, respectively. The 5-year PFS for those treated initially with RT (12 patients; median age, 11 years [range, 3-15 years]) and with chemotherapy (28 patients; median age, 2 years [range 0-8 years]) were 76% and 37%, respectively (log-rank test  $P = .02$ ). Among children who progressed after chemotherapy, the 5-year PFS after salvage RT was 55%. Patients

diagnosed at a younger age (<5 years) were more likely to experience endocrine abnormalities (Fisher exact test;  $P < .00001$ ). CONCLUSIONS: Effective and durable tumor control was obtained with RT as initial treatment. In younger patients, chemotherapy can delay the use of RT; however, frequent progression and long-term morbidity are common. More effective and less toxic therapies are required in these patients, the majority of whom are long-term survivors. Cancer 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 American Cancer Society.

[115]

**TÍTULO / TITLE:** - Mood disturbance in glioma patients.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1143-](#)

[1](#)

**AUTORES / AUTHORS:** - Acquaye AA; Vera-Bolanos E; Armstrong TS; Gilbert MR; Lin L

**INSTITUCIÓN / INSTITUTION:** - Department of Neuro-Oncology, MDACC, 1515 Holcombe Blvd, Houston, TX, 77030, USA, [AAAcquaye@mdanderson.org](mailto:AAAcquaye@mdanderson.org).

**RESUMEN / SUMMARY:** - Patients diagnosed with primary brain tumors such as glioma experience psychological distress throughout the illness trajectory. Determining which patient characteristics are associated with more severe mood disturbance throughout the illness trajectory can help identify patients at risk and assist in developing targeted interventions based on these factors. Adult glioma patients were eligible for participation. Data collection tools included an investigator completed clinician assessment tool, patient completed demographic form and the Profile of mood states-short form. A multiple regression model was used to describe the relationship between the patient groups and clinical factors. The study enrolled 186 glioma patients of various tumor grades, who were categorized in three groups (newly diagnosed, on-treatment, follow-up) based on disease status at time of visit. Newly diagnosed patients experienced more total mood disturbance than all the other groups. Characteristics associated with more severe mood disturbance varied by patient group: newly diagnosed patients who were not on corticosteroids and

were not married were more likely to have higher mood disturbance [R2 = 0.27, F (2, 29) = 5.31, p < 0.02]. For those on treatment, the use of concomitant medications, having more than 1 recurrence and low income predicted higher mood disturbance [R2 = 0.417, F (4, 67) = 11.98, p < 0.001]. For those not on active treatment, female sex, anti-depressant use and having a lower income was associated with higher mood disturbance [R2 = 0.183, F (3, 55) = 4.11, p < 0.02]. Additionally, when compared to other cancer groups, glioma patients reported similar mood disturbance to those with breast cancer. Factors other than disease characteristics are associated with higher mood disturbance and vary according to current disease status. The use of concomitant medications, demographic factors, recurrence and income are associated with mood disturbance and interventions may need to be tailored to these underlying factors.

[116]

**- CASTELLANO -**

**TÍTULO / TITLE:** Infarto hemisferico maligno de la arteria cerebral media.  
Consideraciones diagnosticas y opciones terapeuticas.

**TÍTULO / TITLE:** - Malignant hemispheric infarction of the middle cerebral artery.  
Diagnostic considerations and treatment options.

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

**REVISTA / JOURNAL:** - Neurologia. 2013 Apr 16. pii: S0213-4853(13)00054-6.  
doi: 10.1016/j.nrl.2013.02.009.

●●Enlace al texto completo (gratis o de pago) [1016/j.nrl.2013.02.009](http://1016/j.nrl.2013.02.009)

**AUTORES / AUTHORS:** - Godoy D; Pinero G; Cruz-Flores S; Alcala Cerra G;  
Rabinstein A

**INSTITUCIÓN / INSTITUTION:** - Unidad de Terapia Intensiva, Hospital San Juan  
Bautista, Catamarca, Argentina; Unidad de Cuidados Neurointensivos,  
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**RESUMEN / SUMMARY:** - INTRODUCTION: Malignant hemispheric infarction (MHI) is a specific and devastating type of ischemic stroke. It usually affects all or part of the territory of the middle cerebral artery although its effects may extend to other territories as well. Its clinical outcome is frequently catastrophic when only conventional medical treatment is applied. OBJECTIVE: The purpose of this review is to analyse the available scientific evidence on the treatment of this entity. DEVELOPMENT: MHI is associated with high morbidity and mortality. Its clinical characteristics are early neurological deterioration and severe hemispheric syndrome. Its hallmark is the development of space-occupying cerebral oedema between day 1 and day 3 after symptom onset. The mass effect causes displacement, distortion, and herniation of brain structures even when intracranial hypertension is initially absent. Until recently, MHI was

thought to be fatal and untreatable because mortality rates with conventional medical treatment could exceed 80%. In this unfavourable context, decompressive hemicraniectomy has re-emerged as a therapeutic alternative for selected cases, with reported decreases in mortality ranging between 15% and 40%. CONCLUSIONS: In recent years, several randomised clinical trials have demonstrated the benefit of decompressive hemicraniectomy in patients with MHI. This treatment reduces mortality in addition to improving functional outcomes.

[117]

**TÍTULO / TITLE:** - Sox11 expression in astrocytic gliomas: correlation with nestin/c-Met/IDH1-R132H expression phenotypes, p-Stat-3 and survival.

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

**REVISTA / JOURNAL:** - Br J Cancer. 2013 May 28;108(10):2142-52. doi: 10.1038/bjc.2013.176. Epub 2013 Apr 25.

●●Enlace al texto completo (gratis o de pago) [1038/bjc.2013.176](#)

**AUTORES / AUTHORS:** - Korkolopoulou P; Levidou G; El-Habr EA; Adamopoulos C; Fragkou P; Boviatsis E; Themistocleous MS; Petraki K; Vrettakos G; Sakalidou M; Samaras V; Zisakis A; Saetta A; Chatziandreu I; Patsouris E; Piperi C

**INSTITUCIÓN / INSTITUTION:** - First Department of Pathology, Laikon General Hospital, Athens University Medical School, Athens, 115 27, Greece.

**RESUMEN / SUMMARY:** - Background: Sox11 is a transcription factor expressed in foetal and neoplastic brain tissue, including gliomas. It has been shown to suppress the tumourigenicity of glioma stem cells in vivo, thereby being hypothesised to function as a tumour suppressor. Methods: We investigated the expression of Sox11 in 132 diffuse astrocytomas in relation to the regulator cell marker nestin, c-Met and IDH1-R132H, which have shown to be differentially expressed among the molecular subgroups of malignant gliomas, as well as to an inducer of astrocytic differentiation, that is, signal transducer and activator of transcription (p-STAT-3), clinicopathological features and survival. Results: Sox11 immunoreactivity was identified in all tumours irrespective of grade, but being correlated with p-STAT-3. Three out of seven cases showed partial Sox11 promoter methylation. In >50% of our cases neoplastic cells coexpressed Sox11 and nestin, a finding further confirmed in primary glioblastoma cell cultures. Furthermore, nestin, c-Met and IDH1-R132H expression differed among grade categories. Cluster analysis identified four groups of patients according to c-Met, nestin and IDH1-R132H expression. The c-Met/nestin high-expressor group displayed a higher Sox11 expression. Sox11 expression was an indicator of favourable prognosis in glioblastomas, which remained in multivariate analysis and validated in an independent set of 72 cases. The c-Met/nestin high-expressor group was marginally with shorter

survival in univariate analysis. Conclusions: We highlight the importance of Sox11 expression as a favourable prognosticator in glioblastomas. c-Met/nestin/IDH1-R132H expression phenotypes recapitulate the molecular subgroups of malignant glioma.

[118]

**TÍTULO / TITLE:** - Pyrimethamine sensitizes pituitary adenomas cells to temozolomide through cathepsin B-dependent and caspase-dependent apoptotic pathways.

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

**REVISTA / JOURNAL:** - Int J Cancer. 2013 Apr 6. doi: 10.1002/ijc.28199.

●●Enlace al texto completo (gratis o de pago) [1002/ijc.28199](#)

**AUTORES / AUTHORS:** - Dai C; Zhang B; Liu X; Guo K; Ma S; Cai F; Yang Y; Yao Y; Feng M; Bao X; Deng K; Jiao Y; Wei Z; Junji W; Xing B; Lian W; Wang R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, 100730, P.R. China.

**RESUMEN / SUMMARY:** - Invasive pituitary adenomas (PAs) are generally refractory to conventional therapy and salvage treatment with temozolomide (TMZ). In addition to antiprotozoan effects, pyrimethamine (PYR) has recently shown its strong antitumor activity as an antineoplastic agent or in combination with TMZ in metastatic melanoma cells. In this study, the effects of TMZ, PYR or TMZ/PYR combination on rat/mouse PA cell lines alphaT3-1, GH3, MMQ and ATt-20 as well as GH3 xenograft tumor model were evaluated. TMZ/PYR combination synergistically inhibited proliferation, invasion and induced apoptosis of these PA cell lines in vitro. Strikingly, combination treatment with TMZ and PYR produced synergistic antitumor activity and enhanced the survival rate of GH3 xenograft tumor models without increasing systemic side effects. In addition, TMZ/PYR induced cell cycle arrest, increased DNA damage, upregulated the expression of cathepsin B, BAX, cleaved PARP and phosphorylated histone H2AX as well as elevated caspase3/7, 8, 9 activities. The decreased expression of Bcl-2, MMP-2 and MMP-9 along with cytochrome c release from mitochondria into the cytosol were also observed in the TMZ/PYR combination group. The increase in cell apoptosis due to combination with PYR was rescued by leucovorin. These data suggest that PYR may enhance the efficacy of TMZ via triggering both cathepsin B-dependent and caspase-dependent apoptotic pathways. Therefore, combination of PYR and TMZ may provide a novel regimen for invasive PAs refractory to standard therapy and TMZ. © 2013 Wiley Periodicals, Inc.

[119]

**TÍTULO / TITLE:** - Widening the Differential for Brain Masses in Human Immunodeficiency Virus-Positive Patients: Syphilitic Cerebral Gummata.

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

**REVISTA / JOURNAL:** - Am J Med Sci. 2013 Apr 12.

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

[1097/MAJ.0b013e31828c9f22](#)

**AUTORES / AUTHORS:** - Land AM; Nelson GA; Bell SG; Denby KJ; Estrada CA; Willett LL

**INSTITUCIÓN / INSTITUTION:** - Tinsley Harrison Internal Medicine Residency Program (AML, GAN, SGB), University of Alabama at Birmingham, Birmingham, Alabama; University of Alabama School of Medicine (KJD), Birmingham, Alabama; Division of General Internal Medicine (CAE, LLW), University of Alabama at Birmingham Hospital, Birmingham, Alabama; and Veterans Affairs Quality Scholars Fellowship Program at the Birmingham Veterans Affairs Medical Center (CAE), Birmingham, Alabama.

**RESUMEN / SUMMARY:** - : A 39-year-old man with newly diagnosed human immunodeficiency virus (HIV) infection was admitted with right-sided weakness, right-sided vision loss and slurred speech, which worsened over several weeks. Brain imaging revealed bilateral intraparenchymal ring-enhancing lesions and enhancement of the right optic nerve. Serological findings were positive for venereal disease research laboratory test, whereas the cerebrospinal fluid venereal disease research laboratory test was nonreactive. Brain biopsy suggested a diagnosis of syphilitic cerebral gummata, and the patient's improvement with penicillin and dexamethasone further supported this etiology. Syphilitic cerebral gummata have rarely been reported in patients with HIV infection. This patient demonstrates that cerebral gummata should be considered in the differential diagnosis in immunocompromised patients with characteristic brain masses, that HIV and syphilis often coexist with early neurosyphilis appearing more frequently in this patient population and that normal cerebrospinal fluid studies may not represent a true lack of syphilitic activity in HIV patients.

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[120]

**TÍTULO / TITLE:** - Prolonged Inhibition of Glioblastoma Xenograft Initiation and Clonogenic Growth following In Vivo Notch Blockade.

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

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 May 29.

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

[12-2119](#)

**AUTORES / AUTHORS:** - Chu Q; Orr BA; Semenkow S; Bar EE; Eberhart CG

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Department of Oncology, Tongji Hospital, Tongji Medical School, Huazhong University of Science and

Technology, Wuhan, China; Departments of Pathology, Oncology, and Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, Maryland; Department of Pathology, St. Jude Children's Research Hospital, Memphis, Tennessee; and Department of Neurological Surgery, School of Medicine, Case Western Reserve University, Cleveland, Ohio.

**RESUMEN / SUMMARY:** - PURPOSE: To examine the effects of clinically relevant pharmacologic Notch inhibition on glioblastoma xenografts. EXPERIMENTAL DESIGN: Murine orthotopic xenografts generated from temozolomide-sensitive and -resistant glioblastoma neurosphere lines were treated with the gamma-secretase inhibitor MRK003. Tumor growth was tracked by weekly imaging, and the effects on animal survival and tumor proliferation were assessed, along with the expression of Notch targets, stem cell, and differentiation markers, and the biology of neurospheres isolated from previously treated xenografts and controls. RESULTS: Weekly MRK003 therapy resulted in significant reductions in growth as measured by imaging, as well as prolongation of survival. Microscopic examination confirmed a statistically significant reduction in cross-sectional tumor area and mitotic index in a MRK003-treated cohort as compared with controls. Expression of multiple Notch targets was reduced in the xenografts, along with neural stem/progenitor cell markers, whereas glial differentiation was induced. Neurospheres derived from MRK003-treated xenografts exhibited reduced clonogenicity and formed less aggressive secondary xenografts. Neurospheres isolated from treated xenografts remained sensitive to MRK003, suggesting that therapeutic resistance does not rapidly arise during in vivo Notch blockade. CONCLUSIONS: Weekly oral delivery of MRK003 results in significant in vivo inhibition of Notch pathway activity, tumor growth, stem cell marker expression, and clonogenicity, providing preclinical support for the use of such compounds in patients with malignant brain tumors. Some of these effects can persist for some time after in vivo therapy is complete. Clin Cancer Res; 19(12); 1-10. ©2013 AACR.

[121]

**TÍTULO / TITLE:** - MDA5 and ISG56 mediate CXCL10 expression induced by Toll-like receptor 4 activation in U373MG human astrocytoma cells.

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

**REVISTA / JOURNAL:** - Neurosci Res. 2013 May 15. pii: S0168-0102(13)00115-6. doi: 10.1016/j.neures.2013.05.002.

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

[1016/j.neures.2013.05.002](#)

**AUTORES / AUTHORS:** - Imaizumi T; Murakami K; Ohta K; Seki H; Matsumiya T; Meng P; Hayakari R; Xing F; Aizawa-Yashiro T; Tatsuta T; Yoshida H; Kijima H

**INSTITUCIÓN / INSTITUTION:** - Department of Vascular Biology, Institute of Brain Science, Hirosaki University Graduate School of Medicine, 5 Zaifu-cho, Hirosaki 036-8562, Japan. Electronic address: [timaizum@cc.hirosaki-u.ac.jp](mailto:timaizum@cc.hirosaki-u.ac.jp).

**RESUMEN / SUMMARY:** - Toll-like receptor (TLR) 4 is a pattern recognition receptor, and recognizes not only bacterial lipopolysaccharide (LPS) but also endogenous danger-associated molecular patterns released from dying or injured cells. It has been reported that TLR4 signaling in astrocytes plays an important role in various neurological diseases. However, details of TLR4 signaling in astrocytes are not fully elucidated. In the present study, we demonstrated that TLR4 signaling, induced by LPS, increases the expression of melanoma differentiation-associated gene 5 (MDA5) and interferon (IFN)-stimulated gene 56 (ISG56) in U373MG human astrocytoma cells. We also found that nuclear factor-kappaB, p38 mitogen-activated protein kinase and IFN-beta are involved in the expression of MDA5 and ISG56 induced by LPS. RNA interference experiments revealed that MDA5 and ISG56 positively regulate the LPS-induced expression of a chemokine CXCL10, but not CCL2. In addition, it was suggested that MDA5 and ISG56 constitute a positive feedback loop. These results suggest that MDA5 and ISG56 may contribute not only to physiological inflammatory reactions but also to the pathogenesis of various neurological diseases elicited by TLR4 in astrocytes, at least in part, by regulating the expression of CXCL10.

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[122]

**TÍTULO / TITLE:** - Tax-interacting protein 1 coordinates the spatiotemporal activation of Rho GTPases and regulates the infiltrative growth of human glioblastoma.

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

**REVISTA / JOURNAL:** - Oncogene. 2013 Apr 8. doi: 10.1038/onc.2013.97.

●●Enlace al texto completo (gratis o de pago) [1038/onc.2013.97](https://doi.org/10.1038/onc.2013.97)

**AUTORES / AUTHORS:** - Wang H; Han M; Whetsell W Jr; Wang J; Rich J; Hallahan D; Han Z

**INSTITUCIÓN / INSTITUTION:** - 1] Department of Radiation Oncology, Vanderbilt University School of Medicine, Nashville, TN, USA [2] Department of Cancer Biology, Vanderbilt University School of Medicine, Nashville, TN, USA.

**RESUMEN / SUMMARY:** - PDZ domains represent one group of the major structural units that mediate protein interactions in intercellular contact, signal transduction and assembly of biological machineries. Tax-interacting protein (TIP)-1 protein is composed of a single PDZ domain that distinguishes TIP-1 from other PDZ domain proteins that more often contain multiple protein domains and function as scaffolds for protein complex assembly. However, the biological functions of TIP-1, especially in cell transformation and tumor progression, are still controversial as observed in a variety of cell types. In this

study, we have identified ARHGEF7, a guanine nucleotide exchange factor for Rho GTPases, as one novel TIP-1-interacting protein in human glioblastoma cells. We found that the presence of TIP-1 protein is essential to the intracellular redistribution of ARHGEF7 and rhotekin, one Rho effector and the spatiotemporally coordinated activation of Rho GTPases (RhoA, Cdc42 and Rac1) in migrating glioblastoma cells. TIP-1 knockdown resulted in both aberrant localization of ARHGEF7 and rhotekin, as well as abnormal activation of Rho GTPases that was accompanied with impaired motility of glioblastoma cells. Furthermore, TIP-1 knockdown suppressed tumor cell dispersal in orthotopic glioblastoma murine models. We also observed high levels of TIP-1 expression in human glioblastoma specimens, and the elevated TIP-1 levels are associated with advanced staging and poor prognosis in glioma patients. Although more studies are needed to further dissect the mechanism(s) by which TIP-1 modulates the intracellular redistribution and activation of Rho GTPases, this study suggests that TIP-1 holds potential as both a prognostic biomarker and a therapeutic target of malignant gliomas. Oncogene advance online publication, 8 April 2013; doi:10.1038/onc.2013.97.

[123]

**TÍTULO / TITLE:** - Monensin, a polyether ionophore antibiotic, overcomes TRAIL resistance in glioma cells via endoplasmic reticulum stress, DR5 upregulation and c-FLIP downregulation.

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

**REVISTA / JOURNAL:** - Carcinogenesis. 2013 Jun 3.

●●Enlace al texto completo (gratis o de pago) [1093/carcin/bqt137](#)

**AUTORES / AUTHORS:** - Yoon MJ; Kang YJ; Kim IY; Kim EH; Lee JA; Lim JH; Kwon TK; Choi KS

**INSTITUCIÓN / INSTITUTION:** - Department of Biomedical Sciences, Institute for Medical Sciences, Ajou University School of Medicine, Suwon, Korea and.

**RESUMEN / SUMMARY:** - Tumor necrosis factor-related apoptosis-induced ligand (TRAIL) is preferentially cytotoxic to cancer cells over normal cells. However, many cancer cells, including malignant glioma cells, tend to be resistant to TRAIL. Monensin (a polyether ionophore antibiotic that is widely used in veterinary medicine) and salinomycin (a compound that is structurally related to monensin and shows cancer stem cell-inhibiting activity) are currently recognized as anticancer drug candidates. In this study, we show that monensin effectively sensitizes various glioma cells, but not normal astrocytes, to TRAIL-mediated apoptosis; this occurs at least partly via monensin-induced endoplasmic reticulum (ER) stress, CHOP-mediated DR5 upregulation and proteasome-mediated downregulation of c-FLIP. Interestingly, other polyether antibiotics, such as salinomycin, nigericin, narasin and lasalocid A, also stimulated TRAIL-mediated apoptosis in glioma cells via ER stress, CHOP-

mediated DR5 upregulation and c-FLIP downregulation. Taken together, these results suggest that combined treatment of glioma cells with TRAIL and polyether ionophore antibiotics may offer an effective therapeutic strategy.

[124]

**TÍTULO / TITLE:** - Dasatinib Maintenance Therapy after Allogeneic Hematopoietic Stem Cell Transplantation for an Isolated Central Nervous System Blast Crisis in Chronic Myelogenous Leukemia.

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

**REVISTA / JOURNAL:** - Acta Haematol. 2013 Mar 29;130(2):111-114.

●●Enlace al texto completo (gratis o de pago) [1159/000347158](#)

**AUTORES / AUTHORS:** - Nishimoto M; Nakamae H; Koh KR; Kosaka S; Matsumoto K; Morita K; Koh H; Nakane T; Ohsawa M; Hino M

**INSTITUCIÓN / INSTITUTION:** - Hematology, Graduate School of Medicine, Osaka City University, Osaka, Japan.

**RESUMEN / SUMMARY:** - A 22-year-old male with Ph-positive chronic myelogenous leukemia (CML) was started on treatment with imatinib. After 12 months of therapy, he achieved a complete cytogenetic response (CCyR). Although the CCyR persisted in his bone marrow, he developed an isolated CML blast crisis in his central nervous system (CNS) after 29 months of therapy. He underwent allogeneic hematopoietic stem cell transplantation (HSCT) following combination therapy with dasatinib, intrathecal chemotherapy and cranial irradiation. Subsequently, 168 days after allogeneic HSCT, he was started on dasatinib maintenance therapy to prevent a CNS relapse. Thirty-eight months after allogeneic HSCT, he has sustained a complete molecular response in both bone marrow and CNS. We believe dasatinib has the potential to prevent CNS relapse if used for maintenance therapy after allogeneic HSCT.

[125]

**TÍTULO / TITLE:** - Siglec-h on activated microglia for recognition and engulfment of glioma cells.

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

**REVISTA / JOURNAL:** - Glia. 2013 Apr 30. doi: 10.1002/glia.22501.

●●Enlace al texto completo (gratis o de pago) [1002/glia.22501](#)

**AUTORES / AUTHORS:** - Kopatz J; Beutner C; Welle K; Bodea LG; Reinhardt J; Claude J; Linnartz-Gerlach B; Neumann H

**INSTITUCIÓN / INSTITUTION:** - Neural Regeneration Group, Institute of Reconstructive Neurobiology, Medical Faculty, University Bonn, Bonn, Germany.

**RESUMEN / SUMMARY:** - Sialic-acid-binding immunoglobulin-like lectin-h (Siglec-h) is a recently identified mouse-specific CD33-related Siglec that signals via

DAP12/TYROBP. Expression of Siglec-h has been observed on plasmacytoid dendritic cells and microglia, but the ligand and the function of Siglec-h remained elusive. Here, we demonstrate gene transcription and protein expression of Siglec-h by mouse microglia after interferon-gamma treatment or polarization into a M1-subtype. Microglial Siglec-h acted as phagocytosis receptor since targeting of microsphere beads to Siglec-h triggered their uptake into the microglia. The extracellular domain of Siglec-h protein bound to mouse glioma lines, but not to astrocytes or other normal mouse cells. Microglial cells stimulated to express Siglec-h engulfed intact glioma cells without prior induction of apoptosis and slightly reduced glioma cell number in culture. Phagocytosis of glioma cells by activated microglia was dependent on Siglec-h and its adapter molecule DAP12. Thus, data show that M1-polarized microglial cells can engulf glioma cells via a DAP12-mediated Siglec-h dependent mechanism.

[126]

**TÍTULO / TITLE:** - The proteasome inhibitor lactacystin exerts its therapeutic effects on glioma via apoptosis: an in vitro and in vivo study.

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

**REVISTA / JOURNAL:** - J Int Med Res. 2013 Feb;41(1):72-81. doi: 10.1177/0300060513476992. Epub 2013 Jan 24.

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

[1177/0300060513476992](#)

**AUTORES / AUTHORS:** - Wang H; Zhang S; Zhong J; Zhang J; Luo Y; Pengfei G

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, First Bethune Hospital of Jilin University, Changchun, Jilin Province, China.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To examine the effect and underlying mechanism of action of the proteasome inhibitor lactacystin on glioma, in vitro and in vivo. **METHODS:** Rat C6 glioma cells were cultured with or without lactacystin. Cell proliferation, apoptosis and mitochondrial membrane potential were determined. A glioma xenograft model was established in mice and animals were treated with 0, 1 or 5 microg/20 g body weight lactacystin for 7 days. Animals were sacrificed on day 17 after completion of treatment. Apoptosis in tumour tissue was examined by terminal deoxynucleotidyl transferase dUTP nick end labeling staining. Levels of B cell lymphoma 2 (Bcl-2), and Bcl2-associated X protein (Bax) protein and mRNA, were determined in C6 cells and tumour tissues. **RESULTS:** Lactacystin significantly inhibited the proliferation of C6 cells, increased apoptosis and reduced mitochondrial membrane potential in vitro, and suppressed tumour growth in vivo. Lactacystin increased the ratio of Bax to Bcl-2 at the mRNA and protein levels, both in vitro and in vivo. **CONCLUSIONS:** The effects of lactacystin are associated with

apoptosis induction. Proteasome inhibition may represent an effective treatment option for glioma.

[127]

**TÍTULO / TITLE:** - Subarachnoid Anesthesia in a Patient With Lateral Ventricle Tumor.

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

**REVISTA / JOURNAL:** - J Neurosurg Anesthesiol. 2013 May 8.

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

[1097/ANA.0b013e318296481d](#)

**AUTORES / AUTHORS:** - Gurajala I; Palamattam DJ; Gopinath R

**INSTITUCIÓN / INSTITUTION:** - Nizam's Institute of Medical Sciences Hyderabad, India.

[128]

**TÍTULO / TITLE:** - Association between epidermal growth factor gene rs4444903 polymorphism and risk of glioma.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Jun;34(3):1879-85. doi: 10.1007/s13277-013-0730-2. Epub 2013 May 5.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0730-](#)

[2](#)

**AUTORES / AUTHORS:** - Hu M; Shi H; Xu Z; Liu W

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Xi'an No.1 Hospital, Xi'an, 710002, China.

**RESUMEN / SUMMARY:** - The development of glioma is a complex process which may be influenced by many factors including the epidermal growth factor (EGF) gene polymorphism. Previous studies showed that EGF rs4444903 polymorphism could result in increased risk of tumorigenesis in multiple human cancers, but published data regarding the association between EGF rs4444903 polymorphism and glioma risk were inconsistent. To derive a more precise estimation of the association between EGF rs4444903 polymorphism and glioma risk, we performed a systematic review and meta-analysis of previous published studies. PubMed, Embase, and the Wanfang databases were systematically searched to identify relevant studies. Odds ratios (ORs) and 95 % confidence intervals (95 % CIs) were calculated to assess the strength of the association. Ten published studies with 1,891 glioma cases and 2,836 controls were finally included into the study. Overall, there was a significant association between EGF rs4444903 polymorphism and glioma risk in all four genetic models (the allele model: OR = 1.25, 95 % CI 1.15-1.37, P < 0.001; the codominant model: OR = 1.65, 95 % CI 1.36-1.99, P < 0.001; the dominant

model: OR = 1.27, 95 % CI 1.12-1.44, P < 0.001; the recessive model: OR = 1.48, 95 % CI 1.25-1.75, P < 0.001). Subgroup analyses by ethnicity showed that EGF rs4444903 polymorphism resulted in a higher risk of glioma among both Asians and Caucasians. In conclusion, the results suggest that there is a significant association between EGF rs4444903 polymorphism and glioma risk, and genotypes of EGF rs4444903 mutation contribute to increased host susceptibility to glioma.

[129]

**TÍTULO / TITLE:** - MGMT depletion after treatment of glioblastoma cells with temozolomide and O6-benzylguanine implicates NFkappaB and mutant p53.

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

**REVISTA / JOURNAL:** - Neurol Res. 2013 Mar 22.

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

[1179/1743132813Y.0000000191](https://doi.org/10.1179/1743132813Y.0000000191)

**AUTORES / AUTHORS:** - Vlachostergios PJ; Hatzidaki E; Papandreou CN

**RESUMEN / SUMMARY:** - The DNA repair enzyme O6-methylguanine methyltransferase (MGMT) is a major determinant of glioma resistance to alkylating agents. Several strategies have been used to induce sensitization to alkylatorbased treatments, including the direct MGMT inhibitor O6-benzylguanine (BG). However, replenishment of MGMT is often observed after the withdrawal of combined schedules of temozolomide (TMZ) and BG, thus preventing further treatment efficacy. In this study we investigated the potential mechanisms of resistance to combination treatment with TMZ and BG in the MGMT-proficient, p53-mutated (mt p53) T98G glioblastoma (GBM) cell line, looking for an effect on nuclear factor kappa B (NFkappaB) and mt p53, which are both transcriptional regulators of MGMT. The administration of TMZ alone led to minimal inhibition of T98G cell viability which was, however, enhanced with the addition of BG. This effect coincided with reduced expression of MGMT protein and transcript levels, and a decrease in cellular amount of NFkappaB and mutant p53. However, withdrawal of the drugs led to an increase in cell viability, which was in parallel with depletion of MGMT protein and transcript levels and was also accompanied by elevated protein levels of NFkappaB and mt p53. Overall, these results suggest that NFkappaB and mt p53 induction may be responsible for the failure of BG to induce prolonged inhibition of direct repair in TMZ co-treated GBM cells with mt p53 status.

[130]

**TÍTULO / TITLE:** - Central nervous system involvement in mantle cell lymphoma: clinical features, prognostic factors and outcomes from the European Mantle Cell Lymphoma Network.

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

**REVISTA / JOURNAL:** - Ann Oncol. 2013 Apr 24.

●●Enlace al texto completo (gratis o de pago) [1093/annonc/mdt139](#)

**AUTORES / AUTHORS:** - Cheah CY; George A; Gine E; Chiappella A; Kluijn-Nelemans HC; Jurczak W; Krawczyk K; Mocikova H; Klener P; Salek D; Walewski J; Szymczyk M; Smolej L; Auer RL; Ritchie DS; Arcaini L; Williams ME; Dreyling M; Seymour JF

**INSTITUCIÓN / INSTITUTION:** - Department of Haematology, Peter MacCallum Cancer Centre, Melbourne, Australia.

**RESUMEN / SUMMARY:** - BACKGROUND: Central nervous system (CNS) involvement in mantle cell lymphoma (MCL) is uncommon, and the manifestations and natural history are not well described. PATIENTS AND METHODS: We present the data on 57 patients with MCL who developed CNS involvement, from a database of 1396 consecutively treated patients at 14 institutions. RESULTS: The crude incidence of CNS involvement was 4.1%, with 0.9% having CNS involvement at diagnosis. Blastoid histology, B-symptoms, elevated lactate dehydrogenase, Eastern Cooperative Group performance status  $\geq 2$  and a high Mantle Cell Lymphoma International Prognostic Index score were enriched in the cohort with CNS involvement, and the presence of  $\geq 1$  of these features defined a high-risk subset (an actuarial risk of CNS involvement 15% at 5 years) in a single-institution subset. The median time to CNS relapse was 15.2 months, and the median survival from time of CNS diagnosis was 3.7 months. The white blood cell count at diagnosis  $< 10.9 \times 10^9/l$ , treatment of CNS involvement with high-dose anti-metabolites, consolidation with stem cell transplant and achievement of complete response were all associated with improved survival. CONCLUSIONS: In MCL, CNS involvement is uncommon, although some features may predict risk. Once manifest outlook is poor; however, some patients who receive intensive therapy survive longer than 12 months.

[131]

**TÍTULO / TITLE:** - Clinical neuropathology practice guide 3-2013: levels of evidence and clinical utility of prognostic and predictive candidate brain tumor biomarkers.

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

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 May-Jun;32(3):148-58.

**AUTORES / AUTHORS:** - Berghoff AS; Stefanits H; Woehrer A; Heinzl H; Preusser M; Hainfellner JA

**INSTITUCIÓN / INSTITUTION:** - Institute of Neurology, Department of Neurosurgery, Center for Medical Statistics, Informatics, and Intelligent Systems, Medical University of Vienna, Austria.

**RESUMEN / SUMMARY:** - A large number of potential tissue biomarkers has been proposed for brain tumors. However, hardly any have been adopted for routine clinical use, so far. For most candidate biomarkers substantial controversy exists with regard to their usefulness in clinical practice. The multidisciplinary neurooncology taskforce of the Vienna Comprehensive Cancer Center Central Nervous System Unit (CCC-CNS) addressed this issue and elaborated a four-tiered levels-of-evidence system for assessing analytical performance (reliability of test result) and clinical performance (prognostic or predictive) based on consensually defined criteria. The taskforce also consensually agreed that only biomarker candidates should be considered as ready for clinical use, which meet defined quality standards for both, analytical and clinical performance. Applying this levels-of-evidence system to MGMT, IDH1, 1p19q, Ki67, MYCC, MYCN and beta-catenin, only immunohistochemical IDH1 mutation testing in patients with diffuse gliomas is supported by sufficient evidence in order to be unequivocally qualified for clinical use. For the other candidate biomarkers lack of published evidence of sufficiently high analytical test performance and, in some cases, also of clinical performance limits evidence-based confirmation of their clinical utility. For most of the markers, no common standard of laboratory testing exists. We conclude that, at present, there is a strong need for studies that specifically address the analytical performance of candidate brain tumor biomarkers. In addition, standardization of laboratory testing is needed. We aim to regularly challenge and update the present classification in order to systematically clarify the current translational status of candidate brain tumor biomarkers and to identify specific research needs for accelerating the translational pace.

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[132]

**TÍTULO / TITLE:** - Protopanaxatriol ginsenoside Rh1 inhibits the expression of matrix metalloproteinases and the in vitro invasion/migration of human astrogloma cells.

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

**REVISTA / JOURNAL:** - Neurochem Int. 2013 May 15;63(2):80-86. doi: 10.1016/j.neuint.2013.05.002.

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

[1016/j.neuint.2013.05.002](#)

**AUTORES / AUTHORS:** - Jung JS; Ahn JH; Le TK; Kim DH; Kim HS

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Medicine and Tissue Injury Defense Research Center, Ewha Womans University Medical School, Seoul, Republic of Korea.

**RESUMEN / SUMMARY:** - Malignant gliomas are the most common and fatal brain tumors in adults. In particular, the strong invasiveness of glioma cells into the normal brain tissue makes eradication of glioma very difficult. Matrix

metalloproteinases (MMPs) play a pivotal role in glioma invasion, and thus controlling MMP expression has been suggested as an important therapeutic target for brain tumors. In the present study, we investigated the effect of protopanaxatriol ginsenoside Rh1 on MMP expressions in human astrogloma U87MG and U373MG cells. RT-PCR analysis showed that Rh1 inhibits the mRNA expressions of MMP-1, -3, and -9 in PMA-stimulated U87MG and U373MG cells. Rh1 also suppressed the promoter activities of MMP-1, -3 and -9. The ELISA, Western blot, and zymographic analyses revealed that Rh1 inhibits the protein expression and/or enzymatic activity of MMP-1, -3 and -9. In accordance with the strong inhibitory effects of Rh1 on MMPs, Rh1 efficiently inhibited the invasion and migration of U87MG and U373MG glioma cells as demonstrated by Matrigel invasion assay and wound healing assay. Further mechanistic studies revealed that Rh1 inhibits MAPK and PI3K/Akt signaling pathways and downstream transcription factors such as NF-kappaB and AP-1, which play an important role in MMP gene expressions. The data collectively suggest that ginsenoside Rh1 may have a therapeutic potential for malignant gliomas.

[133]

**TÍTULO / TITLE:** - Multiple treatments with liposomal doxorubicin and ultrasound-induced disruption of blood-tumor and blood-brain barriers improve outcomes in a rat glioma model.

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

**REVISTA / JOURNAL:** - J Control Release. 2013 Apr 18;169(1-2):103-111. doi: 10.1016/j.jconrel.2013.04.007.

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

[1016/j.jconrel.2013.04.007](#)

**AUTORES / AUTHORS:** - Aryal M; Vykhodtseva N; Zhang YZ; Park J; McDannold N

**INSTITUCIÓN / INSTITUTION:** - Department of Physics, Boston College, Chestnut Hill, USA; Department of Radiology, Brigham & Women's Hospital, Harvard Medical School, Boston, USA. Electronic address: [muna@bwh.harvard.edu](mailto:muna@bwh.harvard.edu).

**RESUMEN / SUMMARY:** - The blood-brain-barrier (BBB) prevents the transport of most anticancer agents to the central nervous system and restricts delivery to infiltrating brain tumors. The heterogeneous vascular permeability in tumor vessels, along with several other factors, creates additional barriers for drug treatment of brain tumors. Focused ultrasound (FUS), when combined with circulating microbubbles, is an emerging noninvasive method to temporarily permeabilize the BBB and the "blood-tumor barrier". Here, we tested the impact of three weekly sessions of FUS and liposomal doxorubicin (DOX) in 9L rat glioma tumors. Animals that received FUS+DOX (N=8) had a median survival time that was increased significantly ( $P<0.001$ ) compared to animals who

received DOX only (N=6), FUS only (N=8), or no treatment (N=7). Median survival for animals that received FUS+DOX was increased by 100% relative to untreated controls, whereas animals who received DOX alone had only a 16% improvement. Animals who received only FUS showed no improvement. No tumor cells were found in histology in 4/8 animals in the FUS+DOX group, and in two animals, only a few tumor cells were detected. Adverse events in the treatment group included skin toxicity, impaired activity, damage to surrounding brain tissue, and tissue loss at the tumor site. In one animal, intratumoral hemorrhage was observed. These events are largely consistent with known side effects of doxorubicin and with an extensive tumor burden. Overall this work demonstrates that multiple sessions using this FUS technique to enhance the delivery of liposomal doxorubicin have a pronounced therapeutic effect in this rat glioma model.

[134]

**TÍTULO / TITLE:** - Cerebellar glioblastoma multiforme: a retrospective study of 28 patients at a single institution.

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

**REVISTA / JOURNAL:** - Int J Neurosci. 2013 May 1.

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

[3109/00207454.2013.791292](https://doi.org/10.3109/00207454.2013.791292)

**AUTORES / AUTHORS:** - Yang S; Liu J; Wang T; Li X; You C

**INSTITUCIÓN / INSTITUTION:** - 1Department of Neurosurgery, West China Hospital, Sichuan University, Chengdu, Sichuan Province, PR China.

**RESUMEN / SUMMARY:** - Cerebellar glioblastoma multiforme (CGBM) is rare and its treatment is ill defined. To elucidate prognostic factors, we performed a single institutional review of the largest series to date of CGBM. The West China Hospital database was reviewed from 2007 to June 2011, and a total of 28 CGBM patients were collected. Median age of patients was 50 years old, whereas median Karnofsky Performance Status was 80 (range, 30-100). Brainstem invasion was observed in 9 patients. Sixteen patients received total resection and 12 patients received subtotal resection. Postoperative Gamma Knife radiosurgery (GKRS) was administered to 22 patients. After operation, 16 patients received concurrent GKRS and chemotherapy, and 6 patients received chemotherapy after GKRS. In addition, 4 patients only received chemotherapy, and 2 patients did not receive either GKRS or chemotherapy due to various reasons. Median follow-up period was 13.7 months (range, 5.2-28.1 months). Median overall survival (OS) of 28 patients was 14.3 months and median progression-free survival (PFS) was 9.4 months. Univariate log-rank analysis showed that OS and PFS were significantly related to brainstem invasion ( $p = 0.03$ ,  $p = 0.04$ , respectively), extent of resection ( $p = 0.02$ ,  $p = 0.04$ , respectively) and GKRS ( $p = 0.01$ ,  $p = 0.02$ , respectively) of GBM. Multivariate

analysis revealed that OS and PFS were also significantly associated with brainstem invasion ( $p = 0.007$ ,  $p = 0.014$ , respectively), extent of resection ( $p = 0.032$ ,  $p = 0.045$ , respectively) and GKRS ( $p = 0.031$ ,  $p = 0.046$ , respectively) of CGBM. According to our study, brainstem invasion, extent of resection and GKRS were major prognostic factors for survival. Combination of postoperative GKRS and chemotherapy had an improved prognosis, and it may be a feasible postoperative adjuvant treatment of CGBM.

[135]

**TÍTULO / TITLE:** - Synthetic sickness or lethality points at candidate combination therapy targets in glioblastoma.

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

**REVISTA / JOURNAL:** - Int J Cancer. 2013 Apr 30. doi: 10.1002/ijc.28235.

●●Enlace al texto completo (gratis o de pago) [1002/ijc.28235](#)

**AUTORES / AUTHORS:** - Szczurek E; Misra N; Vingron M

**INSTITUCIÓN / INSTITUTION:** - Department of Computational Molecular Biology, Max Planck Institute for Molecular Genetics, Ihnestr. 63-73, 14195, Berlin, Germany.

**RESUMEN / SUMMARY:** - Synthetic lethal interactions in cancer hold the potential for successful combined therapies, which would avoid the difficulties of single molecule-targeted treatment. Identification of interactions that are specific for human tumors is an open problem in cancer research. This work aims at deciphering synthetic sick or lethal interactions directly from somatic alteration, expression and survival data of cancer patients. To this end, we look for pairs of genes and their alterations or expression levels that are “avoided” by tumors and “beneficial” for patients. Thus, candidates for synthetic sickness or lethality (SSL) interaction are identified as such gene pairs whose combination of states is under-represented in the data. Our main methodological contribution is a quantitative score that allows ranking of the candidate SSL interactions according to evidence found in patient survival. Applying this analysis to glioblastoma data, we collect 1,956 synthetic sick or lethal partners for 85 abundantly altered genes, most of which show extensive copy number variation across the patient cohort. We rediscover and interpret known interaction between TP53 and PLK1, as well as provide insight into the mechanism behind EGFR interacting with AKT2, but not AKT1 nor AKT3. Cox model analysis determines 274 of identified interactions as having significant impact on overall survival in glioblastoma, which is more informative than a standard survival predictor based on patient’s age.

[136]

**TÍTULO / TITLE:** - Visualization of implanted GL261 glioma cells in living mouse brain slices using fluorescent 4-(4-(dimethylamino)-styryl)-N-methylpyridinium iodide (ASP+).

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

**REVISTA / JOURNAL:** - Biotechniques. 2012 Nov;53(5):305-9.

**AUTORES / AUTHORS:** - Kucheryavykh LY; Kucheryavykh YV; Rolon-Reyes K; Skatchkov SN; Eaton MJ; Cubano LA; Inyushin M

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry, Universidad Central del Caribe, School of Medicine, Bayamon, Puerto Rico.

**RESUMEN / SUMMARY:** - Here we describe a new method of glioma cell visualization in living brain slices that can be used for evaluation of tumor size or visualization of internal tumor structures. Glial cells, as well as glioma cells of glial origin, express high levels of organic cation transporters. We demonstrate that application of a fluorescent substrate for these transporters 4-(4-(dimethylamino)-styryl)-N-methylpyridinium iodide (ASP+) to the incubation medium leads to quick accumulation of fluorescence in glioma cells during early developmental stages and in astrocytes, but not in neurons. Stained brain slices can be immediately investigated using confocal or fluorescence microscopy. Glioma and glial cells can be discriminated from each other because of their different morphology. The method described has the advantage of staining living tissue and is simple to perform.

[137]

**TÍTULO / TITLE:** - Autoimmune limbic encephalopathy and anti-Hu antibodies in children without cancer.

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

**REVISTA / JOURNAL:** - Neurology. 2013 May 8.

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

[1212/WNL.0b013e318296e9c3](#)

**AUTORES / AUTHORS:** - Honnorat J; Didelot A; Karantoni E; Ville D; Ducray F; Lambert L; Deiva K; Garcia M; Pichit P; Cavillon G; Rogemond V; Delattre JY; Tardieu M

**INSTITUCIÓN / INSTITUTION:** - From the French Reference Center on Paraneoplastic Neurological Syndrome (J.H., A.D., F.D., G.C., V.R.), Hospices Civils de Lyon, Hopital Neurologique, Neurologie B, Bron; Lyon Neuroscience Research Center (J.H., F.D., G.C., V.R.), INSERM U1028/CNRS UMR 5292, Lyon; Universite de Lyon-Universite Claude Bernard Lyon 1 (J.H., F.D., G.C., V.R.), Lyon; Service de Neurologie Mazarin (E.K., J.-Y.D.), Groupe Hospitalier Pitie-Salpetriere, APHP, Universite Pierre et Marie Curie-Paris 6, Centre de Recherche de l'Institut du Cerveau et de la Moelle Epiniere, UMR S975, CNRS, UMR 7225, Paris; Department of Pediatric Neurology (D.V.), Centre de Reference Epilepsies Rares, Hopital Femme Mere Enfant, Hospices Civils de

Lyon, Lyon; Medecine Infantile 3 et Genetique Clinique (L.L.), CHU, Vandoeuvre-les-Nancy, France; Filiere de Genetique Clinique (L.L.), Service de Medecine Neonatale, Maternite, Nancy; Hopitaux Universitaires Paris Sud (K.D., M.T.), AP-HP, Pediatric Neurology Department, National Referral Center for Neuroinflammatory Diseases in Children (NIE) and Inserm U1012, Le Kremlin Bicetre, Bicetre; Unite de Neuropediatrie (M.G.), Centre Hospitalo-Universitaire d'Angers, Angers; and Unite d'Epileptologie (P.P.), Service de Neurologie 1, Hopital la Pitie-Salpetriere, Paris, France.

**RESUMEN / SUMMARY:** - OBJECTIVE: The aim of this study was to describe the clinical presentation of children and adolescents with anti-Hu antibodies (Hu-Abs). METHODS: This was a retrospective study of children and adolescents with Hu-Abs collected by the French Paraneoplastic Neurological Syndrome (PNS) Reference Center between January 1, 2000 and December 31, 2011. RESULTS: The center identified 251 patients with Hu-Abs. Only 8 patients were younger than 18 years. All of the 243 adult patients had PNS. In contrast, of the 8 children, only 2 (25%, Fisher exact test  $p = 0.0003$ ) had neuroblastoma and opsoclonus-myoclonus. The other 6 children (5 female and 1 male) presented with limbic encephalitis (progressive personality changes, memory loss, and seizure) and were free of cancer (mean follow-up time: 50 months; range: 34-72 months). Brain MRI scans were abnormal in 4 of the 6 patients, with left, right, or bitemporal T2/fluid-attenuated inversion recovery hyperintensity. Protein levels and cell counts in the CSF were normal in all patients, but numerous oligoclonal bands were observed in 4 patients. All 6 patients received antiepileptic drugs and immunotherapy, but management of epilepsy was difficult in all of them. Five of the children developed cognitive impairments. CONCLUSION: In children, as in adults, Hu-Abs can be a marker of PNS. However, in contrast to adults, Hu-Abs in children are also associated with an aggressive form of autoimmune nonparaneoplastic limbic encephalitis. Future studies should be conducted to determine the incidence of this syndrome and whether earlier diagnosis and T-cell-directed immunotherapies may improve its prognosis.

[138]

**TÍTULO / TITLE:** - Integrin alpha3 is overexpressed in glioma stem-like cells and promotes invasion.

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

**REVISTA / JOURNAL:** - Br J Cancer. 2013 May 7. doi: 10.1038/bjc.2013.218.

●●Enlace al texto completo (gratis o de pago) [1038/bjc.2013.218](#)

**AUTORES / AUTHORS:** - Nakada M; Nambu E; Furuyama N; Yoshida Y; Takino T; Hayashi Y; Sato H; Sai Y; Tsuji T; Miyamoto KI; Hirao A; Hamada JI

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School of Medical Science, Kanazawa University, Kanazawa 920 8641, Japan.

**RESUMEN / SUMMARY:** - Background: Glioma stem-like cell (GSC) properties are responsible for gliomagenesis and recurrence. GSCs are invasive but its mechanism remains to be elucidated. Here, we attempted to identify the molecules that promote invasion in GSCs. Methods: Neurospheres and CD133+ cells were collected from glioblastoma (GBM) specimens and glioma cell lines by sphere-formation method and magnetic affinity cell sorting, respectively. Differential expression of gene candidates, its role in invasion and its signaling pathway were evaluated in glioma cell lines. Results: Neurospheres from surgical specimens attached to fibronectin and laminin, the receptors of which belong to the integrin family. Integrin alpha3 was overexpressed in CD133+ cells compared with CD133- cells in all the glioma cell lines (4 out of 4). Immunohistochemistry demonstrated the localisation of integrin alpha3 in GBM cells, including invading cells, and in the tumour cells around the vessels, which is believed to be a stem cell niche. The expression of integrin alpha3 was correlated with migration and invasion. The invasion activity of glioma cells was linked to the phosphorylation of extracellular signal-regulated kinase (ERK) 1/2. Conclusion: Our results suggest that integrin alpha3 contributes to the invasive nature of GSCs via ERK1/2, which renders integrin alpha3 a prime candidate for anti-invasion therapy for GBM. British Journal of Cancer advance online publication, 7 May 2013; doi:10.1038/bjc.2013.218 [www.bjcancer.com](http://www.bjcancer.com).

[139]

**TÍTULO / TITLE:** - Exposure to pesticides and the risk of childhood brain tumors.

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

**REVISTA / JOURNAL:** - Cancer Causes Control. 2013 Apr 5.

●● Enlace al texto completo (gratis o de pago) [1007/s10552-013-0205-](http://1007/s10552-013-0205-1)

[1](#)

**AUTORES / AUTHORS:** - Greenop KR; Peters S; Bailey HD; Fritschi L; Attia J; Scott RJ; Glass DC; de Klerk NH; Alvaro F; Armstrong BK; Milne E

**INSTITUCIÓN / INSTITUTION:** - Telethon Institute for Child Health Research, Centre for Child Health Research, University of Western Australia, PO Box 855, West Perth, WA, 6872, Australia.

**RESUMEN / SUMMARY:** - PURPOSE: Previous research has suggested positive associations between parental or childhood exposure to pesticides and risk of childhood brain tumors (CBT). This Australian case-control study of CBT investigated whether exposures to pesticides before pregnancy, during pregnancy and during childhood, were associated with an increased risk. METHODS: Cases were recruited from 10 pediatric oncology centers, and controls by random-digit dialing, frequency matched on age, sex, and State of residence. Exposure data were collected by written questionnaires and telephone interviews. Data were analyzed by unconditional logistic regression. RESULTS: The odds ratios (ORs) for professional pest control treatments in the

home in the year before the index pregnancy, during the pregnancy, and after the child's birth were 1.54 (95 % confidence interval (CI): 1.07, 2.22), 1.52 (95 % CI: 0.99, 2.34) and 1.04 (95 % CI: 0.75, 1.43), respectively. ORs for treatments exclusively before pregnancy and during pregnancy were 1.90 (95 % CI: 1.08, 3.36) and 1.02 (95 % CI: 0.35, 3.00), respectively. The OR for the father being home during the treatment was 1.79 (95 % CI: 0.85, 3.80). The OR for paternal occupational exposure in the year before the child's conception was 1.36 (95 % CI: 0.66, 2.80). ORs for prenatal home pesticide exposure were elevated for low- and high-grade gliomas; effect estimates for other CBT subtypes varied and lacked precision. CONCLUSIONS: These results suggest that preconception pesticide exposure, and possibly exposure during pregnancy, is associated with an increased CBT risk. It may be advisable for both parents to avoid pesticide exposure during this time.

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[140]

**TÍTULO / TITLE:** - Teaching NeuroImages: Vein of Galen aneurysm mimicking pineal mass in a young adult.

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

**REVISTA / JOURNAL:** - Neurology. 2013 May 28;80(22):e240. doi: 10.1212/WNL.0b013e318294b3df.

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

[1212/WNL.0b013e318294b3df](#)

**AUTORES / AUTHORS:** - Gokhale S; Laskowitz DT

**INSTITUCIÓN / INSTITUTION:** - From the Department of Medicine (Neurology), Duke University School of Medicine, Durham, NC.

**RESUMEN / SUMMARY:** - A 22-year-old man presented with intractable progressive headaches over 2 months. Noncontrast head CT and contrast-enhanced MRI scan revealed a hyperdense pineal-based mass (figure, A and B). Arteriogram was normal (figure, C and D).

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[141]

**TÍTULO / TITLE:** - Implantation of GL261 neurospheres into C57/BL6 mice: A more reliable syngeneic graft model for research on glioma-initiating cells.

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

**REVISTA / JOURNAL:** - Int J Oncol. 2013 May 27. doi: 10.3892/ijo.2013.1962.

●●Enlace al texto completo (gratis o de pago) [3892/ijo.2013.1962](#)

**AUTORES / AUTHORS:** - Yi L; Zhou C; Wang B; Chen T; Xu M; Xu L; Feng H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Daping Hospital, Third Military Medical University, Chongqing, P.R. China.

**RESUMEN / SUMMARY:** - Recent studies have demonstrated that inflammatory cells and inflammatory mediators are indispensable components of the tumor-

initiating cell (TIC) niche and regulate the malignant behavior of TICs. However, conventional animal models for glioma-initiating cell (GIC) studies are based on the implantation of GICs from human glioblastoma (GBM) into immunodeficient mice without the regulation of immune system. Whether animal models can mimic the cellular microenvironment of malignancy and evaluate the biological features of GICs accurately is unclear. Here, we detected the biological features of neurosphere-like tumor cells derived from the murine GBM cell line GL261 (GL261-NS) and from primary human GBM (PGBM-NS) in vitro, injected GL261-NS into syngeneic C57/BL6 mouse brain and injected PGBM-NS into NOD/SCID mouse brain, respectively. The tumorigenic characteristics of the two different orthotopic transplantation models were analyzed and the histological discrepancy between grafts and human primary GBM was compared. We found that GICs enriched in GL261-NS, GL261-NS and PGBM-NS exhibited increased GIC potential and enhanced chemoresistance in vitro. GL261-NS was significantly more aggressive compared to GL261 adhesive cells (GL261-AC) in vivo and the enhanced aggression was more significant in syngeneic mice compared to immunodeficient mice. The discrepancy of tumorigenicity between GL261-NS and GL261-AC in C57/BL6 mice was also larger compared to that between PGBM-NS and PGBM-AC in immunodeficient mice. Syngrafts derived from GL261-NS in C57/BL6 mice corresponded to the human GBM histologically better, compared with xenografts derived from PGBM-NS in NOD/SCID mice, which lack inflammatory cells and inflammatory mediators. We conclude that the inflammatory niche is involved in the tumorigenicity of GICs and implantation of GL261-NS into C57/BL6 mice is a more reliable syngeneic graft model for in vivo study on GICs relative to the immunodeficiency model.

[142]

**TÍTULO / TITLE:** - Histone deacetylase inhibitor AR42 regulates telomerase activity in human glioma cells via an Akt-dependent mechanism.

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

**REVISTA / JOURNAL:** - Biochem Biophys Res Commun. 2013 May 24;435(1):107-12. doi: 10.1016/j.bbrc.2013.04.049. Epub 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [1016/j.bbrc.2013.04.049](http://1016/j.bbrc.2013.04.049)

**AUTORES / AUTHORS:** - Yang YL; Huang PH; Chiu HC; Kulp SK; Chen CS; Kuo CJ; Chen HD; Chen CS

**INSTITUCIÓN / INSTITUTION:** - Institute of Basic Medical Sciences, College of Medicine, National Cheng Kung University, Tainan, Taiwan.

**RESUMEN / SUMMARY:** - Epigenetic regulation via abnormal activation of histone deacetylases (HDACs) is a mechanism that leads to cancer initiation and promotion. Activation of HDACs results in transcriptional upregulation of human telomerase reverse transcriptase (hTERT) and increases telomerase activity

during cellular immortalization and tumorigenesis. However, the effects of HDAC inhibitors on the transcription of hTERT vary in different cancer cells. Here, we studied the effects of a novel HDAC inhibitor, AR42, on telomerase activity in a PTEN-null U87MG glioma cell line. AR42 increased hTERT mRNA in U87MG glioma cells, but suppressed total telomerase activity in a dose-dependent manner. Further analyses suggested that AR42 decreases the phosphorylation of hTERT via an Akt-dependent mechanism. Suppression of Akt phosphorylation and telomerase activity was also observed with PI3K inhibitor LY294002 further supporting the hypothesis that Akt signaling is involved in suppression of AR42-induced inhibition of telomerase activity. Finally, ectopic expression of a constitutive active form of Akt restored telomerase activity in AR42-treated cells. Taken together, our results demonstrate that the novel HDAC inhibitor AR42 can suppress telomerase activity by inhibiting Akt-mediated hTERT phosphorylation, indicating that the PI3K/Akt pathway plays an important role in the regulation of telomerase activity in response to this HDAC inhibitor.

[143]

**TÍTULO / TITLE:** - Pituitary Tumor Transforming Gene 1 Induces Tumor Necrosis Factor-alpha Production from Keratinocytes: Implication for Involvement in the Pathophysiology of Psoriasis.

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

**REVISTA / JOURNAL:** - J Invest Dermatol. 2013 Apr 18. doi: 10.1038/jid.2013.189.

●●Enlace al texto completo (gratis o de pago) [1038/jid.2013.189](#)

**AUTORES / AUTHORS:** - Ishitsuka Y; Kawachi Y; Maruyama H; Taguchi S; Fujisawa Y; Furuta J; Nakamura Y; Ishii Y; Otsuka F

**INSTITUCIÓN / INSTITUTION:** - Department of Dermatology, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan.

**RESUMEN / SUMMARY:** - Proliferation and differentiation in the epidermis must be tightly regulated. This regulation is known to involve a range of transcription factors, including pituitary tumor transforming gene 1 (PTTG1), a ubiquitously distributed transcription factor that regulates keratinocyte proliferation and differentiation. Psoriasis is a common but refractory skin disorder, the pathophysiology of which is characterized by hyperproliferation and impaired differentiation in the epidermis. The present study was conducted to clarify the less well-known roles of PTTG1 in the pathophysiology of psoriasis, focusing on its relationship with tumor necrosis factor-alpha (TNF-alpha), which is a critical mediator of the disease. The levels of PTTG1 expression were increased in the psoriatic epidermis. Overexpression of PTTG1 resulted in the overproduction of TNF-alpha, and TNF-alpha itself had an inductive effect on PTTG1 expression, suggesting that their expression may involve autoinduction. Moreover,

overexpression of PTTG1 involved augmented the expression of cyclin A and B1 proteins in both cultured keratinocytes and the psoriatic epidermis. Therefore, enhanced expression of PTTG1 in the psoriatic epidermis may result in aberrant regulation of the cell cycle and impaired differentiation via the interplay between PTTG1 and TNF-alpha. Journal of Investigative Dermatology advance online publication, 16 May 2013; doi:10.1038/jid.2013.189.

[144]

**TÍTULO / TITLE:** - Long-term cognitive function, neuroimaging, and quality of life in primary CNS lymphoma.

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

**REVISTA / JOURNAL:** - Neurology. 2013 May 17.

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

[1212/WNL.0b013e318297eeba](#)

**AUTORES / AUTHORS:** - Doolittle ND; Korfel A; Lubow MA; Schorb E; Schlegel U; Rogowski S; Fu R; Dosa E; Illerhaus G; Kraemer DF; Muldoon LL; Calabrese P; Hedrick N; Tyson RM; Jahnke K; Maron LM; Butler RW; Neuwelt EA

**INSTITUCIÓN / INSTITUTION:** - From the Oregon Health & Science University (N.D.D., M.A.L., R.F., L.L.M., N.H., R.M.T., L.M.M., R.W.B., E.A.N.), Portland; Charite-Universitätsmedizin Berlin (A.K., K.J.), Campus Benjamin Franklin, Berlin; Freiburg University Medical Center (E.S., G.I.), Freiburg; Knappschafts Krankenhaus (U.S., S.R.), University Hospital Bochum, Bochum, Germany; Semmelweis University (E.D.), Budapest, Hungary; University of Florida (D.F.K.), Jacksonville; University of Basel (P.C.), Basel, Switzerland; and Department of Veterans Affairs Medical Center (E.A.N.), Portland, OR.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To describe and correlate neurotoxicity indicators in long-term primary CNS lymphoma (PCNSL) survivors who were treated with high-dose methotrexate-based regimens with or without whole-brain radiotherapy (WBRT). **METHODS:** Eighty PCNSL survivors from 4 treatment groups (1 with WBRT and 3 without WBRT) who were a minimum of 2 years after diagnosis and in complete remission underwent prospective neuropsychological, quality-of-life (QOL), and brain MRI evaluation. Clinical characteristics were compared among treatments by using the chi2 test and analysis of variance. The association among neuroimaging, neuropsychological, and QOL outcomes was assessed by using the Pearson correlation coefficient. **RESULTS:** The median interval from diagnosis to evaluation was 5.5 years (minimum, 2 years; maximum, 26 years). Survivors treated with WBRT had lower mean scores in attention/executive function ( $p = 0.0011$ ), motor skills ( $p = 0.0023$ ), and neuropsychological composite score ( $p = 0.0051$ ) compared with those treated without WBRT. Verbal memory was better in survivors with longer intervals from diagnosis to evaluation ( $p = 0.0045$ ). On brain imaging, mean areas of total T2 abnormalities were different among treatments ( $p = 0.0006$ ).

Total T2 abnormalities after WBRT were more than twice the mean of any non-WBRT group and were associated with poorer neuropsychological and QOL outcomes. CONCLUSIONS: Our results suggest that in patients treated for PCNSL achieving complete remission and surviving at least 2 years, the addition of WBRT to methotrexate-based chemotherapy increases the risk of treatment-related neurotoxicity. Verbal memory may improve over time. CLASSIFICATION OF EVIDENCE: This study provides Class III evidence that in patients treated for PCNSL achieving complete remission and surviving at least 2 years, the addition of WBRT to methotrexate-based chemotherapy increases the risk of treatment-related neurotoxicity.

[145]

**TÍTULO / TITLE:** - TP53 and RPA3 gene variations were associated with risk of glioma in a Chinese Han population.

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

**REVISTA / JOURNAL:** - Cancer Biother Radiopharm. 2013 Apr;28(3):248-53. doi: 10.1089/cbr.2012.1291.

●●Enlace al texto completo (gratis o de pago) [1089/cbr.2012.1291](http://1089/cbr.2012.1291)

**AUTORES / AUTHORS:** - Jin T; Zhang J; Li G; Li S; Yang B; Chen C; Cai L

**INSTITUCIÓN / INSTITUTION:** - National Engineering Research Center for Miniaturized Detection Systems, School of Life Sciences, Northwest University, Xi'an 710069, Shaanxi, People's Republic of China.

**RESUMEN / SUMMARY:** - Recent advances in human genetic studies have opened new avenues for the identification of susceptibility genes for many complex genetic disorders, especially in the field of rare cancers such as glioma. Glioma is one of the least understood human tumors and the etiology for glioma is barely known. Hundreds of single-nucleotide polymorphisms (SNPs) are found to be related to the risk of glioma in previous studies. This study is committed to investigate the role of heredity in this disorder. To examine and validate how common variants contribute to glioma susceptibility in the Han Chinese population, we evaluated 12 tagging SNPs in a case-control study in the Chinese Han population from Xi'an city of China (301 cases and 302 controls). Overall, two protective alleles and one risk allele for glioma were found by genetic model analyses. In dominant model, the allele "T" of rs6947203 in the RPA3 gene acts as a protective allele [odds ratio (OR), 0.59; 95% confidence interval (CI), 0.22-0.90; p=0.014]. In recessive model, the allele "C" of rs1042522 in the TP53 gene acts as a risk allele (OR, 1.65; 95% CI, 1.05-2.59; p=0.0314). In additive model, the allele "G" of rs4140805 in the RPA3 gene (OR, 0.73; 95% CI, 0.53-0.99; p=0.0437) and the allele "T" of rs6947203 in the RPA3 gene (OR, 0.62; 95% CI, 0.42-0.92; p=0.0177) both act as protective alleles. We also observed a haplotype of "CC" in the TP53 gene with an increased risk of 34% of developing glioma (p=0.0306). Our results,

combined with previous studies, ascertain the potential role of the TP53 gene to glioma onset.

[146]

**TÍTULO / TITLE:** - Is there evidence for clinical differences related to the new classification of temporal lobe cortical dysplasia?

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

**REVISTA / JOURNAL:** - Epilepsia. 2013 May;54(5):909-17. doi: 10.1111/epi.12147. Epub 2013 Mar 29.

●●Enlace al texto completo (gratis o de pago) [1111/epi.12147](#)

**AUTORES / AUTHORS:** - Fauser S; Essang C; Altenmuller DM; Staack A; Steinhoff BJ; Strobl K; Bast T; Schubert-Bast S; Doostkam S; Zentner J; Schulze-Bonhage A

**INSTITUCIÓN / INSTITUTION:** - Epilepsy Center, University of Freiburg, Freiburg, Germany.

**RESUMEN / SUMMARY:** - PURPOSE: The new International League Against Epilepsy (ILAE) classification for focal cortical dysplasia (FCD) differentiates between patients with isolated FCD (type 1) and FCD with an associated hippocampal sclerosis (HS) (type 3<sup>a</sup>). In contrast to the former FCD classification by Palmini, which considered only histologic features, the novel ILAE classification also relies on magnetic resonance imaging (MRI) findings and presumed pathogenesis. We investigated in a cohort of 100 patients with exclusively temporal FCD if the new subdivision of FCD is reflected in clinical characteristics. METHODS: Thirty-one patients with FCD type 1 and 50 patients with FCD type 3<sup>a</sup> in the temporal lobe were included. In all patients MRI and histology of the FCD were available. Both patient groups were compared to 19 patients with temporal FCD type 2 with clearly different histologic appearance. KEY FINDINGS: Patients with FCD type 1 and type 3<sup>a</sup> presented with similar clinical features in many respects. In univariate analyses, no statistically significant differences were found as to age at epilepsy onset ( $p = 0.07$ ) and epilepsy surgery ( $p = 0.14$ ), a normal appearing neocortical temporal lobe ( $p = 0.08$ ) or diagnosis of FCD by visual inspection of MRI ( $p = 0.08$ ), preoperative seizure frequency ( $p = 0.06$ ), and the predominance of an epigastric aura ( $p = 0.08$ ). The postoperative outcome was nearly identical 1 year ( $p = 0.8$ ) and 2 ( $p = 0.8$ ), 3 ( $p = 0.8$ ), 5 ( $p = 0.7$ ), and 8 ( $p = 1.0$ ) years postoperatively. Only febrile seizures ( $p = 0.025$ ) and an aura ( $p = 0.03$ ) were significantly more frequently reported in patients with FCD type 3<sup>a</sup>. Similar results were obtained from a multivariate logistic regression analysis. Patients with FCD type 2 were more different: Compared to FCD type 3<sup>a</sup>, age at epilepsy surgery was significantly lower ( $p = 0.004$ ) and auras ( $p = 0.005$ ) were significantly less frequently reported. Epigastric auras ( $p = 0.04$ ) and febrile seizures ( $p = 0.025$ ) occurred significantly less frequently in patients with FCD type 2 without HS compared to

FCD type 3<sup>a</sup>. The diagnosis of an FCD was significantly more frequently made ( $p = 0.03$ ) by visual inspection of the MRI compared to FCD type 1.

SIGNIFICANCE: Clinical features did not allow to clear separation of temporal FCD types 1 and 3<sup>a</sup>. Statistically significant differences were seen in a history of febrile seizures and the occurrence of auras more common in FCD type 3<sup>a</sup>. However, FCD type 2 in the same localization but with different histology presented with further differences such as more frequent FCD diagnosis by visual inspection of MRI, earlier operation, and less frequent epigastric auras.

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[147]

**TÍTULO / TITLE:** - Gambogic acid induces EGFR degradation and Akt/mTORC1 inhibition through AMPK dependent-LRIG1 upregulation in cultured U87 glioma cells.

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

**REVISTA / JOURNAL:** - Biochem Biophys Res Commun. 2013 May 9. pii: S0006-291X(13)00753-5. doi: 10.1016/j.bbrc.2013.04.099.

●●Enlace al texto completo (gratis o de pago) [1016/j.bbrc.2013.04.099](http://1016/j.bbrc.2013.04.099)

**AUTORES / AUTHORS:** - He XY; Liu XJ; Chen X; Bian LG; Zhao WG; Shen JK; Sun QF

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Ruijin Hospital affiliated to Shanghai Jiao-tong University School of Medicine, Shanghai, 200025, China.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common malignant tumor in adults' central nervous system (CNS). The development of novel anti-cancer agents for GBM is urgent. In the current study, we found that gambogic acid induced growth inhibition and apoptosis in cultured U87 glioma cells, which was associated with Akt/mTORC1 (mTOR complex 1) signaling inactivation. To restore Akt activation by introducing a constitutively active (CA) Akt attenuated gambogic acid-induced cytotoxicity against U87 cells. For mechanism study, we found that gambogic acid induced LRIG1 (leucine-rich repeat and Ig-like domain-containing-1) upregulation, which was responsible for EGFR (epidermal growth factor receptor) degradation and its downstream Akt/mTORC1 inhibition. Further, we provided evidence to support that AMPK (AMP-activated protein kinase) activation mediated gambogic acid-induced LRIG1 upregulation, U87 cell apoptosis and growth inhibition, while AMPK inhibition by shRNA or compound C reduced gambogic acid-induced EGFR/Akt inhibition and cytotoxicity in U87 cells. We here proposed novel signaling mechanism mediating gambogic acid-induced cytotoxic effects in glioma cells.

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[148]

**TÍTULO / TITLE:** - Downregulation of beta1 -adrenergic receptors in rat C6 glioblastoma cells by hyperforin and hyperoside from St John's wort.

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

**REVISTA / JOURNAL:** - J Pharm Pharmacol. 2013 Jun;65(6):907-15. doi: 10.1111/jphp.12050. Epub 2013 Mar 18.

●●Enlace al texto completo (gratis o de pago) [1111/jphp.12050](http://1111/jphp.12050)

**AUTORES / AUTHORS:** - Jakobs D; Hage-Hulsmann A; Prenner L; Kolb C; Weiser D; Haberlein H

**INSTITUCIÓN / INSTITUTION:** - Institute of Biochemistry and Molecular Biology, Rheinische Friedrich-Wilhelm University, Bonn, Germany.

**RESUMEN / SUMMARY:** - **OBJECTIVES:** While the use of St John's wort extracts as treatment for mild to moderate depression is well established the mode of action is still under investigation. Individual constituents of St John's wort extract were tested for possible effects on the beta1 AR density and a subsequent change in downstream signalling in rat C6 glioblastoma cells. **METHODS:** The effect of compounds from St John's wort extract on the downregulation of beta1 -adrenergic receptor-GFP fusion proteins (beta1 AR-green fluorescent protein (GFP)) of transfected rat C6 glioblastoma cells (C6-beta1 AR-GFP) was investigated by means of confocal laser scanning microscopy (LSM). The influence on the lateral mobility of beta1 AR-GFP in C6-beta1 AR-GFP was investigated by fluorescence correlation spectroscopy. The formation of second messenger was determined by c-AMP-assay. **KEY FINDINGS:** Confocal LSM revealed that pretreatment of cells with 1 µm of hyperforin and hyperoside for 6 days, respectively, led to an internalization of beta1 AR-GFP under non-stimulating conditions. Observation by fluorescence correlation spectroscopy showed two diffusion time constants for control cells, with  $\tau_{diff1} = 0.78 \pm 0.18$  ms and  $\tau_{diff2} = 122.53 \pm 69.41$  ms, similarly distributed. Pretreatment with 1 µm hyperforin or 1 µm hyperoside for 3 days did not alter the  $\tau_{diff}$  values but decreased the fraction of  $\tau_{diff1}$  whereas the fraction of  $\tau_{diff2}$  increased significantly. An elevated level of beta1 AR-GFP with hindered lateral mobility was in line with beta1 AR-GFP internalization induced by hyperforin and hyperoside, respectively. A reduced beta1 -adrenergic responsiveness was assumed for C6 glioblastoma cells after pretreatment for 6 days with 1 µm of both hyperforin and hyperoside, which was confirmed by decreased cAMP formation of about 10% and 5% under non-stimulating conditions. Decrease in cAMP formation by 23% for hyperforin and 15% for hyperoside was more pronounced after stimulation with 10 µm dobutamine for 30 min. **CONCLUSIONS:** The treatment of C6 glioblastoma cells with hyperforin and hyperoside results in a reduced beta1 AR density in the plasma membrane and a subsequent reduced downstream signalling.

[149]

**TÍTULO / TITLE:** - A comparative study of short- and long-TE H MRS at 3 T for in vivo detection of 2-hydroxyglutarate in brain tumors.

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

**REVISTA / JOURNAL:** - NMR Biomed. 2013 Apr 17. doi: 10.1002/nbm.2943.

●●Enlace al texto completo (gratis o de pago) [1002/nbm.2943](#)

**AUTORES / AUTHORS:** - Choi C; Ganji S; Hulsey K; Madan A; Kovacs Z; Dimitrov I; Zhang S; Pichumani K; Mendelsohn D; Mickey B; Malloy C; Bachoo R; Deberardinis R; Maher E

**INSTITUCIÓN / INSTITUTION:** - Advanced Imaging Research Center, University of Texas Southwestern Medical Center, Dallas, TX, USA; Department of Radiology, University of Texas Southwestern Medical Center, Dallas, TX, USA; Harold C. Simmons Cancer Center, University of Texas Southwestern Medical Center, Dallas, TX, USA.

**RESUMEN / SUMMARY:** - 2-Hydroxyglutarate (2HG) is produced in gliomas with mutations of isocitrate dehydrogenase (IDH) 1 and 2. The <sup>1</sup>H resonances of the J-coupled spins of 2HG are extensively overlapped with signals from other metabolites. Here, we report a comparative study at 3 T of the utility of the point-resolved spectroscopy sequence with a standard short TE (35 ms) and a long TE (97 ms), which had been theoretically designed for the detection of the 2HG 2.25-ppm resonance. The performance of the methods is evaluated using data from phantoms, seven healthy volunteers and 22 subjects with IDH-mutated gliomas. The results indicate that TE = 97 ms provides higher detectability of 2HG than TE = 35 ms, and that this improved capability is gained when data are analyzed with basis spectra that include the effects of the volume localizing radiofrequency and gradient pulses. Copyright © 2013 John Wiley & Sons, Ltd.

[150]

**TÍTULO / TITLE:** - Glioma tumor grade correlates with p53 depletion in mutant p53-linked tumors and results from loss of function of p53 transcriptional activity.

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

**REVISTA / JOURNAL:** - Oncogene. 2013 May 6. doi: 10.1038/onc.2013.124.

●●Enlace al texto completo (gratis o de pago) [1038/onc.2013.124](#)

**AUTORES / AUTHORS:** - Viotti J; Duplan E; Caillava C; Condat J; Goiran T; Giordano C; Marie Y; Idbaih A; Delattre JY; Honnorat J; Checler F; Alves da Costa C

**INSTITUCIÓN / INSTITUTION:** - Institut de Pharmacologie Moleculaire et Cellulaire, UMR7275 CNRS/UNSA, team labeled 'Fondation pour la Recherche Medicale' and 'Laboratory of Excellence (LABEX) Distalz', Valbonne, France.

**RESUMEN / SUMMARY:** - Gliomas represent the most frequent form of primary brain tumors in adults, the prognosis of which remains extremely poor.

Inactivating mutations on the tumor suppressor TP53 were proposed as a key etiological trigger of glioma development. p53 has been recently identified as a transcriptional target of parkin. Interestingly, somatic mutations on parkin have also been linked to glioma genesis. We examined the possibility that a disruption of a functional interaction between p53 and parkin could contribute to glioma development in samples devoid of somatic parkin mutations or genetic allele deletion. We show here that parkin levels inversely correlate to brain tumor grade and p53 levels in oligodendrogliomas, mixed gliomas and glioblastomas. We demonstrate that p53 levels negatively and positively correlate to bax and Bcl2 respectively, underlying a loss of p53 transcriptional activity in all types of glial tumors. Using various cell models lacking p53 or harboring either transcriptionally inactive or dominant negative p53, as well as in p53 knockout mice brain, we establish that p53 controls parkin promoter transactivation, mRNA and protein levels. Furthermore, we document an increase of parkin expression in mice brain after p53-bearing viral infection. Finally, both cancer-related p53 inactivating mutations and deletion of a consensus p53 binding sequence located on parkin promoter abolish p53-mediated control of parkin transcription, demonstrating that p53 regulates parkin transcription via its DNA binding properties. In conclusion, our work delineates a functional interplay between mutated p53 and parkin in glioma genesis that is disrupted by cancer-linked pathogenic mutations. It also allows envisioning parkin as a novel biomarker of glioma biopsies enabling to follow the progression of this type of cancers. Oncogene advance online publication, 6 May 2013; doi:10.1038/onc.2013.124.

[151]

**TÍTULO / TITLE:** - Targeting the PI3K/AKT/mTOR signaling pathway in glioblastoma: novel therapeutic agents and advances in understanding.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Apr 30.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0800-](#)

[5](#)

**AUTORES / AUTHORS:** - Sami A; Karsy M

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology and Imaging Sciences, Emory University School of Medicine, Atlanta, GA, 30329, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is a grade IV astrocytoma with a median survival of 12 months despite current multi-modal treatment options. GBM is distinguished clinicopathologically into primary and secondary subtypes. Mutations of phosphatase and tensin homolog, and subsequent upregulation of the downstream protein kinase B/mammalian target of rapamycin (mTOR) signaling pathway, are commonly seen in primary GBM and less predominantly in secondary GBM. While investigations into targeted

treatments of mTOR have been attempted, feedback regulation within the mTOR signaling pathway may account for therapeutic resistance. Currently, rapamycin analogs, dual-targeted mTOR complex 1 and 2 agents as well as dual mTOR and phosphatidylinositol-3 kinase-targeted agents are being investigated experimentally and in clinical trials. This review will discuss the experimental potential of these agents in the treatment of GBM and their current stage in the GBM drug pipeline. Knowledge obtained from the application of these agents can help in understanding the pathogenesis of GBM as well as delineating subsequent treatment strategies.

[152]

**TÍTULO / TITLE:** - Suicide ideation in pediatric and adult survivors of childhood brain tumors.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Apr 27.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1130-](http://1007/s11060-013-1130-6)

[6](#)

**AUTORES / AUTHORS:** - Brinkman TM; Liptak CC; Delaney BL; Chordas CA; Muriel AC; Manley PE

**INSTITUCIÓN / INSTITUTION:** - Department of Psychosocial Oncology and Palliative Care, Dana-Farber Cancer Institute, 450 Brookline Ave, Boston, MA, 02215, USA, [tara.brinkman@stjude.org](mailto:tara.brinkman@stjude.org).

**RESUMEN / SUMMARY:** - Survivors of pediatric brain tumors are at risk for long-term psychological morbidities. The current study investigated the prevalence and predictors of suicide ideation (SI) in a clinical sample of youth and adult survivors. Retrospective chart reviews were completed for 319 survivors of pediatric brain tumors who were assessed via clinical interview during routine neuro-oncology clinic visits between 2003 and 2007. Survivors were, on average, 18.0 years of age (SD = 4.9) and 10 years from diagnosis (SD = 5.0) at their most recent follow-up. The most common diagnosis was low-grade glioma (n = 162) followed by embryonal tumors (PNET/medulloblastoma; n = 64). Multivariable logistic regression was used to calculate odds ratios (OR) and 95 % confidence intervals (CI) for SI. Nearly 12 % of survivors (11.7 %, n = 37) reported SI. Five survivors (1.5 %) had documented suicide attempts, though none were fatal. In a multivariable model, adjusting for sex and age, history of depression (OR = 20.6, 95 % CI = 4.2-101.1), psychoactive medication treatment (OR = 4.5, 95 % CI = 1.8-11.2), observation or surgery only treatment (OR = 3.7, 95 % CI = 1.5-9.1), and seizures (OR = 3.6, 95 % CI = 1.1-11.1) were significantly associated with SI in survivors. Survivors of pediatric brain tumors appear to be at risk for experiencing SI. Our results underscore the importance of a multidisciplinary approach to providing follow-up care for childhood brain tumor survivors, including routine psychological screenings.

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[153]

**TÍTULO / TITLE:** - The molecular and cell biology of pediatric low-grade gliomas.

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

**REVISTA / JOURNAL:** - Oncogene. 2013 Apr 29. doi: 10.1038/onc.2013.148.

●●Enlace al texto completo (gratis o de pago) [1038/onc.2013.148](#)

**AUTORES / AUTHORS:** - Chen YH; Gutmann DH

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Washington University School of Medicine, St Louis, MO, USA.

**RESUMEN / SUMMARY:** - Pilocytic astrocytoma (PA) is the most common glial cell tumor arising in children. Sporadic cases are associated with KIAA1549:BRAF fusion rearrangements, while 15-20% of children develop PA in the context of the neurofibromatosis 1 (NF1) inherited tumor predisposition syndrome. The unique predilection of these tumors to form within the optic pathway and brainstem (NF1-PA) and cerebellum (sporadic PA) raises the possibility that gliomagenesis requires more than biallelic inactivation of the NF1 tumor suppressor gene or expression of the KIAA1549:BRAF transcript. Several etiologic explanations include differential susceptibilities of preneoplastic neuroglial cell types in different brain regions to these glioma-causing genetic changes, contributions from non-neoplastic cells and signals in the tumor microenvironment, and genomic modifiers that confer glioma risk. As clinically-faithful rodent models of sporadic PA are currently under development, Nf1 genetically-engineered mouse (GEM) models have served as tractable systems to study the role of the cell of origin, deregulated intracellular signaling, non-neoplastic cells in the tumor microenvironment and genomic modifiers in gliomagenesis. In this report, we highlight advances in Nf1-GEM modeling and review new experimental evidence that supports the emerging concept that Nf1- and KIAA1549:BRAF-induced gliomas arise from specific cell types in particular brain locations. Oncogene advance online publication, 29 April 2013; doi:10.1038/onc.2013.148.

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[154]

**TÍTULO / TITLE:** - ATM Kinase Inhibition Preferentially Sensitizes p53-Mutant Glioma to Ionizing Radiation.

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

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 May 17.

●●Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-3408](#)

**AUTORES / AUTHORS:** - Biddlestone-Thorpe L; Sajjad M; Rosenberg E; Beckta JM; Valerie NC; Tokarz M; Adams BR; Wagner AF; Khalil A; Gilfor D; Golding

SE; Deb S; Temesi DG; Lau A; O'Connor MJ; Choe KS; Parada LF; Lim SK; Mukhopadhyay ND; Valerie K

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliations: Departments of Radiation Oncology, Biochemistry and Molecular Biology, and Biostatistics; Massey Cancer Center, Virginia Commonwealth University, Richmond, Virginia; Cancer Bioscience, AstraZeneca, Macclesfield, United Kingdom; and Department of Developmental Biology, University of Texas Southwestern Medical Center, Dallas, Texas.

**RESUMEN / SUMMARY:** - **PURPOSE:** Glioblastoma multiforme (GBM) is the most lethal form of brain cancer with a median survival of only 12 to 15 months. Current standard treatment consists of surgery followed by chemoradiation. The poor survival of patients with GBM is due to aggressive tumor invasiveness, an inability to remove all tumor tissue, and an innate tumor chemo- and radioresistance. Ataxia-telangiectasia mutated (ATM) is an excellent target for radiosensitizing GBM because of its critical role in regulating the DNA damage response and p53, among other cellular processes. As a first step toward this goal, we recently showed that the novel ATM kinase inhibitor KU-60019 reduced migration, invasion, and growth, and potently radiosensitized human glioma cells in vitro. **EXPERIMENTAL DESIGN:** Using orthotopic xenograft models of GBM, we now show that KU-60019 is also an effective radiosensitizer in vivo. Human glioma cells expressing reporter genes for monitoring tumor growth and dispersal were grown intracranially, and KU-60019 was administered intratumorally by convection-enhanced delivery or osmotic pump. **RESULTS:** Our results show that the combined effect of KU-60019 and radiation significantly increased survival of mice 2- to 3-fold over controls. Importantly, we show that glioma with mutant p53 is much more sensitive to KU-60019 radiosensitization than genetically matched wild-type glioma. **CONCLUSIONS:** Taken together, our results suggest that an ATM kinase inhibitor may be an effective radiosensitizer and adjuvant therapy for patients with mutant p53 brain cancers. Clin Cancer Res; 1-12. ©2013 AACR.

[155]

**TÍTULO / TITLE:** - Novel Gene Expression Model for Outcome Prediction in Paediatric Medulloblastoma.

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

**REVISTA / JOURNAL:** - J Mol Neurosci. 2013 May 7.

●●Enlace al texto completo (gratis o de pago) [1007/s12031-013-0016-](#)

[6](#)

**AUTORES / AUTHORS:** - Zakrzewska M; Gresner SM; Zakrzewski K; Zalewska-Szewczyk B; Liberski PP

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Pathology and Neuropathology, Chair of Oncology, Medical University of Lodz,

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[magdalena.zakrzewska@umed.lodz.pl](mailto:magdalena.zakrzewska@umed.lodz.pl).

**RESUMEN / SUMMARY:** - Medulloblastoma is the most frequent type of embryonal tumour in the paediatric population. The disease progression in patients with this tumour may be connected with the presence of stem/tumour-initiating cells, but the precise source and characteristics of such cells is still a subject of debate. Thus, we tried to analyse biomarkers for which a connection with the presence of stem/tumour-initiating cells was suggested. We evaluated the transcriptional level of the ATOH1, FUT4, NGFR, OTX1, OTX2, PROM1 and SOX1 genes in 48 samples of medulloblastoma and analysed their usefulness in the prediction of disease outcome. The analyses showed a strong correlation of PROM1, ATOH1 and OTX1 gene expression levels with the outcome ( $p \leq 0.2$ ). On the basis of the multivariate Cox regression analysis, we propose a three-gene model predicting risk of the disease, calculated as follows: [Formula: see text]. Survival analysis revealed a better outcome among standard-risk patients, with a 5-year survival rate of 65 %, compared to the 40 % rate observed among high-risk patients. The most promising advantage of such molecular analysis consists in the identification of molecular markers influencing clinical behaviour, which may in turn be useful in therapy optimization.

[156]

**TÍTULO / TITLE:** - Somatostatin receptor subtype 2 (sst) is a potential prognostic marker and a therapeutic target in medulloblastoma.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2142-](https://doi.org/10.1007/s00381-013-2142-4)

[4](#)

**AUTORES / AUTHORS:** - Remke M; Hering E; Gerber NU; Kool M; Sturm D; Rickert CH; Gerst J; Schulz S; Hielscher T; Hasselblatt M; Jeibmann A; Hans V; Ramaswamy V; Taylor MD; Pietsch T; Rutkowski S; Korshunov A; Monoranu CM; Fruhwald MC

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Arthur and Sonia Labatt Brain Tumor Research Centre, Program in Developmental and Stem Cell Biology, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada.

**RESUMEN / SUMMARY:** - INTRODUCTION: Neuroectodermal tumors in general demonstrate high and dense expression of the somatostatin receptor subtype 2 (sst2). It controls proliferation of both normal and neoplastic cells. sst2 has thus been suggested as a therapeutic target and prognostic marker for certain malignancies. METHODS: To assess global expression patterns of sst 2 mRNA, we evaluated normal ( $n = 353$ ) and tumor tissues ( $n = 340$ ) derived from previously published gene expression profiling studies. These analyses

demonstrated specific upregulation of sst 2 mRNA in medulloblastoma ( $p < 0.001$ ). sst2 protein was investigated by immunohistochemistry in two independent cohorts. RESULTS: Correlation of sst2 protein expression with clinicopathological variables revealed significantly higher levels in medulloblastoma ( $p < 0.05$ ) compared with CNS-PNET, ependymoma, or pilocytic astrocytoma. The non-SHH medulloblastoma subgroup tumors showed particularly high expression of sst2, when compared to other tumors and normal tissues. Furthermore, we detected a significant survival benefit in children with tumors exhibiting high sst2 expression ( $p = 0.02$ ) in this screening set. A similar trend was observed in a validation cohort including 240 independent medulloblastoma samples. CONCLUSION: sst2 is highly expressed in medulloblastoma and deserves further evaluation in the setting of prospective trials, given its potential utility as a prognostic marker and a therapeutic target.

[157]

**TÍTULO / TITLE:** - Therapeutic concentrations of anti-epileptic drugs do not inhibit the activity of the oncolytic adenovirus Delta24-RGD in malignant glioma.

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

**REVISTA / JOURNAL:** - J Gene Med. 2013 Mar-Apr;15(3-4):134-41. doi: 10.1002/jgm.2703.

●●Enlace al texto completo (gratis o de pago) [1002/jgm.2703](#)

**AUTORES / AUTHORS:** - de Jonge J; Berghauer Pont LM; Idema S; Kloezeman JJ; Noske D; Dirven CM; Lamfers ML

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Erasmus MC, Rotterdam, The Netherlands.

**RESUMEN / SUMMARY:** - BACKGROUND: The oncolytic adenovirus Delta24-RGD is currently being tested in phase I trials for the treatment of glioblastoma (GBM). Literature suggests that frequently prescribed anticonvulsants for these patients, phenytoin (PHE), valproic acid (VPA) and levetiracetam (LEV), may interfere with cellular mechanisms of cancer or oncolytic virus activity. We therefore investigated the direct effects of these drugs on Delta24-RGD infection and oncolytic activity. METHODS: The anticonvulsants PHE, VPA, and LEV were combined with Delta24-RGD treatment in established glioma cell lines as well as on a panel of patient-derived GBM cultures. Effects on infection efficiency were assessed using luciferase-encoding adenoviral vectors. Oncolytic activity was determined by WST-1 assay and viral progeny production was quantified by dilution titration. RESULTS: IC50 values of the anti-epileptic drugs on the four glioma cell lines were far above clinically-relevant concentrations. At therapeutic concentrations, the anti-epileptics generally did not alter the infection efficiency of RGD-modified adenovirus, nor affect progeny production or oncolytic activity of Delta24-RGD. The only exception was found in U373 cells, where VPA slightly antagonised the oncolytic effect of Delta24-

RGD (from 29% to 55% viability,  $p < 0.01$ ) as well as viral progeny production (60% decrease,  $p < 0.01$ ). Oncolysis by Delta24-RGD was not inhibited by the anti-epileptics in any of the patient-derived glioma cultures ( $n=6$ ). In fact, in one culture a slight enhancement of viral oncolysis by PHE and LEV was found, from 89.7% viability to 76% and 62.4%, respectively ( $p < 0.01$ ) CONCLUSIONS: Therapeutic levels of valproic acid, phenytoin and levetiracetam do not negatively interfere with the infection efficiency or oncolytic activity of Delta24-RGD in patient-derived GBM cells. Therefore, there is no indication that the choice of anticonvulsant for seizure control in glioma patients should take treatment with Delta24-RGD into account.

[158]

**TÍTULO / TITLE:** - Gamma Knife radiosurgery for the management of nonfunctioning pituitary adenomas: a multicenter study.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Apr 26.

●●Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS12766](#)

**AUTORES / AUTHORS:** - Sheehan JP; Starke RM; Mathieu D; Young B; Sneed PK; Chiang VL; Lee JY; Kano H; Park KJ; Niranjan A; Kondziolka D; Barnett GH; Rush S; Golfinos JG; Lunsford LD

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of Virginia Health System, Charlottesville, Virginia;

**RESUMEN / SUMMARY:** - Object Pituitary adenomas are fairly common intracranial neoplasms, and nonfunctioning ones constitute a large subgroup of these adenomas. Complete resection is often difficult and may pose undue risk to neurological and endocrine function. Stereotactic radiosurgery has come to play an important role in the management of patients with nonfunctioning pituitary adenomas. This study examines the outcomes after radiosurgery in a large, multicenter patient population. Methods Under the auspices of the North American Gamma Knife Consortium, 9 Gamma Knife surgery (GKS) centers retrospectively combined their outcome data obtained in 512 patients with nonfunctional pituitary adenomas. Prior resection was performed in 479 patients (93.6%) and prior fractionated external-beam radiotherapy was performed in 34 patients (6.6%). The median age at the time of radiosurgery was 53 years. Fifty-eight percent of patients had some degree of hypopituitarism prior to radiosurgery. Patients received a median dose of 16 Gy to the tumor margin. The median follow-up was 36 months (range 1-223 months). Results Overall tumor control was achieved in 93.4% of patients at last follow-up; actuarial tumor control was 98%, 95%, 91%, and 85% at 3, 5, 8, and 10 years postradiosurgery, respectively. Smaller adenoma volume (OR 1.08 [95% CI 1.02-1.13],  $p = 0.006$ ) and absence of suprasellar extension (OR 2.10 [95% CI 0.96-4.61],  $p = 0.064$ ) were associated with progression-free tumor survival.

New or worsened hypopituitarism after radiosurgery was noted in 21% of patients, with thyroid and cortisol deficiencies reported as the most common postradiosurgery endocrinopathies. History of prior radiation therapy and greater tumor margin doses were predictive of new or worsening endocrinopathy after GKS. New or progressive cranial nerve deficits were noted in 9% of patients; 6.6% had worsening or new onset optic nerve dysfunction. In multivariate analysis, decreasing age, increasing volume, history of prior radiation therapy, and history of prior pituitary axis deficiency were predictive of new or worsening cranial nerve dysfunction. No patient died as a result of tumor progression. Favorable outcomes of tumor control and neurological preservation were reflected in a 4-point radiosurgical pituitary score. Conclusions Gamma Knife surgery is an effective and well-tolerated management strategy for the vast majority of patients with recurrent or residual nonfunctional pituitary adenomas. Delayed hypopituitarism is the most common complication after radiosurgery. Neurological and cranial nerve function were preserved in more than 90% of patients after radiosurgery. The radiosurgical pituitary score may predict outcomes for future patients who undergo GKS for a nonfunctioning adenoma.

[159]

**TÍTULO / TITLE:** - Trans-1-amino-3-F-fluorocyclobutanecarboxylic acid (anti-F-FACBC) is a feasible alternative to C-methyl-L-methionine and magnetic resonance imaging for monitoring treatment response in gliomas.

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

**REVISTA / JOURNAL:** - Nucl Med Biol. 2013 May 21. pii: S0969-8051(13)00080-2. doi: 10.1016/j.nucmedbio.2013.04.007.

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

[1016/j.nucmedbio.2013.04.007](http://1016/j.nucmedbio.2013.04.007)

**AUTORES / AUTHORS:** - Sasajima T; Ono T; Shimada N; Doi Y; Oka S; Kanagawa M; Baden A; Mizoi K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Akita University Graduate School of Medicine, Akita 010-8543, Japan. Electronic address: [sasajima@nsg.med.akita-u.ac.jp](mailto:sasajima@nsg.med.akita-u.ac.jp).

**RESUMEN / SUMMARY:** - INTRODUCTION: Amino acid PET tracers are promising for visualizing gliomas and evaluating radiochemotherapeutic effects. We compared the glioma detection and early response assessment utility between trans-1-amino-3-fluoro-1-14C-cyclobutanecarboxylic acid (anti-14C-FACBC) and 3H-methyl-L-methionine (3H-Met) by simultaneously analyzing their uptake by rat gliomas treated with and without temozolomide (TMZ) in vitro and in vivo. METHODS: C6 rat gliomas were incubated with low-dose TMZ to induce chemoresistance. The 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay demonstrated a significantly greater

surviving fraction in the TMZ-resistant subline (C6R) than in drug-naive cells (C6). The anti-14C-FACBC and 3H-Met uptakes were quantified using a triple-label accumulation assay to examine the relationship between tracer uptake and proliferation (3H-thymidine (TdR) accumulation rate) in tumor cells. C6 and C6R cells were inoculated into the right and left basal ganglia, respectively, of rats. Efficacy of TMZ against the orthotopic gliomas was analyzed by MRI, Evans blue extravasation, anti-14C-FACBC and 3H-Met autoradiography, and MIB-5 proliferation index. RESULTS: The 3H-TdR accumulation rate and amino acid tracer (anti-14C-FACBC and 3H-Met) uptake significantly decreased 48 and 72h, respectively, after TMZ treatment in C6 but not C6R cells. Anti-14C-FACBC uptake correlated significantly with 3H-Met uptake and the 3H-TdR accumulation rate. In the intracerebral glioma model, anti-14C-FACBC and 3H-Met autoradiography clearly delineated the tumor extent, which spread well beyond the high-T2-intensity and enhancing lesions visible on MRI and Evans blue extravasation. TMZ significantly decreased anti-14C-FACBC and 3H-Met uptake and the MIB-5 index of C6 but not C6R tumors. TMZ inhibited tracer uptake and tumor proliferation before morphological changes on MRI. CONCLUSIONS: Anti-14C-FACBC, like 3H-Met, was more sensitive than post-contrast T1-weighted MRI for detecting tumor extent and early tumor response to TMZ treatment. Anti-18F-FACBC should be a sensitive and precise imaging biomarker for tumor extent visualization and response assessment in glioma patients.

[160]

**TÍTULO / TITLE:** - The Aurora Kinases Inhibitor VE-465 is a Novel Treatment for Glioblastoma Multiforme.

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

**REVISTA / JOURNAL:** - Oncology. 2013 Apr 27;84(6):326-335.

●●Enlace al texto completo (gratis o de pago) [1159/000347021](#)

**AUTORES / AUTHORS:** - Lee PY; Chen CL; Lin ZZ; Cheng AL; Chen EI; Whang-Peng J; Huang CY

**INSTITUCIÓN / INSTITUTION:** - Institute of Clinical Medicine, National Yang-Ming University, Taipei, Taiwan, ROC.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is one of the most common and aggressive types of primary brain tumor. After complete surgical resection combined with radiation and chemotherapy, approximately 10% of patients survive for more than 5 years. Therefore, a novel therapy for GBM is needed. Aurora-A (AURKA) plays important roles in cell cycle regulation, such as centrosome maturation, chromatic separation, bipolar spindle assembly, and mitotic entry. To investigate the effects of AURKA inhibition, three GBM cell lines, including GBM 8401, GBM 8901, and U87-MG cells, were treated with the AURKA inhibitor VE-465. Sensitivities to VE-465, as indicated by 50%

inhibitory concentration values for GBM 8401, GBM 8901, and U87-MG cells, were 6, 25, and 19 nM, respectively. Additionally, colony formation of GBM 8401 and GBM 8901 cells was decreased after treatment with the VE-465. VE-465 treatment increased polyploidy and p53 protein expression, and inhibited cell growth in a caspase-independent manner. Taken together, these results suggest that the inhibition of AURKA by a small-molecule inhibitor may have potential to serve as a novel therapeutic approach for GBM.

[161]

**TÍTULO / TITLE:** - Netrin-1 induced activation of Notch signaling mediates glioblastoma cell invasion.

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

**REVISTA / JOURNAL:** - J Cell Sci. 2013 Apr 2.

●●Enlace al texto completo (gratis o de pago) [1242/jcs.120022](#)

**AUTORES / AUTHORS:** - Ylivinkka I; Hu Y; Chen P; Rantanen V; Hautaniemi S; Nyman TA; Keski-Oja J; Hyytiainen M

**RESUMEN / SUMMARY:** - Glioblastoma multiforme is an aggressively invading human brain cancer, which lacks effective treatment. Axonal guidance protein, netrin-1, is overexpressed in glioblastoma tumor biopsies. By experimental overexpression we observed that netrin-1 increased and downregulation of it decreased cell invasiveness in Matrigel invasion assays. Using tandem affinity purification and mass spectrometry protein identification we observed that netrin-1 forms a complex with both Notch2 and Jagged1. Recombinant Netrin-1 colocalized with Jagged1 and Notch2 at the cell surface and was further found in the intracellular vesicles with Jagged1, but not with Notch2. Netrin-1 activated Notch signaling and subsequent glioblastoma cell invasion. Interestingly, the recombinant central domain of netrin-1 counteracted the effects of the full-length netrin-1: it inhibited glioblastoma cell invasion and Notch activation by retaining the Notch signaling complex at the cell surface. This finding may have therapeutic implications. Current results reveal a new mechanism leading to glioblastoma cell invasion, where netrin-1 activates Notch signaling.

[162]

**TÍTULO / TITLE:** - Gliomas Promote Immunosuppression through Induction of B7-H1 Expression in Tumor-Associated Macrophages.

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

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 May 29.

●●Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-3314](#)

**AUTORES / AUTHORS:** - Bloch O; Crane CA; Kaur R; Safaei M; Rutkowski MJ; Parsa AT

**INSTITUCIÓN / INSTITUTION:** - Authors' Affiliation: Department of Neurological Surgery, University of California San Francisco, California.

**RESUMEN / SUMMARY:** - PURPOSE: Gliomas are known to induce local and systemic immunosuppression, inhibiting T-cell-mediated cytotoxic responses to tumor growth. Tumor-associated macrophages are a significant component of the immune infiltrate in gliomas and may express immunosuppressive surface ligands, such as B7-H1. EXPERIMENTAL DESIGN: Tumor and peripheral blood samples from patients with glioblastoma (GBM) were analyzed by flow cytometry to evaluate the expression of B7-H1 in circulating and tumor-infiltrating macrophages. Human monocytes from healthy patients were stimulated with conditioned media from glioma cells to evaluate B7-H1 expression. Production of interleukin (IL)-10 by stimulated monocytes was measured by ELISA, and stimulation with IL-10 alone was evaluated for the ability to induce B7-H1 expression. The effect of inhibiting IL-10 and its receptor on glioma-induced B7-H1 expression in monocytes was evaluated. RESULTS: Circulating monocytes in patients with GBM had significantly increased expression of B7-H1 compared with healthy control patients. Tumor-associated macrophages from matched GBM tissue had even greater B7-H1 expression. Treatment of normal monocytes with glioma-conditioned media could significantly increase B7-H1 expression. Stimulation of monocytes with conditioned media resulted in substantial production of IL-10 and upregulation of the IL-10 receptor. Stimulation of monocytes with IL-10 alone could significantly increase B7-H1 expression, sufficient to induce T-cell apoptosis when cocultured with stimulated monocytes. Inhibition of IL-10 and the IL-10 receptor could knock down the effect of glioma media on B7-H1 by more than 50%. CONCLUSIONS: Gliomas can upregulate B7-H1 expression in circulating monocytes and tumor-infiltrative macrophages through modulation of autocrine/paracrine IL-10 signaling, resulting in an immunosuppressive phenotype. Clin Cancer Res; 19(12); 1-11. ©2013 AACR.

[163]

**TÍTULO / TITLE:** - Somatic Mutations in H-RAS in Sporadic Pheochromocytoma and Paraganglioma Identified by Exome Sequencing.

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

**REVISTA / JOURNAL:** - J Clin Endocrinol Metab. 2013 May 2.

●●Enlace al texto completo (gratis o de pago) [1210/jc.2012-4257](#)

**AUTORES / AUTHORS:** - Crona J; Delgado Verdugo A; Maharjan R; Stalberg P; Granberg D; Hellman P; Bjorklund P

**INSTITUCIÓN / INSTITUTION:** - Departments of Surgical (J.C., A.D.V., R.M., P.S., P.H., P.B.) and Medical Sciences (D.G.), Uppsala University, 75185 Uppsala, Sweden.

**RESUMEN / SUMMARY:** - Context: Up to 60% of pheochromocytoma (PCC) and paraganglioma (PGL) are associated with either somatic or germline mutations in established PCC and PGL susceptibility loci. Most unexplained cases are characterized by an increased activity of the RAS/RAF/ERK signaling pathway. Mutations in RAS subtypes H, K, and N are common in human cancers; however, previous studies have been inconsistent regarding the mutational status of RAS in PCC and PGL. Objectives: To identify novel disease causing genes in PCC and PGL tumors. Design, setting, and participants: Four benign and sporadic PCC and PGL tumors were subjected to whole exome sequencing using the Illumina HiSeq Platform. Sequences were processed by CLC genomics 4.9 bioinformatics software and the acquired list of genetic variants was filtered against the Catalogue of Somatic Mutations in Cancer database. Findings were validated in an additional 78 PCC and PGL tumor lesions. Results: Exome sequencing identified 2 cases with somatic mutations in the H-RAS. In total, 6.9% (n = 4/58) of tumors negative for mutations in major PCC and PGL loci had mutations in H-RAS: G13R, Q61K, and Q61R. There were 3 PCC and 1 PGL; all had sporadic presentation with benign tumor characteristics and substantial increases in norepinephrine and/or epinephrine. H-RAS tumors were exclusively found in male patients (P = .007). Conclusions: We identified recurrent somatic H-RAS mutations in pheochromocytoma and paraganglioma. Tumors with H-RAS mutations had activation of the RAS/RAF/ERK signaling pathway and were associated with male PCC patients having benign and sporadic disease characteristics. H-RAS could serve as a prognostic and predictive marker as well as a novel therapeutic target.

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[164]

**TÍTULO / TITLE:** - Familial SDHA Mutation Associated With Pituitary Adenoma and Pheochromocytoma/Paraganglioma.

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

**REVISTA / JOURNAL:** - J Clin Endocrinol Metab. 2013 Jun;98(6):E1103-8. doi: 10.1210/jc.2013-1400. Epub 2013 Apr 30.

●●Enlace al texto completo (gratis o de pago) [1210/jc.2013-1400](#)

**AUTORES / AUTHORS:** - Dwight T; Mann K; Benn DE; Robinson BG; McKelvie P; Gill AJ; Winship I; Clifton-Bligh RJ

**INSTITUCIÓN / INSTITUTION:** - PhD, Cancer Genetics, Kolling Institute of Medical Research, Royal North Shore Hospital, St Leonards, New South Wales 2065, Australia. [trisha.dwight@sydney.edu.au](mailto:trisha.dwight@sydney.edu.au).

**RESUMEN / SUMMARY:** - Context: Reports of the coexistence of pituitary adenomas and pheochromocytoma/paraganglioma are uncommon. Recently germline mutations in 2 of the genes encoding succinate dehydrogenase, SDHC and SDHD, were associated with pituitary tumors. Objective: Our aim

was to determine whether the development of a pituitary adenoma was associated with SDHA mutation. Patients: A 46-year-old female presented with carotid body paraganglioma (proband). Subsequently the proband's son was diagnosed with a nonfunctioning pituitary macroadenoma at age 30 years. Results: An immunohistochemical analysis of the resected paraganglioma and pituitary adenoma revealed the loss of succinate dehydrogenase subunit B and succinate dehydrogenase subunit A (SDHA) expression in both tumors, with the preservation of staining in nonneoplastic tissue. Mutation analysis showed a novel SDHA mutation (c.1873C>T, p.His625Tyr) in the germline of the proband as well as in the proband's son. In the paraganglioma of the proband, in addition to the germline mutation, a somatic mutation was observed (c.1865G>A, p.Trp622\*). In the pituitary adenoma of the proband's son, loss of SDHA immunoreactivity was paradoxically accompanied by loss of the mutant allele. Conclusions: This is the first report of a pituitary adenoma arising in the setting of germline SDHA mutation. The loss of SDHA protein expression in both the paraganglioma (proband) and pituitary adenoma (proband's son) argues strongly for a causative role of SDHA mutation. This report further strengthens the link between pituitary neoplasia and germline SDH mutation. Although pituitary adenomas appear rare among patients carrying SDH subunit mutations, they may have been underrecognized due to the low penetrance of disease and lack of systematic surveillance.

[165]

**TÍTULO / TITLE:** - All-trans retinoic acid upregulates the expression of p53 via Axin and inhibits the proliferation of glioma cells.

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

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Jun;29(6):2269-74. doi: 10.3892/or.2013.2391. Epub 2013 Apr 8.

●●Enlace al texto completo (gratis o de pago) [3892/or.2013.2391](#)

**AUTORES / AUTHORS:** - Lu J; Zhang F; Yuan Y; Ding C; Zhang L; Li Q

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Shaanxi Province Cancer Hospital, and The Fourth Military Medical University, Xi'an, Shaanxi 710061, PR China.

**RESUMEN / SUMMARY:** - All-trans retinoic acid (ATRA) is a potent chemopreventive and therapeutic agent and exerts its effects by inducing growth arrest. In the present study, we demonstrated that ATRA activated the expression of p53 via Axin and induced cell cycle arrest at the G1/S phase and apoptosis of glioma cells. Briefly, C6 cells were treated with ATRA, and the levels of p53 mRNA and protein were determined by RT-PCR, western blotting and immunohistochemistry. The results showed that ATRA activated the expression of p53. In addition, ectopic expression of Axin by transient transfection of C6 cells with rAxin revealed that overexpression of Axin induced

cell cycle arrest and apoptosis with an upregulation of p53. Furthermore, loss-of-function of Axin in glioma cells by RNAi blocked ATRA-induced cell cycle phase arrest and apoptosis via downregulation of p53. The present study revealed a novel function of Axin and identified it as an important regulator of ATRA-activated p53 expression.

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[166]

**TÍTULO / TITLE:** - Editorial: Glioblastoma multiforme and laser interstitial thermal therapy.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Jun;118(6):1199-201. doi: 10.3171/2012.9.JNS121563. Epub 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [3171/2012.9.JNS121563](#)

**AUTORES / AUTHORS:** - Elder JB; Chiocca EA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, The Ohio State University Medical Center, Columbus, Ohio; and.

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[167]

**TÍTULO / TITLE:** - A “weighted” fluorescence in situ hybridization strengthens the favorable prognostic value of 1p/19q codeletion in pure and mixed oligodendroglial tumors.

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

**REVISTA / JOURNAL:** - J Neuropathol Exp Neurol. 2013 May;72(5):432-41. doi: 10.1097/NEN.0b013e3182901f41.

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

[1097/NEN.0b013e3182901f41](#)

**AUTORES / AUTHORS:** - Senetta R; Verdun di Cantogno L; Chiusa L; Castellano I; Gugliotta P; Sapino A; Cassoni P

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Sciences, University of Turin, Turin, Italy.

**RESUMEN / SUMMARY:** - Evaluation of the molecular status of 1p and 19q is a major relevant diagnostic, prognostic, and predictive tool for oligodendroglial brain tumors. Fluorescence in situ hybridization (FISH) is the most commonly used technique for determining 1p and 19q allelic losses, but it lacks fully standardized criteria for analysis. This lack of standardization has led to interinstitutional disagreement in the interpretation of results, thereby contributing to a “gray prognostic zone” that includes codeleted patients with an unexpectedly unfavorable outcome. To optimize the prognostic potential of 1p/19q status determination, we first compared the actual criteria used for FISH reading (i.e. different ratio cutoff values and the percentage of neoplastic nuclei carrying this chromosomal deletion) in a retrospective series of 143 pure and

mixed oligodendroglial tumors. We then created a “weighted” FISH reading based on the merged ratio and percentage of neoplastic cells carrying the deletion that was further differentially modulated for 1p and 19q, respectively. This weighted codeletion setting significantly strengthened the favorable prognostic power of 1p/19q losses by reducing the number of poor outcomes from 42% to 12.5% for patients with codeleted tumors. Thus, by identifying as codeleted only those cases with more than 50% of cells having a combined loss of 1p (using 0.7 ratio cutoff) and 19q (using 0.8 ratio cutoff) arms, we created a molecular report that bears higher clinical impact and strengthens the prognostic potential of 1p/19q allelic loss.

[168]

**TÍTULO / TITLE:** - PAX3 is overexpressed in human glioblastomas and critically regulates the tumorigenicity of glioma cells.

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

**REVISTA / JOURNAL:** - Brain Res. 2013 May 20. pii: S0006-8993(13)00696-3. doi: 10.1016/j.brainres.2013.05.021.

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

[1016/j.brainres.2013.05.021](#)

**AUTORES / AUTHORS:** - Xia L; Huang Q; Shi J; Nie D; Gong M; Gong P; Zhao L; Zuo H; Huang H; Ju S; Chen J; Shi W

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery; Surgical Comprehensive Laboratory, Affiliated Hospital of Nantong University, Nantong, Jiangsu Province, China.

**RESUMEN / SUMMARY:** - Paired box 3 (PAX3) is overexpressed in glioma tissues compared to normal brain tissues, however, the pathogenic role of PAX3 in human glioma cells remains to be elucidated. In this study, we selected the human glioma cell lines U251, U87, SHG-44, and the normal human astrocytes, 1800, which have differential PAX3 expression depending upon the person. SiRNA targeting PAX3 and PAX3 overexpression vectors were transfected into U87 and SHG-44 glioma cell lines, and cell proliferation, invasion, apoptosis, and differentiation were examined by CCK-8 assays, transwell chamber assays, tunnel staining, Annexin V/PI analysis, and Western blotting, respectively. In addition, we used subcutaneous tumor models to study the effect of PAX3 on the growth of glioma cells in vivo. We found that PAX3 was upregulated in the three glioma cell lines. PAX3 knockdown inhibited cell proliferation and invasion, and induced apoptosis in the U87MG glioblastoma cell line, whereas PAX3 upregulation promoted proliferation, inhibited apoptosis, and increased invasion in the SHG-44 glioma cell line. Moreover, we found that targeting PAX3 expression in glioma cell lines together with chemotherapeutic treatment could increase glioma cell susceptibility to the drug. In subcutaneous tumor models in nude mice using glioma cell lines U-87MG and SHG-44, inhibition of

PAX3 expression in glioblastoma U-87MG cells suppressed tumorigenicity, and upregulation of PAX3 expression in glioma SHG-44 cells promoted tumor formation in vivo. These results indicate that PAX3 in glioma is essential for gliomagenesis; thus, targeting PAX3 or its downstream targets may lead to novel therapies for this disease.

[169]

**TÍTULO / TITLE:** - G-protein coupled receptor kinase (GRK)-5 regulates proliferation of glioblastoma-derived stem cells.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 18. pii: S0967-5868(12)00603-0. doi: 10.1016/j.jocn.2012.10.008.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.10.008](#)

**AUTORES / AUTHORS:** - Kaur G; Kim J; Kaur R; Tan I; Bloch O; Sun MZ; Safae M; Oh MC; Sughrue M; Phillips J; Parsa AT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of California at San Francisco, 505 Parnassus Avenue, San Francisco, CA 94143, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is a grade IV malignant brain tumor with high mortality and has been well known to involve many molecular pathways, including G-protein coupled receptor (GPCR)-mediated signaling (such as epithelial growth factor receptor [EGFR] and platelet derived growth factor receptor [PDGFR]). G protein-coupled receptor kinases (GRK) directly regulate GPCR activity by phosphorylating activated agonist-bound receptors to desensitize signaling and internalize receptors through beta-arrestins. Recent studies in various cancers, including prostate and breast cancer, have highlighted the role of change in GRK expression to oncogenesis and tumor proliferation. In this study, we evaluated the expression of GRK5 in grade II to grade IV glioma specimens using immunohistochemistry and found that GRK5 expression levels are highly correlated with aggressiveness of glioma. We used culture conditions to selectively promote the growth of either glioblastoma cells with stem cell markers (GSC) or differentiated glioblastoma cells (DGC) from fresh GBM specimens. GSC are known to be highly invasive and mobile, and have the capacity to self-renew and are more resistant to chemotherapy and radiation compared to differentiated populations of GBM. We examined the expression of GRK5 in these two sets of culturing conditions for GBM cells and found that GRK5 expression is upregulated in GSC compared to differentiated GBM cells. To better understand the role of GRK5 in GBM-derived stem cells, we created stable GRK5 knockdown and evaluated the proliferation rate. Using an ATP chemiluminescence assay, we show, for the first time, that knocking down the expression of GRK5 decreased the proliferation rate of GSC in contrast to control.

[170]

**TÍTULO / TITLE:** - Phase II study of bevacizumab and temsirolimus combination therapy for recurrent glioblastoma multiforme.

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

**REVISTA / JOURNAL:** - Anticancer Res. 2013 Apr;33(4):1657-60.

**AUTORES / AUTHORS:** - Lassen U; Sorensen M; Gaziel TB; Hasselbalch B; Poulsen HS

**INSTITUCIÓN / INSTITUTION:** - Department of Oncology, Rigshospitalet, Copenhagen, Denmark. [ulrik.lassen@rh.regionh.dk](mailto:ulrik.lassen@rh.regionh.dk)

**RESUMEN / SUMMARY:** - BACKGROUND: Bevacizumab combined with chemotherapy has recently shown promising efficacy in recurrent high-grade glioma. Phosphatase and tensin homolog (PTEN) mutation in glioblastoma multiforme (GBM) patients causes abnormally high activity of the pathways of Phosphatidylinositide 3-kinases (PI3K), Protein Kinase B (AKT), and the mammalian target of rapamycin (mTOR) and is associated with unfavorable prognosis. Temsirolimus, an mTOR inhibitor, has been well-tolerated in monotherapy, but with limited effects. The combination of temsirolimus and antibodies to vascular endothelial factor (VEGF) has not yet been investigated, but with the hypothesis that temsirolimus might provide complimentary therapeutic benefit in combination with bevacizumab, we included patients with progressive GBM after bevacizumab in an open phase II study. PATIENTS AND METHODS: Adult patients with GBM recurrence after standard temozolomide chemoradiotherapy and bevacizumab-containing second-line therapy, received temsirolimus (25 mg i.v.) on days 1 and 8 and bevacizumab (10 mg/kg) on day 8, every two weeks. Assessments were performed every eight weeks. Blood samples for biomarkers were collected weekly for the first eight weeks and at progression. The primary end-point was median progression-free survival (PFS) and secondary end-points were radiographic response, overall survival (OS), and safety of the bevacizumab-temsirolimus combination. RESULTS: Thirteen patients were included, whereof three went off-study during the first four weeks and were replaced. The trial was terminated at 13 patients, according to the planned two-stage design, because 0/10 patients obtained partial remission (PR). Two out of 10 patients obtained radiological stable disease (SD). The median PFS survival was eight weeks, and OS was 15 weeks. One patient had a serious adverse event (SAE) with a hypersensitive reaction to temsirolimus; overall, side-effects were mild, and the most common grade III side-effect was hypercholesterolaemia (4/10). Other grade III side-effects included hypertriglyceridaemia (1/10), thrombocytopenia (1/10), infection (1/10), hypertension (1/10), and hyperglycemia (1/10). CONCLUSION: Temsirolimus can be safely administered in combination with

bevacizumab. This study failed to detect activity of such a combination in patients with progressive GBM beyond bevacizumab therapy.

[171]

**TÍTULO / TITLE:** - Plasmablastic lymphoma after standard-dose temozolomide for newly diagnosed glioblastoma.

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

**REVISTA / JOURNAL:** - Neurology. 2013 May 17.

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

[1212/WNL.0b013e318297eea6](#)

**AUTORES / AUTHORS:** - Clark SW; Taylor J; Wang DL; Abramson JS; Batchelor TT

**INSTITUCIÓN / INSTITUTION:** - From Vanderbilt University (S.W.C.), Nashville, TN; and Massachusetts General Hospital (J.T., D.L.W., J.S.A., T.T.B.), Boston.

**RESUMEN / SUMMARY:** - Secondary malignancies due to alkylating agents or topoisomerase II inhibitors are a concern in patients treated for primary brain tumors of the nervous system. Myelosuppression is the dose-limiting toxic effect of the alkylating agent temozolomide; reversible hematologic toxicity consisting mainly of thrombocytopenia is reported to occur in 7% of patients treated with concomitant radiotherapy and temozolomide and 14% with adjuvant temozolomide.<sup>1</sup> However, the incidence of secondary malignancies and nonreversible hematologic disorders, such as myelodysplastic syndrome (MDS), are a rare complication of temozolomide.<sup>2</sup>

[172]

**TÍTULO / TITLE:** - Inhibition of Polo-Like Kinase 1 Induces Cell Cycle Arrest and Sensitizes Glioblastoma Cells to Ionizing Radiation.

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

**REVISTA / JOURNAL:** - Cancer Biother Radiopharm. 2013 May 28.

●●Enlace al texto completo (gratis o de pago) [1089/cbr.2012.1415](#)

**AUTORES / AUTHORS:** - Pezuk JA; Brassesco MS; Morales AG; de Oliveira JC; de Oliveira HF; Scrideli CA; Tone LG

**INSTITUCIÓN / INSTITUTION:** - 1 Department of Genetics, University of Sao Paulo . Ribeirao Preto, SP, Brazil .

**RESUMEN / SUMMARY:** - Abstract Despite efforts to improve surgical, radiologic, and chemotherapeutic strategies, the outcome of patients with glioblastoma (GBM) is still poor. Polo-like kinase 1 (PLK1) is a serine/threonine kinase that plays key roles in cell cycle control and has been associated with tumor growth and prognosis. Here, we aimed at testing the radiosensitizing effects of the PLK1 inhibitor BI 2536 on eight GBM cell lines. For cell cycle analysis, T98G, U251, U343 MG-a, LN319, SF188, U138 MG, and U87 MG cell lines were

treated with 10, 50, or 100 nM of BI 2536 for 24 hours. In addition, cell cultures exposed to BI 2536 50 nM for 24 hours were irradiated with gamma-rays from 60Cobalt source at final doses of 2, 4, and 6 Gy. Combinatorial effects were evaluated through proliferation and clonogenic capacity assays. Treatment with BI 2536 caused mitotic arrest after 24 hours, and increased apoptosis in GBM cells. Moreover, our results demonstrate that pretreatment with this drug sensitized six out of seven GBM cell lines to different doses of gamma-irradiation as shown by decreased growth and abrogation of colony-formation capacity. Our data suggest that PLK1 blockage has a radiosensitizing effect on GBM, which could improve treatment strategies for this devastating tumor.

[173]

**TÍTULO / TITLE:** - The prevalence and natural history of pituitary hemorrhage in prolactinoma.

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

**REVISTA / JOURNAL:** - J Clin Endocrinol Metab. 2013 Jun;98(6):2362-7. doi: 10.1210/jc.2013-1249. Epub 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1210/jc.2013-1249](#)

**AUTORES / AUTHORS:** - Sarwar KN; Huda MS; Van de Velde V; Hopkins L; Luck S; Preston R; McGowan BM; Carroll PV; Powrie JK

**INSTITUCIÓN / INSTITUTION:** - MD, FRCP, Consultant Physician and Honorary Senior Lecturer, Guy's and St Thomas' NHS Foundation Trust, Diabetes and Endocrine Unit, Southwark Wing, Guy's Hospital, Great Maze Pond, London SE1 9RT, United Kingdom. [jake.powrie@kcl.ac.uk](mailto:jake.powrie@kcl.ac.uk).

**RESUMEN / SUMMARY:** - Context: Incidental pituitary hemorrhage, without full pituitary apoplexy, is a recognized radiological finding, but little information exists on its clinical behavior, with most reports describing surgically treated macroprolactinoma or nonfunctioning adenoma. Objective: Our aim was to characterize the prevalence, natural history, and risk factors associated with pituitary hemorrhage in a large clinic prolactinoma population. Design: The design consisted of a retrospective analysis of a clinic population. Setting: The setting was a tertiary endocrine center in a large teaching hospital. Patients: We studied three hundred sixty-eight patients with prolactinoma. The presence of hemorrhage was documented on magnetic resonance imaging. Main outcome measure: The main outcome measures were the prevalence, risk factors, and natural history of pituitary hemorrhage. Results: Pituitary hemorrhage was found in 25 patients, giving an overall prevalence of 6.8%, and was significantly higher in macroprolactinoma (20.3%) compared to microprolactinoma (3.1%,  $P < .0001$ ). Three patients had classical pituitary apoplexy. The majority of patients in the hemorrhage group had macroprolactinomas (16/25 [64%]) and were women (22/25 [88%]). The proportion of women with macroprolactinoma was higher in the hemorrhage group (14/16 macroprolactinomas [87.5%]) than in the

nonhemorrhage group (36/63 macroprolactinomas [57.1%],  $P = .02$ ). The majority of pituitary hemorrhages (92%) were treated conservatively with dopamine agonist therapy for hyperprolactinemia. Eighty-seven percent of patients had complete resolution of their hemorrhage within 26.6 +/- 23.3 (mean +/- SD) months. The presence of macroprolactinoma (odds ratio 9.00 [95%CI 3.79-23.88],  $P < .001$ ) and being female (odds ratio 8.03 [95%confidence interval 1.22-52.95],  $P = .03$ ) were independently associated with hemorrhage. Conclusions: These data show that incidental hemorrhage in prolactinoma is not uncommon. It is more likely to occur in macroprolactinoma, where 1 in 5 develop hemorrhage, and is particularly common in women with macroprolactinoma. The majority are asymptomatic and resolve spontaneously.

[174]

**TÍTULO / TITLE:** - The radiosensitization effect of titanate nanotubes as a new tool in radiation therapy for glioblastoma: A proof-of-concept.

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

**REVISTA / JOURNAL:** - Radiother Oncol. 2013 May 3. pii: S0167-8140(13)00164-3. doi: 10.1016/j.radonc.2013.04.004.

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

[1016/j.radonc.2013.04.004](#)

**AUTORES / AUTHORS:** - Mirjolet C; Papa AL; Crehange G; Raguin O; Seignez C; Paul C; Truc G; Maingon P; Millot N

**INSTITUCIÓN / INSTITUTION:** - Radiotherapy Department, Centre Georges-Francois Leclerc, Dijon, France.

**RESUMEN / SUMMARY:** - BACKGROUND AND PURPOSE: One of the new challenges to improve radiotherapy is to increase the ionizing effect by using nanoparticles. The interest of titanate nanotubes (TiONts) associated with radiotherapy was evaluated in two human glioblastoma cell lines (SNB-19 and U87MG). MATERIALS AND METHODS: Titanate nanotubes were synthesized by the hydrothermal treatment of titanium dioxide powder in a strongly basic NaOH solution. The cytotoxicity of TiONts was evaluated on SNB-19 and U87MG cell lines by cell proliferation assay. The internalization of TiONts was studied using Transmission Electron Microscopy (TEM). Finally, the effect of TiONts on cell radiosensitivity was evaluated using clonogenic assay. Cell cycle distribution was evaluated by flow cytometry after DNA labeling. DNA double-stranded breaks were evaluated using gammaH2AX labeling. RESULTS: Cells internalized TiONts through the possible combination of endocytosis and diffusion with no cytotoxicity. Clonogenic assays showed that cell lines incubated with TiONts were radiosensitized with a decrease in the SF2 parameter for both SNB-19 and U87MG cells. TiONts decreased DNA repair efficiency after irradiation and amplified G2/M cell-cycle arrest. CONCLUSION:

Our results indicated that further development of TiONts might provide a new useful tool for research and clinical therapy in the field of oncology.

[175]

**TÍTULO / TITLE:** - A 40-year-old male with an intraventricular tumor. Combined tanycytic ependymoma and subependymoma.

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

**REVISTA / JOURNAL:** - Brain Pathol. 2013 May;23(3):359-60. doi: 10.1111/bpa.12054.

●●Enlace al texto completo (gratis o de pago) [1111/bpa.12054](http://1111/bpa.12054)

**AUTORES / AUTHORS:** - Arvanitis LD; Gattuso P; Nag S

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Rush University Medical Center, Chicago, IL, USA.

**RESUMEN / SUMMARY:** - Combined tumors showing histologic features of both ependymoma and subependymoma have been described. In this report we present a case of combined tanycytic ependymoma with foci of subependymoma (WHO grade II), occurring in a 40 year-old male, which arose in the wall of the lateral ventricle. The tanycytic ependymoma component showed elongated fibrillary cells with a fascicular pattern of growth, while the subependymoma component showed clustered cell bodies surrounded by a fibrillary stroma with a microcystic appearance. We consider the present case to be an unusual example of tanycytic ependymoma; which to the best of our knowledge has not been associated with a subependymoma.

[176]

**TÍTULO / TITLE:** - A novel recombinant protein of IP10-EGFRvIIIscFv and CD8 cytotoxic T lymphocytes synergistically inhibits the growth of implanted glioma in mice.

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

**REVISTA / JOURNAL:** - Cancer Immunol Immunother. 2013 May 3.

●●Enlace al texto completo (gratis o de pago) [1007/s00262-013-1426-](http://1007/s00262-013-1426-6)

[6](#)

**AUTORES / AUTHORS:** - Wang X; Lu XL; Zhao HY; Zhang FC; Jiang XB

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 430022, Hubei, China.

**RESUMEN / SUMMARY:** - The epidermal growth factor receptor (EGFR) mutant of EGFRvIII is highly expressed on glioma cells and has been thought to be an excellent target molecule for immunotherapy. IP-10 is a potent chemokine and can recruit CXCR3+ T cells, including CD8+ T cells that are important for the control of tumor growth. This study is aimed at investigating the therapeutic

efficacy of a novel fusion protein of IP10-EGFRvIIIscFv (IP10-scFv) in combination with glioma lysate-pulsed DCs-activated CD8+ cytotoxic T lymphocytes (CTLs) in a mouse model of glioma. A plasmid of pET-IP10-scFv was generated by linking mouse IP-10 gene with the DNA fragment for anti-EGFRvIIIscFv, a (Gly4Ser)3 flexible linker and a His-tag. The recombinant IP10-scFv in *E. coli* was purified by affinity chromatography and characterized for its anti-EGFRvIII immunoreactivity and chemotactic activity. C57BL/6 mice were inoculated with mouse glioma GL261 cells in the brain and treated intracranially with IP10-scFv and/or intravenously with CTL for evaluating the therapeutic effect. The glioma-specific immune responses were examined. The IP10-scFv retained anti-EGFRvIII immunoreactivity and IP-10-like chemotactic activity. Treatment with both IP10-scFv and CTL synergistically inhibited the growth of glioma and prolonged the survival of tumor-bearing mice, accompanied by increasing the numbers of brain-infiltrating lymphocytes (BILs) and the frequency of CXCR3+CD8+ T cells, enhancing glioma-specific IFN-gamma responses and cytotoxicity, and promoting glioma cell apoptosis in mice. Our novel data indicate that IP10-scFv and CTL have synergistic therapeutic effects on inhibiting the growth of mouse glioma in vivo.

[177]

**TÍTULO / TITLE:** - MicroRNA-107 Inhibits U87 Glioma Stem Cells Growth and Invasion.

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

**REVISTA / JOURNAL:** - Cell Mol Neurobiol. 2013 Jul;33(5):651-7. doi: 10.1007/s10571-013-9927-6. Epub 2013 Apr 10.

●●Enlace al texto completo (gratis o de pago) [1007/s10571-013-9927-](#)

[6](#)

**AUTORES / AUTHORS:** - Chen L; Chen XR; Chen FF; Liu Y; Li P; Zhang R; Yan K; Yi YJ; Xu ZM; Jiang XD

**INSTITUCIÓN / INSTITUTION:** - The National Key Clinic Specialty, Guangdong Provincial Key Laboratory on Brain Function Repair and Regeneration, Department of Neurosurgery, The Neurosurgery Institute of Guangdong Province, Zhujiang Hospital, Southern Medical University, 253# Gongye Road, Guangzhou, 510282, China.

**RESUMEN / SUMMARY:** - Glioma stem cells (GSCs) are thought to be critical for resistance to radiotherapy and chemotherapy and for tumor recurrence after surgery in glioma patients. Identification of new therapeutic strategies that can target GSCs may thus be critical for improving patient survival. MicroRNAs (miRNAs) are small non-coding RNAs that function as tumor suppressors or oncogenes. In this study, we confirmed that miR-107 was down-regulated in GSCs. To investigate the role of miR-107 in tumorigenesis of GSCs, a lentiviral vector over-expressing miR-107 in U87GSCs was constructed. We found that

over-expression of miR-107 suppressed proliferation and down-regulated Notch2 protein and stem cell marker (CD133 and Nestin) expression in U87GSCs. Furthermore, enhanced miR-107 expression significantly inhibited U87GSC invasion and reduced matrix metalloproteinase-12 expression. miR-107 also suppressed U87GSCs xenograft growth in vivo. These findings suggest that miR-107 is involved in U87GSCs growth and invasion and may provide a potential therapeutic target for glioma treatment.

[178]

**TÍTULO / TITLE:** - Giant prolactinomas: the therapeutic approach.

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

**REVISTA / JOURNAL:** - Clin Endocrinol (Oxf). 2013 May 10. doi: 10.1111/cen.12242.

●●Enlace al texto completo (gratis o de pago) [1111/cen.12242](#)

**AUTORES / AUTHORS:** - Moraes AB; Marques Dos Santos Silva C; Vieira Neto L; 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; Psychoneuroendocrinology Unit, State Institute of Diabetes and Endocrinology of Rio de Janeiro, Rio de Janeiro, Brazil.

**RESUMEN / SUMMARY:** - BACKGROUND: Giant prolactinomas are an unusual subset of macroprolactinomas and are more commonly found in men. The goal of this review is to propose a giant prolactinoma definition and discuss the available therapeutic options for biochemical and tumour volume control. METHODS: A comprehensive search of all published studies was performed between April and November 2012 in electronic databases (PubMed and Ovid). RESULTS: A giant prolactinoma should be defined as an adenoma with a maximum diameter of more than 4 cm that is associated with serum prolactin above 5300 mIU/L. Regarding treatment, cabergoline is the preferred dopamine agonist for medical management of giant prolactinomas because of its excellent efficacy and tolerability. Normalisation of prolactin level and significant tumour reduction may be achieved in the majority of patients. Combined therapy, particularly cabergoline and surgery, may be necessary due to the large tumour load. Radiotherapy and temozolomide may be used for patients with aggressive giant prolactinomas in whom tumour volume control is not achieved with cabergoline and surgery. CONCLUSION: There is a scarcity of large studies about the management of giant prolactinoma. Cabergoline is the first-line treatment. However, caution should be exercised when comparing efficacy rates among the different treatment modalities due to the variability in study design and data quality. In this scenario, a “standard” definition for giant prolactinomas and larger series may be helpful to assess the real efficacy and

safety of each therapeutic modality. This article is protected by copyright. All rights reserved.

[179]

**TÍTULO / TITLE:** - Effect of the STAT3 inhibitor STX-0119 on the proliferation of cancer stem-like cells derived from recurrent glioblastoma.

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

**REVISTA / JOURNAL:** - Int J Oncol. 2013 Jul;43(1):219-27. doi: 10.3892/ijo.2013.1916. Epub 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [3892/ijo.2013.1916](#)

**AUTORES / AUTHORS:** - Ashizawa T; Miyata H; Iizuka A; Komiyama M; Oshita C; Kume A; Nogami M; Yagoto M; Ito I; Oishi T; Watanabe R; Mitsuya K; Matsuno K; Furuya T; Okawara T; Otsuka M; Ogo N; Asai A; Nakasu Y; Yamaguchi K; Akiyama Y

**INSTITUCIÓN / INSTITUTION:** - Immunotherapy Division, Shizuoka Cancer Center Research Institute, Shizuoka Cancer Center Hospital, Nagaizumi-cho, Suntogun, Shizuoka 411-8777, Japan.

**RESUMEN / SUMMARY:** - Signal transducer and activator of transcription (STAT) 3, a member of a family of DNA-binding molecules, is a potential target in the treatment of cancer. The highly phosphorylated STAT3 in cancer cells contributes to numerous physiological and oncogenic signaling pathways. Furthermore, a significant association between STAT3 signaling and glioblastoma multiforme stem-like cell (GBM-SC) development and maintenance has been demonstrated in recent studies. Previously, we reported a novel small molecule inhibitor of STAT3 dimerization, STX-0119, as a cancer therapeutic. In the present study, we focused on cancer stem-like cells derived from recurrent GBM patients and investigated the efficacy of STX-0119. Three GBM stem cell lines showed many stem cell markers such as CD133, EGFR, Nanog, Olig2, nestin and Yamanaka factors (c-myc, KLF4, Oct3/4 and SOX2) compared with parental cell lines. These cell lines also formed tumors in vivo and had similar histological to surgically resected tumors. STAT3 phosphorylation was activated more in the GBM-SC lines than serum-derived GB cell lines. The growth inhibitory effect of STX-0119 on GBM-SCs was moderate (IC<sub>50</sub> 15-44 µM) and stronger compared to that of WP1066 in two cell lines. On the other hand, the effect of temozolomide was weak in all the cell lines (IC<sub>50</sub> 53-226 µM). Notably, STX-0119 demonstrated strong inhibition of the expression of STAT3 target genes (c-myc, survivin, cyclin D1, HIF-1α and VEGF) and stem cell-associated genes (CD44, Nanog, nestin and CD133) as well as the induction of apoptosis in one stem-like cell line. Interestingly, VEGFR2 mRNA was also remarkably inhibited by STX-0119. In a model using transplantable stem-like cell lines in vivo GB-SCC010 and 026, STX-0119 inhibited the growth of GBM-SCs at 80 mg/kg. STX-0119, an inhibitor

of STAT3, may serve as a novel therapeutic compound against GBM-SCs even in temozolomide-resistant GBM patients and has the potential for GBM-SC-specific therapeutics in combination with temozolomide plus radiation therapy.

[180]

**TÍTULO / TITLE:** - Use of Electroconvulsive Therapy in the Presence of Arachnoid Cyst: A Case Report and Review of Existing Literature.

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

**REVISTA / JOURNAL:** - J ECT. 2013 May 10.

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

[1097/YCT.0b013e31828b3546](#)

**AUTORES / AUTHORS:** - Grover S; Aneja J; Singh A; Singla N

**INSTITUCIÓN / INSTITUTION:** - From the Department of Psychiatry, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

**RESUMEN / SUMMARY:** - A caution is advised for the use of electroconvulsive therapy (ECT) in patients with space-occupying intracranial lesions. The use of ECT in the presence of arachnoid cyst has been reported only in 10 cases in the literature. Here, we report a case of severe depression with psychotic symptoms who was found to have an arachnoid cyst of 3.4 x 1.6 cm in the left temporal region. The patient received a course of 12 ECT treatments without any complications and had significant improvement in symptoms. Magnetic resonance imaging after completion of ECT did not reveal any change in size of the arachnoid cyst.

[181]

**TÍTULO / TITLE:** - Retroperitoneal Ganglioneuroma and Reversible Posterior Leukoencephalopathy in a Child With Acute Lymphoblastic Leukemia.

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

**REVISTA / JOURNAL:** - J Pediatr Hematol Oncol. 2013 May 9.

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

[1097/MPH.0b013e31829342ae](#)

**AUTORES / AUTHORS:** - Maher OM; Marco SA; Sadanandan S; Fireman F; Sedrak A

**INSTITUCIÓN / INSTITUTION:** - \*Division of Pediatric Hematology and Oncology, The Brooklyn Hospital Center, Brooklyn, NY daggerNational Cancer Institute, Cairo University, Cairo, Egypt.

[182]

**TÍTULO / TITLE:** - Intraventricular hemorrhage and multiple intracranial cysts associated with congenital cytomegalovirus infection.

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

**REVISTA / JOURNAL:** - J Clin Microbiol. 2013 May 15.

●●Enlace al texto completo (gratis o de pago) [1128/JCM.00842-13](#)

**AUTORES / AUTHORS:** - Suksumek N; Scott JN; Chadha R; Yusuf K

**INSTITUCIÓN / INSTITUTION:** - Division of Neonatology, Department of Pediatrics, Faculty of Medicine, University of Calgary, Alberta, Canada.

**RESUMEN / SUMMARY:** - Intraventricular hemorrhage with congenital cytomegalovirus (CMV) infection is rare and has been reported only in extremely premature infants or in association with thrombocytopenia. We report the first case of a full term male infant with congenital CMV infection and intraventricular hemorrhage with a normal platelet count and coagulation profile. The infant also had a left subependymal cyst and bilateral occipital cysts without any other manifestations of CMV infection.

[183]

**TÍTULO / TITLE:** - Outcomes after surgery for central neurocytoma: results of a French multicentre retrospective study.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 21.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1732-](#)

[y](#)

**AUTORES / AUTHORS:** - Lubrano V; Francois P; Loundou A; Vasiljevic A; Roche PH

**INSTITUCIÓN / INSTITUTION:** - Service de Neurochirurgie, Hopital de Rangueil, CHU Toulouse, Universite Paul Sabatier, Toulouse, France.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** Central neurocytoma (CN) is a rare intraventricular tumour. Surgery has been highly recommended for CN, although it entails a significant chance to harm the patient. We aimed to provide new data that would support surgical decision-making and optimise patient information about outcomes after surgery. **METHOD:** Under the auspices of the French Society of Neurosurgery, we conducted a multi-institutional database search in 23 academic hospitals. In all, we reviewed the relevant clinical and radiological data of 82 patients who were operated on for CN between 1984 and 2008, and had their diagnosis confirmed by central pathological review. **RESULTS:** The median follow-up was 61 months (range, 6-96 months). Gross total resection (GTR) was achieved in 48 % of the patients, and subtotal resection (STR) in 52 %. The 5-year overall survival rate was 93.8 % (95 % CI, 93.7-93.9). The 5-year progression-free survival rate was 92.1 % (95 % CI, 91.90-92.2) in patients who underwent GTR, compared with 55.3 % (95 % CI, 55.1-55.5) in patients who had STR (p = 0.01). The overall perioperative complication rate was 66 %. The main causes of postoperative disability were some degree of postoperative paresis and/or aphasia (39 %), memory

difficulties (29 %) and temporary hydrocephalus (26 %). GTR was not associated with an increased rate of postoperative complications compared with STR. At last follow-up, Karnofsky Performance Score was at least equal to 80 for 90.6 % of the tested patients. CONCLUSION: Our series emphasised that maximal surgical resection of CNs offers favourable benefit-risk ratio. These data are of importance to properly counsel patients regarding expected outcomes, and to plan relevant preoperative and postoperative investigations like language and memory function evaluation.

[184]

**TÍTULO / TITLE:** - Survival and Prognostic Factors of Anaplastic Gliomas.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 May 29.

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

[1227/01.neu.0000431477.02408.5e](http://1227/01.neu.0000431477.02408.5e)

**AUTORES / AUTHORS:** - Nuno M; Birch K; Mukherjee D; Sarmiento JM; 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:: Prognosis of patients with anaplastic glioma tumors is relatively favorable in comparison to glioblastoma multiforme. OBJECTIVE:: To estimate survival differences among anaplastic astrocytoma (AA) and anaplastic oligodendroglioma (AO) patients and factors associated with survival prognosis. METHODS:: A nationwide cohort of grade III glioma patients diagnosed between 1990 and 2008 was studied using the Surveillance, Epidemiology, and End Results (SEER) registry. Multivariate Cox proportional hazard models evaluated the role of patient and clinical characteristics on overall survival (OS). RESULTS:: 1,766 patients with AA and 570 patients with AO were studied. The median OS was 15 and 42 months among AA and AO patients, respectively. Age increments of 10 years implicated a 50% increase in mortality hazards among AA (HR 1.49,  $p < .0001$ ) and AO (HR 1.51,  $p < .0001$ ) patients. Among AA patients, radiation (HR 0.62,  $p < .0001$ ), surgery (versus biopsy, HR 0.73,  $p < .0001$ ), female gender (HR 0.87,  $p = .02$ ), and married status (HR 0.87,  $p = .02$ ) were associated with a reduction in the hazard of mortality. Longer survival if diagnosed in 2000 relative to 1990 was observed (HR 0.84,  $p = .004$ ) in AA patients. While surgery did not significantly improve survival among AO patients, gross-total resection (GTR) increased the median survival from 40 to 61 months ( $p = .001$ ) in this cohort. CONCLUSION:: First-course radiation, younger age, female gender, treatment in recent years, and surgery were associated with improved survival in AA patients. In contrast, age was the

most prominent predictor of survival in AO patients. Surgery alone did not seem to benefit AO patients, and GTR improved survival by 21 months.

[185]

**TÍTULO / TITLE:** - Luteolin inhibits migration of human glioblastoma U-87 MG and T98G cells through downregulation of Cdc42 expression and PI3K/AKT activity.

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

**REVISTA / JOURNAL:** - Mol Biol Rep. 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1007/s11033-013-2632-](#)

[1](#)

**AUTORES / AUTHORS:** - Cheng WY; Chiao MT; Liang YJ; Yang YC; Shen CC; Yang CY

**INSTITUCIÓN / INSTITUTION:** - Institute of Molecular Biology, National Chung Hsing University, 250 Kuo Kuang Road, Taichung, 402, Taiwan, [wycheng07@yahoo.com.tw](mailto:wycheng07@yahoo.com.tw).

**RESUMEN / SUMMARY:** - Luteolin (3',4',5,7-tetrahydroxyflavone) is a common flavonoid in many types of plants and has several beneficial biological effects, including anti-inflammation, anti-oxidant, and anti-cancer properties. However, the detail mechanisms of luteolin in suppressing tumor invasion and metastasis are poorly understood. Here, we investigated the effects of luteolin on suppressing glioblastoma tumor cell invasion and migration activity. Under the non-cytotoxic doses (15 and 30 μM), luteolin exhibited an inhibitory effect on migration and invasion in U-87 MG and T98G glioblastoma cells. Additionally, filopodia assembly in U-87 MG cells was markedly suppressed after luteolin treatment. The treatment of luteolin also showed a decrease of Cdc42 (cell division cycle 42) protein levels and reduced PI3K/AKT activation, whereas there was no association between this decrease and phosphorylated ERK or altered transcription levels of Cdc42. Over expression of constitutive Cdc42 (Q61L) using transient transfection in U-87 MG cells induced a partial cell migration, but did not affected the degradation of the protein levels of Cdc42 after luteolin treatment. Moreover, inhibition of the proteasome pathway by MG132 caused a significant recovery in the migration ability of U-87 MG cells and augmented the Cdc42 protein levels after luteolin treatment, suggesting that pharmacological inhibition of migration via luteolin treatment is likely to preferentially facilitate the protein degradation of Cdc42. Taken together, the study demonstrated that flavonoids of luteolin prevent the migration of glioblastoma cells by affecting PI3K/AKT activation, modulating the protein expression of Cdc42 and facilitating their degradation via the proteasome pathway.

[186]

**TÍTULO / TITLE:** - A novel orally available inhibitor of focal adhesion signaling increases survival in a xenograft model of diffuse large B cell lymphoma with central nervous system involvement.

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

**REVISTA / JOURNAL:** - Haematologica. 2013 May 28.

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

[3324/haematol.2012.071811](#)

**AUTORES / AUTHORS:** - Bosch R; Moreno MJ; Dieguez-Gonzalez R; Cespedes MV; Gallardo A; Trias M; Granena A; Sierra J; Casanova I; Manges R

**INSTITUCIÓN / INSTITUTION:** - Institut d'Investigacions Biomediques Sant Pau;

**RESUMEN / SUMMARY:** - Central nervous system dissemination is a relatively uncommon but almost always fatal complication in diffuse large B cell lymphoma patients. Optimal therapy for central nervous involvement in this malignancy has not been established. In this paper, we aimed to evaluate the therapeutic effect of E7123, a celecoxib derivative that inhibits focal adhesion signaling, in a novel xenograft model of diffuse large B cell lymphoma with central nervous system involvement. Cells obtained after disaggregation of HT subcutaneous tumors (HT-SC cells) were intravenously injected in NOD/SCID mice. These mice received oral vehicle or 75 mg/kg of E7123 daily until they were euthanized for weight loss or signs of sickness. The antitumor effect of E7123 was validated in an independent experiment using a bioluminescent mouse model. Intravenously injected HT-SC cells showed higher take rate and higher central nervous system tropism (associated with increased expression of beta1-integrin and p130Cas proteins) than HT cells. The oral administration of E7123 significantly increased survival time in two independent experiments using mice injected with unmodified or bioluminescent HT-SC cells. We have developed a new xenograft model of diffuse large B cell lymphoma with central nervous system involvement that can be used in the preclinical evaluation of new drugs for this malignancy. E7123 is a new, well tolerated and orally available therapeutic agent that merits further investigation since it may improve current management of diffuse large B cell lymphoma patients with central nervous system involvement.

[187]

**TÍTULO / TITLE:** - Guggulsterone sensitizes glioblastoma cells to Sonic hedgehog inhibitor SANT-1 induced apoptosis in a Ras/NFkappaB dependent manner.

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

**REVISTA / JOURNAL:** - Cancer Lett. 2013 Mar 31. pii: S0304-3835(13)00255-3. doi: 10.1016/j.canlet.2013.03.025.

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

[1016/j.canlet.2013.03.025](#)

**AUTORES / AUTHORS:** - Dixit D; Ghildiyal R; Anto NP; Ghosh S; Sharma V; Sen E

**INSTITUCIÓN / INSTITUTION:** - National Brain Research Centre, Manesar, Haryana 122 050, India.

**RESUMEN / SUMMARY:** - Since Shh pathway effector, Gli1, is overexpressed in gliomas, we investigated the effect of novel Shh inhibitor SANT-1 on glioma cell viability. Though SANT-1 failed to induce apoptosis, it reduced proliferation of glioma stem-like cells. Apart from canonical Shh cascade, Gli1 is also induced by non-canonical pathways including NFkappaB. Therefore, a combinatorial strategy with Ras/NFkappaB inhibitor, Guggulsterone, was employed to enhance effectiveness of SANT-1. Guggulsterone inhibited Ras and NFkappaB activity and sensitized cells to SANT-1 induced apoptosis via intrinsic apoptotic mechanism. Inhibition of either Ras or NFkappaB activity was sufficient to sensitize cells to SANT-1. Guggulsterone induced ERK activation also contributed to Caspase-9 activation. Since SANT-1 and Guggulsterone differentially target stem-like and non-stem glioma cells respectively, this combination warrants investigation as an effective anti-glioma therapy.

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[188]

**TÍTULO / TITLE:** - Ephrin-As, Eph receptors and integrin alpha3 interact and colocalize at membrane protrusions of U251MG glioblastoma cells.

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

**REVISTA / JOURNAL:** - Cell Biol Int. 2013 May 17. doi: 10.1002/cbin.10134.

●●Enlace al texto completo (gratis o de pago) [1002/cbin.10134](#)

**AUTORES / AUTHORS:** - Makarov A; Ylivinkka I; Nyman TA; Hyytiainen M; Keski-Oja J

**INSTITUCIÓN / INSTITUTION:** - Departments of Virology and Pathology, The Haartman Institute, Translational Cancer Biology Research Program and Helsinki University Hospital, University of Helsinki, Helsinki, Finland.

**RESUMEN / SUMMARY:** - Glioblastoma is the most common brain cancer. Ephrins and their Eph receptors play important roles in the development of central nervous system and the regulation of cancer cell migration and invasion. In a search for the Eph receptor complexes, we used tandem affinity purification based interaction screening with tagged ephrins A1, A3 and A4 combined with protein identification by mass-spectrometry in U251MG glioblastoma cells. Ephrins bound to Eph receptors, mainly to EphA2 in these cells. Integrin alpha3 was identified in protein complexes with ephrin-As. Soluble Ephrin-A1 colocalized with integrin alpha3 at the cell surface, and was rapidly endocytosed by the cells. However, integrin alpha3 did not colocalize with internalized Ephrin-A1, whereas EphA2 receptor did. In U251MG cells, integrin alpha3 colocalized with EphA2 receptor at the cell edges and protrusions. Sites of EphA2-integrin alpha3 colocalization were positive for vinculin, focal adhesion

kinase and phosphotyrosine, i.e. markers for cell adhesion and active signalling. The interaction between ephrin-As, Eph receptors and integrin alpha3 is plausibly important for the crosstalk between Eph and integrin signalling pathways at the membrane protrusions and in the migration of brain cancer cells.

[189]

**TÍTULO / TITLE:** - Dopamine receptor activation increases glial cell line-derived neurotrophic factor in experimental stroke.

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

**REVISTA / JOURNAL:** - Exp Neurol. 2013 May 9;247C:202-208. doi: 10.1016/j.expneurol.2013.04.016.

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

[1016/j.expneurol.2013.04.016](#)

**AUTORES / AUTHORS:** - Kuric E; Wieloch T; Ruscher K

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Sciences, Division of Neurosurgery, Laboratory for Experimental Brain Research, Lund University, BMC A13, S-22184 Lund, Sweden. Electronic address: [enida.kuric@med.lu.se](mailto:enida.kuric@med.lu.se).

**RESUMEN / SUMMARY:** - Treatment with levodopa enhances functional recovery after experimental stroke but its mechanisms of action are elusive. Reactive astrocytes in the ischemic hemisphere are involved in mechanisms promoting recovery and also express dopamine 1 (D1) and dopamine 2 (D2) receptors. Here we investigated if the activation of astrocytic dopamine receptors (D1 and D2) regulates the expression of glial cell line-derived neurotrophic factor (GDNF) after combined in vitro hypoxia/aglycemia (H/A) and studied the expression of GDNF in the ischemic brain after treatment with levodopa/benserazide following transient occlusion of the middle cerebral artery (tMCAO) in the rat. Twenty-four hours after H/A, GDNF levels were upregulated in exposed astrocytes compared to normoxic control cultures and further elevated by the addition of the selective D1 receptor agonist R(+)-SKF-38393 hydrochloride while D1 receptor antagonism by R(+)-SCH-23390 hydrochloride significantly reduced GDNF. No effect on GDNF levels was observed by the application of the D2 receptor agonist R(-)-2,10,11-trihydroxy-N-propyl-noraporphine hydrobromide hydrate or S(-)-eticlopride hydrochloride (D2 receptor antagonist). After tMCAO, GDNF was upregulated in D1 expressing reactive astrocytes in the peri-infarct area. In addition, treatment with levodopa/benserazide significantly increased GDNF levels in the infarct core and peri-infarct area after tMCAO without affecting the expression of glial fibrillar acidic protein (GFAP), an intermediate filament and marker of reactive gliosis. After stroke, GDNF levels increase in the ischemic hemisphere in rats treated with levodopa, implicating GDNF in the mechanisms of tissue reorganization and plasticity and in L-DOPA enhanced recovery of lost brain

function. Our results support levodopa treatment as a potential recovery enhancing therapy in stroke patients.

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[190]

**TÍTULO / TITLE:** - Germline copy number variation of genes involved in chromatin remodelling in families suggestive of Li-Fraumeni syndrome with brain tumours.

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

**REVISTA / JOURNAL:** - Eur J Hum Genet. 2013 Apr 24. doi: 10.1038/ejhg.2013.68.

●●Enlace al texto completo (gratis o de pago) [1038/ejhg.2013.68](#)

**AUTORES / AUTHORS:** - Aury-Landas J; Bougeard G; Castel H; Hernandez-Vargas H; Drouet A; Latouche JB; Schouft MT; Ferec C; Leroux D; Lasset C; Coupier I; Caron O; Herceg Z; Frebourg T; Flaman JM

**INSTITUCIÓN / INSTITUTION:** - 1] Inserm, U1079, Faculty of Medicine, University of Rouen, Rouen, France [2] Institute for Research and Innovation in Biomedicine, University of Rouen, Rouen, France.

**RESUMEN / SUMMARY:** - Germline alterations of the tumour suppressor TP53 gene are detected approximately in 25% of the families suggestive of Li-Fraumeni syndrome (LFS), characterised by a genetic predisposition to a wide tumour spectrum, including soft-tissue sarcomas, osteosarcomas, premenopausal breast cancers, brain tumours, adrenocortical tumours, plexus choroid tumours, leukaemia and lung cancer. The aim of this study was to determine the contribution of germline copy number variations (CNVs) to LFS in families without detectable TP53 mutation. Using a custom-designed high-resolution array CGH, we evaluated the presence of rare germline CNVs in 64 patients fulfilling the Chompret criteria for LFS, but without any detectable TP53 alteration. In 15 unrelated patients, we detected 20 new CNVs absent in 600 controls. Remarkably, in four patients who had developed each brain tumour, the detected CNV overlap the KDM1A, MTA3, TRRAP or SIRT3 genes encoding p53 partners involved in histone methylation or acetylation. Focused analysis of SIRT3 showed that the CNV encompassing SIRT3 leads to SIRT3 overexpression, and that in vitro SIRT3 overexpression prevents apoptosis, increases G2/M and results in a hypermethylation of numerous genes. This study supports the causal role of germline alterations of genes involved in chromatin remodelling in genetic predisposition to cancer and, in particular, to brain tumours. European Journal of Human Genetics advance online publication, 24 April 2013; doi:10.1038/ejhg.2013.68.

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[191]

**TÍTULO / TITLE:** - Molecular subtypes of glioma identified by genome-wide methylation profiling.

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

**REVISTA / JOURNAL:** - Genes Chromosomes Cancer. 2013 Jul;52(7):665-74. doi: 10.1002/gcc.22062. Epub 2013 Apr 30.

●●Enlace al texto completo (gratis o de pago) [1002/gcc.22062](#)

**AUTORES / AUTHORS:** - Kloosterhof NK; de Rooi JJ; Kros M; Eilers PH; Sillevius Smitt PA; van den Bent MJ; French PJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Erasmus MC, Rotterdam, The Netherlands; Department of Pediatric Oncology and Hematology, Sophia, Erasmus MC, Rotterdam, The Netherlands.

**RESUMEN / SUMMARY:** - Recent studies have indicated a prognostic role for genome-wide methylation in gliomas: Tumors that show an overall increase in DNA methylation at CpG sites (CIMP+; CpG island methylator phenotype) have a more favorable prognosis than CIMP- gliomas. Here, we have determined whether methylation profiling can identify more and clinically relevant molecular subtypes of glioma by performing genome-wide methylation profiling on 138 glial brain tumors of all histological diagnosis. Hopach (Hierarchical ordered partitioning and collapsing hybrid) clustering using the 1,000 most variable CpGs identified three distinct glioma subtypes (C+1p19q, C+wt, and C-) and one adult brain subtype. All "C+1p19q" and "C+wt" tumors were CIMP+ whereas most (50/54) "C-" tumors were CIMP-. The C- subtype gliomas contained many glioblastomas and all pilocytic astrocytomas. 1p19q LOH was frequent in the C+1p19q subtype. Other genetic changes (IDH1 mutation and EGFR amplification) and gene-expression based molecular subtypes also segregated in distinct methylation subtypes, demonstrating that these subtypes are also genetically distinct. Each subtype was associated with its own prognosis: median survival for C-, C+1p19q, and C+wt tumors was 1.18, 5.00, and 2.62 years, respectively. The prognostic value of these methylation subtypes was validated on an external dataset from the TCGA. Analysis of recurrences of 14 primary tumors samples indicates that shifts between some C+wt and C+1p/19q tumors can occur between the primary and recurrent tumor, but CIMP status remained stable. Our data demonstrate that methylation profiling identifies at least three prognostically relevant subtypes of glioma that can aid diagnosis and potentially guide treatment for patients. © 2013 Wiley Periodicals, Inc.

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[192]

**TÍTULO / TITLE:** - The influence of the penetrating peptide iRGD on the effect of paclitaxel-loaded MT1-AF7p-conjugated nanoparticles on glioma cells.

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

**REVISTA / JOURNAL:** - Biomaterials. 2013 Jul;34(21):5138-48. doi: 10.1016/j.biomaterials.2013.03.036. Epub 2013 Apr 9.

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

[1016/j.biomaterials.2013.03.036](https://doi.org/10.1016/j.biomaterials.2013.03.036)

**AUTORES / AUTHORS:** - Gu G; Gao X; Hu Q; Kang T; Liu Z; Jiang M; Miao D; Song Q; Yao L; Tu Y; Pang Z; Chen H; Jiang X; Chen J

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Smart Drug Delivery, Ministry of Education & PLA, School of Pharmacy, Fudan University, Lane 826, Zhangheng Road, Shanghai 201203, PR China.

**RESUMEN / SUMMARY:** - Low permeability across the blood-brain tumor barrier (BTB) and poor penetration into the glioma parenchyma represent key obstacles for anti-glioblastoma drug delivery. In this study, MT1-AF7p peptide, which presents high binding affinity to membrane type-1 matrix metalloproteinase (MT1-MMP) that over-expressed on both angiogenic blood vessels and glioma cells, was employed to decorate the paclitaxel-loaded PEG-PLA nanoparticles (MT1-NP-PTX) to mediate glioblastoma targeting. Tumor-homing and penetrating peptide iRGD was co-administrated to further facilitate nanoparticles extravasation from the tumor vessels and penetration into the glioma parenchyma. MT1-NP-PTX showed satisfactory encapsulated efficiency, loading capacity and size distribution. In C6 glioma cells, MT1-NP was found to exhibit significantly enhanced cellular accumulation than that of unmodified NP via both energy-dependent macropinocytosis and lipid raft-mediated endocytosis. The anti-proliferative and apoptosis-induction activity of PTX was significantly enhanced following its encapsulation in MT1-NP. In vivo imaging and glioma distribution together confirmed that MT1-AF7p functionalization and iRGD co-administration significantly improved the nanoparticles extravasation across BTB and accumulation in glioma parenchyma. Furthermore, in vitro C6 glioma spheroid assays evidenced that MT1-NP effectively penetrated into the glioma spheroids and significantly improved the growth inhibitory effects of loaded PTX on glioma spheroids. More importantly, the median survival time of those nude mice bearing intracranial C6 glioma received MT1-NP-PTX and iRGD combination regimen was 60 days, significantly longer than that of other groups. The findings suggested that the BTB/glioma cells dual-targeting DDS co-administrated with iRGD peptide might provide a both practical and feasible solution to highly efficient anti-glioblastoma drug delivery.

[193]

**TÍTULO / TITLE:** - 18F-AFETP, 18F-FET, and 18F-FDG Imaging of Mouse DBT Gliomas.

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

**REVISTA / JOURNAL:** - J Nucl Med. 2013 May 6.

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

[2967/jnumed.112.113217](https://doi.org/10.2967/jnumed.112.113217)

**AUTORES / AUTHORS:** - Solingapuram Sai KK; Huang C; Yuan L; Zhou D; Piwnica-Worms D; Garbow JR; Engelbach JA; Mach RH; Rich KM; McConathy J

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

**RESUMEN / SUMMARY:** - The goal of this study was to evaluate the <sup>18</sup>F-labeled nonnatural amino acid (S)-2-amino-3-[1-(2-<sup>18</sup>F-fluoroethyl)-1H-[1,2,3]triazol-4-yl]propanoic acid (18F-AFETP) as a PET imaging agent for brain tumors and to compare its effectiveness with the more-established tracers O-(2-<sup>18</sup>F-fluoroethyl)-l-tyrosine (18F-FET) and 18F-FDG in a murine model of glioblastoma. The tracer 18F-AFETP is a structural analog of histidine and is a lead compound for imaging cationic amino acid transport, a relatively unexplored target for oncologic imaging. **METHODS:** 18F-AFETP was prepared using the click reaction. BALB/c mice with intracranially implanted delayed brain tumor (DBT) gliomas (n = 4) underwent biodistribution and dynamic small-animal PET imaging for 60 min after intravenous injection of 18F-AFETP. Tumor and brain uptake of 18F-AFETP were compared with those of 18F-FDG and 18F-FET through small-animal PET analyses. **RESULTS:** 18F-AFETP demonstrated focally increased uptake in tumors with good visualization. Peak tumor uptake occurred within 10 min of injection, with stable or gradual decrease over time. All 3 tracers demonstrated relatively high uptake in the DBTs throughout the study. At late time points (47.5-57.5 min after injection), the average standardized uptake value with 18F-FDG (1.9 +/- 0.1) was significantly greater than with 18F-FET (1.1 +/- 0.1) and 18F-AFETP (0.7 +/- 0.2). The uptake also differed substantially in normal brain, with significant differences in the standardized uptake values at late times among 18F-FDG (1.5 +/- 0.2), 18F-FET (0.5 +/- 0.05), and 18F-AFETP (0.1 +/- 0.04). The resulting average tumor-to-brain ratio at the late time points was significantly higher for 18F-AFETP (7.5 +/- 0.1) than for 18F-FDG (1.3 +/- 0.1) and 18F-FET (2.0 +/- 0.3). **CONCLUSION:** 18F-AFETP is a promising brain tumor imaging agent, providing rapid and persistent tumor visualization, with good tumor-to-normal-brain ratios in the DBT glioma model. High tumor-to-brain, tumor-to-muscle, and tumor-to-blood ratios were observed at 30 and 60 min after injection, with higher tumor-to-brain ratios than obtained with 18F-FET or 18F-FDG. These results support further development and evaluation of 18F-AFETP and its derivatives for tumor imaging.

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[194]

**TÍTULO / TITLE:** - Epigenetic Reactivation of RANK in Glioblastoma Cells by Curcumin: Involvement of STAT3 Inhibition.

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

**REVISTA / JOURNAL:** - DNA Cell Biol. 2013 Jun;32(6):292-7. doi: 10.1089/dna.2013.2042. Epub 2013 Apr 27.

●●Enlace al texto completo (gratis o de pago) [1089/dna.2013.2042](http://1089/dna.2013.2042)

**AUTORES / AUTHORS:** - Wu B; Yao X; Nie X; Xu R

**INSTITUCIÓN / INSTITUTION:** - 1 Affiliated Bayi Brain Hospital, Bayi Clinical College, Southern Medical University, Beijing, People's Republic of China.

**RESUMEN / SUMMARY:** - DNA methylation plays an essential role in carcinogenesis. Promoter hypermethylation can result in transcriptional silencing of specific genes, such as tumor suppressors. Thus far, few reports have investigated the effect of curcumin, an active component of the perennial herb *Curcuma longa*, on DNA methylation. In the present study, we evaluated the effects of curcumin on receptor activator of NF-kappaB (RANK) gene expression in human glioblastoma cells. Incubation of cells with therapeutic concentrations of curcumin resulted in a significant elevation of RANK expression at both the mRNA and protein levels in two glioblastoma cell lines. We further confirmed that this elevation was associated with promoter demethylation through methylation-specific polymerase chain reaction (PCR) and bisulfite sequencing PCR. Additionally, we demonstrated that knockdown of STAT3, an oncogenic transcription factor, is sufficient to induce RANK promoter demethylation along with RANK reactivation. These results demonstrated that curcumin induced RANK gene reactivation through epigenetic modification in human glioblastoma cells, and that STAT3 is involved in RANK promoter hypermethylation and epigenetic silencing, thus allowing for further applications of curcumin epigenetic therapy in glioma and therapeutic implications of STAT3 in human glioblastoma.

[195]

**TÍTULO / TITLE:** - Knockdown of NF-E2-related factor 2 inhibits the proliferation and growth of U251MG human glioma cells in a mouse xenograft model.

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

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Jul;30(1):157-64. doi: 10.3892/or.2013.2476. Epub 2013 May 15.

●●Enlace al texto completo (gratis o de pago) [3892/or.2013.2476](http://3892/or.2013.2476)

**AUTORES / AUTHORS:** - Ji XJ; Chen SH; Zhu L; Pan H; Zhou Y; Li W; You WC; Gao CC; Zhu JH; Jiang K; Wang HD

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Jinling Hospital, Nanjing University School of Medicine, Nanjing, Jiangsu 210002, P.R. China.

**RESUMEN / SUMMARY:** - NF-E2-related factor 2 (Nrf2) is a pivotal transcription factor of cellular responses to oxidative stress and recent evidence suggests that Nrf2 plays an important role in cancer pathobiology. However, the underlying mechanism has yet to be elucidated, particularly in glioma. In the present study, we investigated the role of Nrf2 in the clinical prognosis, cell

proliferation and tumor growth of human glioblastoma multiforme (GBM). We detected overexpression of Nrf2 protein levels in GBM compared to normal brain tissues. Notably, higher protein levels of Nrf2 were significantly associated with poorer overall survival and 1-year survival for GBM patients. Furthermore, we constructed the plasmid Si-Nrf2 and transduced it into U251MG cells to downregulate the expression of Nrf2 and established stable Nrf2 knockdown cells. The downregulation of Nrf2 suppressed cell proliferation in vitro and tumor growth in mouse xenograft models. We performed immunohistochemistry staining to detect the protein levels of Nrf2, Ki-67, caspase-3 and CD31 in the xenograft tumors and found that the expression levels of Nrf2 and Ki-67 were much lower in the Si-Nrf2 group compared to the Si-control group. In addition, the number of caspase-3-positive cells was significantly increased in the Si-Nrf2 group. By analysis of microvessel density (MVD) assessed by CD31, the MVD value in the Si-Nrf2 group decreased significantly compared to the Si-control group. These findings indicate that the knockdown of Nrf2 may suppress tumor growth by inhibiting cell proliferation, increasing cell apoptosis and inhibiting angiogenesis. These results highlight the potential of Nrf2 as a candidate molecular target to control GBM cell proliferation and tumor growth.

[196]

**TÍTULO / TITLE:** - 24-year-old woman with an internal auditory canal mass. Hybrid peripheral nerve sheath tumor with schwannoma/perineurioma components.

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

**REVISTA / JOURNAL:** - Brain Pathol. 2013 May;23(3):361-2. doi: 10.1111/bpa.12055.

●●Enlace al texto completo (gratis o de pago) [1111/bpa.12055](http://1111/bpa.12055)

**AUTORES / AUTHORS:** - Las Heras F; Martuza R; Caruso P; Rincon S; Stemmer-Rachamimov A

**INSTITUCIÓN / INSTITUTION:** - Department of Anatomical Pathology, University of Chile Clinical Hospital.

**RESUMEN / SUMMARY:** - Benign peripheral nerve sheath tumors are divided into schwannomas, neurofibromas and perineuriomas. In recent years, tumors with hybrid features, composed of multiple, discrete areas of different histological types, were described. These tumors may represent a diagnostic challenge. A 24-year-old woman with multiple sclerosis was found to have a 1.3 cm TV x 0.7 cm AP T2 intermediate lesion within the left internal auditory canal. Gross examination revealed a tan-white, well circumscribed mass. Histologic examination demonstrated a well demarcated, cellular, solid neoplasm with a biphasic pattern. Most of the tumor was composed of spindle cells arranged in fascicles with focal Verocay body formation and diffuse S100 positivity. A second, minor area showed concentric proliferation of neoplastic spindle cells

around one or more axons. Tumor cells in this area were positive for perineurial markers, claudin-1 and Glut-1, and focally immunopositive for CD34. We present here a case of a benign peripheral nerve sheath tumor with histological and immunohistochemical features consistent with a dual pattern of differentiation of schwannoma and perineurioma, in the VIIIth cranial nerve. This is, to our knowledge, the first case of a hybrid perineurioma/schwannoma reported in a cranial nerve.

[197]

**TÍTULO / TITLE:** - Tolerance of awake surgery for glioma: a prospective European Low Grade Glioma Network multicenter study.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 21.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1759-](#)

[0](#)

**AUTORES / AUTHORS:** - Beez T; Boge K; Wager M; Whittle I; Fontaine D; Spina G; Braun S; Szelenyi A; Bello L; Duffau H; Sabel M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Heinrich-Heine-University, Moorenstrasse 5, 40225, Dusseldorf, Germany, [thomas.beez@med.uni-duesseldorf.de](mailto:thomas.beez@med.uni-duesseldorf.de).

**RESUMEN / SUMMARY:** - BACKGROUND: Gross total removal of glioma is limited by proximity to eloquent brain. Awake surgery allows for intraoperative monitoring to safely identify eloquent regions. However, data on adverse psychological effects induced in these patients is limited. OBJECTIVE: This study explored patients' perception of awake surgery for glioma, with special focus on intraoperative pain and anxiety. METHODS: This study was conducted at five neurosurgical centers within the European Low Grade Glioma Network. Patients underwent awake surgery for glioma according to the protocol of the individual center. Pain and discomfort were measured during the awake phase. Postoperatively, patients answered a questionnaire on aspects of their operation. RESULTS: One hundred five patients were enrolled. Pain levels on a 10-cm visual analogue scale were 1.3 cm at the beginning, 1.9 cm the middle, and 2.1 cm at the end of awake phase. Levels of anxiety were 2.2 cm, 2.5 cm and 2.6 cm, respectively. Women and patients younger than 60 years exhibited highest mean anxiety levels. The patient questionnaire revealed that the majority of patients feel comfortable with the procedure. Discomfort resulted from head fixation or positioning on the operating table. CONCLUSIONS: We demonstrate that awake surgery is well tolerated, as neither intraoperative nor postoperative assessment revealed major disadvantages. Concerning practical lessons learned from this study, we emphasize the importance of minimizing pain and preparing patients thoroughly to reduce anxiety and maximize

cooperation. Awake surgery is an excellent treatment modality for brain tumors with very positive perception by patients.

[198]

**TÍTULO / TITLE:** - Predominant contribution of L-type amino acid transporter to 4-borono-2-(18)F-fluoro-phenylalanine uptake in human glioblastoma cells.

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

**REVISTA / JOURNAL:** - Nucl Med Biol. 2013 Jul;40(5):625-9. doi: 10.1016/j.nucmedbio.2013.02.010. Epub 2013 Apr 2.

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

[1016/j.nucmedbio.2013.02.010](#)

**AUTORES / AUTHORS:** - Yoshimoto M; Kurihara H; Honda N; Kawai K; Ohe K; Fujii H; Itami J; Arai Y

**INSTITUCIÓN / INSTITUTION:** - Division of Functional Imaging, National Cancer Center Hospital East, Chiba. Electronic address: [miyoshim@ncc.go.jp](mailto:miyoshim@ncc.go.jp).

**RESUMEN / SUMMARY:** - INTRODUCTION: 4-Borono-2-(18)F-fluoro-phenylalanine ((18)F-FBPA) has been used to anticipate the therapeutic effects of boron neutron capture therapy (BNCT) with 4-borono-L-phenylalanine (BPA). Similarly, L-[methyl-(11)C]-methionine ((11)C-MET), the most popular amino acid PET tracer, is a possible candidate for this purpose. We investigated the transport mechanism of (18)F-FBPA and compared it with that of (14)C-MET in human glioblastoma cell lines. METHODS: Uptake of (18)F-FBPA and (14)C-MET was examined in A172, T98G, and U-87MG cells using 2-aminobicyclo-(2.2.1)-heptane-2-carboxylic acid (a system L-specific substrate), 2-(methylamino)-isobutyric acid (a system A-specific substrate), and BPA. Gene expression was analyzed by quantitative real time polymerase chain reaction. RESULTS: System L was mainly involved in the uptake of (18)F-FBPA (74.5%-81.1% of total uptake) and (14)C-MET (48.3%-59.4%). System A and ASC also contributed to the uptake of (14)C-MET. Inhibition experiments revealed that BPA significantly decreased the uptake of (18)F-FBPA, whereas 31%-42% of total (14)C-MET uptake was transported by BPA non-sensitive transporters. In addition, (18)F-FBPA uptake correlated with LAT1 and total LAT expressions. CONCLUSION: This study demonstrated that (18)F-FBPA was predominantly transported by system L in human glioblastoma cells compared to (14)C-MET. Although further studies are needed to elucidate the correlation between (18)F-FBPA uptake and BPA content in tumor tissues, (18)F-FBPA is suitable for the selection of patients who benefit from BNCT with BPA.

[199]

- CASTELLANO -

**TÍTULO / TITLE:** Akute Promyelozytenleukämie und lebensbedrohliche Hirnmassenblutung: Sicherheit und Effizienz von Arsentrioxid anstelle konventioneller Chemotherapie bei einer Jugendlichen.

**TÍTULO / TITLE:** - Acute Promyelocytic Leukemia Complicated by Massive Intracerebral Hemorrhage: Safety and Efficacy of Replacing Conventional Chemotherapy with Arsenic Trioxide in an Adolescent.

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

**REVISTA / JOURNAL:** - Klin Padiatr. 2013 May;225(3):172-173. Epub 2013 Apr 26.

●●Enlace al texto completo (gratis o de pago) [1055/s-0033-1334898](#)

**AUTORES / AUTHORS:** - Muller E; Seidel MG; Lackner H; Dworzak M; Urban C

[200]

**TÍTULO / TITLE:** - High-dose chemotherapy and autologous stem cell transplantation for secondary central nervous system lymphoma: many are called, but few are chosen.

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

**REVISTA / JOURNAL:** - Haematologica. 2013 May;98(5):662-4. doi: 10.3324/haematol.2013.084285.

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

[3324/haematol.2013.084285](#)

**AUTORES / AUTHORS:** - Abramson JS

**INSTITUCIÓN / INSTITUTION:** - [jabramson@partners.org](mailto:jabramson@partners.org).

[201]

**TÍTULO / TITLE:** - ERK and PI3K signaling cascades induce Nrf2 activation and regulate cell viability partly through Nrf2 in human glioblastoma cells.

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

**REVISTA / JOURNAL:** - Oncol Rep. 2013 May 23. doi: 10.3892/or.2013.2485.

●●Enlace al texto completo (gratis o de pago) [3892/or.2013.2485](#)

**AUTORES / AUTHORS:** - Cong ZX; Wang HD; Wang JW; Zhou Y; Pan H; Zhang DD; Zhu L

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Jinling Hospital, School of Medicine, Nanjing University, Nanjing, Jiangsu 210002, P.R. China.

**RESUMEN / SUMMARY:** - The ERK and PI3K signaling cascades are aberrantly activated in human glioblastoma cells, resulting in the dysregulation of numerous downstream transcription factors. The dark side of the transcription factor, NF-E2-related factor 2 (Nrf2) in human cancer has been revealed. It has been accepted that high levels of Nrf2 promote tumor progression. In the present study, we investigated the effect of the ERK and PI3K signaling cascades on Nrf2 in human glioblastoma cells. Immunohistochemical staining

for Nrf2 in clinical specimens showed that the expression and nuclear localization of Nrf2 were increased in human glioblastoma tissues when compared to peritumoral normal tissues. In addition, we detected decreased nuclear localization of Nrf2 following combined treatment with ERK and PI3K inhibitors in three human glioblastoma cell lines and selected the cell line (U251) most sensitive to the inhibitors for further study. Our data demonstrated that inhibition of ERK and PI3K not only suppressed the nuclear accumulation of Nrf2 protein but also decreased the expression of the Nrf2 protein. In addition, combined inhibition of ERK and PI3K also decreased the mRNA levels of Nrf2 target genes. Finally, we found that Nrf2 overexpression partly reversed the ERK and PI3K inhibitor-induced inhibition of cell viability. Therefore, the ERK and PI3K signaling cascades regulate the expression and activation of Nrf2 and control cell viability partly through Nrf2 in U251 human glioblastoma cells. Thus, targeting the ERK and PI3K signaling cascades for Nrf2 activation may provide new methods for the treatment of glioblastoma.

[202]

**TÍTULO / TITLE:** - The histone deacetylase inhibitor trichostatin a promotes apoptosis and antitumor immunity in glioblastoma cells.

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

**REVISTA / JOURNAL:** - Anticancer Res. 2013 Apr;33(4):1351-60.

**AUTORES / AUTHORS:** - Horing E; Podlech O; Silkenstedt B; Rota IA; Adamopoulou E; Naumann U

**INSTITUCIÓN / INSTITUTION:** - Hertie Institute for Clinical Brain Research and Center Neurology, Department of Vascular Neurology, Laboratory of Molecular Neuro-Oncology, Tübingen, Germany.

**RESUMEN / SUMMARY:** - Histone deacetylase inhibitors (HDACi) have been described as multifunctional anticancer agents. The failure of conventional therapy for glioblastoma (GBM) renders this tumor an attractive target for immunotherapy. Innate immune cells, such as natural killer (NK) cells, play a crucial role in antitumor immune responses. Here, we describe how the HDACi trichostatin A (TSA) promotes apoptosis of tumor cells, as well as augments anti-GBM innate immune responses. In vitro treatment of GBM cells with TSA results in an up-regulation of the natural killer group-2 member-D (NKG2D) ligands major histocompatibility complex class I-related chain (MIC)-A and UL16 binding protein (ULBP)-2 at both mRNA and protein levels, rendering them susceptible to NK cell-mediated lysis. In vivo, TSA delays tumor growth of GBM xenografts. Both the in vitro and in vivo antitumor effect of TSA was significantly reduced by blocking NK cell activity. Our data suggest that HDACi, especially in combination with other clinical immunotherapeutic approaches, may be considered in a combined therapeutic approach for GBM.

[203]

**TÍTULO / TITLE:** - Expressions of Tumor Necrosis Factor Alpha and MicroRNA-155 in Immature Rat Model of Status Epilepticus and Children with Mesial Temporal Lobe Epilepsy.

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

**REVISTA / JOURNAL:** - J Mol Neurosci. 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1007/s12031-013-0013-](#)

[9](#)

**AUTORES / AUTHORS:** - Ashhab MU; Omran A; Kong H; Gan N; He F; Peng J; Yin F

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Xiangya Hospital of Central South University, No. 87 Xiangya Road, Changsha, Hunan, 410008, China.

**RESUMEN / SUMMARY:** - Recently, the role of inflammation has attracted great attention in the pathogenesis of mesial temporal lobe epilepsy (MTLE), and microRNAs start to emerge as promising new players in MTLE pathogenesis. In this study, we investigated the dynamic expression patterns of tumor necrosis factor alpha (TNF-alpha) and microRNA-155 (miR-155) in the hippocampi of an immature rat model of status epilepticus (SE) and children with MTLE. The expressions of TNF-alpha and miR-155 were significantly upregulated in the seizure-related acute and chronic stages of MTLE in the immature rat model and also in children with MTLE. Modulation of TNF-alpha expression, either by stimulation using myeloid-related protein (MRP8) or lipopolysaccharide or inhibition using lenalidomide on astrocytes, leads to similar dynamic changes in miR-155 expression. Our study is the first to focus on the dynamic expression pattern of miR-155 in the immature rat of SE lithium-pilocarpine model and children with MTLE and to detect their relationship at the astrocyte level. TNF-alpha and miR-155, having similar expression patterns in the three stages of MTLE development, and their relationship at the astrocyte level may suggest a direct interactive relationship during MTLE development. Therefore, modulation of the TNF-alpha/miR-155 axis may be a novel therapeutic target for the treatment of MTLE.

[204]

**TÍTULO / TITLE:** - Early life exposures and the risk of adult glioma.

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

**REVISTA / JOURNAL:** - Eur J Epidemiol. 2013 May 17.

●●Enlace al texto completo (gratis o de pago) [1007/s10654-013-9811-](#)

[1](#)

**AUTORES / AUTHORS:** - Anic GM; Madden MH; Sincich K; Thompson RC; Nabors LB; Olson JJ; Larocca RV; Browning JE; Pan E; 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:** - Exposure to common infections in early life may stimulate immune development and reduce the risk for developing cancer. Birth order and family size are proxies for the timing of exposure to childhood infections with several studies showing a reduced risk of glioma associated with a higher order of birth (and presumed younger age at infection). The aim of this study was to examine whether birth order, family size, and other early life exposures are associated with the risk of glioma in adults using data collected in a large clinic-based US case-control study including 889 glioma cases and 903 community controls. A structured interviewer-administered questionnaire was used to collect information on family structure, childhood exposures and other potential risk factors. Logistic regression was used to calculate odds ratios (OR) and corresponding 95 % confidence intervals (CI) for the association between early life factors and glioma risk. Persons having any siblings were at significantly lower risk for glioma when compared to those reporting no siblings (OR = 0.64; 95 % CI 0.44-0.93; p = 0.020). Compared to first-borns, individuals with older siblings had a significantly lower risk (OR = 0.75; 95 % CI 0.61-0.91; p = 0.004). Birth weight, having been breast fed in infancy, and season of birth were not associated with glioma risk. The current findings lend further support to a growing body of evidence that early exposure to childhood infections reduces the risk of glioma onset in children and adults.

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[205]

**TÍTULO / TITLE:** - The Intersection Between Genetic Engineering and Immunotherapy: Taking a BiTE out of Glioblastoma.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Jun;72(6):N16-7. doi: 10.1227/01.neu.0000430735.78738.29.

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

[1227/01.neu.0000430735.78738.29](http://1227/01.neu.0000430735.78738.29)

**AUTORES / AUTHORS:** - Njoku I Jr; Boockvar JA

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[206]

**TÍTULO / TITLE:** - FoxG1 Interacts with Bmi1 to Regulate Self-Renewal and Tumorigenicity of Medulloblastoma Stem Cells.

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

**REVISTA / JOURNAL:** - Stem Cells. 2013 Apr 17. doi: 10.1002/stem.1401.

●●Enlace al texto completo (gratis o de pago) [1002/stem.1401](http://1002/stem.1401)

**AUTORES / AUTHORS:** - Manoranjan B; Wang X; Hallett RM; Venugopal C; Mack SC; McFarlane N; Nolte SM; Scheinemann K; Gunnarsson T; Hassell JA; Taylor MD; Lee C; Triscott J; Foster CM; Dunham C; Hawkins C; Dunn SE; Singh SK

**INSTITUCIÓN / INSTITUTION:** - McMaster Stem Cell and Cancer Research Institute, McMaster University, Hamilton, Ontario, L8S 4K1, Canada; Department of Biochemistry and Biomedical Sciences, Faculty of Health Sciences, McMaster University, 1200 Main Street West, Hamilton, Ontario, L8N 3Z5, Canada.

**RESUMEN / SUMMARY:** - Brain tumors represent the leading cause of childhood cancer mortality, of which medulloblastoma (MB) is the most frequent malignant tumor. Recent studies have demonstrated the presence of several MB molecular subgroups, each distinct in terms of prognosis and predicted therapeutic response. Groups 1 and 2 are characterized by relatively good clinical outcomes and activation of the Wnt and Shh pathways, respectively. In contrast, Groups 3 and 4 (“non-Shh/Wnt MBs”) are distinguished by metastatic disease, poor patient outcome, and lack a molecular pathway phenotype. Current gene expression platforms have not detected brain tumor-initiating cell (BTIC) self-renewal genes in Group 3 and 4 MBs as BTICs typically comprise a minority of tumor cells and may therefore go undetected on bulk tumor analyses. Since increasing BTIC frequency has been associated with increasing tumor aggressiveness and poor patient outcome, we investigated the subgroup-specific gene expression profile of candidate stem cell genes within 251 primary human MBs from four non-overlapping MB transcriptional databases (Amsterdam, Memphis, Toronto, Boston) and 74 NanoString-subgrouped MBs (Vancouver). We assessed the functional relevance of two genes, FoxG1 and Bmi1, which were significantly enriched in non-Shh/Wnt MBs, and showed these genes to mediate MB stem cell self-renewal and tumor initiation in mice. We also identified their transcriptional regulation through reciprocal promoter occupancy in CD15+ MB stem cells. Our work demonstrates the application of stem cell data gathered from genomic platforms to guide functional BTIC assays, which may then be used to develop novel BTIC self-renewal mechanisms amenable to therapeutic targeting.

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[207]

**TÍTULO / TITLE:** - S100B Promotes Glioma Growth through Chemoattraction of Myeloid-Derived Macrophages.

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

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 May 29.

●●Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-3725](#)

**AUTORES / AUTHORS:** - Wang H; Zhang L; Zhang IY; Chen X; Carvalho da Fonseca AC; Wu S; Ren H; Badie S; Sadeghi S; Ouyang M; Warden CD; Badie B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Provincial Hospital Affiliated to Shandong University.

**RESUMEN / SUMMARY:** - **PURPOSE:** S100B is member of a multigenic family of Ca<sup>2+</sup>-binding proteins that is overexpressed by gliomas. Recently, we demonstrated that low concentrations of S100B attenuated microglia activation through the induction of Stat3. We hypothesized that overexpression of S100B in gliomas could promote tumor growth by modulating the activity of tumor-associated macrophages (TAMs). **EXPERIMENTAL DESIGN:** We stably transfected GL261 glioma cell lines with constructs that overexpressed (S100B<sup>high</sup>) or underexpressed (S100B<sup>low</sup>) S100B and compared their growth characteristics to intracranial wild-type (S100B<sup>wt</sup>) tumors. **RESULTS:** Downregulation of S100B in gliomas had no impact on cell division in vitro but abrogated tumor growth in vivo. Interestingly, compared to S100B<sup>low</sup> tumors, S100B<sup>wt</sup> and S100B<sup>high</sup> intracranial gliomas exhibited higher infiltration of TAMs, stronger inflammatory cytokine expression, and increased vascularity. To identify the potential mechanisms involved, the expression of the S100B receptor, RAGE (receptor for advanced glycation end products), was evaluated in gliomas. Although S100B expression induced RAGE in vivo, RAGE ablation in mice did not significantly inhibit TAM infiltration into gliomas, suggesting that other pathways were involved in this process. To evaluate other mechanisms responsible for TAM chemoattraction, we then examined chemokine pathways and found that CCL2 was upregulated in S100B<sup>high</sup> tumors. Furthermore, analysis of TCGA's glioma data bank demonstrated a positive correlation between S100B and CCL2 expression in human proneural and neural glioma subtypes, supporting our finding. **CONCLUSIONS:** These observations suggest that S100B promotes glioma growth by TAM chemoattraction through upregulation of CCL2 and introduces the potential utility of S100B inhibitors for glioma therapy.

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[208]

**TÍTULO / TITLE:** - Glioma therapy using tumor homing and penetrating peptide-functionalized PEG-PLA nanoparticles loaded with paclitaxel.

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

**REVISTA / JOURNAL:** - Biomaterials. 2013 Jul;34(22):5640-50. doi: 10.1016/j.biomaterials.2013.04.025. Epub 2013 Apr 29.

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

[1016/j.biomaterials.2013.04.025](http://1016/j.biomaterials.2013.04.025)

**AUTORES / AUTHORS:** - Hu Q; Gao X; Gu G; Kang T; Tu Y; Liu Z; Song Q; Yao L; Pang Z; Jiang X; Chen H; Chen J

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Smart Drug Delivery, Ministry of Education & PLA, School of Pharmacy, Fudan University, Lane 826, Zhangheng Road, Shanghai 201203, PR China.

**RESUMEN / SUMMARY:** - By taking advantage of the excessively upregulated expression of neuropilin (NRP) on the surface of both glioma cells and endothelial cells of angiogenic blood vessels, the ligand of NRP with high affinity - tLyp-1 peptide, which also contains a CendR motif ((R/K)XX(R/K)), was functionalized to the surface of PEG-PLA nanoparticles (tLyp-1-NP) to mediate its tumor homing, vascular extravasation and deep penetration into the glioma parenchyma. The tLyp-1-NP was prepared via a maleimide-thiol coupling reaction with uniformly spherical shape under TEM and particle size of 111.30 +/- 15.64 nm. tLyp-1-NP exhibited enhanced cellular uptake in both human umbilical vein endothelial cells and Rat C6 glioma cells, increased cytotoxicity of the loaded PTX, and improved penetration and growth inhibition in avascular C6 glioma spheroids. Selective accumulation and deep penetration of tLyp-1-NP at the glioma site was confirmed by in vivo imaging and glioma distribution analysis. The longest survival was achieved by those mice bearing intracranial C6 glioma treated with PTX-loaded tLyp-1-NP. The findings here strongly indicate that tLyp-1 peptide-functionalized nanoparticulate DDS could significantly improve the efficacy of paclitaxel glioma therapy.

[209]

**TÍTULO / TITLE:** - Does Prior Microsurgery Improve or Worsen the Outcomes of Stereotactic Radiosurgery for Cavernous Sinus Meningiomas?

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 May 29.

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

[1227/01.neu.0000431471.64289.3d](https://doi.org/10.1227/01.neu.0000431471.64289.3d)

**AUTORES / AUTHORS:** - Kano H; Park KJ; Kondziolka D; Iyer A; Liu X; Tonetti D; Flickinger JC; Lunsford LD

**INSTITUCIÓN / INSTITUTION:** - 1Departments of Neurological Surgery 2Radiation Oncology 3Center for Image-Guided Neurosurgery 4University of Pittsburgh School of Medicine, Pittsburgh, PA 5Department of Neurosurgery, College of Medicine, Korea University, Seoul, Korea 6Department of Neurosurgery and Gamma Knife Center, 2nd Hospital of Tianjin Medical University, Tianjin, China.

**RESUMEN / SUMMARY:** - BACKGROUND:: Stereotactic radiosurgery (SRS) is an important option for patients with cavernous sinus meningiomas. OBJECTIVE:: To evaluate cranial nerve outcomes in patients who underwent SRS for cavernous sinus meningiomas with or without prior microsurgery. METHODS:: During a 23-year interval, 272 patients underwent Gamma Knife SRS for cavernous sinus meningiomas (male=70, female=202), with a median age of 54 years. In this series, 99 patients underwent prior microsurgical resection. The

median tumor volume was 7.9 cc and median marginal dose was 13 Gy. The median follow-up period was 62 months (6-209 months). RESULTS:: The progression-free survival after SRS was 96% at 3 years, 94% at 5 years, and 86% at 10 years. After SRS, 13 of 91 patients (14%) who underwent prior microsurgery had improvement of preexisting cranial nerve symptoms or signs. In comparison, 54 of 145 patients (37%) without prior microsurgery had improvement of preexisting cranial nerve symptoms or signs. The improvement rate of cranial nerve deficits after SRS in patients without prior microsurgery was 20% at 1 year, 34% at 2 years, 36% at 3 years, and 39% at 5 years. Patients who had not undergone prior microsurgery had significantly higher improvement rates of preexisting cranial nerve symptoms and signs (p=0.0001). After SRS, 29 patients (11%) developed new or worsened cranial nerve function. CONCLUSION:: SRS provided long-term effective tumor control and a low risk of new cranial nerve deficits. Improvement in preexisting cranial neuropathies was detected in significantly more patients who had not undergone prior microsurgical procedures.

[210]

**TÍTULO / TITLE:** - Gene expression changes in rat brain after short and long exposures to particulate matter in Los Angeles basin air: Comparison with human brain tumors.

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

**REVISTA / JOURNAL:** - Exp Toxicol Pathol. 2013 May 17. pii: S0940-2993(13)00054-7. doi: 10.1016/j.etp.2013.04.002.

●●Enlace al texto completo (gratis o de pago) [1016/j.etp.2013.04.002](http://1016/j.etp.2013.04.002)

**AUTORES / AUTHORS:** - Ljubimova JY; Kleinman MT; Karabalin NM; Inoue S; Konda B; Gangalum P; Markman JL; Ljubimov AV; Black KL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Cedars-Sinai Medical Center, Los Angeles, CA 90048, United States. Electronic address: [ljubimovaj@cshs.org](mailto:ljubimovaj@cshs.org).

**RESUMEN / SUMMARY:** - Air pollution negatively impacts pulmonary, cardiovascular, and central nervous systems. Although its influence on brain cancer is unclear, toxic pollutants can cause blood-brain barrier disruption, enabling them to reach the brain and cause alterations leading to tumor development. By gene microarray analysis validated by quantitative RT-PCR and immunostaining we examined whether rat (n=104) inhalation exposure to air pollution particulate matter (PM) resulted in brain molecular changes similar to those associated with human brain tumors. Global brain gene expression was analyzed after exposure to PM (coarse, 2.5-10µm; fine, <2.5µm; or ultrafine, <0.15µm) and purified air for different times, short (0.5, 1, and 3 months) and chronic (10 months), for 5h per day, four days per week. Expression of select gene products was also studied in human brain (n=7) and

in tumors (n=83). Arc/Arg3.1 and Rac1 genes, and their protein products were selected for further examination. Arc was elevated upon two-week to three-month exposure to coarse PM and declined after 10-month exposure. Rac1 was significantly elevated upon 10-month coarse PM exposure. On human brain tumor sections, Arc was expressed in benign meningiomas and low-grade gliomas but was much lower in high-grade tumors. Conversely, Rac1 was elevated in high-grade vs. low-grade gliomas. Arc is thus associated with early brain changes and low-grade tumors, whereas Rac1 is associated with long-term PM exposure and highly aggressive tumors. In summary, exposure to air PM leads to distinct changes in rodent brain gene expression similar to those observed in human brain tumors.

[211]

**TÍTULO / TITLE:** - Epithelial-mesenchymal transition and clinicopathological correlation in craniopharyngioma.

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

**REVISTA / JOURNAL:** - Histopathology. 2012 May 17;61(4):711-725. doi: 10.1111/j.1365-2559.2012.04297.x.

●●Enlace al texto completo (gratis o de pago) [1111/j.1365-2559.2012.04297.x](#)

**AUTORES / AUTHORS:** - Qi ST; Zhou J; Pan J; Zhang C; Silky C; Yan XR

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Nanfang Hospital, Southern Medical University, Guangzhou Department of Neurosurgery, Affiliated Hospital of Luzhou Medical College, Luzhou Department of Pathology, Nanfang Hospital, Southern Medical University, Guangzhou, China.

**RESUMEN / SUMMARY:** - Qi S-T, Zhou J, Pan J, Zhang C, Silky C & Yan X-R (2012) Histopathology61, 711-725 Epithelial-mesenchymal transition and clinicopathological correlation in craniopharyngioma Aims: To assess the immunophenotypic changes associated with epithelial-mesenchymal transition (EMT) in craniopharyngioma, especially at the tumour invasive front, and to correlate the findings with clinicopathological features and patient outcomes. Methods and results: Forty-two craniopharyngiomas were investigated for the presence of EMT markers (vimentin, E-cadherin and beta-catenin) by immunohistochemistry and western blot. The relationships between expression of these markers and various clinicopathological indicators and clinical outcomes of the tumours were analysed. There were statistically significant differences in the expression of vimentin and E-cadherin-beta-catenin between adamantinomatous and papillary variants. The expression of vimentin and E-cadherin (but not that of beta-catenin) in whole tumour sections was associated with tumour recurrence, and with postoperative weight and hypothalamic disturbances; the expression of vimentin and E-cadherin-beta-catenin at the tumour invasive front was also associated with tumour recurrence,

postoperative weight, and hypothalamic disturbances. The results from western blotting closely matched those of immunohistochemistry. Conclusions: Our study demonstrates, for the first time, the potential prognostic implications of vimentin, E-cadherin and beta-catenin expression in craniopharyngiomas. EMT may represent a crucial mechanism in the progression of craniopharyngiomas.

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[212]

**TÍTULO / TITLE:** - Intensity-modulated radiation therapy with hypoxic sensitizer AK-2123 (sanazole) for glioblastoma multiforme using simultaneous integrated boost technique.

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

**REVISTA / JOURNAL:** - Anticancer Res. 2013 Apr;33(4):1685-8.

**AUTORES / AUTHORS:** - Yamazaki H; Nakamura S; Nishimura T; Okabe H; Aibe N; Yoshida K; Kagiya T

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Kyoto Prefectural University of Medicine, Kamigyo-ku, Kyoto, Japan. [hideya10@hotmail.com](mailto:hideya10@hotmail.com)

**RESUMEN / SUMMARY:** - BACKGROUND: Glioblastoma has a very poor prognosis even after incorporation into therapy of the newly-developed drug, temozolomide. Case Report: We present a case of 62-year-old woman with glioblastoma multiforme treated with tomotherapy intensity-modulated radiation therapy using simultaneous integrated boost technique (SIB-IMRT) along with a daily oral dose of a hypoxic radiation sensitizer, sanazole (AK-2123). SIB-IMRT was administered at a dose of 60 Gy in 20 fractions for high-risk planning target volume (PTV) and at 40 Gy for low-risk PTV. The patient received an oral administration of sanazole (1.0 g/day) for 10 days, 2 h before radiotherapy. She achieved a complete response without any adverse events, and remained disease-free for 3.5 years. Our study demonstrates that the higher single-dose radiotherapy combined with a hypoxic radiation sensitizer has the potential to enhance the efficacy of radiotherapy.

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[213]

**TÍTULO / TITLE:** - Downregulation of miR-124 promotes the growth and invasiveness of glioblastoma cells involving upregulation of PPP1R13L.

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

**REVISTA / JOURNAL:** - Int J Mol Med. 2013 Jul;32(1):101-7. doi: 10.3892/ijmm.2013.1365. Epub 2013 Apr 29.

●●Enlace al texto completo (gratuito o de pago) [3892/ijmm.2013.1365](#)

**AUTORES / AUTHORS:** - Zhao WH; Wu SQ; Zhang YD

**INSTITUCIÓN / INSTITUTION:** - National Hepatobiliary and Enteric Surgery Research Center, Central South University, Changsha 410008, P.R. China.

**RESUMEN / SUMMARY:** - microRNA-124 (miR-124) plays an important role in regulating growth, invasiveness, stem-like traits, differentiation and apoptosis of glioblastoma cells. PPP1R3L, an inhibitory member of the apoptosis-stimulating protein of p53 family (IASPP), is also able to affect growth, cell cycle progression, metastasis and apoptosis of various types of cancer. To investigate the regulation of PPP1R13L expression by miR-124 and their effects on proliferation, cell cycle transition and invasion in glioblastoma cells, U251 and U373 glioblastoma cells were transfected with miR-124 mimics, its negative control (NC) or an inhibitor. We found that miR-124 was downregulated in glioblastoma tissues, and inversely regulated PPP1R13L expression in U251 and U373 glioblastoma cells. PPP1R13L was found to be a direct target of miR-124 in glioblastoma cells. Overexpression of miR-124 inhibited proliferation, G1/S transition and invasiveness in glioblastoma cells. miR-124 downregulation-mediated malignant progression of glioblastoma was partly attributed to increased PPP1R13L expression. Consequently, our findings provide a molecular basis for the role of miR-124/PPP1R13L in the progression of human glioblastoma and suggest a novel target for the treatment of glioblastoma.

[214]

**TÍTULO / TITLE:** - Upregulated glial cell line-derived neurotrophic factor through cyclooxygenase-2 activation in the muscle is required for mechanical hyperalgesia after exercise in rats.

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

**REVISTA / JOURNAL:** - J Physiol. 2013 May 20.

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

[1113/jphysiol.2012.249235](http://1113/jphysiol.2012.249235)

**AUTORES / AUTHORS:** - Murase S; Terazawa E; Hirate K; Yamanaka H; Kanda H; Noguchi K; Ota H; Queme F; Taguchi T; Mizumura K

**INSTITUCIÓN / INSTITUTION:** - Chubu university;

**RESUMEN / SUMMARY:** - Unaccustomed strenuous exercise that includes lengthening contraction (LC) often causes delayed onset muscle soreness (DOMS), a kind of muscular mechanical hyperalgesia. Previously we reported that bradykinin-like substance released from the muscle during exercise plays a pivotal role in triggering the process of muscular mechanical hyperalgesia by upregulating nerve growth factor (NGF) in exercised muscle of rats. We show here that cyclooxygenase (COX)-2 and glial cell line-derived neurotrophic factor (GDNF) are also involved in DOMS. COX-2 inhibitors but not COX-1 inhibitors given orally before LC completely suppressed the development of DOMS, but when given 2 days after LC they failed to reverse the mechanical hyperalgesia. COX-2 mRNA and protein in exercised muscle increased 6-13 fold in mRNA and 1.7-2 fold in protein 0-12 hours after LC. COX-2 inhibitors did not suppress

NGF upregulation after LC. Instead, we found GDNF mRNA was upregulated 7-8 fold in the exercised muscle 12 hours to 1 day after LC and blocked by pretreatment of COX-2 inhibitors. In situ hybridization studies revealed that both COX-2 and GDNF mRNA signals increased at the periphery of skeletal muscle cells 12 hours after LC. The accumulation of COX-2 mRNA signals was also observed in small blood vessels. Intramuscular injection of anti-GDNF antibody 2 days after LC partly reversed DOMS. Based on these findings, we conclude that GDNF upregulation through COX-2 activation is essential to mechanical hyperalgesia after exercise.

[215]

**TÍTULO / TITLE:** - Downregulation of miR-452 Promotes Stem-like traits and Tumorigenicity of Gliomas.

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

**REVISTA / JOURNAL:** - Clin Cancer Res. 2013 May 21.

●●Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-3794](#)

**AUTORES / AUTHORS:** - Liu LP; Chen K; Wu J; Shi L; Hu B; Cheng SY; Li M; Song L

**INSTITUCIÓN / INSTITUTION:** - Microbiology, Sun Yat-sen University Zhongshan School of Medicine.

**RESUMEN / SUMMARY:** - **PURPOSE:** miR-452 is reported to be required for neural crest stem cell differentiation during neural crest development. However, the biological role of miR-452 in gliomas remains unclear. The aim of the present study was to evaluate the effect of miR-452 on the stem-like properties and tumorigenesis of glioma cells. **EXPERIMENTAL DESIGN:** The expression of miR-452 was examined in glioma cells and glioma tissues using real-time PCR. The effects of miR-452 on stem-like traits and tumorigenesis were investigated in vitro and in vivo using patient-derived glioma cells and glioma cell lines. Western blotting and luciferase reporter assays were performed to examine the negative regulation of Bmi-1, LEF1 and TCF4 by miR-452. The methylation of the miR-452 promoter region was examined by bisulfite genomic sequencing PCR. **RESULTS:** miR-452 was markedly downregulated in glioma cells and clinical glioma tissues. miR-452 levels inversely correlated with WHO grades and patient survival. miR-452 directly targeted and suppressed multiple stemness regulators, including Bmi-1, LEF1 and TCF4, resulting in reduced stem-like traits and tumorigenesis of glioma cells in vitro and in vivo. Furthermore, we demonstrated that downregulation of miR-452 in gliomas was caused by hypermethylation of its promoter region. **CONCLUSIONS:** Downregulation of miR-452 plays an important role in promoting the stem-like traits and tumorigenesis of gliomas and may represent a novel prognostic biomarker and therapeutic target for the disease.

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[216]

**TÍTULO / TITLE:** - PET in the Clinical Management of Glioma: Evidence Map.

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

**REVISTA / JOURNAL:** - AJR Am J Roentgenol. 2013 Jun;200(6):W654-60. doi: 10.2214/AJR.12.9168.

●●Enlace al texto completo (gratis o de pago) [2214/AJR.12.9168](#)

**AUTORES / AUTHORS:** - Nihashi T; Dahabreh IJ; Terasawa T

**INSTITUCIÓN / INSTITUTION:** - 1 Department of Radiology, Nagoya University Graduate School of Medicine, Nagoya, Japan.

**RESUMEN / SUMMARY:** - OBJECTIVE. Several studies have assessed PET to complement the anatomic information obtained from other imaging modalities in various clinical contexts for the management of glioma. We constructed an evidence map of clinical evidence on the use of PET in glioma and identified research gaps. MATERIALS AND METHODS. We searched PubMed and Scopus (from inception through June 30, 2011) to identify studies assessing the use of PET for glioma regardless of setting of care or indication. We extracted test objectives, study characteristics, and phases of diagnostic evidence and then assessed research diversity and temporal trends in the literature. We excluded studies assessing only technical feasibility and optimization of PET. RESULTS. A total of 129 studies were considered eligible; the number of articles published annually has greatly increased over time (p for trend < 0.001). Most studies (n = 118, 91%) assessed diagnostic or prognostic performance; fewer studies reported on the impact of PET on diagnostic thinking (n = 4, 3%), therapeutic decisions (n = 4, 3%), or patient-relevant clinical outcomes (n = 3; 2%). Fluorine-18 FDG (n = 73, 57%) or (11)C-methionine (n = 44, 34%) were the two most commonly evaluated PET tracers. Pretherapy assessment (n = 72, 56%) and monitoring of treatment response (n = 48, 37%) were the most common settings of test use assessed in the research studies. CONCLUSION. More primary studies, particularly studies of newer tracers focusing on biopsy or treatment planning, are needed to better characterize the role of PET in specific contexts.

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[217]

**TÍTULO / TITLE:** - Arsenic trioxide depletes cancer stem-like cells and inhibits repopulation of neurosphere derived from glioblastoma by downregulation of Notch pathway.

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

**REVISTA / JOURNAL:** - Toxicol Lett. 2013 Jun 20;220(1):61-9. doi: 10.1016/j.toxlet.2013.03.019. Epub 2013 Mar 28.

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

[1016/j.toxlet.2013.03.019](http://1016/j.toxlet.2013.03.019)

**AUTORES / AUTHORS:** - Wu J; Ji Z; Liu H; Liu Y; Han D; Shi C; Shi C; Wang C; Yang G; Chen X; Shen C; Li H; Bi Y; Zhang D; Zhao S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Affiliated Hospital of Harbin Medical University, Harbin, China; Brain Science Institute of Harbin Medical University, China.

**RESUMEN / SUMMARY:** - Notch signaling has been demonstrated to have a central role in cancer stem-like cells (CSLCs) in glioblastoma multiforme (GBM). We have recently demonstrated the inhibitory effect of arsenic trioxide (ATO) on CSLCs in glioblastoma cell lines. In this study we used neurosphere recovery assay that measured neurosphere formation at three time points to assess the capacity of the culture to repopulate after ATO treatment. Our results provided strong evidence that ATO depleted CSLCs in GBM, and inhibited neurosphere recovery and secondary neurosphere formation. ATO inhibited the phosphorylation and activation of AKT and STAT3 through Notch signaling blockade. These data show that the ATO is a promising new approach to decrease glioblastoma proliferation and recurrence by downregulation of Notch pathway.

[218]

**TÍTULO / TITLE:** - Cellular imaging and texture analysis distinguish differences in cellular dynamics in mouse brain tumors.

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

**REVISTA / JOURNAL:** - Magn Reson Med. 2013 May 9. doi: 10.1002/mrm.24790.

●●Enlace al texto completo (gratis o de pago) [1002/mrm.24790](http://1002/mrm.24790)

**AUTORES / AUTHORS:** - Gazdzinski LM; Nieman BJ

**INSTITUCIÓN / INSTITUTION:** - Mouse Imaging Centre, Hospital for Sick Children, Toronto Centre for Phenogenomics, Toronto, Ontario, Canada.

**RESUMEN / SUMMARY:** - **PURPOSE:** The heterogeneous tumor cell population and dynamic microenvironment within a tumor lead to regional variations in cell proliferation, migration, and differentiation. In this work, MRI and optical projection tomography were used to examine and compare the redistribution of a cellular label in two mouse glioma models. **METHODS:** GL261 and 4C8 glioma cells labeled with iron oxide particles or with a fluorescent probe were injected into the brains of syngeneic mice and allowed to develop into approximately 10-mm<sup>3</sup> tumors. Texture analysis was used to quantitatively describe and compare the label distribution patterns in the two tumor types. **RESULTS:** The label was seen to remain predominantly in the tumor core in GL261 tumors, but become more randomly distributed throughout the tumor volume in 4C8 tumors. Histologically, GL261 tumors displayed a more invasive, aggressive phenotype, although the distribution of mitotic cells in the two tumors

was similar. CONCLUSION: The redistribution of a cellular label during tumor growth is characteristic of a tumor model. The label distribution map reflects more than simple differences in cell proliferation and is likely influenced by differences in the tumor microenvironment. Magn Reson Med, 2013. © 2013 Wiley Periodicals, Inc.

[219]

**TÍTULO / TITLE:** - PRECLINICAL STUDY OF A GLYCOENGINEERED ANTI-HUMAN CD20 ANTIBODY IN MURINE MODELS OF PRIMARY CEREBRAL AND INTRAOCULAR B-CELL LYMPHOMAS.

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

**REVISTA / JOURNAL:** - Invest Ophthalmol Vis Sci. 2013 Apr 23. pii: iovs.12-10316v1. doi: 10.1167/iov.12-10316.

●●Enlace al texto completo (gratis o de pago) [1167/iov.12-10316](http://1167/iov.12-10316)

**AUTORES / AUTHORS:** - Ben Abdelwahed R; Donnou S; Ouakrim H; Crozet L; Cosette J; Jacquet A; Tourais I; Fournes B; Gillard Bocquet M; Miloudi A; Touitou V; Daussy C; Naud MC; Fridman WH; Sautes-Fridman C; Urbain R; Fisson S

**INSTITUCIÓN / INSTITUTION:** - Centre de Recherche des Cordeliers, Institut National de la Santé et de la Recherche Médicale (INSERM), UMRS872, Paris, F-75006, France.

**RESUMEN / SUMMARY:** - Purpose. Primary cerebral lymphoma (PCL) and primary intraocular lymphoma (PIOL) belong to the systemic diffuse large B-cell lymphoma family and are characterized by the presence of CD20+ lymphoma B cells in the brain or the eye. These highly aggressive malignancies have a poor prognosis and no specific therapy. The presence of effector immune cells in the damaged brain and vitreous suggests that treatment with anti-human CD20 (hCD20) monoclonal antibodies might be effective. We developed murine models of PCL and PIOL to assess the intracerebral and intraocular antitumor effect of ublituximab, a promising glycoengineered anti-hCD20 mAb with a high affinity for Fcγ3R (CD16) receptors. Methods. The murine lymphoma B-cell line A20.IIA-GFP-hCD20 (H-2d) was injected into the right cerebral striatum or the vitreous of immunocompetent adult BALB/c mice (H-2d); 4-7 days later, ublituximab was injected intracerebrally or intravitreously into the tumor site. Rituximab was the reference compound. Survival was monitored for injected mice, and flow cytometric analyses were performed to study tumor growth and T-cell infiltration. Results. Single doses of ublituximab, injected intracerebrally or intravitreously, had a marked antitumor effect, more pronounced than that obtained with the same dose of rituximab in these conditions. The reduction in tumor cells was correlated with an increased proportion of CD8+ T cells. This efficacy was observed only against lymphoma B cells expressing hCD20. Conclusions. These in vivo results confirm the potential of the glycoengineered

anti-hCD20 mAb ublituximab as an innovative therapeutic approach to treat primary central nervous system lymphoma and other B-cell lymphomas.

[220]

**TÍTULO / TITLE:** - Microdialysis measurement of intratumoral temozolomide concentration after cediranib, a pan-VEGF receptor tyrosine kinase inhibitor, in a U87 glioma model.

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

**REVISTA / JOURNAL:** - Cancer Chemother Pharmacol. 2013 May 7.

●●Enlace al texto completo (gratis o de pago) [1007/s00280-013-2172-](http://1007/s00280-013-2172-3)

[3](#)

**AUTORES / AUTHORS:** - Grossman R; Tyler B; Rudek MA; Kim E; Zadnik P; Khan U; Blakeley JO; Pathak AP; Brem H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Johns Hopkins University School of Medicine Baltimore, 1550 Orleans Street/Cancer Research Building II Room 2M45, Baltimore, MD, 21231, USA.

**RESUMEN / SUMMARY:** - BACKGROUND: Combining anti-angiogenesis agents with cytotoxic agents for the treatment of malignant gliomas may affect the cytotoxic drug distribution by normalizing the blood-brain barrier (BBB). This study examines the intratumoral concentration of temozolomide (TMZ) in the presence and absence of the pan-VEGF receptor tyrosine kinase inhibitor, cediranib. METHODS: Seven nude rats bearing U87 intracerebral gliomas had a microdialysis probe centered within the tumor. Ten-days after tumor implantation, TMZ (50 mg/kg) was given orally. The extracellular fluid (ECF) concentrations of TMZ within the tumor were assessed via microdialysis for 6 h following TMZ administration. Cediranib (6 mg/kg) was then given orally, and 12 h later, TMZ was re-administered with subsequent microdialysis collection. A subset of animals also underwent functional MRI to assess angiogenesis in vivo at post-inoculation days 12 and 21, before and after the cediranib treatment. RESULTS: After dosing of oral TMZ only, ECF-TMZ mean-C max and area under the concentration curve(AUC0-infinity) within the tumor were 0.59 mug/mL and 1.82 mug h/mL, respectively. Post-cediranib, ECF-TMZ mean-C max and AUC0-infinity were 0.83 mug/mL and 3.72 +/- 0.61 mug h/mL within the tumor, respectively. This represented a 1.4-fold ( $p = 0.3$ ) and 2.0-fold ( $p = 0.06$ ) increase in the ECF-TMZ C max and AUC0-infinity, respectively, after cediranib administration. In vivo MRI measurements of the various vascular parameters were consistent with a BBB "normalization" profile following cediranib treatment. CONCLUSIONS: In the U87 intracerebral glioma model, within the first day of administration of cediranib, the intratumoral concentrations of TMZ in tumor ECF were slightly, but not statistically significantly, increased when compared to the treatment of TMZ alone with radiographic evidence of a normalized BBB.

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[221]

**TÍTULO / TITLE:** - Concurrent occurrence of primary intracranial Epstein-Barr virus-associated leiomyosarcoma and Hodgkin lymphoma in a young adult.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Apr 26.

●●Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS121707](#)

**AUTORES / AUTHORS:** - Takei H; Powell S; Rivera A

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Genomic Medicine, The Methodist Hospital/Weill Cornell Medical College, Houston, Texas.

**RESUMEN / SUMMARY:** - Although Epstein-Barr virus (EBV) infection has been known to be associated with a heterogeneous group of malignancies including Hodgkin lymphoma (HL), its association with smooth-muscle tumors (SMTs) has recently been described. Of these SMTs, a primary intracranial EBV-associated leiomyosarcoma (EBV-LMS) is extremely rare, and most of the reported cases were of immunocompromised and/or pediatric patients. A neurologically asymptomatic, previously healthy 27-year-old man was found to have a PET-positive brain lesion during a staging workup for his recently diagnosed HL. Subsequent MRI revealed a 2.6 x 4.0 x 3.3-cm inhomogeneously enhancing tumor with marked surrounding edema in the right anterior frontal lobe. He was serologically HIV negative. He underwent a right frontal lobectomy with gross-total resection of the tumor. Intraoperatively, the tumor had fairly discrete margins and appeared to arise from the anterior falx (that is, it was dural based). Microscopically, the tumor was composed of interlacing fascicles of spindle cells with brisk mitotic activity and multiple foci of necrosis. Immunohistochemically, the tumor cells were positive for caldesmon and smooth-muscle actin and negative for desmin, CD34, CD99, bcl-2, S100 protein, and GFAP. A Ki-67 labeling index was up to 30%. Epstein-Barr virus-encoded RNA in situ hybridization demonstrated strong diffuse positivity with more than 90% of tumor cells staining. Most of the Reed-Sternberg cells in HL were also labeled with Epstein-Barr virus-encoded RNA. This is the first case of a concurrent occurrence of rare intracranial EBV-LMS and HL in a seemingly "immunocompetent" adult patient (immunocompetence determined by routine laboratory data and clinical history). We should be aware of EBV-SMT as a differential diagnosis of dural-based spindle cell neoplasm in this setting given that patients with HL, even at presentation, exhibit a persistent defect in cellular immunity.

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[222]

**TÍTULO / TITLE:** - The role of different methods of nerve ablation in prevention of neuroma.

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

**REVISTA / JOURNAL:** - Plast Reconstr Surg. 2013 May;131(5):1004-12. doi: 10.1097/PRS.0b013e3182879ec2.

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

[1097/PRS.0b013e3182879ec2](#)

**AUTORES / AUTHORS:** - Chim H; Miller E; Gliniak C; Cohen ML; Guyuron B

**INSTITUCIÓN / INSTITUTION:** - Cleveland, Ohio From the Department of Plastic Surgery and the Department of Pathology, Case Western Reserve University.

**RESUMEN / SUMMARY:** - BACKGROUND: : The aim of this study was to compare the incidence of neuroma formation and neuropathic pain following different techniques of nerve ablation in a rat sural nerve model. METHODS: : Rat sural nerve was subjected to four different techniques of ablation with standardized creation of a 1-cm gap (n = 15 in each group). These included nerve avulsion, transection and burying in muscle, transection and folding of nerve, and transection alone. Animals were killed after 3 months. Explanted nerves were sectioned and stained with Masson trichrome and S-100 stain against neural tissue. The maximal neural cross-sectional area and neural-to-connective tissue ratio was quantified. Quantitative reverse-transcriptase polymerase chain reaction (n = 5) was used to analyze relative mRNA expression of ciliary neurotrophic factor and calcitonin gene-related peptide. RESULTS: : Neural cross-sectional area was statistically increased (p < 0.05) compared with controls in folded, muscle buried, and transected specimens but decreased in avulsed specimens. The neural-to-connective tissue ratio was statistically decreased in the avulsed group. Relative mRNA expression of ciliary neurotrophic factor was lowest in muscle buried (4 percent of control) (p < 0.05) and avulsed specimens (15 percent of control) (p < 0.05) and higher in folded (52 percent of control) and transected specimens (75 percent of control). Relative mRNA expression of calcitonin gene-related peptide was highest in folded specimens (302 percent of control) (p < 0.05). CONCLUSIONS: : Folding and transection lead to increased histologic evidence of neuroma formation, whereas folding leads to neuropathic pain, assayed by calcitonin gene-related peptide expression. Avulsion and muscle burying are preferable techniques for nerve ablation and inhibit nerve regeneration, evidenced by decreased ciliary neurotrophic factor expression. Avulsion offers an alternative to muscle burying when there is no muscle in the vicinity to bury the transected nerve.

[223]

**TÍTULO / TITLE:** - The NFL-TBS.40-63 anti-glioblastoma peptide enters selectively in glioma cells by endocytosis.

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

**REVISTA / JOURNAL:** - Int J Pharm. 2013 Apr 17. pii: S0378-5173(13)00292-5. doi: 10.1016/j.ijpharm.2013.04.004.

- Enlace al texto completo (gratis o de pago)

[1016/j.ijpharm.2013.04.004](https://doi.org/10.1016/j.ijpharm.2013.04.004)

**AUTORES / AUTHORS:** - Lepinoux-Chambaud C; Eyer J

**INSTITUCIÓN / INSTITUTION:** - Laboratoire Neurobiologie & Transgenese, LUNAM, UPRES EA-3143, Universite d'Angers, Centre Hospitalier Universitaire, Batiment IBS-IRIS, 49033 Angers, France.

**RESUMEN / SUMMARY:** - Glioblastoma are the most frequent and aggressive tumour of the nervous system despite surgical resection associated with chemotherapy and radiotherapy. Recently, we showed that the NFL-TBS.40-63 peptide corresponding to the sequence of a tubulin-binding site of neurofilaments, enters selectively in glioblastoma cells where it blocks microtubule polymerization, inhibits their proliferation, and reduces tumour development in rats bearing glioblastoma (Bocquet et al., 2009; Berges et al., 2012<sup>a</sup>). Here, we characterized the molecular mechanism responsible for the uptake of NFL-TBS.40-63 peptide by glioblastoma cells. Unlike other cell penetrating peptides (CPPs), which use a balance between endocytosis and direct translocation, the NFL-TBS.40-63 peptide is unable to translocate directly through the membrane when incubated with giant plasma membrane vesicles. Then, using a panel of markers and inhibitors, flow cytometry and confocal microscopy investigations showed that the uptake occurs mainly through endocytosis. Moreover, glycosaminoglycans and alphaVbeta3 integrins are not involved in the NFL-TBS.40-63 peptide recognition and internalization by glioblastoma cells. Finally, the signalling of tyrosine kinase receptors is involved in the peptide uptake, especially via EGFR overexpressed in tumour cells, indicating that the uptake of NFL-TBS.40-63 peptide by glioblastoma cells is related to their abnormally high proliferative activity.

[224]

**TÍTULO / TITLE:** - Molecular definition of the pro-tumorigenic phenotype of glioma-activated microglia.

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

**REVISTA / JOURNAL:** - Glia. 2013 May 7. doi: 10.1002/glia.22510.

- Enlace al texto completo (gratis o de pago) [1002/glia.22510](https://doi.org/10.1002/glia.22510)

**AUTORES / AUTHORS:** - Ellert-Miklaszewska A; Dabrowski M; Lipko M; Sliwa M; Maleszewska M; Kaminska B

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Molecular Neurobiology, Neurobiology Center, The Nencki Institute of Experimental Biology, 3 Pasteur str., Warsaw, Poland.

**RESUMEN / SUMMARY:** - Microglia are myeloid cells residing in the central nervous system that participate in inflammatory responses and could promote injury and repair. Gliomas attract microglia and polarize them into tumor-supporting cells that participate in matrix remodeling, invasion, angiogenesis,

and suppression of adaptive immunity. Although signaling pathways and critical regulators underlying classical inflammation are well established, signal transduction and transcriptional circuits underlying the alternative activation of microglia are poorly known. Using primary rat microglial cultures exposed to glioma conditioned medium or lipopolysaccharide (LPS), we demonstrate that microglia adapt different fates and polarize into pro-inflammatory or alternatively activated cells. Glioma-derived factors increased cell motility, phagocytosis, and sustained proliferation of microglial cells that was mediated by enhanced focal adhesion kinase and PI-3K/Akt signaling. The signals from glioma cells induced ERK and p38 MAPK but not JNK signaling and failed to activate pro-inflammatory Stat1 and NFkappaB signaling in microglial cells. Transcriptome analysis of microglial cultures at 6 h after exposure to glioma-conditioned medium or LPS revealed different patterns of gene expression. Glioma-induced activation was associated with induction of genes coding for ID (inhibitor of DNA binding) 1/3 and c-Myc, markers of the alternative phenotype Arg1, MT1-MMP, CXCL14, and numerous cytokines/chemokines implicated in immune cell trafficking. Many classical inflammation-related genes and signaling pathways failed to be induced. Our study indicates for the first time molecular pathways that direct microglia toward the pro-invasive, immunosuppressive phenotype.

[225]

**TÍTULO / TITLE:** - EGFR siRNA lipid nanocapsules efficiently transfect glioma cells in vitro.

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

**REVISTA / JOURNAL:** - Int J Pharm. 2013 Apr 10. pii: S0378-5173(13)00285-8. doi: 10.1016/j.ijpharm.2013.04.001.

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

[1016/j.ijpharm.2013.04.001](#)

**AUTORES / AUTHORS:** - Resnier P; David S; Lautram N; Delcroix GJ; Clavreul A; Benoit JP; Passirani C

**INSTITUCIÓN / INSTITUTION:** - LUNAM - Universite d'Angers, F-49933 Angers, France; INSERM U1066 - Micro et Nanomedecines Biomimetiques, Angers, France.

**RESUMEN / SUMMARY:** - Glioma are the most common malignant tumors of the central nervous system and remain associated with poor prognosis, despite the combination of chemotherapy and radiotherapy. EGFR targeting represents an interesting strategy to treat glioma. Indeed, a high level of endothelial growth factor receptors expression (EGFR), involved in the malignancy of the tumor, has been observed in glioma. Our strategy consisted in using EGFR siRNA entrapped into lipid nanocapsules (LNCs) via cationic liposomes. In vitro analyses on U87MG human glioma cells were performed to evaluate firstly the capacity of LNCs to efficiently deliver the siRNA and secondly the effect of

EGFR siRNA targeting on U87MG proliferation. Then, the complement protein consumption was evaluated by CH50 assays to verify the suitability of the siRNA LNCs for systemic administration. The EGFR siRNA LNCs exhibited an adequate size lower than 150nm as well as a neutral surface charge. The IC50 profile together with the 63% of protein extinction demonstrated the significant action of EGFR siRNA LNCs compared to scrambled LNCs. Dose and time-dependent survival assays showed a decrease of U87MG growth evaluated at 38%. Finally, low complement consumption demonstrated the suitability of EGFR siRNA LNCs for intravenous injection. In conclusion, EGFR siRNA LNCs demonstrated their capacity to efficiently encapsulate and deliver siRNA into U87MG human glioma cells, and will therefore be usable in the future for in vivo evaluation.

[226]

**TÍTULO / TITLE:** - A benign cutaneous plexiform hybrid tumor of perineurioma and cellular neurothekeoma.

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

**REVISTA / JOURNAL:** - Am J Surg Pathol. 2013 Jun;37(6):845-52. doi: 10.1097/PAS.0b013e31827edfda.

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

[1097/PAS.0b013e31827edfda](#)

**AUTORES / AUTHORS:** - Requena L; Sitthinamsuwan P; Fried I; Kaddu S; Schirren CG; Scharer L; Hantschke M; Cerroni L; McCalmont TH; Kutzner H

**INSTITUCIÓN / INSTITUTION:** - \*Department of Dermatology, Fundacion Jimenez Diaz, Universidad Autonoma, Madrid, España daggerDepartment of Pathology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand double daggerDepartment of Dermatology, Research Unit Dermatopathology, Medical University of Graz, Austria section signDermatopathology Laboratory, Darmstadt parallelDermatopathologische Gemeinschaftslabor, Friedrichshafen, Germany paragraph signDepartments of Pathology and Dermatology, University of California, San Francisco, CA.

**RESUMEN / SUMMARY:** - There are several recent reports describing hybrid peripheral nerve sheath tumors showing a biphasic component of neoplastic cells. These combinations include a mixture of neurofibroma and schwannoma, schwannoma and perineurioma, neurofibroma and perineurioma, and perineurioma and granular cell tumor. A case of a triphasic combination of neurofibroma, schwannoma, and perineurioma has also been described. We describe the clinicopathologic and immunohistochemical characteristics of 9 cases of a benign cutaneous plexiform nerve sheath tumor located on the lips and exhibiting hybrid features of perineurioma and cellular neurothekeoma. Clinically, lesions were solitary dome-shaped papules located on the lips. Histopathologically, the neoplasms consisted of well-circumscribed but

uncapsulated dermal nodules with a plexiform pattern. They were composed of nests or rounded aggregations of neoplastic cells embedded in a slightly myxoid stroma. Within the aggregates, cells were distributed in a storiform and lamellar pattern. Immunohistochemically, most neoplastic cells expressed strong immunoreactivity for S100A6, MITF, NKI/C3, PGP9.5, EMA, and NSE, whereas variable, focal, and weaker positivity for CD34, claudin-1, and Glut-1 was seen in some cases. On the basis of these findings, we believe that this neoplasm is a distinctive benign cutaneous plexiform nerve sheath tumor with histopathologic and immunohistochemical hybrid features of perineurioma and cellular neurothekeoma.

[227]

**TÍTULO / TITLE:** - Convection-enhanced delivery improves distribution and efficacy of tumor-selective retroviral replicating vectors in a rodent brain tumor model.

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

**REVISTA / JOURNAL:** - Cancer Gene Ther. 2013 May 24. doi: 10.1038/cgt.2013.25.

●●Enlace al texto completo (gratis o de pago) [1038/cgt.2013.25](#)

**AUTORES / AUTHORS:** - Yin D; Zhai Y; Gruber HE; Ibanez CE; Robbins JM; Kells AP; Kasahara N; Forsayeth J; Jolly DJ; Bankiewicz KS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of California San Francisco, San Francisco, CA, USA.

**RESUMEN / SUMMARY:** - In the present study, we compared the therapeutic effect of tumor-selective retroviral replicating vectors (RRV) expressing the yeast cytosine deaminase (CD) delivered by convection-enhanced delivery (CED) or simple injection, followed by systemic administration of the pro-drug, 5-fluorocytosine (5-FC). Treatment with RRV-CD and systemic 5-FC significantly increased survival in rodent U87MG glioma model in comparison with controls ( $P < 0.01$ ). Interestingly, CED of RRV-CD followed by 5-FC further enhanced survival in this animal model in comparison with intra-tumoral injection of RRV-CD, followed by systemic 5-FC ( $P < 0.05$ ). High expression levels of Ki-67 were found in untreated tumors compared with treated. Untreated tumors were also much larger than treated. CED resulted in excellent distribution of RRV while only partial distribution of RRV was obtained after injection. Furthermore, RRV-CD and CD were also found in tumors from treated rats at study end points. These results demonstrated that RRV vectors may efficiently transduce and stably propagate in malignant human glioma, thereby achieving a significant in situ amplification effect after initial administration. We conclude that delivery of RRV into the glioma by CED provides much wider vector distribution than simple injection, and this correlated with better

therapeutic outcomes. Cancer Gene Therapy advance online publication, 24 May 2013; doi:10.1038/cgt.2013.25.

[228]

**TÍTULO / TITLE:** - Methylation of the TERT promoter and risk stratification of childhood brain tumours: an integrative genomic and molecular study.

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

**REVISTA / JOURNAL:** - Lancet Oncol. 2013 May;14(6):534-42. doi: 10.1016/S1470-2045(13)70110-4. Epub 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1016/S1470-2045\(13\)70110-4](#)

**AUTORES / AUTHORS:** - Castelo-Branco P; Choufani S; Mack S; Gallagher D; Zhang C; Lipman T; Zhukova N; Walker EJ; Martin D; Merino D; Wasserman JD; Elizabeth C; Alon N; Zhang L; Hovestadt V; Kool M; Jones DT; Zadeh G; Croul S; Hawkins C; Hitzler J; Wang JC; Baruchel S; Dirks PB; Malkin D; Pfister S; Taylor MD; Weksberg R; Tabori U

**INSTITUCIÓN / INSTITUTION:** - The Arthur and Sonia Labatt Brain Tumor Research Centre, The Hospital for Sick Children, University of Toronto, Toronto, ON, Canada.

**RESUMEN / SUMMARY:** - BACKGROUND: Identification of robust biomarkers of malignancy and methods to establish disease progression is a major goal in paediatric neuro-oncology. We investigated whether methylation of the TERT promoter can be a biomarker for malignancy and patient outcome in paediatric brain tumours. METHODS: For the discovery cohort, we used samples obtained from patients with paediatric brain tumours and individuals with normal brain tissues stored at the German Cancer Research Center (Heidelberg, Germany). We used methylation arrays for genome-wide assessment of DNA. For the validation cohort, we used samples obtained from several tissues for which full clinical and follow-up data were available from two hospitals in Toronto (ON, Canada). We did methylation analysis using quantitative Sequenom and pyrosequencing of an identified region of the TERT promoter. We assessed TERT expression by real-time PCR. To establish whether the biomarker could be used to assess and predict progression, we analysed methylation in paired samples of tumours that transformed from low to high grade and from localised to metastatic, and in choroid plexus tumours of different grades. Finally, we investigated overall survival in patients with posterior fossa ependymomas in which the identified region was hypermethylated or not. All individuals responsible for assays were masked to the outcome of the patients. FINDINGS: Analysis of 280 samples in the discovery cohort identified one CpG site (cg11625005) in which 78 (99%) of 79 samples from normal brain tissues and low-grade tumours were not hypermethylated, but 145 (72%) of 201 samples from malignant tumours were hypermethylated (>15% methylated; p<0.0001).

Analysis of 68 samples in the validation cohort identified a subset of five CpG sites (henceforth, upstream of the transcription start site [UTSS]) that was hypermethylated in all malignant paediatric brain tumours that expressed TERT but not in normal tissues that did not express TERT ( $p < 0.0001$ ). UTSS had a positive predictive value of 1.00 (95% CI 0.95-1.00) and a negative predictive value of 0.95 (0.87-0.99). In two paired samples of paediatric gliomas, UTSS methylation increased during transformation from low to high grade; it also increased in two paired samples that progressed from localised to metastatic disease. Two of eight atypical papillomas that had high UTSS methylation progressed to carcinomas, while the other six assessed did not progress or require additional treatment. 5-year overall survival was 51% (95% CI 31-71) for 25 patients with hypermethylated UTSS posterior fossa ependymomas and 95% (86-100) for 20 with non-hypermethylated tumours ( $p = 0.0008$ ). 5-year progression-free survival was 86% (68-100) for the 25 patients with non-hypermethylated UTSS tumours and 30% (10-50) for those with hypermethylated tumours ( $p = 0.0008$ ). INTERPRETATION: Hypermethylation of the UTSS region in the TERT promoter is associated with TERT expression in cancers. In paediatric brain tumours, UTSS hypermethylation is associated with tumour progression and poor prognosis. This region is easy to amplify, and the assay to establish hypermethylation can be done on most tissues in most clinical laboratories. Therefore the UTSS region is a potentially accessible biomarker for various cancers. FUNDING: The Canadian Institute of Health Research and the Terry Fox Foundation.

[229]

**TÍTULO / TITLE:** - Expression of VEGF and collagen XVIII in meningiomas: correlations with histopathological and MRI characteristics.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Jun;155(6):989-96. doi: 10.1007/s00701-013-1699-8. Epub 2013 Apr 20.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1699-](#)

[8](#)

**AUTORES / AUTHORS:** - Salokorpi N; Yrjana S; Tuominen H; Karttunen A; Heljasvaara R; Pihlajaniemi T; Heikkinen E; Koivukangas J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Institute of Clinical Medicine, University of Oulu, Oulu, P.O. Box 21, 90029 OYS, Finland, [niina.salokorpi@ppshp.fi](mailto:niina.salokorpi@ppshp.fi).

**RESUMEN / SUMMARY:** - BACKGROUND: The objective of this study was to assess the possibility of predicting histological characteristics of meningiomas on the basis of preoperative MRI and the correlation of the expression of vascular endothelial growth factor (VEGF) and collagen XVIII with histological parameters already established as predictive of the course of these tumors.

**METHODS:** Expression of VEGF and collagen XVIII as well as other histological characteristics was examined in meningioma tissues from 20 patients. Preoperative MRI, including dynamic imaging of contrast enhancement, was analyzed. Times to maximum enhancement and maximum intensity increase were noted from dynamic imaging. The relative intensity of the tumor in fluid-attenuated inversion recovery (FLAIR), T2-weighted and contrast enhanced T1-weighted images, as well as volumes of tumor and edema, was calculated. The edema-tumor volume ratio was defined as the edema index (EI). **RESULTS:** Both VEGF and collagen XVIII were expressed in all meningioma samples. Edema was present in 60 % of cases. The strongest correlation of VEGF expression was to EI. Among histological parameters, microvessel density (MVD) and cellularity correlated moderately with VEGF. Collagen XVIII expression correlated strongly with the maximal intensity increase after contrast agent administration ( $\rho = 0.71$ ,  $P = 0.001$ ) as well as with MVD and intensity of the meningioma on FLAIR images. **CONCLUSION:** Meningiomas with faster and more intense enhancement in dynamic studies, indicative of good tumor blood supply and permeability of vasculature, are associated with high levels of collagen XVIII and VEGF expression. Occurrence of peritumoral edema in meningiomas is strongly correlated with expression of VEGF.

[230]

**TÍTULO / TITLE:** - Restricted Calorie Ketogenic Diet for the Treatment of Glioblastoma Multiforme.

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

**REVISTA / JOURNAL:** - J Child Neurol. 2013 May 13.

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

[1177/0883073813488670](https://doi.org/10.1177/0883073813488670)

**AUTORES / AUTHORS:** - Maroon J; Bost J; Amos A; Zuccoli G

**INSTITUCIÓN / INSTITUTION:** - 1University of Pittsburgh Medical Center, Pittsburgh, PA, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme is the most common malignant primary brain tumor in adults and generally considered to be universally fatal. Glioblastoma multiforme accounts for 12% to 15% of all intracranial neoplasms and affects 2 to 3 adults per every 100,000 in the United States annually. In children glioblastoma multiforme accounts for only approximately 7% to 9% of central nervous system tumors. The mean survival rate in adults after diagnosis ranges from 12 to 18 months with standard therapy and 3 to 6 months without therapy. The prognosis in children is better compared to adult tumor onset with a mean survival of approximately 4 years following gross total surgical resection and chemotherapy. There have been few advances in the treatment of glioblastoma multiforme in the past 40 years beyond surgery, radiotherapy,

chemotherapy, and corticosteroids. For this reason a restrictive calorie ketogenic diet, similar to that used in children to control drug resistant seizure activity, has been advanced as an alternative adjunctive treatment to help prolonged survival. This article reviews the science of tumor metabolism and discusses the mechanism of calorie restriction, cellular energy metabolism, and how dietary induced ketosis can inhibit cancer cell's energy supply to slow tumor growth.

[231]

**TÍTULO / TITLE:** - Pediatric brain tumors in Nigeria: clinical profile, management strategies, and outcome.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 18.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2105-](http://1007/s00381-013-2105-9)

[9](#)

**AUTORES / AUTHORS:** - Uche EO; Shokunbi MT; Malomo AO; Akang EE; Lagunju I; Amanor-Boadu SD

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Institute of Neurosciences, University College Hospital, Ibadan, Oyo State, Nigeria, [kechyenny@yahoo.com](mailto:kechyenny@yahoo.com).

**RESUMEN / SUMMARY:** - INTRODUCTION: Although modern neuroimaging has facilitated early care of brain tumors in children worldwide, there are, however, few published reports on clinical profile, treatment, and outcome of brain tumors in children from our subregion. PURPOSE: We aimed to retrospectively study the clinical profile and outcome of pediatric brain tumors in a tertiary referral center from a developing country. METHODS: Forty pediatric patients with histologically verified brain tumors managed by the authors over a 13-year period (May 1994-April 2006) were studied. Patients' data from clinical, radiological, and pathology records were analyzed using the statistical package for social sciences version 16. RESULTS: The mean age was 9.75 years (range 1-15 years). Twenty-two males, 18 females. Common presenting symptoms were headaches (23 patients, 57.5 %) and seizures (15 patients, 37.5 %). Hyperreflexia (72.5 %) and focal motor deficits (62.5 %) were the most common neurologic signs. The mean interval from onset of symptoms to neurosurgical diagnosis was 13.4 months (95 % CI). All patients had tumor resection, while 11 (27.5 %) patients received adjuvant radiotherapy. Hydrocephalus occurred in 19 (47.5 %) patients and was associated with early presentation ( $X^2 = 10.65$ ,  $p < 0.01$ ). Low-grade astrocytoma (25 %) and medulloblastoma (25 %) were the most common tumors. Survival at 1 and 5 years were 56 and 47 %, respectively. CONCLUSION: Focal motor signs and elevated intracranial pressure are the salient presenting features of brain

tumors in children seen in Nigeria. Those of them with hydrocephalus are likely to present early. The outcome for pediatric brain tumors remains poor.

[232]

**TÍTULO / TITLE:** - GRIM-19 opposes reprogramming of glioblastoma cell metabolism via HIF1alpha destabilization.

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

**REVISTA / JOURNAL:** - Carcinogenesis. 2013 May 15.

●●Enlace al texto completo (gratis o de pago) [1093/carcin/bqt125](#)

**AUTORES / AUTHORS:** - Liu Q; Wang L; Wang Z; Yang Y; Tian J; Liu G; Guan D; Cao X; Zhang Y; Hao A

**INSTITUCIÓN / INSTITUTION:** - Department of Histology and Embryology, Key Laboratory of the Ministry of Education for Experimental Teratology, Shandong University School of Medicine, Jinan, 250012 Shandong, China.

**RESUMEN / SUMMARY:** - The metabolism that sustains cancer cells is adapted preferentially to glycolysis, even under aerobic conditions (Warburg effect). This effect was one of the first alterations in cancer cells recognized as conferring a survival advantage. In this study, we show that gene associated with retinoid-interferon-induced mortality-19 (GRIM-19), which was previously identified as a tumor suppressor protein associated with growth inhibition and cell apoptosis, contributes to the switch between oxidative and glycolytic pathways. In parallel to this, vascular endothelial growth factor, which promotes neovascularization, is also regulated. We have identified hypoxia-inducible factor 1alpha (HIF1alpha) as the downstream factor of GRIM-19 in human glioblastoma cell lines. Downregulation of GRIM-19 promotes HIF1alpha synthesis in a STAT3-dependent manner, which acts as a potential competitive inhibitor for von Hippel-Lindau (pVHL)-HIF1alpha interaction, and thereby prevents HIF1alpha from pVHL-mediated ubiquitination and proteasomal degradation. Taken together, it is concluded that GRIM-19, a potential tumor suppressor gene, performs its function in part via regulating glioblastoma metabolic reprogramming through STAT3-HIF1alpha signaling axis, and this has added new perspective to its role in tumorigenesis, thus providing potential strategies for tumor metabolic therapy.

[233]

**TÍTULO / TITLE:** - Common Pediatric Cerebellar Tumors: Correlation between Cell Densities and Apparent Diffusion Coefficient Metrics.

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

**REVISTA / JOURNAL:** - Radiology. 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [1148/radiol.13121362](#)

**AUTORES / AUTHORS:** - Koral K; Mathis D; Gimi B; Gargan L; Weprin B; Bowers DC; Margraf L

**INSTITUCIÓN / INSTITUTION:** - Departments of Radiology, Pediatrics, and Pathology, University of Texas Southwestern Medical Center and Children's Medical Center, 1935 Medical District Dr, Dallas, TX 75235; Division of Neuropathology, Department of Pathology, University of Texas Southwestern Medical Center, Dallas, Tex; Department of Radiology, Dartmouth Medical School, Hanover, NH.

**RESUMEN / SUMMARY:** - Purpose: To test whether there is correlation between cell densities and apparent diffusion coefficient (ADC) metrics of common pediatric cerebellar tumors. Materials and Methods: This study was reviewed for issues of patient safety and confidentiality and was approved by the Institutional Review Board of the University of Texas Southwestern Medical Center and was compliant with HIPAA. The need for informed consent was waived. Ninety-five patients who had preoperative magnetic resonance imaging and surgical pathologic findings available between January 2003 and June 2011 were included. There were 37 pilocytic astrocytomas, 34 medulloblastomas (23 classic, eight desmoplastic-nodular, two large cell, one anaplastic), 17 ependymomas (13 World Health Organization [WHO] grade II, four WHO grade III), and seven atypical teratoid rhabdoid tumors. ADCs of solid tumor components and normal cerebellum were measured. Tumor-to-normal brain ADC ratios (hereafter, ADC ratio) were calculated. The medulloblastomas and ependymomas were subcategorized according to the latest WHO classification, and tumor cellularity was calculated. Correlation was sought between cell densities and mean tumor ADCs, minimum tumor ADCs, and ADC ratio. Results: When all tumors were considered together, negative correlation was found between cellularity and mean tumor ADCs ( $\rho = -0.737$ ,  $P < .05$ ) and minimum tumor ADCs ( $\rho = -0.736$ ,  $P < .05$ ) of common pediatric cerebellar tumors. There was no correlation between cellularity and ADC ratio. Negative correlation was found between cellularity and minimum tumor ADC in atypical teratoid rhabdoid tumors ( $\rho = -0.786$ ,  $P < .05$ ). In atypical teratoid rhabdoid tumors, no correlation was found between cellularity and mean tumor ADC and ADC ratio. There was no correlation between the ADC metrics and cellularity of the pilocytic astrocytomas, medulloblastomas, and ependymomas. Conclusion: Negative correlation was found between cellularity and ADC metrics of common pediatric cerebellar tumors. Although ADC metrics are useful in the preoperative diagnosis of common pediatric cerebellar tumors and this utility is generally attributed to differences in cellularity of tumors, tumor cellularity may not be the sole determinant of the differences in diffusivity. © RSNA, 2013.

[234]

**TÍTULO / TITLE:** - Intensity-modulated radiotherapy (IMRT) in pediatric low-grade glioma.

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

**REVISTA / JOURNAL:** - Cancer. 2013 Apr 30. doi: 10.1002/cncr.28118.

●●Enlace al texto completo (gratis o de pago) [1002/cncr.28118](#)

**AUTORES / AUTHORS:** - Paulino AC; Mazloom A; Terashima K; Su J; Adesina AM; Okcu MF; Teh BS; Chintagumpala M

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, The Methodist Hospital and Weil-Cornell Medical College, Houston, Texas, .; Department of Pediatrics, Texas Children's Cancer Center, Baylor College of Medicine, Houston, Texas.

**RESUMEN / SUMMARY:** - BACKGROUND: The objective of this study was to evaluate local control and patterns of failure in pediatric patients with low-grade glioma (LGG) who received treatment with intensity-modulated radiation therapy (IMRT). METHODS: In total, 39 children received IMRT after incomplete resection or disease progression. Three methods of target delineation were used. The first was to delineate the gross tumor volume (GTV) and add a 1-cm margin to create the clinical target volume (CTV) (Method 1; n = 19). The second was to add a 0.5-cm margin around the GTV to create the CTV (Method 2; n = 6). The prescribed dose to the GTV was the same as dose to the CTV for both Methods 1 and 2 (median, 50.4 grays [Gy]). The final method was dose painting, in which a GTV was delineated with a second target volume (2TV) created by adding 1 cm to the GTV (Method 3; n = 14). Different doses were prescribed to the GTV (median, 50.4 Gy) and the 2TV (median, 41.4 Gy). RESULTS: The 8-year progression-free and overall survival rates were 78.2% and 93.7%, respectively. Seven failures occurred, all of which were local in the high-dose (>=95%) region of the IMRT field. On multivariate analysis, age <=5 years at time of IMRT had a detrimental impact on progression-free survival. CONCLUSIONS: IMRT provided local control rates comparable to those provided by 2-dimensional and 3-dimensional radiotherapy. Margins >=1 cm added to the GTV may not be necessary, because excellent local control was achieved by adding a 0.5-cm margin (Method 2) and by dose painting (Method 3). Cancer 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 American Cancer Society.

[235]

**TÍTULO / TITLE:** - Histone deacetylase 3 implicated in the pathogenesis of children glioma by promoting glioma cell proliferation and migration.

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

**REVISTA / JOURNAL:** - Brain Res. 2013 May 15. pii: S0006-8993(13)00646-X. doi: 10.1016/j.brainres.2013.04.061.

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

[1016/j.brainres.2013.04.061](#)

**AUTORES / AUTHORS:** - Zhu J; Wan H; Xue C; Jiang T; Qian C; Zhang Y

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

**RESUMEN / SUMMARY:** - BACKGROUND: Glioma is an aggressive cancer with high mortality, especially in children. It is known that histone modification plays an important role in the pathogenesis of various cancers. However, it is unknown whether histone deacetylase 3 (HDAC3) plays a role in the tumorigenesis of children gliomas. This study was aimed to explore the potential effects of HDAC3 in children gliomas. Expression of HDAC3 was measured in children glioma samples (n=70) and normal brain tissues (n=7) by real-time PCR and western blotting. Survival of the two groups was analyzed by the Kaplan-Meier method. The effects of HDAC3 in the pathogenesis of gliomas were analyzed by silencing the glioma cells U87-MG and U251. Data showed that HDAC3 was significantly elevated in children's gliomas, following the glioma grade, with almost no expression in normal brain tissues. Ectopic HDAC3 expression was correlated with poorer prognosis of children with glioma. In glioma cell lines, inhibition of HDAC3 using siRNA could suppress proliferation and sphere formation, induce G0/G1 arrest and apoptosis, and suppress the migration of glioma cells in comparison with controls. The higher level of HDAC3 expression was associated with more advanced tumor grades and shorter survival. HDAC3 participated in the pathogenesis of children gliomas by promoting glioma cell proliferation and migration.

[236]

**TÍTULO / TITLE:** - Atorvastatin suppresses glioma invasion and migration by reducing microglial MT1-MMP expression.

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

**REVISTA / JOURNAL:** - J Neuroimmunol. 2013 May 21. pii: S0165-5728(13)00117-3. doi: 10.1016/j.jneuroim.2013.04.020.

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

[1016/j.jneuroim.2013.04.020](#)

**AUTORES / AUTHORS:** - Yongjun Y; Shuyun H; Lei C; Xiangrong C; Zhilin Y; Yiquan K

**INSTITUCIÓN / INSTITUTION:** - Department of neurosurgery, Zhujiang Hospital of Southern Medical University, Guangzhou 510282, China; Neurosurgery Institute, Key Laboratory on Brain Function Repair and Regeneration of Guangdong Province, Southern Medical University, Guangzhou 510282, China.

**RESUMEN / SUMMARY:** - Microglia, the immune cells of the brain, often present in large numbers in gliomas, where they promote tumor growth and invasiveness. This study found that atorvastatin reduced the pro-tumorigenic effects of microglia on glioma migration and invasion by reducing the microglial expression of membrane type 1 metalloproteinase (MT1-MMP). The results suggest that down-regulation of MT1-MMP is controlled by a p38 MAPK pathway in microglia. Taken together, the results support further research on atorvastatin as a candidate for glioma therapy by targeting microglia.

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[237]

**TÍTULO / TITLE:** - Targeting oncogenic ALK and MET: a promising therapeutic strategy for glioblastoma.

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

**REVISTA / JOURNAL:** - Metab Brain Dis. 2013 Apr 2.

●●Enlace al texto completo (gratis o de pago) [1007/s11011-013-9401-](http://1007/s11011-013-9401-7)

[7](#)

**AUTORES / AUTHORS:** - Wallace GC 4th; Dixon-Mah YN; Vandergrift WA 3rd; Ray SK; Haar CP; Mittendorf AM; Patel SJ; Banik NL; Giglio P; Das A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences and MUSC Brain & Spine Tumor Program, Medical University of South Carolina, 96 Jonathan Lucas Street, Charleston, SC, 29425, USA.

**RESUMEN / SUMMARY:** - Glioblastoma is the most common aggressive, highly glycolytic, and lethal brain tumor. In fact, it is among the most commonly diagnosed lethal malignancies, with thousands of new cases reported in the United States each year. Glioblastoma's lethality is derived from a number of factors including highly active pro-mitotic and pro-metastatic pathways. Two factors increasingly associated with the intracellular signaling and transcriptional machinery required for such changes are anaplastic lymphoma kinase (ALK) and the hepatocyte growth factor receptor (HGFR or, more commonly MET). Both receptors are members of the receptor tyrosine kinase (RTK) family, which has itself gained much attention for its role in modulating mitosis, migration, and survival in cancer cells. ALK was first described as a vital oncogene in lymphoma studies, but it has since been connected to many carcinomas, including non-small cell lung cancer and glioblastoma. As the receptor for HGF, MET has also been highly characterized and regulates numerous developmental and wound healing events which, when upregulated in cancer, can promote tumor progression. The wealth of information gathered over the last 30 years regarding these RTKs suggests three downstream cascades that

depend upon activation of STAT3, Ras, and AKT. This review outlines the significance of ALK and MET as they relate to glioblastoma, explores the significance of STAT3, Ras, and AKT downstream of ALK/MET, and touches on the potential for new chemotherapeutics targeting ALK and MET to improve glioblastoma patient prognosis.

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[238]

**TÍTULO / TITLE:** - Phase I study of temozolomide combined with oral etoposide in children with malignant glial tumors.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1145-](#)

[Z](#)

**AUTORES / AUTHORS:** - Ruggiero A; Rizzo D; Attina G; Lazzareschi I; Maurizi P; Ridola V; Mastrangelo S; Migliorati R; Bertolini P; Colosimo C; Riccardi R

**INSTITUCIÓN / INSTITUTION:** - Pediatric Oncology Division, Department of Pediatric Oncology, A. Gemelli Hospital, Catholic University of Rome, Largo A Gemelli, 1, 00168, Rome, Italy.

**RESUMEN / SUMMARY:** - The treatment of children with malignant glioma remains challenging. The aim of this multicenter phase I study is to establish the recommended dose (RD) of the combination therapy with temozolomide (TMZ) and oral etoposide (VP-16) in children with relapsed or refractory malignant glioma and brainstem glioma at diagnosis. A phase I trial was conducted to establish the maximum tolerated dose (MTD) of TMZ and oral VP-16. This orally administered combination was investigated by a classical 3 + 3 design. Cohorts of patients were enrolled at 4 different levels: (1) TMZ 120 mg/m<sup>2</sup> on days 1-5 and VP-16 50 mg/m<sup>2</sup> on days 1-8; (2) TMZ 150 mg/m<sup>2</sup> on days 1-5 and VP-16 50 mg/m<sup>2</sup> on days 1-8; (3) TMZ 150 mg/m<sup>2</sup> on days 1-5 and VP-16 50 mg/m<sup>2</sup> on days 1-10; (4) TMZ 150 mg/m<sup>2</sup> on days 1-5 and VP-16 50 mg/m<sup>2</sup> on days 1-12. Therapy was administered in 28-day courses. A total of 118 courses were administered to 18 patients with a median age of 11.2 years. At dose level 1, none displayed toxicity. Of the 6 patients at dose level 2, 1 patient had dose limiting toxicity (DLT). None of the 3 patients at dose level 3 had DLT. At dose level 4, grade III/IV thrombocytopenia and neutropenia were observed in 2 out of the 6 patients enrolled. Therefore, the MTD was established at dose level 3. The RD for phase II trial in children with malignant glial is TMZ 150 mg/m<sup>2</sup> for 5 days and VP-16 50 mg/m<sup>2</sup> for 10 days every 28 days.

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[239]

**TÍTULO / TITLE:** - HGF/c-met system targeting PI3K/AKT and STAT3/phosphorylated-STAT3 pathways in pituitary adenomas: an immunohistochemical characterization in view of targeted therapies.

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

**REVISTA / JOURNAL:** - Endocrine. 2013 Apr 11.

●●Enlace al texto completo (gratis o de pago) [1007/s12020-013-9950-](#)

[X](#)

**AUTORES / AUTHORS:** - Trovato M; Torre ML; Ragonese M; Simone A; Scarfi R; Barresi V; Giuffrè G; Benvenga S; Angileri FF; Tuccari G; Trimarchi F; Ruggeri RM; Cannavo S

**INSTITUCIÓN / INSTITUTION:** - Department of Human Pathology, Pad D 4 piano-AOU Policlinico "G. Martino", via Consolare Valeria, 1, 98125, Messina, Italy, [mariatrovato@tin.it](mailto:mariatrovato@tin.it).

**RESUMEN / SUMMARY:** - The ligand/receptor hepatocyte growth factor (HGF)/c-met signaling system promotes cellular growth and angiogenesis through PI3K/phosphor-Akt and STAT3/phosphor-STAT3 downstream effectors. In this study, we have evaluated the expression of molecules of the HGF/c-met pathway in pituitary adenomas (PA). The expression of HGF, c-met, PI3K (p85α subunit) pAkt, STAT3, and pSTAT3 was analyzed by immunohistochemistry in an archival series of 30 PA (12 non-functioning and 18 functioning; 25 macroadenomas and 5 microadenomas). PAs expressed all six proteins in tumor epithelial cells. The proportion of c-met+ve cells was greater than HGF+ve cells (49 +/- 19 vs 34 +/- 17 %, P < 0.01), the pAkt+ve cells greater than PI3K+ve cells (39 +/- 16.0 vs 1.3 +/- 0.5 %, P < 0.001), and the STAT3+ve cells greater than active pSTAT3+ve cells (14 +/- 8 vs 7 +/- 6 %, P < 0.01). Furthermore, endothelial Akt immunostaining was detected on the vascular surface area of 17 PAs, in macroadenomas more frequently than in microadenomas (82 vs 18 %). The percentage of immunostained endothelial cells was greater in macro than in microadenomas (19 +/- 7 and 7 +/- 3 %; P < 0.05). In conclusion, HGF and c-met are widely expressed in PA, and correlate with pAkt expression. These data, together with the finding of pAkt immunostaining on microvascular areas related to tumor size, suggest a major role of the pAKT signaling in tumor growth and angiogenesis. There might be practical implications for the targeted therapy of PA.

[240]

**TÍTULO / TITLE:** - Diphtheria toxin-based targeted toxin therapy for brain tumors.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1157-](#)

[8](#)

**AUTORES / AUTHORS:** - Li YM; Vallera DA; Hall WA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, State University of New York Upstate Medical University, Syracuse, NY, 13210, USA, [liy@upstate.edu](mailto:liy@upstate.edu).

**RESUMEN / SUMMARY:** - Targeted toxins (TT) are molecules that bind cell surface antigens or receptors such as the transferrin or interleukin-13 receptor that are overexpressed in cancer. After internalization, the toxin component kills the cell. These recombinant proteins consist of an antibody or carrier ligand coupled to a modified plant or bacterial toxin such as diphtheria toxin (DT). These fusion proteins are very effective against brain cancer cells that are resistant to radiation therapy and chemotherapy. TT have shown an acceptable profile for toxicity and safety in animal studies and early clinical trials have demonstrated a therapeutic response. This review summarizes the characteristics of DT-based TT, the animal studies in malignant brain tumors and early clinical trial results. Obstacles to the successful treatment of brain tumors include poor penetration into tumor, the immune response to DT and cancer heterogeneity.

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[241]

**TÍTULO / TITLE:** - Real-time magnetic resonance imaging visualization and quantitative assessment of diffusion in the cerebral extracellular space of C6 glioma-bearing rats.

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

**REVISTA / JOURNAL:** - Neurosci Lett. 2013 May 24;543:84-9. doi: 10.1016/j.neulet.2013.02.071. Epub 2013 Apr 2.

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

[1016/j.neulet.2013.02.071](http://1016/j.neulet.2013.02.071)

**AUTORES / AUTHORS:** - Li K; Han H; Zhu K; Lee K; Liu B; Zhou F; Fu Y; He Q

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Peking University Third Hospital, Beijing, China; Beijing Key Lab of MRI Device and Technique, Beijing, China.

**RESUMEN / SUMMARY:** - Interstitial drug delivery is a promising technique for glioma treatment; however, suboptimal methodologies limit the ability to document the delivery of therapeutic agents. The present study employed magnetic resonance imaging for real-time visualization and quantitative assessment of drug diffusion in gliomas. Using gadolinium-diethylenetriaminepentaacetic acid (Gd-DTPA) as a tracer, we considered diffusion in the agarose gel phantom as a reference and compared the diffusion and distribution patterns between the control group and C6 glioma-bearing rats after direct cerebral infusion. Our findings confirmed that Gd-DTPA diffusion was severely impaired in gliomas and presented in an anisotropic pattern in the caudate nucleus. The proposed method provides a new approach for the real-

time monitoring of interstitial drug delivery and quantitative assessment of biophysical structural variations in diseased tissue.

[242]

**TÍTULO / TITLE:** - Malignant peripheral nerve sheath tumor arising in a traumatic neuroma: a case report.

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

**REVISTA / JOURNAL:** - Hum Pathol. 2013 May 21. pii: S0046-8177(13)00111-1. doi: 10.1016/j.humpath.2013.02.020.

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

[1016/j.humpath.2013.02.020](#)

**AUTORES / AUTHORS:** - Kos Z; Robertson SJ; Purgina BM; Verma S; Gravel DH  
**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Laboratory Medicine, The Ottawa Hospital and University of Ottawa, Ottawa, ON, Canada K1H 8L6.

**RESUMEN / SUMMARY:** - A 67-year-old woman with a history of breast cancer presented with a soft tissue mass at the site of a remote, non-neoplastic lumbar surgery. Excisional biopsy revealed a traumatic neuroma. Five years later she re-presented with a rapidly growing, tender nodule at the same site. An excisional biopsy was again performed and revealed a tumor composed of malignant epithelioid and spindle cells merging imperceptibly with residual traumatic neuroma. The malignant cells were positive for vimentin, S-100 and microphthalmia transcription factor. They were negative for cytokeratins, muscle markers, Melan-A, HMB45, glial fibrillary acidic protein, and myelin basic protein. Electron microscopy showed no melanosomes. The diagnosis of malignant peripheral nerve sheath tumor arising within a long-standing traumatic neuroma was rendered and represents a hitherto unreported origin of this rare, aggressive soft tissue sarcoma.

[243]

**TÍTULO / TITLE:** - D-dimer elevation and paresis predict thromboembolic events during bevacizumab therapy for recurrent malignant glioma.

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

**REVISTA / JOURNAL:** - Anticancer Res. 2013 May;33(5):2093-8.

**AUTORES / AUTHORS:** - Misch M; Czabanka M; Dengler J; Stoffels M; Auf G; Vajkoczy P; Stockhammer F

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Medicine Gottingen, Robert-Koch-Str. 40, 37075 Gottingen, Germany.

[florian.stockhammer@gmx.de](mailto:florian.stockhammer@gmx.de).

**RESUMEN / SUMMARY:** - BACKGROUND: The major side-effects of bevacizumab in glioma treatment are venous thromboembolic events (VTE). We retrospectively evaluated factors potentially predictive of thromboembolic

events. PATIENTS AND METHODS: Bevacizumab, alone or in combination with chemotherapy was used as salvage therapy for recurrence in malignant glioma every two weeks. None but one patient received anti-coagulants. Before each bevacizumab cycle differential blood cell count, kidney and liver parameters, D-dimers, neurological status, body-mass index, vital signs and signs of venous thrombosis were assessed. RESULTS: Thirty-eight patients received 428 cycles of bevacizumab. In five patients (13%), six VTE were observed. These complications were preceded four weeks before the onset of symptoms by D-dimer elevation above 0.865 mg/l [ $p < 0.0001$ ; sensitivity=89% (95% confidence interval=83-93%); specificity=89% (95% CI=52-100%)]. An existing hemiparesis constituted a 27-fold risk elevation for thrombotic complication ( $p < 0.0001$ , chi(2)-test). CONCLUSION: D-Dimer elevation or hemiparesis predict VTE under bevacizumab and chemotherapy, four weeks before the event becomes clinically apparent. Future investigations should determine if prophylactic anti-coagulants for patients at risk may reduce the risk of VTE.

[244]

**TÍTULO / TITLE:** - mTOR-independent autophagy counteracts apoptosis in herpes simplex virus type 1-infected U251 glioma cells.

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

**REVISTA / JOURNAL:** - Microbes Infect. 2013 May 10. pii: S1286-4579(13)00093-2. doi: 10.1016/j.micinf.2013.04.012.

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

[1016/j.micinf.2013.04.012](#)

**AUTORES / AUTHORS:** - Tovilovic G; Ristic B; Siljic M; Nikolic V; Kravic-Stevovic T; Dulovic M; Milenkovic M; Knezevic A; Bosnjak M; Bumbasirevic V; Stanojevic M; Trajkovic V

**INSTITUCIÓN / INSTITUTION:** - Institute for Biological Research, University of Belgrade, Despota Stefana Blvd.142, 11000 Belgrade, Serbia.

**RESUMEN / SUMMARY:** - We investigated the role of autophagy, a stress-inducible lysosomal self-digestion of cellular components, in modulation of herpes simplex virus type 1 (HSV-1)-triggered death of U251 human glioma cells. HSV-1 caused apoptotic death in U251 cells, characterized by phosphatidylserine externalization, caspase activation and DNA fragmentation. HSV-1-induced apoptosis was associated with the induction of autophagic response, as confirmed by the conversion of cytosolic LC3-I to autophagosome-associated LC3-II, increase in intracellular acidification, presence of autophagic vesicles, and increase in proteolysis of the selective autophagic target p62. HSV-1-triggered autophagy was not associated with the significant increase in the expression of proautophagic protein beclin-1 or downregulation of the major autophagy suppressor mammalian target of rapamycin (mTOR). Moreover, the

phosphorylation of mTOR and its direct substrate p70 S6 kinase was augmented by HSV-1 infection, while the mTOR stimulator Akt and inhibitor AMPK-activated protein kinase (AMPK) were accordingly activated and suppressed, respectively. An shRNA-mediated knockdown of the autophagy-essential LC3beta, as well as pharmacological inhibition of autophagy with bafilomycin A1 or 3-methyladenine, markedly accelerated apoptotic changes and ensuing cell death in HSV-1-infected glioma cells. These data indicate that AMPK/Akt/mTOR-independent autophagy could prolong survival of HSV-1-infected U251 glioma cells by counteracting the coinciding apoptotic response.

[245]

**TÍTULO / TITLE:** - Ophthalmological outcome after resection of tumors based on the pineal gland.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS122137](#)

**AUTORES / AUTHORS:** - Hart MG; Sarkies NJ; Santarius T; Kirollos RW

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

**RESUMEN / SUMMARY:** - Object Descriptions of visual dysfunction in pineal gland tumors tend to focus on upward gaze palsy alone. The authors aimed to characterize the nature, incidence, and functional significance of ophthalmological dysfunction after resection of tumors based on the pineal gland. Methods Review of a retrospective case series was performed and included consecutive patients who underwent surgery performed by a consultant neurosurgeon between 2002 and 2011. Only tumors specifically based on the pineal gland were included; tumors encroaching on the pineal gland from other regions were excluded. All patients with visual signs and/or symptoms were reviewed by a specialist consultant neuroophthalmologist to accurately characterize the nature of their deficits. Visual disturbance was defined as visual symptoms caused by a disturbance of ocular motility. Results A total of 20 patients underwent resection of pineal gland tumors. Complete resection was obtained in 85%, and there were no perioperative deaths. Visual disturbance was present in 35% at presentation; of those who had normal ocular motility preoperatively 82% had normal motility postoperatively. In total, 55% of patients had residual visual disturbance postoperatively. Although upward gaze tended to improve, significant functional deficits remained, particularly with regard to complex convergence and accommodation dysfunction. Prisms were used in 25% but were only ever partially effective. Visual outcome was only related to preoperative visual status and tumor volume (multivariate analysis). Conclusions Long-term visual morbidity after pineal gland tumor resection is common and leads to significant functional impairment. Improvement in deficits rarely occurs spontaneously, and prisms only have

limited effectiveness, probably due to the dynamic nature of supranuclear ocular movement coordination.

[246]

**TÍTULO / TITLE:** - A case of late-onset leukoencephalopathy, calcifications, and cysts presenting with intracerebral hemorrhage resembling a neoplasm.

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

**REVISTA / JOURNAL:** - Cerebrovasc Dis. 2013;35(4):396-7. doi: 10.1159/000348312. Epub 2013 Apr 30.

●●Enlace al texto completo (gratis o de pago) [1159/000348312](#)

**AUTORES / AUTHORS:** - Banks GP; Weiss SA; Pisapia D; Willey JZ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Columbia University College of Physicians and Surgeons, New York, N.Y., USA.

[247]

**TÍTULO / TITLE:** - Cerebral Diffusion Tensor MR Tractography in Tuberous Sclerosis Complex: Correlation with Neurologic Severity and Tract-Based Spatial Statistical Analysis.

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

**REVISTA / JOURNAL:** - AJNR Am J Neuroradiol. 2013 Apr 11.

●●Enlace al texto completo (gratis o de pago) [3174/ajnr.A3507](#)

**AUTORES / AUTHORS:** - Wong AM; Wang HS; Schwartz ES; Toh CH; Zimmerman RA; Liu PL; Wu YM; Ng SH; Wang JJ

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Imaging and Intervention Chang Gung Memorial Hospital and Chang Gung University, Keelung, Linkou, Taiwan, Republic of China; Division of Pediatric Neurology, Department of Pediatrics, Chang Gung Children's Hospital and Chang Gung University, Kwei-Shan, Tao Yuan, Taiwan, Republic of China; Department of Radiology, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania; and Institute of Information Science, Academia Sinica, Taiwan, Republic of China.

**RESUMEN / SUMMARY:** - BACKGROUND AND PURPOSE: The neurologic significance of residual cerebral white matter tracts, identified on diffusion tensor tractography, has not been well studied in tuberous sclerosis complex. We aimed to correlate the quantity of reconstructed white matter tracts with the degree of neurologic impairment of subjects with the use of DTI and determined differences in white matter integrity between patients with tuberous sclerosis complex and controls with the use of voxelwise analysis. MATERIALS AND METHODS: In this case-control study, 16 patients with tuberous sclerosis complex and 12 control subjects underwent DTI. Major white matter tracts, comprising bilateral PF and CF, were reconstructed and assessed for quantity, represented by NOP and NOF. A neurologic severity score, based on the

presence of developmental disability, seizure, autism, and other neuropsychiatric disorders, was calculated for each subject. We then correlated this score with white matter quantity. Voxelwise tract-based spatial statistics was used to determine differences in FA, axial, and radial diffusivity values between the tuberous sclerosis complex group and the control subjects. RESULTS: NOP and NOF of CF, bilateral PF, and MWT in the tuberous sclerosis complex group were all significantly lower than those in the control subjects ( $P < .05$ ). The neurologic severity score was moderately negatively correlated with NOF and NOP regarding CF ( $r = -.70$ ;  $r = -.75$ ), bilateral PF ( $r = -.66$ ;  $r = -.68$ ), and MWT ( $r = -.71$ ;  $r = -.74$ ). Tract-based spatial statistics revealed that patients with tuberous sclerosis complex showed a widespread reduction ( $P < .05$ ) in FA and axial diffusivity in most cerebral white matter regions. CONCLUSIONS: Patients with tuberous sclerosis complex with reduced residual white matter were neurologically more severely affected. Tract-based spatial statistics revealed decreased FA and axial diffusivity of the cerebral white matter in the tuberous sclerosis complex group, suggesting reduced axonal integrity.

[248]

**TÍTULO / TITLE:** - Evaluation of Perfusion CT in Grading and Prognostication of High-Grade Gliomas at Diagnosis: A Pilot Study.

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

**REVISTA / JOURNAL:** - AJR Am J Roentgenol. 2013 May;200(5):W504-9. doi: 10.2214/AJR.12.8967.

●●Enlace al texto completo (gratis o de pago) [2214/AJR.12.8967](#)

**AUTORES / AUTHORS:** - Shankar JJ; Woulfe J; Silva VD; Nguyen TB

**INSTITUCIÓN / INSTITUTION:** - 1 Department of Diagnostic Imaging, QEII Hospital, 5743 Southwood Dr, 1807, Halifax, NS B3H 1E6, Canada.

**RESUMEN / SUMMARY:** - OBJECTIVE. Differentiation of grade 3 astrocytoma from glioblastoma multiforme can be difficult with conventional structural imaging but is important for prognosis. The purpose of this study was to assess perfusion CT in differentiating high-grade gliomas (HGGs) and their role in prognosis in the care of patients with HGG. SUBJECTS AND METHODS. Twenty patients with previously untreated HGG underwent prospective evaluation with perfusion CT. Permeability surface area product (PS) and cerebral blood volume (CBV) were calculated by the deconvolution method and were compared between HGGs with Student two-sample t tests. Receiver operating characteristic curves were generated for PS, CBV, and the conjoint factor PS + CBV. Cox regression analysis was used to correlate these parameters with patient survival over a follow-up period. Hazard ratios were calculated, and Kaplan-Meier survival curves were drawn. RESULTS. There was a significant difference between grade 3 and grade 4 gliomas for PS ( $p =$

0.022) and PS + CBV ( $p = 0.019$ ) but not for CBV alone ( $p = 0.411$ ). Receiver operating characteristic analyses showed that PS (area under the curve [AUC], 0.72) and CBV + PS (AUC, 0.73) can be used to differentiate grade 3 from grade 4 gliomas but that CBV alone cannot be so used (AUC, 0.54). There was a significant relation between patient outcome and age ( $p = 0.034$ ) and CBV + PS ( $p = 0.048$ ). Patients with HGG and a CBV + PS greater than 9 had a poor outcome (hazard ratio, 6.00). CONCLUSION. PS and CBV + PS can be used to differentiate grade 3 from grade 4 gliomas. The outcome of patients with HGG depends on age and CBV + PS.

[249]

**TÍTULO / TITLE:** - Simultaneous Colonic Adenocarcinoma and Medulloblastoma in a 12-Year-Old with Biallelic Deletions in PMS2.

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

**REVISTA / JOURNAL:** - J Pediatr. 2013 Apr 10. pii: S0022-3476(13)00283-7. doi: 10.1016/j.jpeds.2013.03.007.

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

[1016/j.jpeds.2013.03.007](#)

**AUTORES / AUTHORS:** - Lindsay H; Jubran RF; Wang L; Kipp BR; May WA

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Children's Center for Cancer and Blood Diseases.

**RESUMEN / SUMMARY:** - We describe a 12-year-old girl, simultaneously presenting with colonic adenocarcinoma and medulloblastoma from biallelic deletions in the mismatch repair gene PMS2. Her distinctive physical and clinical findings are characteristic of constitutional mismatch repair deficiency syndrome. Earlier recognition of such findings may permit better screening and more effective treatment.

[250]

**- CASTELLANO -**

**TÍTULO / TITLE:** Schulabschluss nach Hirntumorerkrankung im Kindesalter: Ergebnisse einer Umfrage in Deutschland.

**TÍTULO / TITLE:** - Educational Level of Childhood Brain Tumor Survivors: Results from a German Survey.

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

**REVISTA / JOURNAL:** - Klin Padiatr. 2013 May;225(3):138-144. Epub 2013 Apr 18.

●●Enlace al texto completo (gratis o de pago) [1055/s-0033-1341488](#)

**AUTORES / AUTHORS:** - Pfitzer C; Zynda A; Hohmann C; Keil T; Borgmann-Staudt A

**INSTITUCIÓN / INSTITUTION:** - Paediatric Oncology/Haematology, Charite - Universitätsmedizin Berlin, Berlin, Germany.

**RESUMEN / SUMMARY:** - Among adult survivors of childhood brain tumors in Germany, we assessed their educational level and examined potentially influencing factors. A questionnaire was sent to 505 childhood brain tumor survivors listed in the German Childhood Cancer Registry. 203/505 (40.2%) patients with treatment and educational data were included in the analysis. Of the included brain tumor survivors 54.7% (111/203) were male, the median age was 11.0 (1-15) years at diagnosis and 22.0 (19-37) years at the time of the survey. 34.8% (95%-CI 25.1-44.5) of female and 34.9% (26.0-43.8) of male survivors achieved a high school diploma. Survivors who had received irradiation had less likely obtained a high school diploma compared to those without irradiation. However, this association was statistically not significant: for either craniospinal or tumor irradiation adjusted odds ratio was 0.54 (0.08-3.76); for those with a combination of craniospinal and tumor irradiation 0.51 (0.07-3.59). Participants aged 6-10 years at diagnosis achieved a higher educational level 2.24 (0.45-11.25) compared to younger patients. A third of the childhood brain tumor survivors who participated in our survey obtained the highest school leaving certificate. This may be biased by an overrepresentation of well-educated survivors without major cancer-related late effects. The influence of the patients' strong motivation following a severe illness combined with the intensive psychosocial and/or pedagogical support on education needs to be examined in future studies.

[251]

**TÍTULO / TITLE:** - Neurodevelopment outcome of newborns with cerebral subependymal pseudocysts at 18 and 46 months: a prospective study.

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

**REVISTA / JOURNAL:** - Arch Dis Child. 2013 Apr 27.

●●Enlace al texto completo (gratis o de pago) [1136/archdischild-2012-303223](#)

**AUTORES / AUTHORS:** - Cevey-Macherel M; Forcada Guex M; Bickle Graz M; Truttmann AC

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics and Pediatric Surgery, Follow up Unit, Clinic of Neonatology, University Hospital Center and University of Lausanne, , Lausanne, Vaud, Switzerland.

**RESUMEN / SUMMARY:** - **OBJECTIVES:** Subependymal pseudocysts (SEPC) are cerebral periventricular cysts located on the floor of the lateral ventricle and result from regression of the germinal matrix. They are increasingly diagnosed on neonatal cranial ultrasound. While associated pathologies are reported, information about long-term prognosis is missing, and we aimed to investigate long-term follow-up of these patients. **STUDY DESIGN:** Newborns diagnosed

with SEPC were enrolled for follow-up. Neurodevelopment outcome was assessed at 6, 18 and 46 months of age. RESULTS: 74 newborns were recruited: we found a high rate of antenatal events (63%), premature infants (66% <37 weeks, 31% <32 weeks) and twins (30%). MRI was performed in 31 patients, and cystic periventricular leukomalacia (c-PVL) was primarily falsely diagnosed in 9 of them. Underlying disease was diagnosed in 17 patients, 8 with congenital cytomegalovirus (CMV) infection, 5 with genetic and 4 with metabolic disease. Neurological examination (NE) at birth was normal for patients with SEPCs and no underlying disease, except one. Mean Developmental Quotient and IQ of these patients was 98.2 (+/-9.6SD; range 77-121), 94.6 (+/-14.2SD; 71-120) and 99.6 (+/-12.3SD; 76-120) at 6, 18 and 46 months of age, respectively, with no differences between the subtypes of SEPC. A subset analysis showed no outcome differences between preterm infants with or without SEPC, or between preterm of <32 GA and >=32 GA. CONCLUSIONS: Neurodevelopment of newborns with SEPC was normal when no underlying disease was present. This study suggests that if NE is normal at birth and congenital CMV infection can be excluded, then no further investigations are needed. Moreover, it is crucial to differentiate SEPC from c-PVL which carries a poor prognosis.

[252]

**TÍTULO / TITLE:** - The long pentraxin PTX3 as a correlate of cancer-related inflammation and prognosis of malignancy in gliomas.

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

**REVISTA / JOURNAL:** - J Neuroimmunol. 2013 May 9. pii: S0165-5728(13)00093-3. doi: 10.1016/j.jneuroim.2013.04.009.

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

[1016/j.jneuroim.2013.04.009](#)

**AUTORES / AUTHORS:** - Locatelli M; Ferrero S; Martinelli Boneschi F; Boiocchi L; Zavanone M; Maria Gaini S; Bello L; Valentino S; Barbati E; Nebuloni M; Mantovani A; Garlanda C

**INSTITUCIÓN / INSTITUTION:** - Fondazione IRCCS Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Milan, Italy.

**RESUMEN / SUMMARY:** - Inflammation is a component of glioma microenvironment. PTX3 is a component of the humoral arm of innate immunity and a candidate marker of inflammation. In the present study we assessed the expression of PTX3 in gliomas by immunohistochemistry. PTX3 expression differed across low and high-grade tumors based on histopathological diagnosis and clinical severity, positively correlating with tumor grade and severity. In a multivariate logistic regression model, only the PTX3 score was significantly associated with the presence of a high-grade tumor. Thus, PTX3 may represent a new marker of cancer-related inflammation and glioma malignancy.

[253]

**TÍTULO / TITLE:** - Conventional and advanced MRI features of pediatric intracranial tumors: supratentorial tumors.

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

**REVISTA / JOURNAL:** - AJR Am J Roentgenol. 2013 May;200(5):W483-503. doi: 10.2214/AJR.12.9724.

●●Enlace al texto completo (gratis o de pago) [2214/AJR.12.9724](#)

**AUTORES / AUTHORS:** - Borja MJ; Plaza MJ; Altman N; Saigal G

**INSTITUCIÓN / INSTITUTION:** - 1 Department of Radiology, University of Miami/Jackson Memorial Hospital, 1611 NW 12th Ave, West Wing 279, Miami, FL 33136.

**RESUMEN / SUMMARY:** - OBJECTIVE. Our objective is to review the imaging characteristics and applications of conventional and advanced neuroimaging techniques of supratentorial intracranial masses in the pediatric population. Specifically, we review astrocytomas, oligodendrogliomas, primary neuroectodermal tumors, dysembryoplastic neuroepithelial tumors, gangliogliomas, arachnoid cysts, and choroid plexus and pineal region masses. CONCLUSION. Advanced imaging methods, such as MR spectroscopy, perfusion MRI, functional MRI, diffusion-tensor imaging, and tractography, help develop a more accurate differential diagnosis and aid in planning tumor treatment.

[254]

**TÍTULO / TITLE:** - Conventional and advanced MRI features of pediatric intracranial tumors: posterior fossa and suprasellar tumors.

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

**REVISTA / JOURNAL:** - AJR Am J Roentgenol. 2013 May;200(5):1115-24. doi: 10.2214/AJR.12.9725.

●●Enlace al texto completo (gratis o de pago) [2214/AJR.12.9725](#)

**AUTORES / AUTHORS:** - Plaza MJ; Borja MJ; Altman N; Saigal G

**INSTITUCIÓN / INSTITUTION:** - 1 Department of Radiology, University of Miami/Jackson Memorial Hospital, 1611 NW 12th Ave, West Wing 279, Miami, FL 33136.

**RESUMEN / SUMMARY:** - OBJECTIVE. In this article, we review the most common posterior fossa and suprasellar intracranial neoplasms in the pediatric population. We briefly discuss basic MRI concepts used in the initial evaluation of a pediatric brain tumor and then discuss sophisticated MRI techniques that give insight into the physiology and chemical makeup of these tumors to help the radiologist make a more specific diagnosis. CONCLUSION. Diagnosis and treatment of pediatric CNS tumors necessitate a multi-disciplinary approach and

require expertise and diligence of all parties involved. Imaging is an essential component has evolved greatly over the past decade. We are becoming better at making a preoperative diagnosis of that tumor type, detecting recurrence, and guiding surgical management to avoid injury to vital brain structures.

[255]

**TÍTULO / TITLE:** - The Impact of the Body-Mass-Index on Outcome After Subarachnoid Hemorrhage: Is There an Obesity Paradox in SAH? A Retrospective Analysis.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Apr 29.

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

[1227/01.neu.0000430322.17000.82](https://doi.org/10.1227/01.neu.0000430322.17000.82)

**AUTORES / AUTHORS:** - Platz J; Guresir E; Schuss P; Konczalla J; Seifert V; Vatter H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Johann Wolfgang Goethe-University, Frankfurt am Main, Germany.

**RESUMEN / SUMMARY:** - BACKGROUND:: Obesity is a risk factor for cardiovascular disease and associated with poor outcome, especially for intensive care patients. Yet, recent studies have described favorable outcomes of obese patients after stroke, a phenomenon called “obesity paradox”. OBJECTIVE:: To assess the impact of BMI (Body-Mass-Index) on outcome after subarachnoid hemorrhage (SAH). METHODS:: We analyzed the data of 741 SAH patients. BMI>25 kg/m was considered overweight and >30 kg/m obese. Outcome according to the Glasgow Outcome scale (GOS) at discharge and after 6 months was assessed using logistic regression analysis. RESULTS:: According to BMI, 268 patients (36.2%) were overweight and 113 (15.2%) obese. A favorable outcome (GOS>3) was achieved in 53.0% of overweight patients. In contrast, 61.4% of the 360 patients with a normal BMI had a favorable outcome (P=0.021). However, in the multivariate analysis, only age (OR 1.051, 95%CI 1.04-1.07, P<0.001), WFNS grade (OR 2.095, 95%CI 1.87-2.35, P<0.001), occurrence of vasospasm (OR 2.90, 95%CI 1.94-4.34, P<0.001) and aneurysm size >12mm (OR 2.215, 95%CI 1.20-4.10, P=0.011) were independent predictors for outcome after 6 months. Of the 321 poor grade patients (WFNS>3), 171 (53.3%) were overweight. Of these, 21.6% attained a favorable outcome compared to 35.3% of normal weight patients (P=0.006). CONCLUSION:: Although many physicians anticipate a worse outcome for obese patients, in our study BMI was not an independent predictor for outcome. Based on BMI, obesity seems to be negligible for outcome after SAH compared to the impact of SAH itself, the patient’s age, occurrence of vasospasm, or aneurysm size.

[256]

**TÍTULO / TITLE:** - Intractable headache after excision of an acoustic neuroma treated by stent revascularisation of the sigmoid sinus.

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

**REVISTA / JOURNAL:** - Br J Neurosurg. 2013 May 7.

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

[3109/02688697.2013.791665](#)

**AUTORES / AUTHORS:** - Higgins JN; Pickard JD

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Addenbrooke's Hospital, Hills Road, Cambridge CB2 0QQ, United Kingdom.

**RESUMEN / SUMMARY:** - A 47 year old man developed severe headaches after resection of an acoustic neuroma ipsilateral to non dominant venous drainage. CSF pressures were normal but imaging studies showed acquired, severe narrowing of the sigmoid sinus where it traversed the surgical defect. Stenting the sinus gave a lasting clinical improvement.

[257]

**TÍTULO / TITLE:** - Correlation between Tc-HYNIC-octreotide SPECT/CT somatostatin receptor scintigraphy and pathological grading of meningioma.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 9.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1146-](#)

[y](#)

**AUTORES / AUTHORS:** - Wang S; Yang W; Deng J; Zhang J; Ma F; Wang J

**INSTITUCIÓN / INSTITUTION:** - Department of Nuclear Medicine, Xijing Hospital, Fourth Military Medical University, 15 West Changle Road, Xi'an, 710032, Shaanxi, China.

**RESUMEN / SUMMARY:** - The aim of this study was to explore the association of 99mTc-HYNIC-octreotide SPECT/CT somatostatin receptor scintigraphy (SRS) with the pathological grading and expression of somatostatin receptor 2 (SSTR2) for meningioma, and to define possible roles of SRS in the pathological grading of meningioma. Thirty patients with meningiomas diagnosed by MRI and treated with 99mTc-HYNIC-octreotide SPECT/CT SRS. Meningioma tissues were obtained from analyzing pathological grading and measuring the expression of SSTR2 with immunohistochemical staining. The meningioma side (T) to the contralateral side (NT) ratios (T/TN) of radioactive counts were calculated to investigate their association with the pathological grading of meningioma and the expression of SSTR2. All 30 cases showed high meningioma radioactivity accumulation using SRS with a sensitivity of 100 %, while CT scans only detected 25 cases with a sensitivity of 83 %. Twenty cases with grade I meningioma had a T/NT ratio of 3.80 +/- 1.67, which was

significantly lower than the other 10 cases (9.57 +/- 3.78) with a grade II meningioma (P < 0.01). All meningiomas expressed SSTR2 as detected by immunohistochemical staining, and the T/NT ratio was positively associated with the pathological grading of meningioma and the expression of SSTR2 (with r of 0.784 and 0.805, respectively). 99mTc-HYNIC-octreotide SPECT/CT SRS is a sensitive technique for detecting meningioma, and the T/NT ratio of the SRS data closely correlates with the pathological grade of meningioma and the expression of SSTR2.

[258]

**TÍTULO / TITLE:** - Long non-coding RNAs as potential biomarkers and therapeutic targets for gliomas.

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

**REVISTA / JOURNAL:** - Med Hypotheses. 2013 May 17. pii: S0306-9877(13)00180-1. doi: 10.1016/j.mehy.2013.04.010.

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

[1016/j.mehy.2013.04.010](http://1016/j.mehy.2013.04.010)

**AUTORES / AUTHORS:** - Sun Y; Wang Z; Zhou D

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Affiliated Hospital of Soochow University, Suzhou, Jiangsu 215006, PR China; Department of Neurosurgery, Huai'an Second People's Hospital, Huai'an, Jiangsu 223002, PR China.

**RESUMEN / SUMMARY:** - Gliomas are the most malignant and common primary brain tumors, accounting for 50-60%. Despite all surgical efforts in combination with intense chemoradiotherapy, gliomas still have a dismal prognosis. The early screening and identification of patients with gliomas could improve their prognosis by allowing proactive medical treatment. Traditionally, gliomas of varying subtypes and grades are diagnosed based on histopathological features, but this can be challenging, particularly in cases that lack the typical features. Molecular expression profiles using microarray analyses have provided additional information to help distinguish between glioma subtypes, which correlate well with histological profiles. Various molecular biomarkers and therapeutic targets for gliomas are currently available, including genes and miRNAs, but all remain in preclinical studies. Certain specific lncRNAs involved in gliomas have been identified in surgical brain biopsies, which may be involved in brain development and the pathogenesis of gliomas; these can also be detected in peripheral blood. Therefore, we postulate that these specific lncRNAs may be both potential biomarkers and therapeutic targets for gliomas.

[259]

**TÍTULO / TITLE:** - Editorial: Asymptomatic meningiomas.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 May 24.

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

[3171/2012.12.JNS122338](#)

**AUTORES / AUTHORS:** - Elharmady MS; Heros RC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Miami, Florida.

[260]

**TÍTULO / TITLE:** - Editorial: Embolization of meningiomas.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [3171/2013.2.JNS121860](#)

**AUTORES / AUTHORS:** - Lanzino G

**INSTITUCIÓN / INSTITUTION:** - Department of Neurologic Surgery, Mayo Medical School, Mayo Clinic, Rochester, Minnesota.

[261]

**TÍTULO / TITLE:** - The role of preoperative embolization for intracranial meningiomas.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS121328](#)

**AUTORES / AUTHORS:** - Shah AH; Patel N; Raper DM; Bregy A; Ashour R; Elharmady MS; Aziz-Sultan MA; Morcos JJ; Heros RC; Komotar RJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of Miami, Florida; and.

**RESUMEN / SUMMARY:** - Object As endovascular techniques have become more advanced, preoperative embolization has become an increasingly used intervention in the management of meningiomas. To date, however, no consensus has been reached on the use of this technique. To clarify the role of preoperative embolization in the management of meningiomas, the authors conducted a systematic review of case reports, case series, and prospective studies to increase the current understanding of the management options for these common lesions and complications associated with preoperative embolization. Methods A PubMed search was performed to include all relevant studies in which the management of intracranial meningiomas with preoperative embolization was reported. Immediate complications of embolization were reported as major (sustained) or minor (transient) deficits, death, or no neurological deficits. Results A total of 36 studies comprising 459 patients were included in the review. Among patients receiving preoperative embolization for

meningiomas, 4.6% (n = 21) sustained complications as a direct result of embolization. Of the 21 patients with embolization-induced complications, the incidence of major complications was 4.8% (n = 1) and the mortality rate was 9.5% (n = 2). Conclusions Preoperative embolization is associated with an added risk for morbidity and mortality. Preoperative embolization may be associated with significant complications, but careful selection of ideal cases for embolization may help reduce any added morbidity with this procedure. Although not analyzed in the authors' study, embolization may still reduce rates of surgical morbidity and mortality and therefore may still have a potential benefit for selected patients. Future prospective studies involving the use of preoperative embolization in certain cases of meningiomas may further elucidate its potential benefit and risks.

[262]

**TÍTULO / TITLE:** - Melatonin antagonizes hypoxia-mediated glioblastoma cell migration and invasion via inhibition of HIF-1alpha

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

**REVISTA / JOURNAL:** - J Pineal Res. 2013 Mar 25. doi: 10.1111/jpi.12052.

●●Enlace al texto completo (gratis o de pago) [1111/jpi.12052](#)

**AUTORES / AUTHORS:** - Zhang Y; Liu Q; Wang F; Ling EA; Liu S; Wang L; Yang Y; Yao L; Chen X; Wang F; Shi W; Gao M; Hao A

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of the Ministry of Education for Experimental Teratology, Shandong Provincial Key Laboratory of Mental Disorders, Department of Histology and Embryology, Shandong University School of Medicine, Jinan, China.

**RESUMEN / SUMMARY:** - Hypoxia is a crucial factor in tumor aggressiveness and resistance to therapy, especially in glioblastoma. Our previous results have shown that melatonin exerts antimigratory and anti-invasive action in glioblastoma cells under normoxia. However, the effect of melatonin on migration and invasion of glioblastoma cells under hypoxic condition remains poorly understood. Here, we show that melatonin strongly reduced hypoxia-mediated invasion and migration of U251 and U87 glioblastoma cells. In addition, we found that melatonin significantly blocked HIF-1alpha protein expression and suppressed the expression of downstream target genes, matrix metalloproteinase 2 (MMP-2) and vascular endothelial growth factor (VEGF). Furthermore, melatonin destabilized hypoxia-induced HIF-1alpha protein via its antioxidant activity against ROS produced by glioblastoma cells in response to hypoxia. Along with this, HIF-1alpha silencing by small interfering RNA markedly inhibited glioblastoma cell migration and invasion, and this appeared to be associated with MMP-2 and VEGF under hypoxia. Taken together, our findings suggest that melatonin suppresses hypoxia-induced glioblastoma cell migration and invasion via inhibition of HIF-1alpha. Considering the fact that

overexpression of the HIF-1alpha protein is often detected in glioblastoma multiforme, melatonin may prove to be a potent therapeutic agent for this tumor.

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[263]

**TÍTULO / TITLE:** - APT-weighted and NOE-weighted image contrasts in glioma with different RF saturation powers based on magnetization transfer ratio asymmetry analyses.

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

**REVISTA / JOURNAL:** - Magn Reson Med. 2013 May 9. doi: 10.1002/mrm.24784.

●●Enlace al texto completo (gratis o de pago) [1002/mrm.24784](#)

**AUTORES / AUTHORS:** - Zhou J; Hong X; Zhao X; Gao JH; Yuan J

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Johns Hopkins University, Baltimore, Maryland, USA; F.M. Kirby Research Center for Functional Brain Imaging, Kennedy Krieger Institute, Baltimore, Maryland, USA.

**RESUMEN / SUMMARY:** - PURPOSE: To investigate the saturation-power dependence of amide proton transfer (APT)-weighted and nuclear Overhauser enhancement-weighted image contrasts in a rat glioma model at 4.7 T. METHODS: The 9L tumor-bearing rats (n = 8) and fresh chicken eggs (n = 4) were scanned on a 4.7-T animal magnetic resonance imaging scanner. Z-spectra over an offset range of +/-6 ppm were acquired with different saturation powers, followed by the magnetization transfer-ratio asymmetry analyses around the water resonance. RESULTS: The nuclear Overhauser enhancement signal upfield from the water resonance (-2.5 to -5 ppm) was clearly visible at lower saturation powers (e.g., 0.6 microT) and was larger in the contralateral normal brain tissue than in the tumor. Conversely, the APT effect downfield from the water resonance was maximized at relatively higher saturation powers (e.g., 2.1 microT) and was larger in the tumor than in the contralateral normal brain tissue. The nuclear Overhauser enhancement decreased the APT-weighted image signal, based on the magnetization transfer-ratio asymmetry analysis, but increased the APT-weighted image contrast between the tumor and contralateral normal brain tissue. CONCLUSION: The APT and nuclear Overhauser enhancement image signals in tumor are maximized at different saturation powers. The saturation power of roughly 2 muT is ideal for APT-weighted imaging at clinical B0 field strengths. Magn Reson Med, 2013. © 2013 Wiley Periodicals, Inc.

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[264]

**TÍTULO / TITLE:** - Genomic analysis of non-neurofibromatosis type 2 meningiomas.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Jun;72(6):N18-9. doi: 10.1227/01.neu.0000430737.55867.9f.

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

[1227/01.neu.0000430737.55867.9f](https://doi.org/10.1227/01.neu.0000430737.55867.9f)

**AUTORES / AUTHORS:** - Parry PV; Engh JA

[265]

**TÍTULO / TITLE:** - A quantitative study of white matter hypomyelination and oligodendroglial maturation in focal cortical dysplasia type II.

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

**REVISTA / JOURNAL:** - Epilepsia. 2013 May;54(5):898-908. doi: 10.1111/epi.12143. Epub 2013 Mar 28.

●●Enlace al texto completo (gratis o de pago) [1111/epi.12143](https://doi.org/10.1111/epi.12143)

**AUTORES / AUTHORS:** - Shepherd C; Liu J; Goc J; Martinian L; Jacques TS; Sisodiya SM; Thom M

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical and Experimental Epilepsy, UCL, Institute of Neurology and National Hospital for Neurology and Neurosurgery, London, United Kingdom.

**RESUMEN / SUMMARY:** - **PURPOSE:** A diagnostic feature of focal cortical dysplasia (FCD) type II on magnetic resonance imaging (MRI) is increased subcortical white matter (WM) signal on T2 sequences corresponding to hypomyelination, the cause of which is unknown. We aimed to quantify WM pathology in FCD type II and any deficiency in the numbers and differentiation of oligodendroglial (OL) cell types within the dysplasia. **METHODS:** In 19 cases we defined four regions of interests (ROIs): ROI1 = abnormal WM beneath dysplasia, ROI2 =dysplastic cortex, ROI3 = normal WM, and ROI4 = normal cortex. We quantified axonal and myelin density using immunohistochemistry for neurofilament, myelin basic protein and quantified mature OL with NogoA, cyclic nucleotide 3-phosphodiesterase (CNPase) and OL precursor cell (OPC) densities with platelet derived growth factor receptor (PDGFR)alpha, beta and NG-2 in each region. **KEY FINDINGS:** We observed a significant reduction in myelin and axons in the WM beneath dysplasia relative to normal WM and there was a correlation between relative reduction of myelin and neurofilament in each case. OL and OPC were present in the WM beneath dysplasia and although present in lower numbers with most markers, were not significantly different from normal WM. Neurofilament and myelin labeling highlighted disorganized orientation of fibers in dysplastic cortex but there were no significant quantitative differences compared to normal cortex. Clinical correlations showed an association between the severity of reduction of myelin and axons in the WM of FCD and duration of epilepsy. **SIGNIFICANCE:** These findings indicate a reduction of myelinated axons in the WM of FCD type II rather than dysmyelination as the primary pathologic process underlying WM

abnormalities, possibly influenced by duration of seizures. The range of OPC to OL present in FCD type II does not implicate a primary failure of cell recruitment and differentiation of these cell types in this pathology.

[266]

**TÍTULO / TITLE:** - Displacement of mammillary bodies by craniopharyngiomas involving the third ventricle: surgical-MRI correlation and use in topographical diagnosis.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Mar 29.

●●Enlace al texto completo (gratis o de pago) [3171/2013.1.JNS111722](#)

**AUTORES / AUTHORS:** - Pascual JM; Prieto R; Carrasco R; Barrios L

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, La Princesa University Hospital;

**RESUMEN / SUMMARY:** - Object Accurate diagnosis of the topographical relationships of craniopharyngiomas (CPs) involving the third ventricle and/or hypothalamus remains a challenging issue that critically influences the prediction of risks associated with their radical surgical removal. This study evaluates the diagnostic accuracy of MRI to define the precise topographical relationships between intraventricular CPs, the third ventricle, and the hypothalamus. Methods An extensive retrospective review of well-described CPs reported in the MRI era between 1990 and 2009 yielded 875 lesions largely or wholly involving the third ventricle. Craniopharyngiomas with midsagittal and coronal preoperative and postoperative MRI studies, in addition to detailed descriptions of clinical and surgical findings, were selected from this database (n = 130). The position of the CP and the morphological distortions caused by the tumor on the sella turcica, suprasellar cistern, optic chiasm, pituitary stalk, and third ventricle floor, including the infundibulum, tuber cinereum, and mammillary bodies (MBs), were analyzed on both preoperative and postoperative MRI studies. These changes were correlated with the definitive CP topography and type of third ventricle involvement by the lesion, as confirmed surgically. Results The mammillary body angle (MBA) is the angle formed by the intersection of a plane tangential to the base of the MBs and a plane parallel to the floor of the fourth ventricle in midsagittal MRI studies. Measurement of the MBA represented a reliable neuroradiological sign that could be used to discriminate the type of intraventricular involvement by the CP in 83% of cases in this series (n = 109). An acute MBA (< 60 degrees ) was indicative of a primary tuberal-intraventricular topography, whereas an obtuse MBA (> 90 degrees ) denoted a primary suprasellar CP position, causing either an invagination of the third ventricle (pseudointraventricular lesion) or its invasion (secondarily intraventricular lesion; p < 0.01). A multivariate model including a combination of 5 variables (the MBA, position of the hypothalamus,

presence of hydrocephalus, psychiatric symptoms, and patient age) allowed an accurate definition of the CP topography preoperatively in 74%-90% of lesions, depending on the specific type of relationship between the tumor and third ventricle. Conclusions The type of mammillary body displacement caused by CPs represents a valuable clue for ascertaining the topographical relationships between these lesions and the third ventricle on preoperative MRI studies. The MBA provides a useful sign to preoperatively differentiate a primary intraventricular CP originating at the infundibulotuberal area from a primary suprasellar CP, which either invaginated or secondarily invaded the third ventricle.

[267]

**TÍTULO / TITLE:** - Intracisternal administration of SB203580, a p38 mitogen-activated protein kinase inhibitor, attenuates cerebral vasospasm via inhibition of tumor-necrosis factor-alpha.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May;20(5):726-30. doi: 10.1016/j.jocn.2012.09.012. Epub 2013 Mar 27.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.09.012](http://1016/j.jocn.2012.09.012)

**AUTORES / AUTHORS:** - Pan YX; Chen KF; Lin YX; Wu W; Zhou XM; Zhang XS; Zhang X; Shi JX

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Jinling Hospital, School of Medicine, Nanjing University, 305 East Zhongshan Road, Nanjing 210002, Jiangsu, China.

**RESUMEN / SUMMARY:** - Tumor-necrosis factor-alpha (TNF-alpha) is critical to the development of cerebral vasospasm after subarachnoid hemorrhage (SAH). Hence, therapeutic strategies targeting TNF-alpha can attenuate cerebral vasospasm. This study investigated the effects of SB203580, a p38 mitogen-activated protein kinase (MAPK) inhibitor, on TNF-alpha concentration in the cerebral arteries and the cerebrospinal fluid (CSF) after SAH and on subsequent cerebral vasospasm. Twenty-three rabbits were divided into four groups: (i) control (without SAH), (ii) SAH (SAH only), (iii) dimethylsulfoxide (DMSO, vehicle), and (iv) SB203580. The severity of vasospasm and the immunoreactivities of TNF-alpha and phosphorylated p38 MAPK in the brain vessels were determined in all animals, and the concentrations of TNF-alpha in the CSF were also assessed. Severe vasospasm was observed in the rabbits from the SAH and DMSO groups. SB203580 reversed vasospasm after SAH. Lower immunoreactivities of TNF-alpha and phosphorylated p38 MAPK were found in the basilar artery in the SB203580 group than in the DMSO group. The concentration of TNF-alpha in the CSF increased after SAH, but treatment with SB203080 after SAH suppressed this increase. Our data show that SB203580 reversed cerebral vasospasm by inhibiting the phosphorylation of p38 MAPK in

the basilar artery and by suppressing the increase in TNF-alpha in the basilar artery and CSF after SAH. SB203580 could therefore potentially be used for the treatment of cerebral vasospasm after SAH.

[268]

**TÍTULO / TITLE:** - The role of ubiquitin-proteasome system in glioma survival and growth.

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

**REVISTA / JOURNAL:** - Growth Factors. 2013 Jun;31(3):106-13. doi: 10.3109/08977194.2013.799156. Epub 2013 May 21.

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

[3109/08977194.2013.799156](#)

**AUTORES / AUTHORS:** - Vlachostergios PJ; Voutsadakis IA; Papandreou CN

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, Faculty of Medicine, School of Health Sciences, University of Thessaly, University Hospital of Larissa , Larissa , Greece and.

**RESUMEN / SUMMARY:** - Abstract High-grade gliomas represent a group of aggressive brain tumors with poor prognosis due to an inherent capacity of persistent cell growth and survival. The ubiquitin-proteasome system (UPS) is an intracellular machinery responsible for protein turnover. Emerging evidence implicates various proteins targeted for degradation by the UPS in key survival and proliferation signaling pathways of these tumors. In this review, we discuss the involvement of UPS in the regulation of several mediators and effectors of these pathways in malignant gliomas.

[269]

**TÍTULO / TITLE:** - Blood oxygenation level dependent, blood volume, and blood flow responses to carbogen and hypoxic hypoxia in 9L rat gliomas as measured by MRI.

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

**REVISTA / JOURNAL:** - J Magn Reson Imaging. 2013 Apr 1. doi: 10.1002/jmri.24097.

●●Enlace al texto completo (gratis o de pago) [1002/jmri.24097](#)

**AUTORES / AUTHORS:** - Jerome NP; Hekmatyar SK; Kauppinen RA

**INSTITUCIÓN / INSTITUTION:** - Biomedical NMR Research Center, Department of Radiology, Dartmouth College, Hanover, New Hampshire, USA.

**RESUMEN / SUMMARY:** - PURPOSE: To study vascular responsiveness to hypoxia and hypercarbia together with vessel size index (VSI) in a 9L rat glioma (n = 11) using multimodal MRI. MATERIALS AND METHODS: VSI was determined using T2 and T2\* MRI following AMI-227 contrast agent. Blood oxygenation level dependent (BOLD) signal response was determined using T2

EPI MRI, blood volume changes using AMI-227 and blood flow by means of continuous arterial spin labeling. RESULTS: VSI in the cortex, tumor rim, and core of 2.2 +/- 1.0, 18.2 +/- 5.4, and 23.9 +/- 14.7  $\mu\text{m}$ , respectively, showing a larger average vessel size in glioma than in the brain parenchyma. BOLD and blood volume signal changes to hypoxia and hypercapnia were much more profound in the tumor rim than the core. Hypoxia led to rim BOLD signal change that was larger in amplitude and it attained the low value much faster than either core or brain cortex. The vasculature in the rim appears more responsive to respiratory challenges in terms of volume adaptation than the core. Blood flow values within the gliomas were much lower than in the contralateral brain. Neither hypercarbia nor hypoxia had an effect on the tumor blood flow. CONCLUSION: Vascular responses of 9L gliomas to respiratory challenge, in particular hypoxia, are heterogeneous between the core and rim zones, potentially offering a means to classify and separate intratumor tissues with differing hemodynamic characteristics. 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.

[270]

**TÍTULO / TITLE:** - Low-grade astrocytomas: the prognostic value of fibrillary, gemistocytic, and protoplasmic tumor histology.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [3171/2013.4.JNS122329](#)

**AUTORES / AUTHORS:** - Babu R; Bagley JH; Park JG; Friedman AH; Adamson C

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, Duke University Medical Center; and.

**RESUMEN / SUMMARY:** - Object Low-grade astrocytomas are slow-growing, infiltrative gliomas that over time may progress into more malignant tumors. Various factors have been shown to affect the time to progression and overall survival including age, performance status, tumor size, and the extent of resection. However, more recently it has been suggested that histological subtypes (fibrillary, protoplasmic, and gemistocytic) may impact patient outcome. In this study the authors have performed a large comparative

population-based analysis to examine the characteristics and survival of patients with the various subtypes of WHO Grade II astrocytomas. Methods Patients diagnosed with fibrillary, protoplasmic, and gemistocytic astrocytomas were identified through the Surveillance, Epidemiology, and End Results (SEER) database. The chi-square test and Student t-test were used to evaluate differences in patient and treatment characteristics between astrocytoma subtypes. Kaplan-Meier analysis was used to assess overall survival, and the log-rank test was used to evaluate the differences between survival curves. Univariate and multivariate analyses were also performed to determine the effect of various patient, tumor, and treatment variables on overall survival. Results A total of 500 cases were included in the analysis, consisting of 326 fibrillary (65.2%), 29 protoplasmic (5.8%), and 145 gemistocytic (29%) variants. Gemistocytic astrocytomas presented at a significantly older age than the fibrillary variant (46.8 vs 37.7 years,  $p < 0.0001$ ), with protoplasmic and fibrillary subtypes having a similar age. Although protoplasmic and fibrillary variants underwent radiotherapy at similar rates, gemistocytic tumors more frequently received radiotherapy ( $p = 0.0001$ ). Univariate analysis revealed older age, larger tumor size, and the use of radiotherapy to be poor prognostic factors, with resection being associated with improved survival. The gemistocytic subtype (hazard ratio [HR] 1.62 [95% CI 1.27-2.07],  $p = 0.0001$ ) also resulted in significantly worse survival than fibrillary tumors. Bivariate analyses demonstrated that older age, the use of radiotherapy, and resection significantly influenced median survival. Tumor subtype also affected median survival; patients who harbored gemistocytic tumors experienced less than half the median survival of fibrillary and protoplasmic tumors (38 vs 82 months,  $p = 0.0003$ ). Multivariate analysis revealed increasing age (HR 1.05 [95% CI 1.04-1.05],  $p < 0.0001$ ), larger tumor size (HR 1.02 [95% CI 1.01-1.03],  $p = 0.0002$ ), and the use of resection (HR 0.70 [95% CI 0.52-0.94],  $p = 0.018$ ) to be independent predictors of survival. Examination of tumor subtype revealed that the gemistocytic variant (HR 1.30 [95% CI 0.98-1.74],  $p = 0.074$ ) was associated with worse patient survival than fibrillary tumors, although this only approached significance. The protoplasmic subtype did not affect overall survival ( $p = 0.33$ ). Conclusions Gemistocytic tumor histology was associated with worse survival than fibrillary and protoplasmic astrocytomas. As protoplasmic astrocytomas have a survival similar to fibrillary tumors, there may be limited utility to the identification of this rare variant. However, increased attention should be paid to the presence of gemistocytes in low-grade gliomas as this is associated with shorter time to progression, increased malignant transformation, and reduced overall survival.

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[271]

**TÍTULO / TITLE:** - Effects of Electroacupuncture on Depression and the Production of Glial Cell Line-Derived Neurotrophic Factor Compared with Fluoxetine: A Randomized Controlled Pilot Study.

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

**REVISTA / JOURNAL:** - J Altern Complement Med. 2013 May 6.

●●Enlace al texto completo (gratis o de pago) [1089/acm.2011.0637](http://1089/acm.2011.0637)

**AUTORES / AUTHORS:** - Sun H; Zhao H; Ma C; Bao F; Zhang J; Wang DH; Zhang YX; He W

**INSTITUCIÓN / INSTITUTION:** - 1 Department of Traditional Chinese Medicine, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China .

**RESUMEN / SUMMARY:** - Abstract Background and Objective: Postmortem studies indicate that the number and density of glial cells are reduced in different brain regions of patients with depression. Glial cell line-derived neurotrophic factor (GDNF) plays an important role in the pathogenesis of depressive disorder (DD) and might be a biomarker for damage to nerve cells. In this study, we compared the therapeutic effects of electroacupuncture (EA) and fluoxetine, a serotonin reuptake inhibitor, on DD patients, focusing on the serum level of GDNF. Design: This was a prospective, randomized clinical trial. Setting: Seventy-five patients with DD from the Department of Acupuncture, Beijing Hospital of Traditional Chinese Medicine, were recruited. Intervention: Twenty patients were treated with acupuncture for 6 weeks on the acupoints of Baihui (DU20) and Zusanli (ST36). Sixteen patients were treated with acupuncture for 6 weeks on the acupoints of Taichong (LR3), Sanyinjiao (SP6), Neiguan (PC6), and Shenmen (HT7), and constituted the electroacupuncture control group. The patients received acupuncture treatment five times per week. Twenty-five patients were treated with oral fluoxetine (20 mg/day) for 6 weeks. Outcome measures: All subjects were evaluated by the Hamilton Depression Rating Scale at four time points (0 [baseline], 2, 4, and 6 weeks after treatment). Serum GDNF was quantified in duplicate by enzyme-linked immunosorbent assay (ELISA). Results: EA and fluoxetine had similar curative effects on DD patients. EA had a faster onset of action, better response rate, and better improvement rate than fluoxetine. Both fluoxetine and EA treatment restored the normal concentration of GDNF in the serum of DD patients. Conclusion: EA treatment for depression is as effective as a recommended dose of fluoxetine. However, EA demonstrates an advantage in the regulation of the production of GDNF compared with fluoxetine.

[272]

**TÍTULO / TITLE:** - Symptomatic Spinal Cord Compression from an Intradural Arachnoid Cyst with Associated Syrinx in a Child: Case Report.

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

**REVISTA / JOURNAL:** - *Pediatr Neurosurg.* 2013 Apr 18.

●●Enlace al texto completo (gratis o de pago) [1159/000348885](https://doi.org/10.1159/000348885)

**AUTORES / AUTHORS:** - Su DK; Ebenezer S; Avellino AM

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of Washington School of Medicine and Seattle Children's Hospital, Seattle, Wash., USA.

**RESUMEN / SUMMARY:** - Symptomatic intradural extramedullary arachnoid cysts in children are rare, and of the previously reported pediatric cases in the current literature, none to our knowledge were associated with a spinal cord syrinx. We describe an 8-year-old child who presented with paraparesis and regression of bowel and bladder control. An intradural extramedullary arachnoid cyst was identified on preoperative magnetic resonance imaging, with an associated spinal cord syrinx. We describe the preoperative imaging, surgical management, and clinical course of this patient, who had improvement in his paraparesis. This paper reviews relevant pediatric literature and the etiology of arachnoid cysts and associated spinal cord syrinx formation.

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[273]

**TÍTULO / TITLE:** - Intracerebral Administration of Heat-Inactivated *Staphylococcus Epidermidis* Enhances Oncolysis and Prolongs Survival in a 9L Orthotopic Gliosarcoma Model.

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

**REVISTA / JOURNAL:** - *Cell Physiol Biochem.* 2013;31(4-5):614-24. doi: 10.1159/000350081. Epub 2013 May 6.

●●Enlace al texto completo (gratis o de pago) [1159/000350081](https://doi.org/10.1159/000350081)

**AUTORES / AUTHORS:** - Lohr M; Molcanyi M; Poggenborg J; Spuentrup E; Runge M; Rohn G; Hartig W; Hescheler J; Hampl JA

**INSTITUCIÓN / INSTITUTION:** - Neurosurgical Oncology Laboratory, Department of General Neurosurgery, University Hospital Cologne, Cologne, Germany.

**RESUMEN / SUMMARY:** - Background/Aims: The association between postoperative infection and prolonged survival in high-grade glioma is still a matter of debate. Previously we demonstrated that the intracerebral (i.c.) injection of heat-inactivated staphylococcal epitopes (HISE) resulted in a well-defined influx of immunocompetent cells across the blood-brain barrier. The present study investigated the potential antitumoral effect of HISE-immunostimulation in an experimental glioma model. Methods: Wistar rats were intracerebrally implanted with 9L gliosarcoma cells (n=6), 9L cells mixed with HISE (n=12), or phosphate buffered saline (n=4). Tumor growth was measured by serial magnetic resonance imaging (MRI). After death due to the tumor burden, the brains were histopathologically assessed for inflammation and oncolysis. A toxicity assay was performed to quantify potential impairment of HISE on tumor cell growth in vitro. Results: Animals treated by HISE showed a

significant increase in average survival and even complete regression of an already established mass in one case. Naive 9L gliosarcomas failed to recruit significant numbers of systemic immune cells. In contrast, concomitant intracerebral HISE inoculation lead to a oncolysis and a distinct peri- and intratumoral infiltration of macrophages, CD8 and CD4 co-expressing T-lymphocytes in two thirds of the tumor-bearing animals. The toxicity screening showed HISE-mediated oncolysis to be ineffective ex vivo. Conclusion: This study describes a novel approach for combatting malignant glioma using inactivated staphylococci as potent immunomodulators. Our results provide an outline for investigating the strategic potential of bacteria as emerging future therapeutics.

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[274]

**TÍTULO / TITLE:** - A mechanistic model for medulloblastoma induction in mice.

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

**REVISTA / JOURNAL:** - Radiat Res. 2013 May;179(5):610-4. doi: 10.1667/RR3130.1. Epub 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [1667/RR3130.1](#)

**AUTORES / AUTHORS:** - Heidenreich WF; Saran A; Atkinson M; Pazzaglia S

**INSTITUCIÓN / INSTITUTION:** - a Helmholtz Zentrum Munchen, German Research Center for Environmental Health (GmbH), Institute for Radiation Protection, 85764 Neuherberg, Germany.

**RESUMEN / SUMMARY:** - Medulloblastomas in Patched heterozygous mice (Ptc1(+/-) mice) are induced with high probability by ionizing radiation applied in the immediate post-natal period. A mathematical model is described here that accommodates the dependence of the medulloblastoma incidence on dose, age at exposure and age. The model assumes that the first step in the development of the cancer is already present in all cells of the patched mouse due to germline inactivation of one allele of the patched tumor suppressor gene. The subsequent rate-limiting step is dependent linearly on dose at least up to 3 Gy. The observed strong decrease in carcinogenic effect of radiation between exposure on day 1 and day 10 is described by a physiological elimination of target cells during post-natal maturation of the brain. A single malignant cell develops into a tumor following a gamma-distribution with mean of about 160 days. The multiplicity of medulloblastomas is predicted.

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[275]

**TÍTULO / TITLE:** - Mediation of multiple pathways regulating cell proliferation, migration, and apoptosis in the human malignant glioma cell line U87MG via unphosphorylated STAT1.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Jun;118(6):1239-47. doi: 10.3171/2013.3.JNS122051. Epub 2013 Apr 19.

●●Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS122051](https://doi.org/10.3171/2013.3.JNS122051)

**AUTORES / AUTHORS:** - Ju H; Li X; Li H; Wang X; Wang H; Li Y; Dou C; Zhao G

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, First Bethune Hospital of Jilin University;

**RESUMEN / SUMMARY:** - Object Signal transducer and activator of transcription 1 (STAT1) is thought to be a tumor suppressor protein. The authors investigated the expression and role of STAT1 in glioblastoma. Methods Immunohistochemistry was used to detect the expression of STAT1 in glioblastoma and normal brain tissues. Reverse transcription-polymerase chain reaction and Western blot analysis were used to detect mRNA and protein expression levels of STAT1. Cell growth, proliferation, migration, apoptosis, and the expression of related genes and proteins (Bcl-2, Bax, cleaved caspase-3, caspase-9, p21, and proliferating cell nuclear antigen) were examined in vitro via cell counting kit-8, wound-healing, flow cytometry, Rhodamine B, TUNEL, and Western blot assays. Results Human glioblastoma had decreased expression of STAT1 proteins. Transfection of the U87MG cells with STAT1 plasmid in vitro demonstrated significant inhibition of cell growth and an increase in apoptotic cell death compared with cells transfected with vector or mock plasmids. These effects were associated with the upregulation of cleaved caspase-3, Bax, and p21 and the downregulation of Bcl-2 expression. Conclusions The results of this study suggest that increased expression of STAT1 by transfection with STAT1 plasmid synergistically inhibits human U87MG glioblastoma cell growth in vitro.

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[276]

**TÍTULO / TITLE:** - SDHB gene positive metastatic paraganglioma associated with lesions which demonstrate both positive and negative uptake of 18FDG PET and 131MIBG.

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

**REVISTA / JOURNAL:** - QJM. 2013 May 28.

●●Enlace al texto completo (gratis o de pago) [1093/qjmed/hct118](https://doi.org/10.1093/qjmed/hct118)

**AUTORES / AUTHORS:** - Casey R; Slattery D; Prendeville S; Moore M; Maher M; O'Halloran D

**INSTITUCIÓN / INSTITUTION:** - From the Department of Endocrinology, Department of Pathology and Department of Radiology, Cork University Hospital, Cork, Ireland.

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[277]

**TÍTULO / TITLE:** - Oncocytic glioblastoma: a glioblastoma showing oncocytic changes and increased mitochondrial DNA copy number.

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

**REVISTA / JOURNAL:** - Hum Pathol. 2013 May 9. pii: S0046-8177(13)00101-9. doi: 10.1016/j.humpath.2013.02.014.

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

[1016/j.humpath.2013.02.014](http://1016/j.humpath.2013.02.014)

**AUTORES / AUTHORS:** - Marucci G; Maresca A; Caporali L; Farnedi A; Betts CM; Morandi L; de Biase D; Cerasoli S; Foschini MP; Bonora E; Vidone M; Romeo G; Perli E; Giordano C; d'Amati G; Gasparre G; Baruzzi A; Carelli V; Eusebi V

**INSTITUCIÓN / INSTITUTION:** - Department of Biomedical and NeuroMotor Sciences (DiBiNeM), University of Bologna, Section of Pathology, "M. Malpighi", Bellaria Hospital, via Altura 3, 40139 Bologna, Italy.

**RESUMEN / SUMMARY:** - Ten cases of glioblastomas showing oncocytic changes are described. The tumors showed mononuclear to multinuclear cells and abundant, granular, eosinophilic cytoplasm. The cytoplasm of these same cells was filled by strongly immunoreactive mitochondria. At ultrastructure, numerous mitochondria, some of which were large, were evidenced in the cytoplasm of neoplastic cells. Finally, 9 of 10 of these cases had a significantly high mitochondrial DNA content compared with control tissue ( $P < .01$ ). It seems that, for these tumors, the designation of oncocytic glioblastoma is appropriate. To the best of our knowledge, oncocytic changes have not been previously reported in such neoplasms. Oncocytic glioblastomas have to be added to the long list of various tumors that can manifest "unexpected" oncocytic changes in different organs. Albeit failing to show statistical significance (log-rank test,  $P = .597$ ; Wilcoxon test,  $P = .233$ ), we observed a trend for longer median survival in oncocytic glioblastomas, when compared with "ordinary" glioblastomas (median survival of 16 versus 8.7 months). Thus, it seems that the definition of neoplasms showing oncocytic changes, currently based on classic morphological parameters (ie, histology, ultrastructure, and immunohistochemistry), can be expanded by including the quantitative assessment of mitochondrial DNA content.

[278]

**TÍTULO / TITLE:** - The Cleveland Clinic Experience With Primary Central Nervous System Lymphoma.

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

**REVISTA / JOURNAL:** - Am J Clin Oncol. 2013 Apr 19.

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

[1097/COC.0b013e31828f5a26](http://1097/COC.0b013e31828f5a26)

**AUTORES / AUTHORS:** - Xie H; Ahluwalia MS; Peereboom DM

**INSTITUCIÓN / INSTITUTION:** - \*Cleveland Clinic Lerner College of Medicine, The Rose Ella Burkhardt Brain Tumor and Neuro-Oncology Center, Solid Tumor Oncology Cleveland Clinic, Case Western Reserve University daggerThe Rose Ella Burkhardt Brain Tumor Neuro-Oncology Center, Neurological Institute double daggerTaussig Cancer Institute, Cleveland Clinic, Cleveland, OH.

**RESUMEN / SUMMARY:** - BACKGROUND:: The rarity and difficulty of conducting large trials limit the evaluation of various treatment options for primary central nervous system lymphoma (PCNSL). In this study, we sought to describe the demographics, diagnoses, management, and outcomes of patients with PCNSL at a single institution. METHODS:: This is a retrospective study of 153 patients with PCNSL between 1986 and 2010. Prognostic factors identified by univariate and multivariable survival analyses were used by recursive partitioning analysis to generate a prognostic model. RESULTS:: The median age was 61 and Karnofsky performance status (KPS) was 70. The progression-free survival was 9.3 months; the overall survival was 27 months. The diagnosis of PCNSL was established mainly by stereotactic brain biopsy (80%), cerebrospinal fluid analysis (7.2%), and vitrectomy (2.6%). Methotrexate-based chemotherapy with or without consolidation whole-brain radiation therapy offered better response rate and survival in the initial treatment than whole-brain radiation therapy alone. However, this observation was not present in the subsequent salvage treatments. Multivariable Cox proportional hazards regression identified age and KPS as the only prognostic indicators. Recursive partitioning analysis categorized the patients into 3 groups. Patients with KPS >70 had a favorable outcome compared with patients with KPS ≤70. This held true especially for patients age 60 and younger. CONCLUSIONS:: The Cleveland Clinic experience with management of PCNSL demonstrated successful disease control with methotrexate-based regimens. The survival and prognostic indicators approximate those reported previously and provide independent validation for a simple yet powerful prognostic model using age and KPS to predict survival.

[279]

**TÍTULO / TITLE:** - Pituitary adenoma with mucin cells in a man with an unusual presentation of carney complex.

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

**REVISTA / JOURNAL:** - Endocr Pathol. 2013 Jun;24(2):106-9. doi: 10.1007/s12022-013-9247-x.

●●Enlace al texto completo (gratis o de pago) [1007/s12022-013-9247-x](https://doi.org/10.1007/s12022-013-9247-x)

[X](#)

**AUTORES / AUTHORS:** - Yeane GA; Brathwaite JM; Dashnaw ML; Vates GE; Calvi LM

**INSTITUCIÓN / INSTITUTION:** - Departments of Pathology and Laboratory Medicine and Ophthalmology, University of Rochester School of Medicine and Dentistry, 601 Elmwood Ave, Box 626, Rochester, NY, 14642, USA, [Gabrielle\\_Yeane@urmc.rochester.edu](mailto:Gabrielle_Yeane@urmc.rochester.edu).

**RESUMEN / SUMMARY:** - We describe a 44-year-old man with infertility, acromegaly, and hypergonadotropic hypogonadism. Clinical examination of the patient revealed hyperpigmented macules on the lips, buccal mucosa, and face which were histologically confirmed as cutaneous myxomas and blue nevi. Ultrasound revealed testicular calcifications and multiple hypoechoic thyroid nodules. MR imaging showed a pituitary microadenoma and resection revealed it to be a growth hormone and prolactin-secreting adenoma with the unusual finding of admixed individual mucin-producing cells. We discuss mucin cells in pituitary adenoma, an unreported pathologic finding in a patient with Carney complex.

[280]

**TÍTULO / TITLE:** - The role of the WNT/beta-catenin pathway in central nervous system primitive neuroectodermal tumours (CNS PNETs).

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

**REVISTA / JOURNAL:** - Br J Cancer. 2013 May 28;108(10):2130-41. doi: 10.1038/bjc.2013.170. Epub 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1038/bjc.2013.170](http://1038/bjc.2013.170)

**AUTORES / AUTHORS:** - Rogers HA; Ward JH; Miller S; Lowe J; Coyle B; Grundy RG

**INSTITUCIÓN / INSTITUTION:** - Children's Brain Tumour Research Centre, Department of Clinical Sciences, D Floor Medical School, Queen's Medical Centre, University of Nottingham, Nottingham NG7 2UH, UK.

**RESUMEN / SUMMARY:** - Background:Central nervous system primitive neuroectodermal tumours (CNS PNETs) are embryonal tumours occurring predominantly in children. Current lack of knowledge regarding their underlying biology hinders development of more effective treatments. We previously identified WNT/beta-catenin pathway activation in one-third of CNS PNETs, which was potentially linked to a better prognosis. In this study, we have extended our cohort, achieving a statistically significant correlation with prognosis. We additionally investigated the biological effects of WNT/beta-catenin pathway activation in tumour pathogenesis.Methods:A total of 42 primary and 8 recurrent CNS PNETs were analysed for WNT/beta-catenin pathway status using beta-catenin immunohistochemistry. Genomic copy number and mRNA expression data were analysed to identify a molecular profile linked to WNT/beta-catenin pathway activation.Results:Pathway activation was seen in 26% of CNS PNETs and was significantly associated with longer overall survival. Genes displaying a significant difference in

expression levels, between tumours with and without WNT/beta-catenin pathway activation, included several involved in normal CNS development suggesting aberrant pathway activation may be disrupting this process. Conclusion: We have identified WNT/beta-catenin pathway status as a marker, which could potentially be used to stratify disease risk for patients with CNS PNET. Gene expression data suggest pathway activation is disrupting normal differentiation in the CNS.

[281]

**TÍTULO / TITLE:** - Low penetrance susceptibility to glioma is caused by the TP53 variant rs78378222.

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

**REVISTA / JOURNAL:** - Br J Cancer. 2013 May 28;108(10):2178-85. doi: 10.1038/bjc.2013.155. Epub 2013 Apr 9.

●●Enlace al texto completo (gratis o de pago) [1038/bjc.2013.155](http://1038/bjc.2013.155)

**AUTORES / AUTHORS:** - Enciso-Mora V; Hosking FJ; Di Stefano AL; Zelenika D; Shete S; Broderick P; Idbaih A; Delattre JY; Hoang-Xuan K; Marie Y; Labussiere M; Alentorn A; Ciccarino P; Rossetto M; Armstrong G; Liu Y; Gousias K; Schramm J; Lau C; Hepworth SJ; Schoemaker M; Strauch K; Muller-Nurasyid M; Schreiber S; Franke A; Moebus S; Eisele L; Swerdlow A; Simon M; Bondy M; Lathrop M; Sanson M; Houlston RS

**INSTITUCIÓN / INSTITUTION:** - Division of Genetics and Epidemiology, Institute of Cancer Research, 15 Cotswold Road, Surrey SM2 5NG, UK.

**RESUMEN / SUMMARY:** - Background: Most of the heritable risk of glioma is presently unaccounted for by mutations in known genes. In addition to rare inactivating germline mutations in TP53 causing glioma in the context of the Li-Fraumeni syndrome, polymorphic variation in TP53 may also contribute to the risk of developing glioma. Methods: To comprehensively evaluate the impact of variation in TP53 on risk, we analysed 23 tagSNPs and imputed 2377 unobserved genotypes in four series totaling 4147 glioma cases and 7435 controls. Results: The strongest validated association signal was shown by the imputed single-nucleotide polymorphism (SNP) rs78378222 ( $P=6.86 \times 10^{-24}$ ), minor allele frequency approximately 0.013). Confirmatory genotyping confirmed the high quality of the imputation. The association between rs78378222 and risk was seen for both glioblastoma multiforme (GBM) and non-GBM tumours. We comprehensively examined the relationship between rs78378222 and overall survival in two of the case series totaling 1699 individuals. Despite employing statistical tests sensitive to the detection of differences in early survival, no association was shown. Conclusion: Our data provided strong validation of rs78378222 as a risk factor for glioma but do not support the tenet that the polymorphism being a clinically useful prognostic marker. Acquired TP53 inactivation is a common feature of glioma. As

rs78378222 changes the polyadenylation signal of TP53 leading to impaired 3'-end processing of TP53 mRNA, the SNP has strong plausibility for being directly functional contributing to the aetiological basis of glioma.

[282]

**TÍTULO / TITLE:** - Differential Scanning Calorimetry of Gliomas: A New Tool in Brain Cancer Diagnostics?

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Apr 25.

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

[1227/01.neu.0000430296.23799.cd](http://1227/01.neu.0000430296.23799.cd)

**AUTORES / AUTHORS:** - Chagovetz AA; Quinn C; Damarse N; Hansen LD; Chagovetz AM; Jensen RL

**INSTITUCIÓN / INSTITUTION:** - 1Department of Neurosurgery, Huntsman Cancer Institute, University of Utah, Salt Lake City, Utah 2TA Instruments, Inc., Lindon, Utah 3Department of Chemistry, Brigham Young University, Provo, Utah.

**RESUMEN / SUMMARY:** - BACKGROUND:: Thermal stability signatures of complex molecular interactions in biological fluids can be measured using differential scanning calorimetry (DSC). Evaluating the thermal stability of plasma proteomes offers a method of producing a disease-specific “signature” (thermogram) in neoplastic and autoimmune diseases. OBJECTIVE:: The authors describe the use of DSC with human brain tumor tissue to create unique thermograms for correlation with histological tumor classification. METHODS:: Primary brain tumors were classified according to the World Health Organization classification. Tumor samples were digested and assayed by DSC calorimeter. Experimental thermograms were background subtracted and normalized to the total area of transitions to exclude concentration effects. The resulting thermograms were analyzed by applying two-state, scaled, Gaussian distributions. RESULTS:: Differences in glioma-specific signatures are described by using calculated parameters at transitions that are characterized, in the equilibrium approximation, by a melting temperature  $T_m$ , an apparent enthalpy change ( $\Delta H$ ), and a scaling factor related to the relative abundance of the materials denatured in the transition ( $A_w$ ). Thermogram signatures of GBM and low-grade astrocytomas were differentiated by calculated values of  $A_{w3}$  and  $T_{m4}$ , those of GBM and oligodendrogliomas were differentiated by  $A_{w2}$ ,  $\Delta H_2$ ,  $\Delta H_4$ , and  $T_{m4}$ , and those of low-grade astrocytomas and oligodendroglioma were differentiated by  $A_{w4}$ . CONCLUSION:: Our preliminary results suggest that solid brain tumors exhibit specific thermogram profiles that are distinguishable among glioma grades. We anticipate that our results will form the conceptual base of a novel diagnostic assay based on tissue thermograms as a complement to currently used histological analysis.

[283]

**TÍTULO / TITLE:** - Disseminated progression of glioblastoma after treatment with bevacizumab.

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

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 May 21. pii: S0303-8467(13)00156-X. doi: 10.1016/j.clineuro.2013.04.017.

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

[1016/j.clineuro.2013.04.017](#)

**AUTORES / AUTHORS:** - Bloch O; Safaee M; Sun MZ; Butowski NA; McDermott MW; Berger MS; Aghi MK; Parsa AT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Brain Tumor Research Center, University of California, San Francisco, USA.

**RESUMEN / SUMMARY:** - **OBJECTIVES:** Reports of glioblastoma (GBM) progression following treatment with bevacizumab indicate that a subset of patients develop disseminated, often minimally enhancing tumors that differ from the typical pattern of focal recurrence. We have reviewed our institutional experience with bevacizumab for GBM to evaluate the prognostic factors and outcomes of patients with disseminated progression. **PATIENTS AND METHODS:** Medical records of patients treated for GBM at the University of California San Francisco from 2005 to 2009 were reviewed. Patients receiving bevacizumab for focal disease were evaluated and imaging was reviewed to identify patients who progressed in a disseminated pattern. Tumor and treatment factors were compared between focal and disseminated progressors to identify predictive factors for dissemination. Clinical outcomes were compared between progression groups. **RESULTS:** Seventy-one patients received adjuvant bevacizumab at some point in their disease course in addition to surgical resection and standard chemoradiotherapy. Of these, 12 patients (17%) had disseminated progression after bevacizumab. There were no differences in patient demographics, surgical treatment, or bevacizumab administration between disseminated and focal progressors. Length of bevacizumab treatment for disseminated progressors trended toward increased time (7.4 vs. 5.4 months) but was not statistically significant ( $p=0.1$ ). Although progression-free survival and overall survival did not differ significantly between progression groups (median survival from progression was 3.8 vs. 4.6 months,  $p=0.5$ ), over 30% of focal progressors had a subsequent resection and enrollment in a surgically based clinical trial, whereas none of the disseminated progressors had further surgical intervention. Compared to previously published reports of GBM dissemination with and without prior bevacizumab treatment, our patients had a rate of disease dissemination similar to the baseline rate observed in patients treated without bevacizumab. **CONCLUSION:** The risk of dissemination does not appear to be considerably increased due to the use of bevacizumab, and the pattern of disease at progression does not affect

subsequent survival. Therefore, the risk of dissemination should not influence the decision to treat with bevacizumab, especially for recurrent disease.

[284]

**TÍTULO / TITLE:** - Promoter methylation of AREG, HOXA11, hMLH1, NDRG2, NPTX2 and Tes genes in glioblastoma.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1133-](#)

[3](#)

**AUTORES / AUTHORS:** - Skiriute D; Vaitkiene P; Asmoniene V; Steponaitis G; Deltuva VP; Tamasauskas A

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Neurooncology and Genetics, Neuroscience Institute, Lithuanian University of Health Sciences, Eiveniu str. 4, 50161, Kaunas, Lithuania, [dainski@gmail.com](mailto:dainski@gmail.com).

**RESUMEN / SUMMARY:** - Epigenetic alterations alone or in combination with genetic mechanisms play a key role in brain tumorigenesis. Glioblastoma is one of the most common, lethal and poor clinical outcome primary brain tumors with extraordinarily miscellaneous epigenetic alterations profile. The aim of this study was to investigate new potential prognostic epigenetic markers such as AREG, HOXA11, hMLH1, NDRG2, NTPX2 and Tes genes promoter methylation, frequency and value for patients outcome. We examined the promoter methylation status using methylation-specific polymerase chain reaction in 100 glioblastoma tissue samples. The value for clinical outcome was calculated using Kaplan-Meier estimation with log-rank test. DNA promoter methylation was frequent event appearing more than 45 % for gene. AREG and HOXA11 methylation status was significantly associated with patient age. HOXA11 showed the tendency to be associated with patient outcome in glioblastomas. AREG gene promoter methylation showed significant correlation with poor patient outcome. AREG methylation remained significantly associated with patient survival in a Cox multivariate model including MGMT promoter methylation status. This study of new epigenetic targets has shown considerably high level of analyzed genes promoter methylation variability in glioblastoma tissue. AREG gene might be valuable marker for glioblastoma patient survival prognosis, however further analysis is needed to clarify the independence and appropriateness of the marker.

[285]

**TÍTULO / TITLE:** - Caloric restriction reduces edema and prolongs survival in a mouse glioma model.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 24.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1154-](http://1007/s11060-013-1154-y)

[y](#)

**AUTORES / AUTHORS:** - Jiang YS; Wang FR

**INSTITUCIÓN / INSTITUTION:** - Center of Tumor, Tongji Hospital of Tongji Medical College, Huazhong University of Science and Technology, Wuhan, People's Republic of China.

**RESUMEN / SUMMARY:** - Regardless of their cell type of origin, all aggressive brain tumors, such as malignant gliomas and metastatic tumors produce brain edema, which is an important cause of patient morbidity and mortality. Caloric restriction (CR) has long been recognized as a natural therapy that improves health, promotes longevity, and significantly reduces both the incidence and growth of many tumor types. The aim of present work was to investigate the effect of CR on edema and survival in the mice implanted with U87 gliomas. We found that CR significantly inhibited the intracerebral tumor growth, attenuated brain edema, and ultimately prolonged survival of mice with U87 gliomas. Plasma corticosterone level was found higher and serum VEGF and IGF-1 levels were found lower in CR, when compared to AL group. CR upregulated tight junction proteins including claudin-1, claudin-5 and ZO-1, downregulated VEGF and VEGFR2, enhanced alpha-SMA expression, and reduced AQP1 expression in U87 gliomas. In addition, CR suppressed inducible nitric oxide synthase (iNOS) expression and nitric oxide (NO) formation in U87 gliomas. In conclusion, CR attenuated edema in U87 orthotopic mouse glioma model associated with elevation of corticosterone, suppression of VEGF/VEGFR2, improvement of tight junctions, and suppression of iNOS expression and NO formation. Our results suggested that CR might be an effective therapy for recurrent malignant brain cancers through alleviating associated edema.

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[286]

**TÍTULO / TITLE:** - Reduced WWOX protein expression in human astrocytoma.

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

**REVISTA / JOURNAL:** - Neuropathology. 2013 May 16. doi: 10.1111/neup.12040.

●●Enlace al texto completo (gratis o de pago) [1111/neup.12040](http://1111/neup.12040)

**AUTORES / AUTHORS:** - Winardi W; Tsai CY; Chen WT; Tsai HP; Chung CL; Loh JK; Chai CY; Kwan AL

**INSTITUCIÓN / INSTITUTION:** - School of Medicine, Poznan University, Poznan, Poland.

**RESUMEN / SUMMARY:** - The WW domain-containing oxidoreductase (WWOX) functions as a tumor suppressor by interacting with various proteins in numerous important signaling pathways. WWOX silencing via homozygous deletion of its locus and/or promoter hypermethylation has been observed in various human cancers. However, the relationship between WWOX and tumors

in the central nervous system has not been fully explored. In this study, the expression levels of WWOX protein in astrocytomas from 38 patients with different tumor grades were retrospectively analyzed by immunohistochemical staining. The results showed that 19 (50.0%) samples had highly reduced WWOX protein expression when compared with normal controls, while 14 (36.8%) and five (13.2%) cases exhibited moderate and mild decreases in WWOX expression, respectively. Reduction of the expression of WWOX protein correlated with patient age, supra-tentorial localization of the tumor and severity of the symptoms. Furthermore, loss of WWOX expression inversely correlated with survival time. No significant correlation was observed between the loss of WWOX expression and the gender of patients or the difference in pre-operative and post-operative Karnofsky performance status scores. Surprisingly, there was no significant correlation between the loss of WWOX protein expression and overall tumor grades. Nevertheless, it was found that 63.6% (7/11) of the grade II astrocytomas had highly reduced WWOX expression and 36.4% (4/11) showed moderately reduced WWOX expression, while none of the samples exhibited mild reductions. Similar results were also found in grade III astrocytomas. The results from this small-size sample pilot study suggest that the loss of WWOX expression may be an early event in the pathogenesis of human astrocytoma.

[287]

**TÍTULO / TITLE:** - Prediagnostic body weight and survival in high grade glioma.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1150-](#)

[2](#)

**AUTORES / AUTHORS:** - Siegel EM; Nabors LB; Thompson RC; Olson JJ; Browning JE; Madden MH; Han G; Egan KM

**INSTITUCIÓN / INSTITUTION:** - Department of Cancer Epidemiology, H. Lee Moffitt Cancer Center and Research Institute, 12902 Magnolia Drive, MRC-CANCONT, Tampa, FL, 33612-9416, USA.

**RESUMEN / SUMMARY:** - Greater adiposity has been linked to an increased risk and/or poorer survival in a variety of cancers. We examined whether prediagnostic body weight 1-5 years prior to diagnosis is associated with survival in patients with high grade glioma. The analysis was based on a series of patients with high-grade glioma (N = 853) enrolled in a US-based multicenter case-control study. Subjects reported height and weight 1-5 years prior to interview and at age 21. BMI was categorized according to WHO criteria as underweight (BMI <18.5 kg/m<sup>2</sup>), normal weight (BMI 18.5-24.9 kg/m<sup>2</sup>), overweight (BMI 25-29.9 kg/m<sup>2</sup>) and obese (BMI ≥30 kg/m<sup>2</sup>). Proportional hazards regression was used to estimate hazard ratios (HR) and 95 %

confidence intervals (CIs) for glioma-related death according to body mass index (BMI, kg/m<sup>2</sup>). Overall survival was reduced among patients underweight (median survival: 12.0 months) or obese (median: 13.6 months) when compared to patients of normal weight (median: 17.5 months) prior to glioma diagnosis (p = 0.004). In a multivariate model controlling for other prognostic factors, an excess mortality was observed in patients reporting obese body weights 1-5 years prior to study interview when compared to patients with a normal BMI (HR = 1.32; 95 % CI 1.04-1.68). Consistent patterns of association with excess body weight were observed in men and women, and all findings were similar regardless of treatment for glioma. A lower than optimal body weight was associated with a nonsignificant excess mortality in multivariate analysis. Premorbid obesity was significantly associated with a poor patient outcome independent of treatment and established prognostic factors. Excess body weight may be an adverse prognostic factor in glioma, a relationship observed across a spectrum of cancer types. The current findings linking prediagnostic body weight with mortality in high-grade glioma warrant further research.

[288]

**TÍTULO / TITLE:** - Adult primitive neuroectodermal tumors: the prognostic value of supratentorial location.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 30.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1163-](#)

[X](#)

**AUTORES / AUTHORS:** - Gandhi R; Babu R; Cummings TJ; Adamson C

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, Duke University Medical Center, 2624, Durham, NC, 27710, USA.

**RESUMEN / SUMMARY:** - Primitive neuroectodermal tumors (PNETs) are tumors which primarily consist of undifferentiated round neuroepithelial cells. Central nervous system PNETs can be divided into two genetically distinct groups: infratentorial PNET (iPNET)/medulloblastoma and supratentorial PNET (sPNET). Currently, the comparative outcome of adult patients with sPNETs and iPNETs is unknown. In this study we have utilized the Surveillance, Epidemiology, and End Results database to perform a comparative analysis of 103 cases of adult sPNET and 669 adult medulloblastoma cases. Additionally we have analyzed various factors to identify their prognostic significance and characterize the optimal treatment for these tumors. Patients with sPNETs were seen to have a significantly worse survival than those diagnosed with medulloblastomas (16 vs. 155 months, p < 0.0001). Elderly patients (15 vs. 114 months, p < 0.0001) and those over the age of 40 (68 vs. 147 months, p < 0.0001) experienced significantly worse survival than younger patients. In

contrast, radiotherapy (143 vs. 26 months,  $p < 0.0001$ ), surgical resection (116 vs. 22 months,  $p = 0.0010$ ) and the extent of resection (EOR) (173 vs. 81 months,  $p = 0.0005$ ) resulted in significantly improved patient survival. Multivariate analysis revealed age greater than 40 years (HR: 1.57; 95 % CI: 1.17-2.11;  $p = 0.0028$ ) and sPNET pathology (HR: 3.41; 95 % CI: 2.47-4.72;  $p < 0.0001$ ) to be poor prognostic factors for survival while radiotherapy (HR: 0.52; 95 % CI: 0.38-0.71;  $p < 0.0001$ ) and the EOR (HR: 0.73; 95 % CI: 0.55-0.96;  $p = 0.023$ ) were associated with significantly improved survival. The treatment of sPNETs should therefore include maximal surgical resection when feasible followed by radiotherapy as these treatments have been demonstrated to confer a survival benefit. Additional studies are needed to identify effective chemotherapeutics and specific treatment regimens for adults with sPNETs.

[289]

**TÍTULO / TITLE:** - Outcome and prognostic factors in adult cerebellar glioblastoma.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 22. pii: S0967-5868(13)00029-5. doi: 10.1016/j.jocn.2012.12.006.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.12.006](http://1016/j.jocn.2012.12.006)

**AUTORES / AUTHORS:** - Babu R; Sharma R; Karikari IO; Owens TR; Friedman AH; Adamson C

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, Duke University Medical Center, Durham, NC 27710, USA.

**RESUMEN / SUMMARY:** - Cerebellar glioblastoma multiforme (GBM) occurs rarely in adults, accounting for 0.4-3.4% of all GBM. Current studies have all involved small patient numbers, limiting the clear identification of prognostic factors. Additionally, while few studies have compared cerebellar GBM to their supratentorial counterparts, there is conflicting data regarding their relative prognosis. To better characterize outcome and identify patient and treatment factors which affect survival, the authors analyzed cases of adult cerebellar GBM from the Surveillance, Epidemiology, and End Results database. A total of 247 adult patients with cerebellar GBM were identified, accounting for 0.67% of all adult GBM. Patients with cerebellar GBM were significantly younger than those with supratentorial tumors (56.6 versus 61.8 years,  $p < 0.0001$ ), but a larger percentage of patients with supratentorial GBM were Caucasian (91.7% versus 85.0%,  $p < 0.0001$ ). Overall median survival did not differ between those with cerebellar and supratentorial GBM (7 versus 8 months,  $p = 0.24$ ), with similar rates of long-term (greater than 2 years) survival (13.4% versus 10.6%,  $p = 0.21$ ). Multivariate analysis revealed age greater than 40 years (hazard ratio [HR]: 2.20; 95% confidence interval [CI]: 1.47-3.28;  $p = 0.0001$ ) to be associated with worse patient survival, while the use of radiotherapy (HR: 0.33; 95% CI: 0.24-

0.47;  $p < 0.0001$ ) and surgical resection (HR: 0.66; 95% CI: 0.45-0.96;  $p = 0.028$ ) were seen to be independent favorable prognostic factors. In conclusion, patients with cerebellar GBM have an overall poor prognosis, with radiotherapy and surgical resection significantly improving survival. As with supratentorial GBM, older age is a poor prognostic factor. The lack of differences between supratentorial and cerebellar GBM with respect to overall survival and prognostic factors suggests these tumors to be biologically similar.

[290]

**TÍTULO / TITLE:** - Lyophilized brain tumor specimens can be used for histologic, nucleic acid, and protein analyses after 1 year of room temperature storage.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 3.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1135-](http://1007/s11060-013-1135-1)

[1](#)

**AUTORES / AUTHORS:** - Mareninov S; De Jesus J; Sanchez DE; Kay AB; Wilson RW; Babic I; Chen W; Telesca D; Lou JJ; Mirsadraei L; Gardner TP; Khanlou N; Vinters HV; Shafa BB; Lai A; Liau LM; Mischel PS; Cloughesy TF; Yong WH

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Laboratory Medicine (Neuropathology), UCLA School of Medicine, Los Angeles, CA, 90095, USA.

**RESUMEN / SUMMARY:** - Frozen tissue, a gold standard biospecimen, can yield well preserved nucleic acids and proteins after over a decade but is vulnerable to thawing and has substantial fiscal, spatial, and environmental costs. A long-term room temperature biospecimen storage alternative that preserves broad analytical utility can potentially empower tissue-based research. As there is scant data on the analytical utility of lyophilized brain tumor biospecimens, we evaluated lyophilized (freeze-dried) samples stored for 1 year at room temperature. Lyophilized tumor tissue processed into paraffin sections produced good histology. Yields of extracted DNA, RNA, and protein approximated those of frozen tissue. After 1 year, lyophilized samples yielded high molecular weight DNA that permitted copy number variation analysis, IDH 1 mutation detection, and MGMT promoter methylation PCR. A 27 % decrease in RIN scores over the 1 year suggests that RNA degradation was inhibited though incompletely. Nevertheless, RT-PCR studies on lyophilized tissue performed similarly to frozen tissue. In contrast to FFPE tissues where protein bands were absent or shifted to a lower molecular weight, lyophilized samples showed similar protein bands as frozen tissue on SDS-PAGE analysis. Lyophilized tissue performed similarly to frozen tissue for Western blots and enzyme activity assays. Immunohistochemistry of lyophilized tissue that were processed into FFPE blocks often required longer incubation times for staining than standard FFPE samples but generally provided robust antigen detection. This preliminary study suggests that lyophilization has promise for long-term

room temperature storage while permitting varied tests; however, further work is required to better stabilize nucleic acids particularly RNA.

[291]

**TÍTULO / TITLE:** - Sluggish cognitive tempo in survivors of pediatric brain tumors.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1149-](#)

[8](#)

**AUTORES / AUTHORS:** - Willard VW; Hardy KK; Allen TM; Hwang EI; Gururangan S; Hostetter SA; Bonner MJ

**INSTITUCIÓN / INSTITUTION:** - Department of Psychology and Neuroscience, Duke University, Durham, NC, USA, [victoria.willard@stjude.org](mailto:victoria.willard@stjude.org).

**RESUMEN / SUMMARY:** - The presence of neurocognitive late effects in survivors of pediatric brain tumors is well established. However, there remains some debate about how best to conceptualize these deficits. Sluggish cognitive tempo (SCT) is a proposed conceptual framework that has been used to describe a subset of children with ADHD who exhibit a particular profile characterized by lethargy, day dreaming and staring, and poor organization. Previous work has suggested that survivors of leukemia exhibit a similar profile, but it has not yet been examined in survivors of pediatric brain tumors. A sample of 65 survivors of pediatric brain tumors, 25 survivors of leukemia and 50 community controls completed the Child Behavior Checklist, with four items used to measure SCT. Survivors completed additional measures of neurocognitive functioning. Survivors of brain tumors demonstrated significantly greater symptoms of SCT than survivors of leukemia or controls. SCT was associated with attention problems and working memory deficits and the presence of a VP-shunt. Results provided conditional support for the presence of SCT in survivors of brain tumors, with further research needed to determine the clinical utility of the framework.

[292]

**TÍTULO / TITLE:** - On the role of 25-hydroxycholesterol synthesis by glioblastoma cell lines. Implications for chemotactic monocyte recruitment.

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

**REVISTA / JOURNAL:** - Exp Cell Res. 2013 Mar 26. pii: S0014-4827(13)00133-X. doi: 10.1016/j.yexcr.2013.03.025.

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

[1016/j.yexcr.2013.03.025](#)

**AUTORES / AUTHORS:** - Eibinger G; Fauler G; Bernhart E; Frank S; Hammer A; Wintersperger A; Eder H; Heinemann A; Mischel PS; Malle E; Sattler W

**INSTITUCIÓN / INSTITUTION:** - Institute of Molecular Biology and Biochemistry, Medical University of Graz, Harrachgasse 21, Graz 8010, Austria.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common malignant primary brain tumor and is invariably fatal to affected patients. Oxysterols belong to a class of bioactive lipids that are implicated in neurological disease and are associated with various types of cancer. Here, we investigated expression and transcriptional regulation of cholesterol 25-hydroxylase (CH25H) in human U87MG and GM133 glioblastoma cell lines. We demonstrate that in both cell lines transcription and translation of CH25H are increased in response to TNFalpha and IL1beta. In parallel, both cell lines upregulate 25-hydroxycholesterol (25-OHC) synthesis and secretion to levels comparable to bone marrow-derived mouse macrophages under inflammatory conditions. To determine whether 25-OHC acts as chemoattractant for tumor-associated macrophages, the human THP-1 monoblastic leukemia cell line was treated with varying amounts of the oxysterol. Experiments revealed that 25-OHC and lipid extracts isolated from GM133-conditioned medium (containing 7-fold higher 25-OHC concentrations than U87MG medium) induce chemotactic migration of THP-1 cells. Of note, 25-OHC also induced the migration of primary human peripheral blood monocytes. In response to exogenously added 25-OHC, THP-1 cells reorganized intermediate filament-associated vimentin to more cortical and polarized structures. Chemotactic migration of monocytes in response to 25-OHC was pertussis toxin-sensitive, indicating the involvement of G protein-coupled receptors. Using RNA interference we demonstrated that G protein-coupled receptor 183 (EBI2) contributes to 25-OHC-mediated chemotactic migration of THP-1 cells. These in vitro data indicate that GBM-derived and secreted 25-OHC may be involved in the recruitment of immune-competent cells to a tumor via EBI2.

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[293]

**TÍTULO / TITLE:** - GABA-B-receptor antibodies in paraneoplastic brainstem encephalitis.

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

**REVISTA / JOURNAL:** - J Neuroimmunol. 2013 Jun 15;259(1-2):88-91. doi: 10.1016/j.jneuroim.2013.04.004. Epub 2013 Apr 28.

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

[1016/j.jneuroim.2013.04.004](http://1016/j.jneuroim.2013.04.004)

**AUTORES / AUTHORS:** - Mundiyanapurath S; Jarius S; Probst C; Stocker W; Wildemann B; Bosel J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University Hospital Heidelberg, Im Neuenheimer Feld 400, 69120 Heidelberg, Germany. Electronic address: [sibu.mundiyanapurath@med.uni-heidelberg.de](mailto:sibu.mundiyanapurath@med.uni-heidelberg.de).

**RESUMEN / SUMMARY:** - BACKGROUND: Gamma-aminobutyric-acid B (GABA-B)-receptor encephalitis represents a novel entity among autoimmune CNS disorders. Most cases are characterised by limbic encephalitis. CASE REPORT: A 63-year-old patient presented with acute vertigo, nausea and vomiting, facial palsy and dysarthria. He developed dysphagia, gait ataxia and, finally, respiratory failure. Antibodies to GABA-B receptors were positive and declined under treatment with intravenous methylprednisolone and plasma exchange, followed by clinical improvement and stabilisation. Broad tumour screening revealed oesophageal carcinoma. CONCLUSION: The spectrum of neurological manifestations and tumours associated with the paraneoplastic variant of anti-GABA-B-receptor encephalitis may be broader than previously reported.

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[294]

**TÍTULO / TITLE:** - Characterization of IRDye 800CW chlorotoxin as a targeting agent for brain tumors.

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

**REVISTA / JOURNAL:** - Anal Biochem. 2013 May 24. pii: S0003-2697(13)00244-3. doi: 10.1016/j.ab.2013.05.013.

●●Enlace al texto completo (gratis o de pago) [1016/j.ab.2013.05.013](#)

**AUTORES / AUTHORS:** - Kovar JL; Curtis E; Othman SF; Simpson MA; Michael Olive D

**INSTITUCIÓN / INSTITUTION:** - Translational Research, LI-COR Biosciences, Lincoln NE 68504. Electronic address: [joy.kovar@licor.com](mailto:joy.kovar@licor.com).

**RESUMEN / SUMMARY:** - Primary brain tumors present significant challenges for surgical resection because of their location and the frequent occurrence of malignant projections extending beyond the primary tumor. Visualization of the tumor margins during surgery is critical for a favorable outcome. We report the use of IRDye 800CW chlorotoxin (CLTX) as a targeted imaging agent for brain tumors in a spontaneous mouse model of medulloblastoma, ND2:SmoA1. Specificity and functionality of the targeted agent were confirmed in cell-based assays. Tumors were detected by magnetic resonance imaging and IRDye 800CW CLTX administered to individual animals for optical imaging at one-month increments. The integrity of the blood-brain-barrier (BBB) was measured by Evan's Blue perfusion prior to sacrifice. Results show IRDye 800CW CLTX specifically targeted tumor tissue. The extravasation of Evan's Blue was observed in all tumors, suggesting the presence of the tumors can introduce alterations in the permeability of the BBB. Since increased vascular permeability was observed early in the disease model, larger dye-labeled imaging agents that exceed current BBB size restrictions may warrant renewed consideration as candidates for tumor detection and surgical resection. Our study provides

data characterizing in vitro and in vivo use of IRDye 800CW CLTX as a broadly applicable tumor imaging agent.

[295]

**TÍTULO / TITLE:** - Comparative diagnostic accuracy of contrast-enhanced MRI and F-FDOPA PET-CT in recurrent glioma.

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

**REVISTA / JOURNAL:** - Eur Radiol. 2013 Apr 28.

●●Enlace al texto completo (gratis o de pago) [1007/s00330-013-2838-](http://1007/s00330-013-2838-6)

[6](#)

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

**INSTITUCIÓN / INSTITUTION:** - Department of Nuclear Medicine, All India Institute of Medical Sciences, Ansari Nagar, New Delhi, 110029, India.

**RESUMEN / SUMMARY:** - **OBJECTIVES:** To compare the diagnostic accuracy of contrast enhanced magnetic resonance imaging (Ce-MRI) and 18F-fluorodopa (18F-FDOPA) positron emission tomography (PET)-computed tomography (CT) for detecting recurrent glioma. **METHODS:** In this prospective study, 35 patients (age, 36.62 +/- 0.86 years; 80 % male) with histopathologically proven glioma with clinical suspicion of recurrence were evaluated using Ce-MRI and 18F-FDOPA PET-CT. 18F-FDOPA PET-CT images were evaluated qualitatively and semi-quantitatively. Combination of clinical follow-up (minimum 1 year), repeat imaging and/or biopsy (when available) was taken as the reference standard. **RESULTS:** Based on the reference standard, 26 patients were positive and nine were negative for recurrence. The sensitivity, specificity and accuracy of Ce-MRI were 92.3 %, 44.4 % and 80 % respectively, whereas those of 18F-FDOPA PET-CT were 100 %, 88.89 % and 97.1 % respectively. Results of Ce-MRI and 18F-FDOPA PET-CT were concordant in 74.3 % (29/35) and discordant in 17.1 % of patients (6/35). On McNemar analysis the difference was not statistically significant overall (P = 0.687), for high-grade tumour (P = 0.5) or low-grade tumours (P = 1.0). However, 18F-FDOPA PET-CT was more specific than Ce-MRI overall (P = 0.0002), for high-grade tumour (P = 0.006) and low-grade tumours (P = 0.004). **CONCLUSION:** F-FDOPA PET-CT shows a high but comparable diagnostic accuracy to Ce-MRI for the detection of recurrent glioma. However, it is more specific than Ce-MRI. **KEY POINTS :** \* Recurrent glioma in the postoperative site remains a diagnostic dilemma. \* 18 F-FDOPA PET-CT shows high diagnostic accuracy for detecting recurrent glioma. \* Diagnostic accuracies for 18 F-FDOPA PET-CT and contrast enhanced MRI are comparable. \* However, 18 F-FDOPA PET-CT is more specific than Ce-MRI for recurrent glioma.

[296]

**TÍTULO / TITLE:** - Autophagy contributes to ING4-induced glioma cell death.

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

**REVISTA / JOURNAL:** - Exp Cell Res. 2013 May 14. pii: S0014-4827(13)00198-5. doi: 10.1016/j.yexcr.2013.05.004.

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

[1016/j.yexcr.2013.05.004](#)

**AUTORES / AUTHORS:** - Gong A; Ye S; Xiong E; Guo W; Zhang Y; Peng W; Shao G; Jin J; Zhang Z; Yang J; Gao J

**INSTITUCIÓN / INSTITUTION:** - School of Medicine, Jiangsu University, Zhenjiang 212013, PR China. Electronic address: [ahg5@ujs.edu.cn](mailto:ahg5@ujs.edu.cn).

**RESUMEN / SUMMARY:** - Previous studies suggest that ING4, a novel member of ING (inhibitor of growth) family, can inhibit brain tumor growth. However, whether autophagy is involved in ING4-induced cell death still remains unknown. In this study, we found that in addition to apoptosis, autophagy also contributed to cell death induced by ING4. Autophagy levels were elevated following the exposure to Ad-ING4, including enhanced fluorescence intensity of monodansylcadaverine (MDC), a specific in vivo marker for autophagic vacuoles, and increased expression levels of the LC3-II and Beclin-1, whereas the autophagic levels were attenuated following the pretreatment of 3-MA, the inhibitor of autophagy, which significantly decreased the Ad-ING4-induced cell death compared with caspase inhibitor zVAD. Furthermore, ING4 also induced mitochondrial dysfunction, such as mitophagy, collapse of mitochondrial membrane potential and the intracellular ROS, which indicated that mitochondria might be associated with the process of autophagic cell death of glioma cells. Finally, the relationship among Bax, Bcl-2, Beclin-1 and caspase family proteins levels were analyzed in glioma cells U251MG and LN229 infected with Ad-ING4 or Ad-lacZ. It is suggested that both autophagy and apoptosis could contribute to ING4-induced glioma cell death, and mitochondria might play an important role in this process. Our findings reveal novel aspects of the autophagy in glioma cells that underlie the cytotoxic action of ING4, possibly providing new insights in the development of combinatorial therapies for gliomas.

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[297]

**TÍTULO / TITLE:** - Pilocytic astrocytomas of the optic nerve and their relation to pilocytic astrocytomas elsewhere in the central nervous system.

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

**REVISTA / JOURNAL:** - Mod Pathol. 2013 May 24. doi: 10.1038/modpathol.2013.79.

●●Enlace al texto completo (gratis o de pago) [1038/modpathol.2013.79](#)

**AUTORES / AUTHORS:** - Reis GF; Bloomer MM; Perry A; Phillips JJ; Grenert JP; Karnezis AN; Tihan T

**INSTITUCIÓN / INSTITUTION:** - Neuropathology Unit, Department of Anatomic Pathology, UCSF School of Medicine, San Francisco, CA, USA.

**RESUMEN / SUMMARY:** - Pilocytic astrocytoma is a low-grade glioma that affects mostly children and young adults and can occur anywhere in the central nervous system. Pilocytic astrocytoma of the optic nerve is an equally indolent subtype that is occasionally associated with neurofibromatosis type 1. In earlier studies, this subtype was considered within the larger category of 'optic pathway glioma,' which included infiltrating astrocytomas and other hypothalamic tumors. However, there have been suggestions that gliomas in the optic nerve, and especially pilocytic astrocytoma of the optic nerve, are biologically different from tumors within the hypothalamus and other parts of the optic tract. Furthermore, the recent discovery of BRAF duplication and fusion with the KIAA1549 gene is reported to be more typical for posterior fossa tumors, and the rate of this aberration is not well known in pilocytic astrocytoma of the optic nerve. To determine the distinction of pilocytic astrocytoma of the optic nerve from pilocytic astrocytoma of the posterior fossa and to investigate the prevalence of BRAF aberrations, we reviewed the clinicopathological and molecular features of all such patients in our institution. Our study demonstrates that BRAF duplication is more frequent in posterior fossa tumors compared with pilocytic astrocytoma of the optic nerve ( $P=0.011$ ). However, the rates of phospho-MAPK1 and CDKN2A expression were high in both pilocytic astrocytoma of the optic nerve and posterior fossa pilocytic astrocytoma, suggesting that the MAPK pathway is active in these tumors. Our study supports the notion that BRAF duplication is more typical of posterior fossa pilocytic astrocytoma and that molecular alterations other than KIAA1549 fusion may underlie MAPK pathway activation in pilocytic astrocytoma of the optic nerve. *Modern Pathology* advance online publication, 24 May 2013; doi:10.1038/modpathol.2013.79.

[298]

**TÍTULO / TITLE:** - The CXCL16-CXCR6 chemokine axis in glial tumors.

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

**REVISTA / JOURNAL:** - *J Neuroimmunol.* 2013 Apr 26. pii: S0165-5728(13)00090-8. doi: 10.1016/j.jneuroim.2013.04.006.

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

[1016/j.jneuroim.2013.04.006](#)

**AUTORES / AUTHORS:** - Hattermann K; Held-Feindt J; Ludwig A; Mentlein R

**INSTITUCIÓN / INSTITUTION:** - Department of Anatomy, University of Kiel, 24098 Kiel, Germany.

**RESUMEN / SUMMARY:** - Since chemokines and their receptors play a pivotal role in tumors, we investigated the CXCL16-CXCR6-axis in human astroglial tumors. The transmembrane chemokine CXCL16 is heavily expressed by tumor, microglial and endothelial cells in situ and in vitro. In contrast, the receptor CXCR6 is restricted in glioblastomas to a small subset of proliferating cells positive for the stem-cell markers Musashi, Nanog, Sox2 and Oct4. In particular, the vast majority (about 90%) of Musashi-positive cells stained also for CXCR6. Thus, CXCL16 is highly expressed by glial tumor and stroma cells whereas CXCR6 defines a subset of cells with stem cell character.

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[299]

**TÍTULO / TITLE:** - Prognostic role for diffusion-weighted imaging of pediatric optic pathway glioma.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 15.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1140-](#)

[4](#)

**AUTORES / AUTHORS:** - Yeom KW; Lober RM; Andre JB; Fisher PG; Barnes PD; Edwards MS; Partap S

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Radiology, Department of Radiology, Stanford University School of Medicine, Stanford, CA, 94305, USA.

**RESUMEN / SUMMARY:** - Optic pathway glioma (OPG) has an unpredictable course, with poor correlation between conventional imaging features and tumor progression. We investigated whether diffusion-weighted MRI (DWI) predicts the clinical behavior of these tumors. Twelve children with OPG (median age 2.7 years; range 0.4-6.2 years) were followed for a median 4.4 years with DWI. Progression-free survival (time to requiring therapy) was compared between tumors stratified by apparent diffusion coefficient (ADC) from initial pre-treatment scans. Tumors with baseline ADC greater than  $1,400 \times 10^{-6} \text{ mm}^2/\text{s}$  required treatment earlier than those with lower ADC (log-rank  $p = 0.002$ ). In some cases, ADC increased leading up to treatment, and declined following treatment with surgery, chemotherapy, or radiation. Baseline ADC was higher in tumors that eventually required treatment ( $1,562 \pm 192 \times 10^{-6} \text{ mm}^2/\text{s}$ ), compared with those conservatively managed ( $1,123 \pm 114 \times 10^{-6} \text{ mm}^2/\text{s}$ ) (Kruskal-Wallis test  $p = 0.013$ ). Higher ADC predicted earlier tumor progression in this cohort and in some cases declined after therapy. Evaluation of OPG with DWI may therefore be useful for predicting tumor behavior and assessing treatment response.

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[300]

**TÍTULO / TITLE:** - Detection of serum alu element hypomethylation for the diagnosis and prognosis of glioma.

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

**REVISTA / JOURNAL:** - J Mol Neurosci. 2013 Jun;50(2):368-75. doi: 10.1007/s12031-013-0014-8. Epub 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [1007/s12031-013-0014-8](#)

**AUTORES / AUTHORS:** - Chen J; Gong M; Lu S; Liu F; Xia L; Nie D; Zou F; Shi J; Ju S; Zhao L; Zuo H; Qi J; Shi W

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Comprehensive Surgical Laboratory, Affiliated Hospital of Nantong University, 20 Xisi Road, Nantong, Jiangsu Province, China, 226001.

**RESUMEN / SUMMARY:** - Global genomic hypomethylation is a hallmark of cancer in humans. In the present study, the feasibility of measuring hypomethylation of Alu elements (Alu) in serum and its clinical utility were investigated. Tumor tissues and matched serum specimens from 65 glioma patients and serum samples from 30 healthy controls were examined for Alu hypomethylation by bisulfite sequencing. The median serum Alu methylation level was 47.30 % in patients (interquartile range (IQR), 35.40-54.25 %) and 57.90 % in the controls (IQR, 55.25-61.45 %). The median Alu methylation level in tumor samples was 40.30 % (IQR, 36.80-54.20 %), which shows the correlation of Alu hypomethylation between tumor and serum samples ( $r = 0.882$ ) in the study group. The methylation level was higher in the low-grade glioma group than in the high-grade group both in tumor and serum samples. A correlation between high methylation level and longer survival time was detected in tumor and serum samples. Receiver operating characteristic curve analysis showed that the area under the curve for diagnosis was 0.861 (95 % confidence interval, 0.789-0.933), suggesting that Alu hypomethylation in serum may be of diagnostic value. Our results indicate that the detection of Alu hypomethylation in serum may be clinically useful for the diagnosis and prognosis of glioma.

[301]

**- CASTELLANO -**

**TÍTULO / TITLE:** Causa rara de hipertension arterial en la juventud: paraganglioma retroperitoneal con invasion vascular.

**TÍTULO / TITLE:** - An uncommon cause of high blood pressure in young people: retroperitoneal paraganglioma with vascular invasion.

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

**REVISTA / JOURNAL:** - Nefrologia. 2013 May 17;33(3):435-437. doi: 10.3265/Nefrologia.pre2012.Oct.11744.

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

[3265/Nefrologia.pre2012.Oct.11744](#)

**AUTORES / AUTHORS:** - Ayllon-Teran MD; Torres-Lorite M; Benitez-Cantero JM; Sanchez-Hidalgo JM; Diaz-Iglesias C; Rufian-Pena S

[302]

**TÍTULO / TITLE:** - Histopathological correlates with survival in reoperated glioblastomas.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1141-](#)

[3](#)

**AUTORES / AUTHORS:** - Woodworth GF; Garzon-Muvdi T; Ye X; Blakeley JO; Weingart JD; Burger PC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Maryland School of Medicine, Baltimore, MD, USA, [gwoodworth@smail.umaryland.edu](mailto:gwoodworth@smail.umaryland.edu).

**RESUMEN / SUMMARY:** - The addition of concomitant and adjuvant chemotherapy to radiation therapy after surgical resection has increased significantly the survival of patients with glioblastoma (GB). In conjunction, there has been an increasing fraction of patients who present with new enlarged areas of contrast enhancement and edema on post-treatment imaging that improve without further treatment. It remains to be established how this phenomenon, commonly termed pseudoprogression, can be distinguished from true tumor recurrence defined as the histological presence of active high-grade tumor, as well as its prognostic significance. Data for over 500 patients undergoing surgery for recurrent GB were reviewed. Pathological specimens were categorized as those that contained active high-grade glioma in any amount, and those that did not. Patient survival was compared between these two groups, and independent associations were assessed using Cox proportionate hazards regression analysis. 59 patients met the study criteria including complete pathological and follow-up data. Mean age was 53 +/- 11 years. Median survival from suspected recurrence and initial diagnosis were 8 [5-14] and 20 [12-30] months. Seventeen patients (29 %) had no evidence of active high-grade tumor and 42 (71 %) had at least focal active high-grade glioma. Pathologic pseudoprogression at re-operation ( $p = 0.03$ ) and gross total resection ( $p = 0.01$ ) were independently associated with survival. The histopathological features defined here and used to assess the tumor at reoperation were independently associated with survival. These findings may be important in designing treatment strategies and clinical trial endpoints for patients with GB.

[303]

**TÍTULO / TITLE:** - Preoperative functional MRI of number processing in left trigonal meningioma.

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

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Apr 30. pii: S0303-8467(13)00124-8. doi: 10.1016/j.clineuro.2013.03.016.

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

[1016/j.clineuro.2013.03.016](#)

**AUTORES / AUTHORS:** - Carlsson A; Nilsson DT

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Physics and Biomedical Engineering, Sahlgrenska University Hospital, Gothenburg, Sweden; Department of Radiation Physics at the Sahlgrenska Academy at University of Gothenburg, Gothenburg, Sweden. Electronic address: [asa.carlsson@vregion.se](mailto:asa.carlsson@vregion.se).

[304]

**TÍTULO / TITLE:** - MR perfusion in and around the contrast-enhancement of primary CNS lymphomas.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1161-](#)

[Z](#)

**AUTORES / AUTHORS:** - Blasel S; Jurcoane A; Bahr O; Weise L; Harter PN; Hattingen E

**INSTITUCIÓN / INSTITUTION:** - Institute of Neuroradiology, Goethe-University Hospital Frankfurt, University of Frankfurt, Schleusenweg 2-16, 60528, Frankfurt, Germany, [stella.blasel@kfu.de](mailto:stella.blasel@kfu.de).

**RESUMEN / SUMMARY:** - Diffuse cerebral infiltration of primary brain tumors may be missed on conventional MRI. In glioblastomas it may be visible on MR-perfusion images as an elevated rCBV adjacent to the contrast enhancing area (penumbra). We aimed to evaluate whether penumbral rCBV of primary central nervous system lymphomas (PCNSL) is also increased and if PCNSL perfusion has different features than that of glioblastomas. We measured dynamic susceptibility contrast MR-perfusion at 3 Tesla in 38 presurgical patients with histopathological diagnosis of PCNSL (n = 19) and glioblastoma (n = 19). We compared normalized rCBV within and adjacent to the enhancing area and evaluated time-signal intensity curves (TSIC) in all patients. Histopathological comparison of patients with different TSIC patterns (with or without shoulder-like increase) was performed. Relative to the normal tissue, rCBV within and adjacent to the enhancing area was increased (p < 0.05) in both glioblastomas and PCNSL. In the penumbra the increase was moderate in both groups, with 1.4 +/- 0.46 in PCNSL and 1.82 +/- 0.82 in glioblastomas (p = 0.07 between groups). In the enhancing tumor the increase was moderate in PCNSL (1.46 +/-

0.62) and marked in glioblastomas (4.13 +/- 2.44) ( $p < 0.001$  between groups). A shoulder-like TSIC increase was exclusively found in PCNSL (11/19) and was significantly associated with a less prominent reticulin fibre network compared to the PCNSL without a shoulder-like TSIC increase. The moderately increased penumbral rCBV in PCNSL and glioblastomas reveals tumor-related changes beyond the tumor borders which are invisible with conventional MRI. PCNSL can be differentiated from glioblastomas through their significantly lower rCBV and shoulder-like signal intensity changes inside the enhancing area.

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[305]

**TÍTULO / TITLE:** - Diencephalic syndrome as sign of tumor progression in a child with neurofibromatosis type 1 and optic pathway glioma: a case report.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 25.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2109-](http://1007/s00381-013-2109-5)

[5](#)

**AUTORES / AUTHORS:** - Cavicchiolo ME; Opocher E; Daverio M; Bendini M; Viscardi E; Bisogno G; Perilongo G; Da Dalt L

**INSTITUCIÓN / INSTITUTION:** - Department of Woman and Child Health, University Hospital of Padua, Via Giustiniani 3, 35128, Padua, Italy.

**RESUMEN / SUMMARY:** - ILLUSTRATIVE CASE: We describe the case of a 3-year-old child, diagnosed with familial neurofibromatosis type 1 (NF1) and asymptomatic optic pathway tumor at the age of two, who developed diencephalic syndrome (DS) due to tumor progression 1 year after diagnosis. Magnetic resonance imaging disclosed an enlarging hypothalamic contrast-enhanced mass. Because of the tumor progression, in terms of tumor volume and DS, chemotherapy (CT) treatment was started according to the international protocol for progressive low-grade glioma, with rapid clinical improvement in terms of gain weight and DS resolution. Interestingly, tumor volume was unchanged after CT. **CONCLUSIONS:** This case report highlights the following facts: (1) optic pathway glioma (OPG) in young children with NF1 may have definitive growth potentials and thus, they are worth an accurate clinical follow-up; (2) also, OPG occurring in NF1 patients can be responsible for DS in case of hypothalamus involvement; (3) consequently, the child's growth pattern must be included among the clinical parameters, which must be specifically evaluated during the follow-up of children, with or without NF1, bearing an OPG; and, finally, (4) that DS can improve after CT, even in face of a stable tumor volume.

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[306]

**TÍTULO / TITLE:** - Comparative Evaluation of 3-Dimensional Pseudocontinuous Arterial Spin Labeling With Dynamic Contrast-Enhanced Perfusion Magnetic Resonance Imaging in Grading of Human Glioma.

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

**REVISTA / JOURNAL:** - J Comput Assist Tomogr. 2013 May/June;37(3):321-326.

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

[1097/RCT.0b013e318282d7e2](#)

**AUTORES / AUTHORS:** - Roy B; Awasthi R; Bindal A; Sahoo P; Kumar R; Behari S; Ojha BK; Husain N; Pandey CM; Rathore RK; Gupta RK

**INSTITUCIÓN / INSTITUTION:** - From the \*Departments of Radiology & Imaging, Fortis Memorial Research Institute, Gurgaon; daggerDepartment of Radiodiagnosis, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow; double daggerDepartment of Neurosurgery, Chhatrapati Sahuji Maharaj Medical University, Lucknow; section signDepartment of Mathematics and Statistics, Indian Institute of Technology, Kanpur; parallelDepartment of Neurosurgery, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow; paragraph signDepartment of Pathology, Ram Manohar Lohia, Institute of Medical Sciences, Lucknow; and #Department of Biostatistics, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India.

**RESUMEN / SUMMARY:** - INTRODUCTION: The study was performed to compare dynamic contrast-enhanced (DCE) magnetic resonance imaging (MRI) with 3-dimensional (3D) pseudocontinuous arterial spin labeling (PCASL) MRI in gliomas with an aim to see whether arterial spin labeling (ASL)-derived cerebral blood flow (CBF) values can be used as an alternative to DCE-MRI for its grading. MATERIALS AND METHODS: Sixty-four patients with glioma (37 male; mean age, 43 years; 38 high grade and 26 low grade) underwent 3D-PCASL and DCE-MRI. The DCE indices (relative cerebral blood volume, rCBV; relative CBF, rCBF; permeability, k and  $k_{ep}$ ; and leakage,  $v_e$ ) and ASL (absolute and rCBF) values were quantified from the tumors. Student independent t test was used to compare ASL and DCE-MRI indices. Pearson correlation was used to see correlation between DCE- and ASL-derived CBF values in tumor and normal parenchyma. RESULTS: On Student t test, neither ASL-derived absolute CBF ( $P = 0.78$ ) nor rCBF ( $P = 0.12$ ) values were found to be significantly different in 2 groups, whereas DCE indices except  $v_e$  were significantly higher in high-grade gliomas. Arterial spin labeling-derived rCBF values weakly correlated with DCE-derived rCBF values, whereas these did not show correlation in normal grey ( $P = 0.12$ ,  $r = 0.2$ ) and white ( $P = 0.26$ ,  $r = 0.14$ ) matter regions. CONCLUSIONS: Three-dimensional pseudocontinuous arterial spin labeling does not appear to be a reliable technique in the current form and may not be a suitable replacement for DCE in grading of glioma.

[307]

**TÍTULO / TITLE:** - The importance of measuring the velocity of diameter expansion on MRI in upfront management of suspected WHO grade II glioma - Case report.

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

**REVISTA / JOURNAL:** - Neurochirurgie. 2013 Apr;59(2):89-92. doi: 10.1016/j.neuchi.2013.02.005. Epub 2013 Apr 23.

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

[1016/j.neuchi.2013.02.005](#)

**AUTORES / AUTHORS:** - Mandonnet E; Wait S; Choi L; Teo C

**INSTITUCIÓN / INSTITUTION:** - Centre for minimally invasive neurosurgery, Sydney, Australia; Department of Neurosurgery, hospital Lariboisiere, 2, rue Ambroise-Pare, 75010 Paris, France. Electronic address:

[mandonnet@mac.com](mailto:mandonnet@mac.com).

**RESUMEN / SUMMARY:** - A right insular lesion was incidentally discovered in a 48-year-old male. Morphological and metabolic radiological characteristics on magnetic resonance imaging (MRI) were in favor of a World Health Organization (WHO) grade II glioma. Despite being advised that surgery was appropriate, the patient elected for conservative management. A second MRI was performed 5 months after, and interpreted as unchanged. A third MRI 4 months later demonstrated a significant increase in tumor size and enhancement in a new distant tumor focus. The patient was referred to our center and underwent surgical resection. Histopathology revealed a grade III astrocytoma. A retrospective quantitative measurement of the radiological growth between the two first MRIs yielded a growth rate of 12 mm/year. This value, highly suggestive of a malignant glioma, should have triggered surgery at the time of the second MRI. We conclude that, whenever surgical treatment of a suspected WHO grade II gliomas is postponed, assessing tumor kinetics quantitatively is important to identify patients whose tumor is indeed a WHO grade III glioma. The tumor should be indeed followed by serial MRIs with quantitative measurement of tumor growth, not just "eyeball" qualitative examination. Immediate treatment is indicated in patients with radiological tumor expansion of greater than 8 mm/year.

[308]

**TÍTULO / TITLE:** - Letters to the Editor: Medulloblastoma and the Inferior Medullary Velum.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 May 24.

●●Enlace al texto completo (gratis o de pago) [3171/2013.2.JNS13237](#)

**AUTORES / AUTHORS:** - Salma A; Lin J; Fassett DR

**INSTITUCIÓN / INSTITUTION:** - Illinois Neurological Institute, University of Illinois College of Medicine at Peoria, Peoria, Illinois.

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[309]

**TÍTULO / TITLE:** - Efficacy of vagus nerve stimulation in brain tumor-associated intractable epilepsy and the importance of tumor stability.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Apr 19.

●●Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS121890](#)

**AUTORES / AUTHORS:** - Patel KS; Moussazadeh N; Doyle WK; Labar DR; Schwartz TH

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurological Surgery.

**RESUMEN / SUMMARY:** - Object Vagus nerve stimulation (VNS) is a viable option for patients with medically intractable epilepsy. However, there are no studies examining its effect on individuals with brain tumor-associated intractable epilepsy. This study aims to evaluate the efficacy of VNS in patients with brain tumor-associated medically intractable epilepsy. Methods Epilepsy surgery databases at 2 separate epilepsy centers were reviewed to identify patients in whom a VNS device was placed for tumor-related intractable epilepsy between January 1999 and December 2011. Preoperative and postoperative seizure frequency and type as well as antiepileptic drug (AED) regimens and degree of tumor progression were evaluated. Statistical analysis was performed using odds ratios and t-tests to examine efficacy. Results Sixteen patients were included in the study. Eight patients (50%) had an improved outcome (Engel Class I, II, or III) with an average follow-up of 39.6 months. The mean reduction in seizure frequency was 41.7% (p = 0.002). There was no significant change in AED regimens. Seizure frequency decreased by 10.9% in patients with progressing tumors and by 65.6% in patients with stable tumors (p = 0.008). Conclusions Vagus nerve stimulation therapy in individuals with brain tumor-associated medically intractable epilepsy was shown to be comparably effective in regard to seizure reduction and response rates to the general population of VNS therapy patients. Outcomes were better in patients with stable as opposed to progressing tumors. The authors' findings support the recommendation of VNS therapy in patients with brain tumor-associated intractable epilepsy, especially in cases in which imminent tumor progression is not expected. Vagus nerve stimulation may not be indicated in more malignant tumors.

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[310]

**TÍTULO / TITLE:** - Sphenoid sinus anatomy and suprasellar extension of pituitary tumors.

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

**REVISTA / JOURNAL:** - J Neurosurg. 2013 Apr 26.

●●Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS122113](#)

**AUTORES / AUTHORS:** - Ramakrishnan VR; Suh JD; Lee JY; O'Malley BW Jr; Grady MS; Palmer JN

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology, University of Colorado School of Medicine, Aurora, Colorado;

**RESUMEN / SUMMARY:** - Object As tumors enlarge, they generally grow along paths of least resistance. For pituitary macroadenomas, extrasellar extension into the suprasellar region, cavernous sinus, or sphenoid sinus may occur. The sphenoid sinus is known to have a variable anatomical configuration, and the authors hypothesize that certain anatomical factors may resist tumor expansion into the sphenoid sinus, thereby directing tumor growth into the suprasellar space. In this paper the authors' goal was to determine if sphenoid anatomy influences pituitary tumor growth. Methods The authors conducted a retrospective analysis of 106 consecutive surgical cases of pituitary macroadenoma. Patient demographics, suprasellar extension, sellar width, and features of the sphenoid intersinus septum were recorded on radiographic review. The chi-square test, t-test, logistic regression, and classification and regression tree analysis were used for statistical analysis. Results Of the 106 patients included in the study, 71 (67%) demonstrated suprasellar extension of their tumor. Patients with suprasellar tumor extension had significantly greater intersinus septum width (width > 1.27 mm: OR = 14.32; p = 0.0012) and were significantly older (age > 54 yrs: OR = 3.33; p = 0.0176). They also tended to be male and to have two or more sphenoid partitions (OR = 6.58; p = 0.0306). While patients with suprasellar extension tended to be more likely to have a midline partition and a larger sellar width than their counterparts, these differences did not reach statistical significance. Conclusions Certain aspects of the sphenoid sinus anatomy may function to resist pituitary tumor growth into the sphenoid sinus. Progressive enlargement of pituitary macroadenomas may extend in a suprasellar direction, in part, as a consequence of the sphenoid sinus anatomy.

[311]

**TÍTULO / TITLE:** - Development of JAK2V617F-Positive Polycythemia Vera after Chemotherapy-Induced Remission of Primary Central Nervous System Diffuse Large B Cell Non-Hodgkin's Lymphoma: A Case Report and Review of the Literature.

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

**REVISTA / JOURNAL:** - Acta Haematol. 2013 May 7;130(3):142-145.

●●Enlace al texto completo (gratis o de pago) [1159/000347159](#)

**AUTORES / AUTHORS:** - Elli EM; Belotti A; Cecchetti C; Realini S; Fedele M; Parma M; Pogliani EM

**INSTITUCIÓN / INSTITUTION:** - Hematology Division, Ospedale San Gerardo, Università degli Studi Milano Bicocca, Monza, Italy.

**RESUMEN / SUMMARY:** - The coexistence or the development of Philadelphia chromosome-negative myeloproliferative neoplasms after a lymphoproliferative disease in the same patient is an extremely rare event. We report the case of a 72-year-old man who developed JAK2V617F polycythemia vera 3 years after the diagnosis and treatment of primary diffuse large B cell non-Hodgkin's lymphoma of the central nervous system. We also review the literature regarding the pathogenesis underlying the association of myeloproliferative and lymphoproliferative chronic disorders.

[312]

**TÍTULO / TITLE:** - The Use of a Simple Self-Retaining Retractor in Endoscopic Endonasal Transsphenoidal Approach to the Pituitary Macroadenomas: Technical Note.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Apr 23.

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

[1227/01.neu.0000430292.39046.10](https://doi.org/10.1227/01.neu.0000430292.39046.10)

**AUTORES / AUTHORS:** - Kutlay M; Gonul E; Duz B; Izci Y; Tehli O; Temiz C; Solmaz I; Daneyemez M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Gulhane Military Medical Academy, Etlik-Ankara, Turkey.

**RESUMEN / SUMMARY:** - **BACKGROUND::** During tumor removal of the endoscopic endonasal approach to pituitary adenomas with a significant suprasellar extension, the early descent of diaphragma sellae obscuring the visualization of the surgical field is a surgical challenge. **OBJECTIVE::** To describe a simple diaphragma retraction technique to eliminate this problem. **METHODS::** A transparent flexible material (a strip of polypropylene) was used as a self-retaining retractor to elevate the redundant diaphragma and also to maintain the diaphragma elevation. This technique was performed in 3 patients who had pituitary adenoma with suprasellar extension. The degree of tumor removal was determined by a combination of surgeon's intraoperative impression and the postoperative magnetic resonance imaging obtained 3 months later. **RESULTS::** The technique was performed very easily and no complication was observed due to this technique and self-retaining retractor. Total tumor removal was achieved in 2 patients with this technique and subtotal removal in one patient. **CONCLUSION::** This technique was effective and practicable to elevate the diaphragma sellae during the tumor removal phase of transsphenoidal surgery. This simple self-retaining retractor may support the neurosurgeon's skill by providing control of the entire surgical field and adequate working space. It may also eliminate the risks of blind curettage during surgery.

[313]

**TÍTULO / TITLE:** - Fibroproliferative Neuromas May Occur after Iatrogenic Injury for Lipomatosis of Nerve.

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

**REVISTA / JOURNAL:** - Neurosurgery. 2013 Apr 23.

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

[1227/01.neu.0000430289.93304.e5](https://doi.org/10.1227/01.neu.0000430289.93304.e5)

**AUTORES / AUTHORS:** - Mahan MA; Amrami KK; Spinner RJ

**INSTITUCIÓN / INSTITUTION:** - 1Mayo Clinic, Departments of Neurologic Surgery  
2Radiology 3Orthopedics, Rochester, MN.

**RESUMEN / SUMMARY:** - BACKGROUND:: Lipomatosis of nerve (LN) is a condition associated with nerve-territory overgrowth. We have noted a unique type of neuroma at sites of LN injury; the neuroma extends beyond the epineurium, enhances and appears to enlarge over time. OBJECTIVE:: We sought to understand the relationship between fibroproliferative scarring and surgery performed on the nerve. METHODS:: Review of the searchable records for LN at our institution found 52 cases, confirmed by pathology or pathognomonic appearance on MRI. Clinical histories were reviewed to categorize the surgeries performed by the degree of iatrogenic injury to the nerve. Postoperative MRIs were obtained in 22 of the 46 patients who had surgery which were then retrospectively reviewed for fibroproliferative neuromas. RESULTS:: Complex and mass-like neuromas were found on MR imaging, correlated to the degree of iatrogenic injury to the nerve. These fibrous neuromas proliferated beyond the epineurium, disrupted fascicular architecture and were contrast enhancing when contrast was administered, unique and unlike stump or traction neuromas. Of the 8 patients who underwent surgery involving nerve decompression alone, none developed fibroproliferative neuromas. Of the 7 patients who underwent surgery involving nerve debulking, 4 developed fibroproliferative neuromas. Of the 11 patients who underwent surgery involving nerve transection, all developed fibroproliferative neuromas ( $p < 0.001$ ). There was also a high incidence of hypertrophic scarring of the skin incision (21.3%). CONCLUSION:: Surgical injury of LN appears to be strongly associated with the development of fibroproliferative neuromas. It is possible that the pathologic overgrowth stimulus associated with LN promotes exuberant scar formation.

[314]

**TÍTULO / TITLE:** - Glioma-amplified sequence KUB3 influences double-strand break repair after ionizing radiation.

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

**REVISTA / JOURNAL:** - Int J Oncol. 2013 Jul;43(1):50-6. doi: 10.3892/ijo.2013.1937. Epub 2013 May 13.

●●Enlace al texto completo (gratis o de pago) [3892/ijo.2013.1937](https://doi.org/10.3892/ijo.2013.1937)

**AUTORES / AUTHORS:** - Fischer U; Rheinheimer S; Krempler A; Lohrich M; Meese E

**INSTITUCIÓN / INSTITUTION:** - Department of Human Genetics, Medical School, Saarland University, D-66421 Homburg/Saar, Germany.

**RESUMEN / SUMMARY:** - Human glioblastomas are characterized by frequent DNA amplifications most often at chromosome regions 7p11.2 and 12q13-15. Although amplification is a well-known hallmark of glioblastoma genetics the function of most amplified genes in glioblastoma biology is not understood. Previously, we cloned Ku70-binding protein 3 (KUB3) from the amplified domain at 12q13-15. Here, we report that glioblastoma cell cultures with endogenous KUB3 gene amplification and with elevated KUB3 protein expression show an efficient double-strand break (DSB) repair after being irradiated with 1 Gy. A significantly less efficient DSB repair was found in glioma cell cultures without KUB3 amplification and expression. Furthermore, we found that a siRNA-mediated reduction of the endogenous KUB3 expression in glioblastoma cells resulted in a reduction of the repair efficiency. HeLa cells transfected with KUB3 showed an increased DSB repair in comparison to untreated HeLa cells. In addition, KUB3 seems to influence DSB efficiency via the DNA-PK-dependent repair pathway as shown by simultaneous inhibition of KUB3 and DNA-PK. The data provide the first evidence for a link between the level of KUB3 amplification and expression in glioma and DSB repair efficiency.

[315]

**TÍTULO / TITLE:** - Accuracy of MRI in Defining Tumor-Free Margin in Optic Nerve Glioma Surgery.

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

**REVISTA / JOURNAL:** - Ophthal Plast Reconstr Surg. 2013 May 24.

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

[1097/IOP.0b013e318291658e](https://doi.org/10.1097/IOP.0b013e318291658e)

**AUTORES / AUTHORS:** - Spicer GJ; Kazim M; Glass LR; Harris GJ; Miller NR; Rootman J; Sullivan TJ

**INSTITUCIÓN / INSTITUTION:** - \*Department of Ophthalmology, New York Presbyterian Hospital, Columbia Presbyterian Medical Center, New York, New York, U.S.A; daggerDepartment of Ophthalmology, Medical College of Wisconsin, Milwaukee, Wisconsin, U.S.A; double daggerWilmer Eye Institute, Johns Hopkins University, Baltimore, Maryland, U.S.A.; section signDepartment of Ophthalmology and Visual Sciences and Department of Pathology and Laboratory Sciences, University of British Columbia, Vancouver, British

Columbia, Canada; and ||Royal Brisbane Hospital, Brisbane, Queensland, Australia.

**RESUMEN / SUMMARY:** - PURPOSE:: To determine the value of preoperative MRI in predicting the histopathologic margin of optic nerve glioma undergoing surgical resection. METHODS:: Retrospective, noncomparative, multicenter case series of patients diagnosed with prechiasmal optic nerve glioma, using MRI, who underwent surgical resection. Clinical data were abstracted from patient medical records at 6 medical centers through a survey vehicle. Preoperative MRI findings were compared with intraoperative findings and postoperative histopathologic interpretations of the posterior margins of 13 surgically resected optic nerve gliomas. RESULTS:: A total of 13 patient submissions qualified for study entry based on preoperative MRI having identified a unilateral optic glioma anterior to the optic chiasm. Of these, 2 cases (15%) demonstrated an abnormal macroscopic appearance of the chiasm intraoperatively and were surgically debulked rather than resected as planned preoperatively. The remaining 11 patients underwent resection posterior to the margins indicated by preoperative MRI. Of these, 3 (27%) demonstrated evidence of microscopically positive margins on histopathologic examination. Follow up ranged from 3 months to 21 years. One patient with involvement of the chiasm manifested tumor growth; no other recurrences or evidence of growth occurred in the remaining patients, including 1 other case with involvement of the chiasm and 3 cases with positive surgical margins. CONCLUSIONS:: Unilateral optic nerve gliomas limited to the prechiasmatic nerve on MRI not infrequently extend beyond the MRI borders. This finding is of significance when considering management options, particularly surgical resection.

[316]

**TÍTULO / TITLE:** - Metformin inhibits glioma cell U251 invasion by downregulation of fibulin-3.

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

**REVISTA / JOURNAL:** - Neuroreport. 2013 Jul 10;24(10):504-8. doi: 10.1097/WNR.0b013e32836277fb.

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

[1097/WNR.0b013e32836277fb](#)

**AUTORES / AUTHORS:** - Gao LB; Tian S; Gao HH; Xu YY

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, The 4th Affiliated Hospital of China Medical University, Shenyang, China.

**RESUMEN / SUMMARY:** - Fibulin-3 has been considered as a regulator of glioma cell invasion, but little is known about the molecules regulating fibulin-3 expression. Metformin, an oral antidiabetic drug in the biguanide class, is known to inhibit proliferation and metastasis in a variety of cancer cells. In the

present study, we determined the effect of metformin on the expression of fibulin-3 in U251 Human glioma cells. Metformin potently suppressed U251 cell adhesion and invasion. Metformin inhibited the expression of fibulin-3 at the transcriptional level. Moreover, metformin abolished the protein expression of fibulin-3 in a concentration-dependent manner. Furthermore, this compound suppressed the expression of matrix metalloproteinase-2, a key effector of glioma cell invasion, regulated by fibulin-3. Taken together, our results suggest that metformin abolishes fibulin-3 expression and subsequently inhibits invasion of glioma cells.

[317]

**TÍTULO / TITLE:** - Histologic grade and extent of resection are associated with survival in pediatric spinal cord ependymomas.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2149-](#)

[X](#)

**AUTORES / AUTHORS:** - Safaee M; Oh MC; Kim JM; Aranda D; Tarapore PE; Cage TA; 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:** - **PURPOSE:** Prognostic factors affecting outcomes in pediatric spinal cord ependymomas are limited. We sought to investigate potential associations between extent of resection and histologic grade on progression-free survival (PFS) and overall survival (OS). **METHODS:** A comprehensive literature search was performed to identify pediatric patients who underwent surgical resection for spinal cord ependymomas. Only manuscripts with clearly defined age, tumor grade, extent of resection, and clinical follow-up were included. **RESULTS:** A total of 80 patients were identified with a histologic distribution as follows: 36 % myxopapillary (grade I), 54 % classical (grade II), and 10 % anaplastic (grade III). There was no association between tumor grade and PFS. The only factor associated with improved PFS was gross total resection (GTR), which remained significant in a multivariate model (hazard ratio (HR) = 0.248, p = 0.022). Moreover, older age (HR = 0.818, p = 0.026), GTR (HR = 0.042, p = 0.013), and anaplastic grade (HR = 19.847, p = 0.008) demonstrated a significant association with OS in a multivariate model. **CONCLUSIONS:** Among pediatric patients with spinal cord ependymomas, PFS did not differ across histologic grades but was prolonged among patients who underwent GTR. Age, extent of resection, and tumor grade were all significantly associated with survival.

[318]

**TÍTULO / TITLE:** - Low-grade (WHO II) and anaplastic (WHO III) gliomas: differences in morphology and MRI signal intensities.

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

**REVISTA / JOURNAL:** - Eur Radiol. 2013 May 19.

●●Enlace al texto completo (gratis o de pago) [1007/s00330-013-2886-](http://1007/s00330-013-2886-)

[y](#)

**AUTORES / AUTHORS:** - Schafer ML; Maurer MH; Synowitz M; Wustefeld J; Marnitz T; Streitparth F; Wiener E

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Charite-Universitätsmedizin Berlin, Campus Virchow Klinikum, Augustenburger Platz 1, 13353, Berlin, Germany, [max-ludwig.schaefer@charite.de](mailto:max-ludwig.schaefer@charite.de).

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To evaluate the diagnostic potential of a multi-factor analysis of morphometric parameters and signal characteristics of brain tumours and peritumoural areas for distinguishing WHO-grade II and III gliomas at magnetic resonance imaging (MRI). **METHODS:** MR examinations of 108 patients with histologically proven World Health Organization (WHO) grade II and III gliomas were included. Morphological criteria and MR signal characteristics were evaluated. The data were subjected to a multifactorial logistic regression analysis to differentiate between grade II and grade III gliomas. The discriminatory power was assessed by receiver operating characteristic (ROC). **RESULTS:** Logistic regression analysis showed that WHO grade II and III can be distinguished based on contrast enhancement, cortical involvement, margin of the enhancing lesion and maximum diameter (width and length) of the peritumoural area (the so-called tumour infiltration zone). With the final model of logistic regression analysis and with the cut-off value  $\geq 0.377$ , WHO grade III glioma is predicted with a sensitivity of 71.0 % and a specificity of 80.4 %. **CONCLUSION:** Measurement of maximum diameter of peritumoural area, contrast enhancement as well as cortical involvement and the margin of the contrast-enhancing lesion can be used easily in clinical routine to adequately distinguish WHO grade II from grade III gliomas. **KEY POINTS :** \* MRI offers new information concerning WHO-grade II and III gliomas. \* The differentiation between such tumour grades is important for therapeutic decisions. \* We assessed differences in enhancement, cortical involvement, margins and peritumoural appearances. \* WHO grade III gliomas can be predicted with reasonable sensitivity and specificity.

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[319]

**TÍTULO / TITLE:** - The incidence rate and mortality of malignant brain tumors after 10 years of intensive cell phone use in Taiwan.

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

**REVISTA / JOURNAL:** - Eur J Cancer Prev. 2013 Apr 14.

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

[1097/CEJ.0b013e328360f456](https://doi.org/10.1097/CEJ.0b013e328360f456)

**AUTORES / AUTHORS:** - Hsu MH; Syed-Abdul S; Scholl J; Jian WS; Lee P; Iqbal U; Li YC

**INSTITUCIÓN / INSTITUTION:** - aDepartment of Health, Bureau of International Cooperation bInstitute of Biomedical Informatics, National Yang Ming University cSchool of Health Care Administration dCollege of Medical Science and Technology, Taipei Medical University eDepartment of Dermatology, Wan Fang Hospital, Taipei, Taiwan fHealth Informatics Centre, Karolinska Institutet, Stockholm, Sweden.

**RESUMEN / SUMMARY:** - The issue of whether cell phone usage can contribute toward the development of brain tumors has recently been reignited with the International Agency for Research on Cancer classifying radiofrequency electromagnetic fields as 'possibly' carcinogenic to humans in a WHO report. To our knowledge, this is the largest study reporting on the incidence and mortality of malignant brain tumors after long-term use of the cell phone by more than 23 million users. A population-based study was carried out the numbers of cell phone users were collected from the official statistics provided by the National Communication Commission. According to National Cancer Registry, there were 4 incidences and 4 deaths due to malignant neoplasms in Taiwan during the period 2000-2009. The 10 years of observational data show that the intensive user rate of cell phones has had no significant effect on the incidence rate or on the mortality of malignant brain tumors in Taiwan. In conclusion, we do not detect any correlation between the morbidity/mortality of malignant brain tumors and cell phone use in Taiwan. We thus urge international agencies to publish only confirmatory reports with more applicable conclusions in public. This will help spare the public from unnecessary worries.

[320]

**TÍTULO / TITLE:** - Unusual Features in Four Canine Meningiomas.

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

**REVISTA / JOURNAL:** - J Comp Pathol. 2013 May 6. pii: S0021-9975(13)00052-2. doi: 10.1016/j.jcpa.2013.03.003.

●●Enlace al texto completo (gratis o de pago) [1016/j.jcpa.2013.03.003](https://doi.org/10.1016/j.jcpa.2013.03.003)

**AUTORES / AUTHORS:** - Schoniger S; Woolford L; Jutras L; Head E; de Lahunta A; Summers BA

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Pathogen Biology, The Royal Veterinary College, Hawkshead Lane, North Mymms, Hatfield, Herts AL9 7TA, UK. Electronic address: [sandra.schoeniger@vetmed.uni-leipzig.de](mailto:sandra.schoeniger@vetmed.uni-leipzig.de).

**RESUMEN / SUMMARY:** - Several subtypes of canine meningioma are recognized. This report describes four canine meningiomas with previously unreported features. The four affected dogs were of different breeds. Three of

the affected dogs were male and aged 7-10 years. In one dog, age and gender were not recorded. Meningiomas were located intracranially (three dogs) or within the vertebral canal (one dog). Two meningiomas resembled gemistocytic astrocytomas, while one had focal features of a rhabdoid tumour; these three meningiomas also contained amyloid deposits. The fourth tumour, a secretory meningioma, was rich in amianthoid fibres (i.e. unusual collagen deposits containing giant collagen fibres). All of these features are also described in human meningiomas.

[321]

**TÍTULO / TITLE:** - Feasibility, safety, and indications for surgical biopsy of intrinsic brainstem tumors in children.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 11.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2101-](http://1007/s00381-013-2101-0)

[0](#)

**AUTORES / AUTHORS:** - Cage TA; Samagh SP; Mueller S; Nicolaidis T; Haas-Kogan D; Prados M; Banerjee A; Auguste KI; Gupta N

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Pediatric Neurosurgery, University of California, San Francisco, 505 Parnassus Ave, Room M779, San Francisco, CA, 94143-0112, USA.

**RESUMEN / SUMMARY:** - **PURPOSE:** Diffuse intrinsic pontine gliomas (DIPGs) are rapidly progressive and aggressive tumors that usually arise in children. Their anatomic location makes gross total surgical resection impossible, and fewer than 10 % of patients survive more than 2 years after diagnosis. Often, these lesions are treated based on imaging characteristics alone. However, despite aggressive chemotherapy and radiation treatments available, prognosis remains poor. There is therefore a need for new therapies directed by biologic profiling. This necessitates a tissue diagnosis and, therefore, surgical biopsy. We have reviewed the results of biopsy for DIPGs in children at a single institution and compared our results to those available in the literature to elucidate the utility of biopsy for DIPGs. **METHODS:** A historical cohort study was performed using medical records of patients under the age of 18 who underwent surgical biopsy of a DIPG at a single institution. **RESULTS:** Nine patients were included, four males and five females. Age at presentation ranged from 8 months to 10 years (average 5.7 years). Pathologic diagnoses included five high grade (WHO grade III or IV) gliomas and four low grade (WHO grade II) astrocytomas. There were no intraoperative complications, and only one patient developed a new postoperative neurologic deficit. **CONCLUSIONS:** Stereotactic biopsy of DIPGs is essential to obtain a pathologic diagnosis and is associated with low morbidity. This technique is important to elucidate biological characteristics of these tumors in order to direct multidisciplinary treatment

plans possibly involving chemotherapy, radiation therapy, or other future clinical trial interventions for children with DIPGs.

[322]

**TÍTULO / TITLE:** - Delineation of malignant glioma by turbo spin echo multislice motion-sensitized driven-equilibrium (TSE-MSDE) with gadolinium-based contrast media: A case report.

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

**REVISTA / JOURNAL:** - Magn Reson Imaging. 2013 May 17. pii: S0730-725X(13)00031-3. doi: 10.1016/j.mri.2013.01.004.

●●Enlace al texto completo (gratis o de pago) [1016/j.mri.2013.01.004](http://1016/j.mri.2013.01.004)

**AUTORES / AUTHORS:** - Kanoto M; Hosoya T; Toyoguchi Y; Oda A

**INSTITUCIÓN / INSTITUTION:** - Department of Diagnostic Radiology, Faculty of Medicine, Yamagata University, Iida-Nishi 2-2-2, 990-9585, Yamagata, Japan. Electronic address: [mkanoto@med.id.yamagata-u.ac.jp](mailto:mkanoto@med.id.yamagata-u.ac.jp).

**RESUMEN / SUMMARY:** - T1-weighted images by turbo spin echo multislice motion-sensitized driven-equilibrium with gadolinium-based contrast media clearly delineated the brainstem invasion of a malignant glioma in an 80-year-old woman compared with other magnetic resonance imaging sequences.

[323]

**TÍTULO / TITLE:** - Pin1-Nanog expression in human glioma is correlated with advanced tumor progression.

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

**REVISTA / JOURNAL:** - Oncol Rep. 2013 May 23. doi: 10.3892/or.2013.2481.

●●Enlace al texto completo (gratis o de pago) [3892/or.2013.2481](http://3892/or.2013.2481)

**AUTORES / AUTHORS:** - Yang Y; Niu CS; Cheng CD

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Anhui Provincial Hospital Affiliated to Anhui Medical University, Hefei, Anhui 230001, P.R. China.

**RESUMEN / SUMMARY:** - The stemness gene Nanog has been shown to play an important role in tumor development, including glioma. Nanog is phosphorylated at multiple Ser/Thr-Pro motifs, which promotes the interaction between Nanog and the prolyl isomerase Pin1, leading to Nanog stabilization by suppressing its ubiquitination. The present study investigated the expression and relationship of Pin1 and Nanog in human gliomas. Significantly higher mRNA and protein expression levels of Pin1 and Nanog were demonstrated in 120 glioma specimens of different pathological grades by RT-PCR, immunohistochemistry staining and western blot analysis. The relative levels of Pin1 expression, as well as Nanog expression, were significantly positively correlated with pathological grade. Moreover, a positive correlation of Pin1 and Nanog expression in human gliomas was noted. Co-localization of Pin1 and Nanog

was observed in the perinuclear space in the cytoplasm of glioma cells detected by immunofluorescence staining. Significantly positive correlation between Pin1 and Nanog in gliomas indicated that Pin1 and Nanog may be related to tumorigenesis and development of glioma cells.

[324]

**TÍTULO / TITLE:** - Downregulation of miR-383 promotes glioma cell invasion by targeting insulin-like growth factor 1 receptor.

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

**REVISTA / JOURNAL:** - Med Oncol. 2013 Jun;30(2):557. doi: 10.1007/s12032-013-0557-0. Epub 2013 Apr 6.

●●Enlace al texto completo (gratis o de pago) [1007/s12032-013-0557-0](#)

**AUTORES / AUTHORS:** - He Z; Cen D; Luo X; Li D; Li P; Liang L; Meng Z  
**INSTITUCIÓN / INSTITUTION:** - Department of Paediatrics, Sun Yat-sen Memorial Hospital, Sun Yat-sen University, 107 Yan Jiang West Road, Guangzhou, 510120 Guangdong, People's Republic of China. [zwHe2013@yahoo.com](mailto:zwHe2013@yahoo.com)

**RESUMEN / SUMMARY:** - Invasiveness is a major clinical feature of glioma, an aggressive brain tumor with poor prognosis. Although there is emerging evidence that some microRNAs are involved in the glioma cell invasion process, it remains necessary to find functional microRNAs and elucidate the underlying molecular mechanisms. Here, we reported that a microRNA, miR-383, was downregulated in gliomas and inversely correlated with glioma pathological grades. Downregulation of miR-383 enhanced, whereas upregulation of miR-383 inhibited, the glioma cell invasive ability. Furthermore, we found that downregulation of miR-383 activated the AKT signaling following upregulation of MMP2 expression by directly targeting insulin-like growth factor 1 receptor (IGF1R). Importantly, we demonstrated that IGF1R expression is critical for miR-383 downregulation-induced cell invasion. Taken together, these findings uncover a novel regulatory mechanism for constitutive IGF1R signaling activation in glioma cancer and may provide miR-383 as a useful diagnostic marker or therapeutic target.

[325]

**TÍTULO / TITLE:** - Malignant meningitis presenting as pseudotumor cerebri.

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

**REVISTA / JOURNAL:** - J Neurol Sci. 2013 Jun 15;329(1-2):62-5. doi: 10.1016/j.jns.2013.03.013. Epub 2013 Apr 9.

●●Enlace al texto completo (gratis o de pago) [1016/j.jns.2013.03.013](#)

**AUTORES / AUTHORS:** - Ahmed RM; Halmagyi GM

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Royal Prince Alfred Hospital, Sydney, Australia. [rebekahahmed@gmail.com](mailto:rebekahahmed@gmail.com)

**RESUMEN / SUMMARY:** - Malignant leptomeningitis can present as the clinical syndrome of pseudotumor cerebri due to infiltration of arachnoid villi in the superior sagittal sinus. We show that malignant pachymeningitis can also present with pseudotumor cerebri, likely due to cerebral venous hypertension from transverse sinus compression. We present 3 cases of pseudotumor cerebri due to pachymeningeal or leptomeningeal metastases and discuss the mechanism of intracranial hypertension in such cases, its diagnosis and treatment.

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[326]

**TÍTULO / TITLE:** - Safety of second-line chemotherapy with non-conventional fotemustine schedule in recurrent high grade gliomas: a single institution experience.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 24.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1147-](http://1007/s11060-013-1147-)

[X](#)

**AUTORES / AUTHORS:** - Gaviani P; Simonetti G; Salmaggi A; Lamperti E; Silvani A

**INSTITUCIÓN / INSTITUTION:** - Neuro-Oncology Department, Fondazione IRCCS Istituto Neurologico Carlo Besta, Milan, Italy, [gaviani.p@istituto-besta.it](mailto:gaviani.p@istituto-besta.it).

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[327]

**TÍTULO / TITLE:** - Temozolomide in combination with carbon ion or photon irradiation in glioblastoma multiforme cell lines - does scheduling matter?

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

**REVISTA / JOURNAL:** - Int J Radiat Biol. 2013 May 13.

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

[3109/09553002.2013.791406](http://3109/09553002.2013.791406)

**AUTORES / AUTHORS:** - Harrabi S; Combs SE; Brons S; Haberer T; Debus J; Weber KJ

**INSTITUCIÓN / INSTITUTION:** - Radiation Oncology, University Hospital of Heidelberg.

**RESUMEN / SUMMARY:** - Purpose: To extend the application area of particle therapy with carbon ions the many already established treatment regimens for different tumor entities have to be taken into consideration. The present study investigates the effect of combined radiochemotherapy with temozolomide (TMZ) and high linear energy transfer (LET) irradiation with carbon ions versus photons. Materials and methods: Clonogenic survival was analyzed for human

glioma cell lines with different O6-methylguanine-DNA methyltransferase (MGMT) status, LN18 (MGMT+) and LN-229 (MGMT-), after exposure to different doses of either carbon ion or photon irradiation at different time points relative to TMZ application. Cell cycle distribution was measured by flow cytometry. MGMT status of the cell lines was verified by Western blot. Results: LN-18 and LN-229 reacted in accordance to their MGMT status with different sensitivity to TMZ treatment. Combined treatment with irradiation showed additive cytotoxic effects for both cell lines with low radiation doses but no radiosensitization. With increasing photon doses the combination effect was reduced, and the efficacy of the combined treatment was not dependent on administration schedule. Carbon ion irradiation showed the well known increased relative biological efficiency (RBE), overcame the abovementioned antagonism and was also not schedule-dependent. Conclusions: The in vitro effectiveness of TMZ in combined radiochemotherapy is independent of administration time or MGMT-expression. Both cell lines are significantly more sensitive to combined treatment with carbon ion radiation than to photon radiation but do not show any super-additive effects.

[328]

**TÍTULO / TITLE:** - Hypoxia-induced expression of VE-cadherin and filamin B in glioma cell cultures and pseudopalisade structures.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1124-](#)

[4](#)

**AUTORES / AUTHORS:** - Nissou MF; El Atifi M; Guttin A; Godfraind C; Salon C; Garcion E; van der Sanden B; Issartel JP; Berger F; Wion D

**INSTITUCIÓN / INSTITUTION:** - INSERM U836, Grenoble Institut des Neurosciences, Université Joseph Fourier, CHU Grenoble, Batiment E.J. Safra, 38042, Grenoble, France.

**RESUMEN / SUMMARY:** - Most of our knowledge regarding glioma cell biology comes from cell culture experiments. For many years the standards for glioma cell culture were the use of cell lines cultured in the presence of serum and 20 % O<sub>2</sub>. However, in vivo, normoxia in many brain areas is in close to 3 % O<sub>2</sub>. Hence, in cell culture, the experimental value referred as the norm is hyperoxic compared to any brain physiological value. Likewise, cells in vivo are not usually exposed to serum, and low-passaged glioma neurosphere cultures maintained in serum-free medium is emerging as a new standard. A consequence of changing the experimental normoxic standard from 20 % O<sub>2</sub> to the more brain physiological value of 3 % O<sub>2</sub>, is that a 3 % O<sub>2</sub> normoxic reference point enabled a more rigorous characterization of the level of regulation of genes by hypoxia. Among the glioma hypoxia-regulated genes

characterized using this approach we found VE-cadherin that is required for blood vessel formation, and filamin B a gene involved in endothelial cell motility. Both VE-cadherin and filamin B were found expressed in pseudopalisades, a glioblastoma pathognomonic structure made of hypoxic migrating cancer cells. These results provide additional clues on the role played by hypoxia in the acquisition of endothelial traits by glioma cells and on the functional links existing between pseudopalisades, hypoxia, and tumor progression.

[329]

**TÍTULO / TITLE:** - Tumor origin and growth pattern at diagnosis and surgical hypothalamic damage predict obesity in pediatric craniopharyngioma.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1128-0](http://1007/s11060-013-1128-0)

**AUTORES / AUTHORS:** - Park SW; Jung HW; Lee YA; Shin CH; Yang SW; Cheon JE; Kim IO; Phi JH; Kim SK; Wang KC

**INSTITUCIÓN / INSTITUTION:** - Division of Endocrinology and Metabolism, Department of Pediatrics, Seoul National University Children's Hospital, Seoul National University College of Medicine, 101 Daehak-ro, Jongno-gu, Seoul, 110-769, South Korea.

**RESUMEN / SUMMARY:** - Severe obesity is a major problem in pediatric craniopharyngioma. We investigated whether tumor origin, growth pattern, and surgical damage predict obesity in pediatric craniopharyngioma. Subjects were 58 patients (30 males) with no tumor recurrence during the first postoperative 18 months. Preoperative hypothalamic involvement was classified into no (pre\_G0, n = 19), little (pre\_G1, n = 21), and severe (pre\_G2, n = 18) involvement groups based on sub- or supradiaphragmatic tumor origin and growth patterns. Postoperative hypothalamic involvement was classified into no (post\_G0, n = 4), minimal (post\_G1, n = 19), and significant (post\_G2, n = 35) involvement groups according to follow-up imaging. The prevalence of obesity increased from 13.2 % at diagnosis (mean age = 8.1 years) to 37.9 % at last follow-up (mean duration = 9.1 years). Only the body mass index (BMI) Z-score increment of the first postoperative year (first-year DeltaBMI\_Z) was significant (P = 0.007). Both the preoperative BMI\_Z (P = 0.001) and the first-year DeltaBMI\_Z (P = 0.017) showed an increasing trend from the pre\_G0 to pre\_G1 to pre\_G2 group. For the 40 patients with pre\_G0 or pre\_G1, the first-year DeltaBMI\_Z was higher in the post\_G2 group than the post\_G1 group (0.02 +/- 0.91 vs. 0.89 +/- 0.72, P = 0.003). Tumor origin and growth pattern affect preoperative BMI\_Z and postoperative weight gain. Despite little or no hypothalamic involvement at diagnosis, surgical damage contributes to postoperative weight gain in patients with craniopharyngioma.

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[330]

**TÍTULO / TITLE:** - Fluorescein-guided surgery for grade IV gliomas with a dedicated filter on the surgical microscope: preliminary results in 12 cases.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1734-](#)

[9](#)

**AUTORES / AUTHORS:** - Acerbi F; Broggi M; Eoli M; Anghileri E; Cuppini L; Pollo B; Schiariti M; Visintini S; Orsi C; Franzini A; Broggi G; Ferroli P

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Fondazione IRCCS Istituto Neurologico Carlo Besta, Via Celoria 11, 20133, Milan, Italy, [acerbi.f@istituto-besta.it](mailto:acerbi.f@istituto-besta.it).

**RESUMEN / SUMMARY:** - BACKGROUND: Fluorescein is widely used as a fluorescent tracer for many applications. Its capability to accumulate in cerebral areas with blood-brain barrier damage makes it an ideal dye for intraoperative visualization of malignant gliomas (MG). We report our preliminary experience in fluorescein-guided removal of grade IV gliomas using a dedicated filter on the surgical microscope. METHODS: In September 2011 we started a prospective phase II trial (FLUOGLIO) to evaluate the safety and obtain initial indications about the efficacy of fluorescein-guided surgery for MG. Patients with suspected MG amenable to complete resection of contrast-enhancing areas were eligible to participate in this study. This report is based on a preliminary analysis of the results of 12 patients with grade IV gliomas out of 15 consecutive cases (age range 48-72 years) enrolled since September 2011. Fluorescein was injected intravenously (i.v.) after intubation (5-10 mg/kg). The tumor was removed using a microsurgical technique and fluorescence visualization by BLU 400 or YELLOW 560 filters on a Pentero microscope (Carl Zeiss, Germany). The study was approved by our ethics committee and registered on the European Regulatory Authorities website (EudraCT no. 2011-002527-18). RESULTS: Histological analysis confirmed grade IV gliomas in 12/15 cases. Median preoperative tumor volume was 33.15 cm<sup>3</sup> (9.6-87.8 cm<sup>3</sup>). No adverse reaction related to the administration of fluorescein was registered. Contrast-enhanced tumor was completely removed in 75 % of the patients. CONCLUSION: This preliminary analysis suggested that the use of intravenous fluorescein during surgery on grade IV gliomas is safe and allows a high rate of complete resection of contrast-enhanced tumor at the early postoperative MRI.

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[331]

**TÍTULO / TITLE:** - Dilemmas and diagnostic difficulties in meningioma.

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

**REVISTA / JOURNAL:** - Clin Radiol. 2013 Apr 25. pii: S0009-9260(13)00110-4. doi: 10.1016/j.crad.2013.03.007.

●●Enlace al texto completo (gratis o de pago) [1016/j.crad.2013.03.007](#)

**AUTORES / AUTHORS:** - Hallinan JT; Hegde AN; Lim WE

**INSTITUCIÓN / INSTITUTION:** - Department of Diagnostic Radiology, Singapore General Hospital, Singapore. Electronic address: [jim.hallinan@gmail.com](mailto:jim.hallinan@gmail.com).

**RESUMEN / SUMMARY:** - This article will review the uncommon locations and morphological features of meningiomas, which are important to recognize in order to avoid misdiagnosis. Uncommon locations will be demonstrated at the cerebellopontine angle, pineal, optic, intraventricular, and intradiploic regions. Unusual imaging features including cysts, metaplastic changes, and peritumoural oedema will also be discussed.

[332]

**TÍTULO / TITLE:** - Leucine-rich glioma inactivated 3 associates negatively with adiponectin.

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

**REVISTA / JOURNAL:** - Cytokine. 2013 May;62(2):206-9. doi: 10.1016/j.cyto.2013.03.012. Epub 2013 Mar 30.

●●Enlace al texto completo (gratis o de pago) [1016/j.cyto.2013.03.012](#)

**AUTORES / AUTHORS:** - Kim HA; Kwon NS; Baek KJ; Kim DS; Yun HY

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry, Chung-Ang University, College of Medicine, 84 Heukseok-ro, Dongjak-gu, Seoul 156-861, Republic of Korea.

**RESUMEN / SUMMARY:** - Leucine-rich glioma inactivated 3 (LGI3) is a secreted protein member of LGL/epitempin family. We previously reported that LGI3 was expressed in adipose tissues and suppressed adipogenesis through its receptor, ADAM23. We proposed that LGI3 may be a candidate adipokine with pro-inflammatory activity. To investigate the role of LGI3 in adipose tissues, we analyzed cytokine profile in LGI3 knockout mice. Protein array analysis showed that adiponectin was significantly increased in adipose tissues and plasma of LGI3 knockout mice. SiRNA-mediated knockdown of LGI3 increased adiponectin in 3T3-L1 preadipocytes. Treatment of differentiating 3T3-L1 cells with LGI3 protein decreased adiponectin in a dose-dependent manner. High fat diet (HFD)-fed mice showed expression of LGI3 in adipose tissue macrophages in addition to adipocytes that expressed LGI3 in both normal chow-fed and HFD-fed mice. The 60-kDa LGI3 was selectively increased in adipose tissues of HFD mice in which adiponectin was downregulated. Taken together, these results suggested that LGI3 may participate in adipose tissue homeostasis by negatively regulating adiponectin.

[333]

**TÍTULO / TITLE:** - Prenatal MRI characterization of brainstem glioma.

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

**REVISTA / JOURNAL:** - *Pediatr Radiol.* 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1007/s00247-013-2706-](http://1007/s00247-013-2706-1)

[1](#)

**AUTORES / AUTHORS:** - Swenson DW; Nickel BJ; Boxerman JL; Klinge PM; Rogg JM

**INSTITUCIÓN / INSTITUTION:** - Department of Diagnostic Imaging, Alpert Medical School of Brown University, 593 Eddy St., Providence, RI, 02903, USA, [Swenson.david.w@gmail.com](mailto:Swenson.david.w@gmail.com).

**RESUMEN / SUMMARY:** - We describe a unique case of prenatally diagnosed diffuse brainstem glioma, detected during routine obstetric ultrasound and characterized with fetal magnetic resonance imaging. The diagnosis was supported by early postpartum imaging and confirmed at autopsy. Few examples of these rare lesions have been described in neonates by imaging and fewer cases have been confirmed by histopathological examination. Our case contributes to the limited literature concerning the clinical, MRI, and pathological correlates of brainstem gliomas in the perinatal period.

[334]

**TÍTULO / TITLE:** - Childhood craniopharyngioma: 20-year institutional experience in Western Australia.

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

**REVISTA / JOURNAL:** - *J Paediatr Child Health.* 2013 May;49(5):403-8. doi: 10.1111/jpc.12190. Epub 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [1111/jpc.12190](http://1111/jpc.12190)

**AUTORES / AUTHORS:** - Rath SR; Lee S; Kotecha RS; Taylor M; Junckerstorff RC; Choong CS

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology and Diabetes, Princess Margaret Hospital for Children, Perth, Western Australia, Australia.

**RESUMEN / SUMMARY:** - AIM: A retrospective audit was undertaken to evaluate modes of presentation and treatment outcomes for craniopharyngioma in a single paediatric institution over a 20-year period. METHODS: A search of the neurosurgical and histopathological databases for patients under 21 years of age treated for craniopharyngioma between 1990 and 2010 was performed at our institution. The clinical records of eligible patients were reviewed and information regarding presentation, medical and surgical management and post-treatment outcome were extracted and collated. RESULTS: Of 10 evaluable patients, the commonest presenting symptoms were headache and visual impairment. Clinical and biochemical evaluation undertaken prior to

surgery revealed visual dysfunction in 70% and pituitary deficit in 30%. Gross total resection was achieved in 40% but was curative in only 20%. The remaining 80% required further surgical and/or radiotherapeutic intervention. Seven patients had radiation therapy with stabilisation in 70%. Multiple Pituitary Hormone Deficiency evolved in all patients over time, while visual impairment worsened in 30% post-operatively and improved in 20%. Obesity was present in 50% after a mean follow-up interval of 5.6 years and was apparent within 1 year of initial surgery in 30%. Although neurocognitive, psychological and behavioural problems were noted for some patients during medical review, only 20% of patients were formally assessed. CONCLUSIONS: Craniopharyngioma is associated with significant long-term morbidity. Attention to an integrated care pathway that includes standardised neurocognitive and psychological and behavioural assessment would facilitate early appropriate intervention and support leading to an improved quality of life for children with craniopharyngioma.

[335]

**TÍTULO / TITLE:** - Long-Term Health Experience of Jet Engine Manufacturing Workers: VI: Incidence of Malignant Central Nervous System Neoplasms in Relation to Estimated Workplace Exposures.

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

**REVISTA / JOURNAL:** - J Occup Environ Med. 2013 May 24.

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

[1097/JOM.0b013e3182749c4a](https://doi.org/10.1097/JOM.0b013e3182749c4a)

**AUTORES / AUTHORS:** - Marsh GM; Youk AO; Buchanich JM; Xu H; Downing S; Kennedy KJ; Esmen NA; Hancock RP; Lacey SE; Fleissner ML

**INSTITUCIÓN / INSTITUTION:** - From the Center for Occupational Biostatistics and Epidemiology (Drs Marsh, Youk, and Buchanich and Ms Downing), Department of Biostatistics, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Penn; Baylor Institute for Immunology Research (Ms Xu), Dallas, Tex; and Division of Environmental and Occupational Health Sciences (Ms Kennedy, Drs Esmen and Lacey, and Mr Hancock), School of Public Health, University of Illinois at Chicago. Dr Fleissner was previously affiliated with the Division of Environmental Epidemiology and Occupational Health, Connecticut Department of Public Health, Hartford.

**RESUMEN / SUMMARY:** - OBJECTIVE:: To determine whether glioblastoma (GB) incidence rates among jet engine manufacturing workers were associated with specific chemical or physical exposures. METHODS:: Subjects were 210,784 workers employed from 1952 to 2001. We conducted a cohort incidence study and two nested case-control studies with focus on the North Haven facility where we previously observed a not statistically significant overall elevation in GB rates. We estimated individual-level exposure metrics for 11 agents.

RESULTS:: In the total cohort, none of the agent metrics considered was associated with increased GB risk. The GB incidence rates in North Haven were also not related to workplace exposures, including the “blue haze” exposure unique to North Haven. CONCLUSIONS:: If not due to chance alone, GB rates in North Haven may reflect external occupational factors, nonoccupational factors, or workplace factors unique to North Haven unmeasured in the current evaluation.

[336]

**TÍTULO / TITLE:** - Serum GFAP autoantibody as an ELISA-detectable glioma marker.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0770-](#)

[7](#)

**AUTORES / AUTHORS:** - Wei P; Zhang W; Yang LS; Zhang HS; Xu XE; Jiang YH; Huang FP; Shi Q

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology/Institute of Pathology, Fudan University Shanghai Cancer Center, Shanghai, China.

**RESUMEN / SUMMARY:** - Glioma is the most common primary brain tumor, yet the high cost of diagnostic imaging has made early detection of asymptomatic glioma a formidable challenge. Thus, the development of a convenient, sensitive, and cost-effective diagnostic strategy, such as enzyme-linked immunosorbent assay (ELISA) based on glioma-specific and World Health Organization (WHO) grade-specific autoantibody serum markers, is necessary. To this end, a comparative proteomic analysis based on two-dimensional western blotting was carried out with the sera of glioma patients and normal controls. Of the 11 novel glioma-expressed autoantibodies, the autoantibody against glial fibrillary acidic protein (GFAP) showed the highest differential expression. To investigate the potential clinical utility of the GFAP autoantibody as an early diagnostic marker for glioma, an ELISA-based assay was developed and validated with sera from glioma patients with WHO grades II (n = 19), III (n = 17), and IV (n = 24). The GFAP autoantibody level directly correlated with WHO grade and tumor volume. Sera from patients of non-glioma brain tumors, as well as non-brain tumors, showed much lower levels of GFAP autoantibody than those of the glioma patients, indicating that elevated GFAP autoantibody is specific to glioma patients. Analysis of the receiver operating characteristics curve suggested that the new ELISA has good distinguishing power and sensitivity for diagnosing glioma patients. This is the first ELISA assay developed for an autoantibody of a glioma antigen and may prove valuable for the clinical detection of glioma.

[337]

**TÍTULO / TITLE:** - miR-181b modulates glioma cell sensitivity to temozolomide by targeting MEK1.

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

**REVISTA / JOURNAL:** - Cancer Chemother Pharmacol. 2013 May 5.

●●Enlace al texto completo (gratis o de pago) [1007/s00280-013-2180-](#)

[3](#)

**AUTORES / AUTHORS:** - Wang J; Sai K; Chen FR; Chen ZP

**INSTITUCIÓN / INSTITUTION:** - State Key Laboratory of Oncology in South China, Department of Neurosurgery, Sun Yat-sen University Cancer Center, 651 Dongfeng Road East, Guangzhou, 510060, China.

**RESUMEN / SUMMARY:** - **PURPOSE:** Recent studies have reported that miR-181b contributes to chemoresistance in several cancer types and functions as a tumor suppressor in glioma. This study aimed to explore whether miR-181b could enhance the chemotherapeutic effect of temozolomide in glioma cells and sought to identify the candidate target genes which mediated the effect. **METHODS:** Using 48 frozen samples from patients with glioma who had received in vitro chemosensitivity assay, we measured MGMT promoter methylation status by methylation-specific PCR and miR-181b expression by qRT-PCR. Then, miR-181b expression level was correlated with temozolomide IC50 and MGMT promoter methylation status. To investigate the mechanism of miR-181b-induced chemosensitivity, assays were performed using stable miR-181b-expressing transfectants of glioma cell lines created by a lentiviral system. **RESULTS:** Glioma cells rich in miR-181b were more sensitive to temozolomide. miR-181b expression was not correlated with MGMT promoter methylation status. miR-181b combined with temozolomide enhanced glioma cell sensitivity and apoptosis. The effects were through posttranscriptional repression of MEK1. We demonstrated that miR-181b bound directly to the 3' untranslated regions of MEK1, thus reducing both the mRNA and protein levels of MEK1. Additionally, knockdown of MEK1 using small interfering RNA resulted in effects similar to ectopic miR-181b expression, whereas enforced expression of MEK1 lacking the 3' untranslated regions abrogated the effects. Finally, inverse correlation between miR-181b and MEK1 was established in glioma specimens. **CONCLUSION:** miR-181b independently predicted chemoresponse to temozolomide and enhanced temozolomide sensitivity via MEK1 downregulation. A combination of miR-181b and temozolomide may be an effective therapeutic strategy for gliomas.

[338]

**TÍTULO / TITLE:** - Sequential Development of Wilms Tumor and Medulloblastoma in a Child: An Unusual Presentation of Fanconi Anemia.

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

**REVISTA / JOURNAL:** - Pediatr Hematol Oncol. 2013 May 22.

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

[3109/08880018.2013.788593](#)

**AUTORES / AUTHORS:** - Rizk T; Taslakian B; Torbey PH; Issa G; Hourani R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hotel Dieu de France , Beirut , Lebanon.

[339]

**TÍTULO / TITLE:** - Seizure outcomes of lesionectomy in pediatric lesional epilepsy with brain tumor - Single institute experience.

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

**REVISTA / JOURNAL:** - Brain Dev. 2013 May 17. pii: S0387-7604(13)00159-9.

doi: 10.1016/j.braindev.2013.04.010.

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

[1016/j.braindev.2013.04.010](#)

**AUTORES / AUTHORS:** - Jo KI; Shin HJ; Hong SC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea.

**RESUMEN / SUMMARY:** - **PURPOSE:** To determine the clinical characteristics, surgical strategy, and outcome in pediatric lesional epilepsy patients younger than 5years of age undergoing surgery in a single institute. **METHOD:** Retrospective data were collected and analyzed on patients younger than 5years of age who underwent lesionectomy for lesional epilepsy at single institute from January 2001 to August 2010. Fourteen pediatric lesional epilepsy patients were enrolled in this study. Engel classification was used to classify seizure outcome. **RESULTS:** Median preoperative seizure period was 1month (range, 1-21). Median post-operative follow up period was 35months (range 13-84). Ten patients who underwent gross total resection of tumor showed Engel class Ia seizure outcome without any antiepileptic drug (AED). Subtotal resection was performed in four patients to avoid eloquent area injury. Two of these four patients with subtotal removal became seizure-free (Engel class Ia) without AED, while two were in Engel class Ib with AED medication. There was no significant surgical morbidity or mortality. **CONCLUSION:** Lesionectomy in children younger than 5years of age is relatively safe and effective in controlling seizures. Short preoperative seizure periods and total removal of tumor might be associated with good outcome. Therefore, early and complete lesionectomy alone may help allow for seizure freedom and optimal brain development in pediatric patients.

[340]

**TÍTULO / TITLE:** - Curcumin acts anti-proliferative and pro-apoptotic in human meningiomas.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1148-](#)

[9](#)

**AUTORES / AUTHORS:** - Curic S; Wu Y; Shan B; Schaaf C; Utpadel D; Lange M; Kuhlen D; Perone MJ; Arzt E; Stalla GK; Renner U

**INSTITUCIÓN / INSTITUTION:** - Max Planck Institute of Psychiatry, Clinical Neuroendocrinology Group, Kraepelinstr. 10, 80804, Munich, Germany.

**RESUMEN / SUMMARY:** - Meningiomas, the most frequent benign intracranial and intraspinal types of tumors are normally removed by surgery. Complications can occur when the tumor is critically localized and cannot be completely removed or when comorbidities of the mostly elder patients increase the general surgical risk. Thus, alternate medical treatment concepts for the therapy of meningiomas would be desirable. Curcumin, the active ingredient of the spice plant *Curcuma longa* has shown anti-tumorigenic actions in many different types of tumors and therefore, its effect on growth and apoptosis of meningioma cells was studied in the present paper. In vitro, treatment of the human Ben-Men-1 meningioma cell line and of a series of 21 primary human meningioma cell cultures with curcumin (1-20 µM) strongly reduced the proliferation in all cases in a dose dependent manner. Cell cycle analysis by fluorescence-activated cell sorting showed growth arrest at G2/M phase, which was confirmed by demonstrating the corresponding modulation of proteins involved in G2/M arrest by immunoblotting and/or confocal laser microscopy. High dosages (20, 50 µM) of curcumin induced a significant increase of apoptosis in Ben-Men-1 and primary meningioma cell cultures as demonstrated by morphological changes of cell nuclei, DNA fragmentation, translocation of cell membrane associated phosphatidyl serine and the induction of apoptotic-acting cleaved caspase-3. Our results suggest that the multi-targeting drug curcumin has potent anti-tumorigenic actions in meningioma cells and might therefore be a putative candidate for the pharmacological treatment of meningiomas.

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[341]

**TÍTULO / TITLE:** - Primary extranodal marginal zone B-cell lymphoma of the mucosa-associated lymphoid tissue type in the central nervous system (MZL CNS) presented as traumatic subdural hematoma and subarachnoid bleeding - case report.

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

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [5414/NP300579](#)

**AUTORES / AUTHORS:** - Jesionek-Kupnicka D; Smolewski P; Kupnicki P; Pluciennik E; Zawlik I; Papierz W; Kordek R

**RESUMEN / SUMMARY:** - The study describes a very rare case of primary extranodal marginal zone Bcell lymphoma of the central nervous system (MZL CNS) with an unusual clinical and radiological presentation mimicking subarachnoid bleeding and subdural hematoma (SDH) after head injury. The patient presented symptoms which had commenced 3 weeks earlier: a gradually-progressing headache associated with periodic right-sided cramp of the face muscles and numbness of the right upper limb. During urgent craniotomy for drainage of the presumed SDH, a tumor mass histopathologically and immunohistochemically matching marginal zone B-cell lymphoma was found. Molecular analysis confirmed monoclonal immunoglobulin heavy chain gene (IgH) rearrangement; the patient had previously suspected nodal lymphoma because of cervical lymphadenopathy, but histopathological, immunohistochemical and molecular examination excluded malignant lymphoma. The patient underwent successful radiotherapy, and achieved complete response. At present, no evidence of either systemic disease or lymph node enlargement has been found. The recognition of an indolent type of lymphoma in a rare anatomical localization is very important due to the proper management of the patient.

[342]

**TÍTULO / TITLE:** - Brain stem tumors in children and adolescents: single institutional experience.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 12.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2137-](http://1007/s00381-013-2137-1)

[1](#)

**AUTORES / AUTHORS:** - Garzon M; Garcia-Fructuoso G; Guillen A; Sunol M; Mora J; Cruz O

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Neurosurgery, Hospital Sant Joan de Deu, University of Barcelona, Passeig St. Joan de Deu, 2, Esplugues de Llobregat, 08950, Barcelona, España, [dendrita07@gmail.com](mailto:dendrita07@gmail.com).

**RESUMEN / SUMMARY:** - PURPOSE: Pediatric brain stem tumors (BsT) are a heterogeneous group of diseases. Our aim was to analyze our experience to find out prognostic factors. METHOD: A retrospective study with BsT patients was performed. Imaging characteristics, extension of surgery, pathology, and adjuvant therapy were analyzed and correlated with overall survival (OS) and progression-free survival (PFS) as outcome measures. RESULT: Since 1980 to 2010, we analyzed 65 BsT patients, 41 of them girls (63 %), median age of 8 years (range 13.9 months to 17.6 years). Twenty-two patients (33.8 %) had diffuse intrinsic pontine gliomas (DIPG) and 43 (66.2 %) presented with focal

BsT. Histology was available in 42 patients; the most frequent is low-grade glioma in 24/42 patients (57 %). DIPG's histology (obtained usually at necropsy) confirmed five high-grade gliomas. After median follow-up of 49.3 months (0.5-175 months), 20/22 DIPG patients have died (90.9 %), while 27/43 with focal tumors were alive (62.8 %). Variables related to outcome were histology (better for low-grade glioma (LGG) OS  $p < 0.001$ ), surgery (better if operated OS  $p < 0.001$ ), and adjuvant therapy (worse if given, PFS  $p = 0.001$ , OS  $p = 0.024$ ). The outcome for DIPG was dismal, median OS/EFS of 14.2/9.4 months, significantly worse than focal BsT ( $p = 0.000$ ), while OS/EFS was 122.8/87.2 months for focal intrinsic, 88.2/47.1 months for exophytic, and 124.4/54 months for cervico-medullary tumors: no differences were found among them, except the histology (OS  $p < 0.001$  for low-grade vs high-grade tumors).  
CONCLUSION: BsT in children comprised two different groups: diffuse (DIPG) and focal gliomas. The DIPGs continue having a dismal prognosis, needing new approaches, while focal tumors including LGG have better prognosis.

[343]

**TÍTULO / TITLE:** - Identifying Ki-67 specific miRNA-mRNA interactions in malignant astrocytomas.

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

**REVISTA / JOURNAL:** - Neurosci Lett. 2013 May 2. pii: S0304-3940(13)00389-3. doi: 10.1016/j.neulet.2013.04.030.

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

[1016/j.neulet.2013.04.030](http://1016/j.neulet.2013.04.030)

**AUTORES / AUTHORS:** - Liu Y; Tang K; Yan W; Wang Y; You G; Kang C; Jiang T; Zhang W

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

**RESUMEN / SUMMARY:** - Background: Ki-67 is an excellent indicator of glioma cell growth. However, limited information is available regarding the mechanisms underlying abnormal expression of Ki-67 in glioma tissue. The aim of this study is to identify Ki-67 specific miRNA-mRNA interactions on basis of miRNA and mRNA expression profilings. Methods: We performed a large-scale miRNA (n=829) and mRNA (n=29,421) expression profiling in primary glioblastoma multiforme (pGBM) and anaplastic astrocytoma (AA) tissues (with an aim to investigate Ki-67 related miRNAs and mRNAs). From target prediction databases, the targeting relationships between Ki-67 specific miRNAs and mRNAs were established, and functions of these mRNAs were analyzed by DAVID. The functional verifications of the candidate miRNA were also performed in LN229 cell line. Results: High expression level of Ki-67 protein predicted a shorter survival time for patients with AA. Integrated analysis of profiling data from pGBM and AA revealed 4 Ki-67 positively and 5 negatively

correlated miRNAs, along with the top 12 Ki-67 positively and 2 negatively correlated mRNAs. By means of target prediction, we found that the target mRNAs employed by miR-218 were the most significant among Ki-67 specific mRNAs. Up-regulation of miR-218 was further demonstrated to reduce Ki-67 expression, promote apoptosis, and induce G0/G1 phase cell cycle arrest in LN229 cells. Conclusions: Ki-67 protein may be regulated by specific miRNA-mRNA interactions which may contribute to the proliferation of glioma cells.

[344]

**TÍTULO / TITLE:** - The benefits of navigated intraoperative ultrasonography during resection of fourth ventricular tumors in children.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2103-](http://1007/s00381-013-2103-)

[Y](#)

**AUTORES / AUTHORS:** - El Beltagy MA; Atteya MM

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery Department, Children's Cancer Hospital Egypt (CCHE, 57357), Cairo, Egypt, [beltagy\\_mohamed@hotmail.com](mailto:beltagy_mohamed@hotmail.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Safe and radical excision of pediatric fourth ventricular tumors is by far the best line of management. Pediatric fourth ventricular tumor surgery is a challenge for neurosurgeons. The aim of the study is to present the authors' experience and to evaluate the possible benefits of neuro-navigated intraoperative ultrasonography (NIOUS) during the surgery of fourth ventricular tumors in children. METHODS: Nonrandomized clinical trial study was conducted on 60 children with fourth ventricular tumors who were treated at Children's Cancer Hospital-Egypt. Mean age was 5.2 (+/-2.6) years. Thirty cases were operated upon utilizing the conventional microneurosurgical techniques. Another 30 cases were operated upon utilizing the NIOUS technique. RESULTS: Total tumor excision was achieved in 29 cases (96.7 %) of NIOUS group versus 24 cases (80 %) in the conventional group. Mean operative time NIOUS group was 150 min [standard deviation (SD) = 18.28] versus 140.6 min (SD = 18.6) in the conventional group (p value = 0.055). The mean operative blood loss was 67.5 ml (SD = 17) in NIOUS group versus 71 ml (SD = 15.4) in the conventional group. Postoperative cerebellar mutism occurred in one case (3.3 %) of NIOUS group versus in six cases (20 %) of the conventional group. CONCLUSIONS: Integration of navigated intraoperative ultrasonography in surgery of pediatric fourth ventricular tumors is a useful technology. It safely monitors maximum stepwise tumor excision. It is associated with less operative morbidity without significantly added operative time. It is a real-time, cost-effective, easily applicable, and easily interpretable tool that could substitute the use of intraoperative MRI especially in pediatric neurosurgery.

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[345]

**TÍTULO / TITLE:** - OCT4 is epigenetically regulated by DNA hypomethylation of promoter and exon in primary gliomas.

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

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Jul;30(1):201-6. doi: 10.3892/or.2013.2456. Epub 2013 May 13.

●●Enlace al texto completo (gratis o de pago) [3892/or.2013.2456](#)

**AUTORES / AUTHORS:** - Shi J; Shi W; Ni L; Xu X; Su X; Xia L; Xu F; Chen J; Zhu J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Affiliated Hospital of Nantong University, Nantong, Jiangsu 226001, P.R. China.

**RESUMEN / SUMMARY:** - Glioma is the leading cause of tumor-related mortality in the central nervous system. There is increasing evidence that the self-renewal capacity of cancer cells is critical for the initiation, growth and recurrence of tumors. OCT4 is a transcription factor that plays a key role in regulating the self-renewal ability of embryonic stem cells. DNA methylation is involved in the regulation of OCT4 expression during the development and differentiation of embryonic stem cells and neural stem cells. In the present study, we reported that OCT4 was highly expressed in primary gliomas and its expression levels increased in parallel with pathological grades. BSP analysis showed that the methylation levels of OCT4 gene promoter and exon were significantly reduced in comparison with the normal group and were negatively correlated with OCT4 gene expression in primary gliomas. In vitro, OCT4 gene expression was upregulated following treatment by a demethylation reagent in glioma cell lines. Our findings suggest that OCT4 is epigenetically regulated by DNA hypomethylation in primary gliomas, which may provide evidence for the role of DNA methylation in tumor and may present a new direction for developing more powerful strategies to treat glioma in the clinic.

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[346]

**TÍTULO / TITLE:** - Arrested growth and spontaneous tumor regression of partially resected low-grade cerebellar astrocytomas in children.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2113-](#)

[9](#)

**AUTORES / AUTHORS:** - Loh JK; Lieu AS; Chai CY; Hwang SL; Kwan AL; Wang CJ; Howng SL

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, Kaohsiung Medical University Hospital, No 100 Tzyou 1 Rood, Kaohsiung, 807, Taiwan.

**RESUMEN / SUMMARY:** - **PURPOSE:** The prognosis of children with low-grade cerebellar astrocytoma who have partial resection of tumor is largely unpredictable. The purpose of this study was to review the long-term outcome of such patients. **METHODS:** The medical charts, imaging findings, operative notes, histopathological reports, and survival times of 12 patients with cerebellar astrocytoma were reviewed. **RESULTS:** Five patients had total resection and seven had partial resection. Nine patients had grade I histology and three patients had grade II. Follow-up duration ranged from 3 to 25 years. Among the seven patients with residual tumor, five had tumor progression, one had arrested tumor growth, and one had spontaneous tumor regression. Five patients with partial resection received radiotherapy and three had malignant transformation of tumor during follow-up. Six patients, including five who had partial resection, underwent a second operation. One patient with partial resection died of pneumonia 23 years after surgery. **CONCLUSIONS:** Patients with complete tumor resection had a better prognosis than patients with partial resection. For patients with partial resection, we recommend a “wait and see” policy with surveillance using MRI. The phenomenon of arrested tumor growth and spontaneous tumor regression in patients with cerebellar astrocytoma who have subtotal resection warrants further study.

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[347]

**TÍTULO / TITLE:** - A human astrocytoma cell line is highly susceptible to infection with *Trypanosoma cruzi*.

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

**REVISTA / JOURNAL:** - Mem Inst Oswaldo Cruz. 2013 Apr;108(2):212-9.

**AUTORES / AUTHORS:** - Vargas-Zambrano JC; Lasso P; Cuellar A; Puerta CJ; Gonzalez JM

**INSTITUCIÓN / INSTITUTION:** - Grupo de Ciencias Basicas Medicas, Facultad de Medicina, Universidad de los Andes, Bogota, Colombia.

**RESUMEN / SUMMARY:** - Astrocytes play a vital role in neuronal protection, homeostasis, vascular interchange and the local immune response. Some viruses and parasites can cross the blood-brain barrier and infect glia. *Trypanosoma cruzi*, the aetiological agent of Chagas disease, can seriously compromise the central nervous system, mainly in immune-suppressed individuals, but also during the acute phase of the infection. In this report, the infective capacity of *T. cruzi* in a human astrocyte tumour-derived cell line was studied. Astrocytes exposed to trypomastigotes (1:10 ratio) produced intracellular amastigotes and new trypomastigotes emerged by day 4 post-infection (p.i.). At day 6 p.i., 93% of the cells were infected. Using flow

cytometry, changes were observed in both the expression of major histocompatibility complex class I and II molecules and the chemokine secretion pattern of astrocytes exposed to the parasite. Blocking the low-density lipoprotein receptor on astrocytes did not reduce parasite intracellular infection. Thus, *T. cruzi* can infect astrocytes and modulate the immune response during central nervous system infection.

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[348]

**TÍTULO / TITLE:** - Role of microRNAs in mechanisms of glioblastoma resistance to radio- and chemotherapy.

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

**REVISTA / JOURNAL:** - Biochemistry (Mosc). 2013 Apr;78(4):325-34. doi: 10.1134/S0006297913040019.

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

[1134/S0006297913040019](#)

**AUTORES / AUTHORS:** - Koshkin PA; Chistiakov DA; Chekhonin VP

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Nanobiotechnology, N. I. Pirogov Russian National Research Medical University, Moscow, 117997, Russia. [philipkoshkin@gmail.com](mailto:philipkoshkin@gmail.com)

**RESUMEN / SUMMARY:** - Low-grade gliomas and multiform glioblastoma are characterized by highly pronounced anaplasia, malignization, proliferation, and invasiveness; moreover, they are highly resistant to chemo- and radiotherapy. The very low efficiency of traditional approaches in the treatment of patients with glioblastomas is due to the intensive invasive growth of the tumor resulting in deep infiltration of adjacent normal perivascular and nervous tissue and formation of areas of perineural infiltration differently remote from the tumor epicenter. MicroRNAs are key posttranscriptional regulators of gene activities, and their expression is markedly increased in tumors, in particular in gliomas. MicroRNAs have been shown to promote the growth, proliferation, migration, and survival of tumor stem and non-stem cells. However, a population of microRNA possessing antitumor effects is also detected in gliomas. As a rule, the expression of antitumor microRNAs is suppressed in tumors. In this review, we consider microRNAs, their influence on radio- and chemoresistance of gliomas, and prospects for their use as specific agents in targeted therapy of gliomas. The pool of these microRNAs has distinct therapeutic value, because on use in combined therapy it can decrease the resistance of glioma tumor stem cells to existing pharmaceuticals and improve the efficiency of radio- and chemotherapy.

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[349]

**TÍTULO / TITLE:** - Surgical techniques for the dissection of encased perforators in giant clinoidal meningiomas.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 19.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1750-9](http://1007/s00701-013-1750-9)

**AUTORES / AUTHORS:** - Yoshimoto K; Nakamizo A; Sasaki T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School of Medical Sciences, Kyushu University, 3-1-1, Maidashi, Higashi-ku, Fukuoka, 812-8582, Japan, [kyoshimo@ns.med.kyushu-u.ac.jp](mailto:kyoshimo@ns.med.kyushu-u.ac.jp).

**RESUMEN / SUMMARY:** - BACKGROUND: Surgical treatment of giant clinoidal meningiomas remains a challenging task for neurosurgeons. Here, we present details of the surgical techniques for the dissection of encased perforators. METHODS: The dissection of encased perforators is summarized as follows: (1) split the tumor above the encased arteries and perforators; (2) find the entrance and exit points of the perforators, and estimate the running course of the perforators within the tumor; (3) dissect and expose the perforators along the estimated line. CONCLUSIONS: The surgical techniques described in this article will aid in achieving maximum tumor resection while preserving encased perforators.

[350]

**TÍTULO / TITLE:** - The role of indocyanine green videoangiography (ICGV) in surgery of parasagittal meningiomas.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Jun;155(6):1035. doi: 10.1007/s00701-013-1722-0. Epub 2013 Apr 25.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1722-0](http://1007/s00701-013-1722-0)

**AUTORES / AUTHORS:** - Ferroli P; Acerbi F; Broggi M; Broggi G

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Fondazione IRCCS Istituto Neurologico Carlo Besta, Via Celoria 11, 20133, Milano, Italy.

[351]

**TÍTULO / TITLE:** - Osteonectin Expression in Surrounding Stroma of Craniopharyngiomas: Association With Recurrence Rate and Brain Infiltration.

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

**REVISTA / JOURNAL:** - Int J Surg Pathol. 2013 May 6.

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

[1177/1066896913486695](http://1177/1066896913486695)

**AUTORES / AUTHORS:** - Ebrahimi A; Honegger J; Schluesener H; Schittenhelm J

**RESUMEN / SUMMARY:** - Craniopharyngioma is an epithelial tumor of the sellar region with a high survival rate but a high rate of recurrence, especially in children. Hypothalamic involvement, tumor recurrence, and multiple treatments result in clinical deterioration and impaired quality of life. Using immunohistochemistry, we investigated the expression pattern of osteonectin, a marker of tumor invasion and aggressive behavior, in 43 cases of craniopharyngioma. We observed a positive correlation of osteonectin expression in connective-type stromal tissue surrounding the epithelial tumor cells of craniopharyngioma with the extent of central nervous system infiltration and recurrence rate ( $P < .001$ ). Given the previous success of chemotherapeutic agents that target the tumor microenvironment, our findings on osteonectin expression in stroma of craniopharyngiomas might, hopefully, be a guide to find newer prognostic markers capable of estimating the risk of progression or recurrence. They may also aid in the development of therapeutics that target tumor microenvironment to improve patient outcome.

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[352]

**TÍTULO / TITLE:** - Ciliary body medulloepithelioma associated with pleuropulmonary blastoma.

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

**REVISTA / JOURNAL:** - Br J Ophthalmol. 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [1136/bjophthalmol-2012-303019](http://1136/bjophthalmol-2012-303019)

**AUTORES / AUTHORS:** - Laird PW; Grossniklaus HE; Hubbard GB

**INSTITUCIÓN / INSTITUTION:** - Department of Ophthalmology, Emory Eye Center, Emory University, Atlanta, Georgia, USA.

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[353]

**TÍTULO / TITLE:** - Preoperative embolization of hypervascular pediatric brain tumors: evaluation of technical safety and outcome.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 4.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2128-2](http://1007/s00381-013-2128-2)

**AUTORES / AUTHORS:** - Wang HH; Luo CB; Guo WY; Wu HM; Lirng JF; Wong TT; Lu YH; Chang FC

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Taipei Veterans General Hospital, 201, Sec 2, Shih-Pai Rd., Taipei, 112, Taiwan, Republic of China.

**RESUMEN / SUMMARY:** - BACKGROUND: Surgical management of pediatric hypervascular brain tumors is challenging because of the risk of bleeding. We sought to evaluate the technical factors associated with safety and outcome of

preoperative embolization of pediatric hypervascular brain tumors. **MATERIALS AND METHODS:** Eight pediatric brain tumor patients received preoperative endovascular embolization during the past 8 years. The cases included four choroid plexus papillomas, one yolk sac tumor, one intraventricular meningioma, one astrocytoma, and one hemangioblastoma. Embolization was done by superselection of the feeding arteries with microcatheters followed by slow injection of either n-butyl 2-cyanoacrylate (NBCA) or tris-acryl gelatin microspheres (Embosphere). Surgery for tumor removal was done in the same session right after embolization in all but one patient. Blood loss during surgery and clinical outcome were recorded. **RESULTS:** Preoperative embolization was successfully done in all patients. Technical complication was noted in two patients. One patient developed bleeding while embolizing the tumor with Embospheres but was immediately embolized with NBCA without sequel. The other patient experienced tumor bleeding 4 h after embolization with Embospheres, and suffered left hemiparesis despite an emergency surgery. Surgical intervention was successfully done in all patients without procedure-related complication. Surgical blood loss ranged from 50 to 1,600 ml. **CONCLUSION:** Though associated with the risk of procedure-related bleeding, preoperative embolization of pediatric hypervascular brain tumors has high technical success rates and can enhance the surgical management. We suggest to perform the embolization and surgery in a single session and to use NBCA as the embolic agent to minimize the procedure-related risk.

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[354]

**TÍTULO / TITLE:** - Chordoid meningioma: a retrospective series of seven consecutive cases.

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

**REVISTA / JOURNAL:** - Neurol Sci. 2013 Apr 18.

●●Enlace al texto completo (gratis o de pago) [1007/s10072-013-1431-](#)

[8](#)

**AUTORES / AUTHORS:** - Passacantilli E; Lapadula G; Caporlingua F; Lenzi J; Antonelli M; Santoro F; Santoro A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology and Psychiatry, Neurosurgery, Policlinico Umberto I, "Sapienza" University of Rome, Rome, Italy.

**RESUMEN / SUMMARY:** - Chordoid meningioma is a rare variant of meningioma characterized by a more aggressive behavior. The present study documents the histological, radiological and clinical features of seven cases treated at the Policlinico Umberto I of Rome from 1999 to 2010. There were five males and two females. Most of the cases were located in the supratentorial space, especially the convexity. Surgical gross total resection was achieved in four cases. Of the remaining three cases, two relapsed and underwent further

surgeries and adjuvant treatment. The MIB-1 index had a mean value of 7.5 (range 0.3-25.8). Tumors were composed of epithelioid cells or plump to spindle cells, forming cords, cribriforms or nests, in a mucoid matrix. All tumors showed diffuse positive immunoreactivity to vimentin and epithelial membrane antigen. Surgery is the first line of treatment for this kind of lesion. Gross total resection guaranteed a survival free from recurrences in our series. On the other hand, radiation therapy must be considered in patients submitted to a subtotal resection.

[355]

**TÍTULO / TITLE:** - Unusual case of coexisting cerebellopontine epidermoid and neurenteric cyst.

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

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 Apr 2.

●●Enlace al texto completo (gratis o de pago) [5414/NP300538](#)

**AUTORES / AUTHORS:** - Ghosal N; Dadlani R; Kumaran SP

[356]

**TÍTULO / TITLE:** - BRAF alterations in pediatric low grade gliomas and mixed neuronal-glioma tumors.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Apr 24.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1131-](#)

[5](#)

**AUTORES / AUTHORS:** - Dimitriadis E; Alexiou GA; Tsotsou P; Simeonidi E; Stefanaki K; Patereli A; Prodromou N; Pandis N

**INSTITUCIÓN / INSTITUTION:** - Department of Genetics, Saint Savvas Hospital, Athens, Greece.

**RESUMEN / SUMMARY:** - Low grade astrocytomas are the most common brain tumor in children. Recent studies have identified alterations in the BRAF serine/threonine kinase gene that result in mitogen activated protein kinase pathway activation. Herewith, we investigated the genetic changes of BRAF in pediatric low grade gliomas and their relation to pathological findings and Ki-67 proliferation index. The results showed gene fusions between KIAA1549 and BRAF in 66.7 % of tumors. The majority involved the KIAA1549-BRAF exon 16-exon 9 variant. Fusion junction between KIAA1549 exon 15 and BRAF exon 9 was found in five tumors, in which the myxoid component was the predominant. This has not been previously reported. No significant correlation was found between specific KIAA1549 and BRAF fusion junctions and Ki-67 index. All of the samples included in this study were tested for the presence of the BRAFV600E mutation, and no positive sample was found.

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[357]

**TÍTULO / TITLE:** - Giant-cell glioblastoma of childhood associated with HIV-1 and JC virus coinfection.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 24.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2154-0](#)

**AUTORES / AUTHORS:** - Brassesco MS; Darrigo LG Jr; Valera ET; Oliveira RS; Yamamoto YA; de Castro Barros MV; Tone LG

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Faculty of Medicine of Ribeirao Preto, University of Sao Paulo, Sao Paulo, Brazil, [solbrassesco@usp.br](mailto:solbrassesco@usp.br).

**RESUMEN / SUMMARY:** - PURPOSE: John Cunningham (JC) viral DNA sequence has seldom been reported in patients with brain tumors such as high grade gliomas and medulloblastomas, pointing to a role in the etiopathogenesis of such tumors. RESULTS: We present a unique clinical case of an HIV-positive pediatric patient with multifocal leukoencephalopathy and confirmed JC virus (JCV) infection that developed a giant-cell glioblastoma. CONCLUSIONS: Experimental data with infected primates has previously hypothesized an association of human giant-cell glioblastoma with JCV or progressive multifocal leukoencephalopathy, though such association has not been documented in the literature for humans. Future studies with larger cohorts and molecular pathological analyses are still needed to corroborate the role of the widely spread human neurotropic virus in early transformation and in the development of brain tumors with different histology in the setting of HIV-related severe immunosuppression.

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[358]

**TÍTULO / TITLE:** - Validation of 18F-FDG PET at Conventional and Delayed Intervals for the Discrimination of High-Grade From Low-Grade Gliomas: A Stereotactic PET and MRI Study.

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

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1097/RLU.0b013e318292a753](#)

**AUTORES / AUTHORS:** - Mertens K; Acou M; Van Hauwe J; De Ruyck I; Van den Broecke C; Kalala JP; D'Asseler Y; Goethals I

**INSTITUCIÓN / INSTITUTION:** - From the Departments of \*Nuclear Medicine, daggerRadiology and Medical Imaging, double daggerPathology, and section signNeurosurgery, Ghent University Hospital, Ghent, Belgium.

**RESUMEN / SUMMARY:** - AIM: The aim of this study was to validate F-FDG PET imaging for differentiating high-grade gliomas (HGGs) from low-grade gliomas (LGGs). METHODS: Twenty-one patients with gliomas undergoing a stereotactic biopsy underwent PET scanning at conventional and delayed intervals, diagnostic and stereotactic MR examinations. To calculate the uptake at the biopsy site, a 2-mm voxel was selected. Uptake in this voxel was expressed as a percentage of the average uptake per voxel in the normal brain. The difference in uptake between HGG and LGG at conventional and late intervals and the difference in uptake difference between HGG and LGG at both intervals were analyzed using t tests as well as a mixed-model analysis of variance. RESULTS: At conventional intervals, uptake in LGG was 67% of that in the normal brain. Between early and late intervals, a significant decrease in uptake of 11% (+/-2.5%) was noted (P = 0.001). Uptake in HGG at conventional intervals was 138% of that in the normal brain. Between early and late intervals, a significant increase in uptake of 43% (+/-11%) was noted (P = 0.005). The difference in uptake between HGG and LGG was significant both at conventional and delayed intervals (P < 0.001). Moreover, the difference in uptake between both groups was significantly greater (31%) at delayed than at conventional intervals (2%) (P < 0.001). CONCLUSIONS: The results of this correlative study between tumor grade and F-FDG uptake both determined at the stereotactic biopsy site indicate that PET, particularly at delayed intervals, is valid for discriminating LGG from HGG.

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[359]

**TÍTULO / TITLE:** - Epstein-Barr Viral Load in Cerebrospinal Fluid as a Diagnostic Marker of Central Nervous System Involvement of AIDS-related Lymphoma.

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

**REVISTA / JOURNAL:** - Intern Med. 2013;52(9):955-9. Epub 2012 Mar 1.

**AUTORES / AUTHORS:** - Yanagisawa K; Tanuma J; Hagiwara S; Gatanaga H; Kikuchi Y; Oka S

**INSTITUCIÓN / INSTITUTION:** - Department of Medicine and Clinical Science, Graduate School of Medicine, Gunma University, Japan.

**RESUMEN / SUMMARY:** - Objective AIDS-related lymphoma (ARL) often involves the central nervous system (CNS). Although the diagnostic value of Epstein-Barr virus (EBV)-DNA in cerebrospinal fluid (CSF) in detecting HIV-positive primary CNS lymphoma (PCNSL) has been established, its usefulness for identifying CNS involvement of systemic ARL remains elusive. In this study, we evaluated the utility of the EBV-DNA load in CSF in identifying CNS involvement in patients with systemic ARL. Methods We retrospectively reviewed the clinical and pathological data of consecutive ARL patients managed at our clinic between January 1998 and June 2012. Sixty-two patients with ARL, including eight PCNSL patients and 52 systemic ARL patients, and

63 controls underwent CSF EBV-DNA load evaluations before receiving chemotherapy. ARL-related CNS involvement was defined as any lesion diagnosed histologically or radiologically as a lymphoma in the brain, meninges, spine, cranial nerves or oculus. Results A cut off value of 200 copies/mL predicted the presence of CNS lesions with a sensitivity of 70% and a specificity of 85% in both the PCNSL and systemic ARL patients, while a sensitivity of 75% and a specificity of 93% were obtained for systemic ARL. A cut off value of 2,000 (3.30 log) copies/mL provided the best specificity (100%), with a sensitivity of 50%. Conclusion Our results support the clinical utility of evaluating the quantitative EBV-DNA load in the CSF for the diagnosis of CNS involvement of systemic ARL as well as PCNSL.

[360]

**TÍTULO / TITLE:** - Sporadic intracranial haemangioblastomas: surgical outcome in a single institution series.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Jun;155(6):1003-9. doi: 10.1007/s00701-013-1681-5. Epub 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1681-](#)

[5](#)

**AUTORES / AUTHORS:** - Le Reste PJ; Henaux PL; Morandi X; Carsin-Nicol B; Brassier G; Riffaud L

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Pontchaillou University Hospital, 35033, Rennes cedex 09, France.

**RESUMEN / SUMMARY:** - BACKGROUND: Haemangioblastomas are benign vascular tumours that may appear sporadically or in von Hippel-Lindau disease. Despite their higher incidence, sporadic haemangioblastomas have been less studied than syndromic ones. In this article, we evaluate the specific features, outcome and quality of life of patients with intracranial sporadic haemangioblastomas (ISHs) operated on in our institution. METHODS: Between 1998 and 2010, 38 patients harbouring 38 ISHs were operated on in our department. Their clinical, biological, radiological and surgical features were retrospectively reviewed. All patients were contacted for a quality-of-life (QOL) survey assessed by the Short Form 36 questionnaire (SF36). The mean duration of follow-up was 40 months (13-108 months). RESULTS: ISH represented 0.9 % of primary intracranial neoplasms treated in our centre during this period. Patients comprised 23 men and 15 women with a mean age of 47 years. None had polycythaemia. Cerebellar locations accounted for 79 % of ISHs, and brainstem ISH with involvement of the floor of the fourth ventricle represented 11 % of ISHs. At last follow-up, two patients harbouring solid medulla oblongata haemangioblastoma had died following severe bulbar syndrome and five patients had died of unrelated causes. One patient had

multiple surgeries for three recurrences. Tumoral control was achieved in all cases at last follow-up. Results of the SF-36 questionnaire were as follows: median physical functioning score 100 (range 0-100), median physical problems score 100 (range 0-100), median bodily pain score 100 (range 45-100), median social functioning score 100 (range 25-100), median general mental health score 84 (range 40-92), median emotional problems score 100 (range 0-100), median vitality score 70 (range 35-80) and median general health perceptions score 70 (range 35-100). Mean QOL scores were similar to the general healthy population. CONCLUSION: Surgery of ISH provides good QOL and tumoral control except for those located in the medulla oblongata. We recommend considering a careful multimodal therapeutic approach, including radiosurgery for these specific locations.

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[361]

**TÍTULO / TITLE:** - Impact of the biophysical features of a 3D gelatin microenvironment on glioblastoma malignancy.

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

**REVISTA / JOURNAL:** - J Biomed Mater Res A. 2013 Apr 5. doi: 10.1002/jbm.a.34637.

●●Enlace al texto completo (gratis o de pago) [1002/jbm.a.34637](http://1002/jbm.a.34637)

**AUTORES / AUTHORS:** - Pedron S; Harley BA

**INSTITUCIÓN / INSTITUTION:** - Institute for Genomic Biology, University of Illinois at Urbana-Champaign, Urbana, IL 61801.

**RESUMEN / SUMMARY:** - Three-dimensional tissue engineered constructs provide a platform to examine how the local extracellular matrix (ECM) contributes to the malignancy of cancers such as human glioblastoma multiforme. Improved resolution of how local matrix biophysical features impact glioma proliferation, genomic and signal transduction paths, as well as phenotypic malignancy markers would complement recent improvements in our understanding of molecular mechanisms associated with enhanced malignancy. Here, we report the use of a gelatin methacrylate (GelMA) platform to create libraries of three-dimensional biomaterials to identify combinations of biophysical features that promote malignant phenotypes of human U87MG glioma cells. We noted key biophysical properties, namely matrix density, crosslinking density, and biodegradability, that significantly impact glioma cell morphology, proliferation, and motility. Gene expression profiles and secreted markers of increased malignancy, notably VEGF, MMP-2, MMP-9, HIF-1, and the ECM protein fibronectin, were also significantly impacted by the local biophysical environment as well as matrix-induced deficits in diffusion-mediated oxygen and nutrient biotransport. Overall, this biomaterial system provides a flexible platform to explore the role biophysical factors play in the etiology,

growth, and subsequent invasive spreading of gliomas. © 2013 Wiley Periodicals, Inc. J Biomed Mater Res Part A, 2013.

[362]

**TÍTULO / TITLE:** - Immediate post-operative brachytherapy prior to irradiation and temozolomide for newly diagnosed glioblastoma.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 15.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1139-](#)

[X](#)

**AUTORES / AUTHORS:** - Waters JD; Rose B; Gonda DD; Scanderbeg DJ; Russell M; Alksne JF; Murphy K; Carter BS; Lawson J; Chen CC

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Center for Theoretic and Applied Neuro-Oncology, University of California, San Diego, 3855 Health Science Drive #0987, La Jolla, CA, 92093-0987, USA.

**RESUMEN / SUMMARY:** - To determine whether immediate post-operative brachytherapy can be safely applied to newly diagnosed glioblastomas to retard tumor progression prior to initiation of external beam radiation therapy (EBRT) and temozolomide. Between 1996 and 2011, eleven patients underwent implantation of GlioSite (n = 9) or MammoSite (n = 2) at the time of surgical resection. Brachytherapy was carried out on post-operative day 2-3, with 45-60 Gy delivered to a 1 cm margin. All patients underwent subsequent standard radiation/temozolomide treatment 4-5 weeks post-irradiation. There were no wound related complications. Toxicity was observed in two patients (2/11 or 18 %), including one post-operative seizure and one case of cerebral edema that resolved after a course of steroid treatment. Immediate post-operative and pre-irradiation/temozolomide magnetic resonance imaging assessment was available for 9 of the 11 patients. Two of these nine patients (22 %) developed new regions of contrast enhancement prior to irradiation/temozolomide. This compares favorably to historical data where 53 % of patient suffer such tumor progression. While there was a trend toward improved 6 month progression free survival in the brachytherapy/temozolomide/radiation treated patients, the overall survival of these patients were comparable to historical controls. This case series demonstrates the safety of immediate post-operative brachytherapy when applied prior to EBRT and temozolomide in the treatment of newly diagnosed glioblastomas.

[363]

**TÍTULO / TITLE:** - Prenatal diagnosis and management of a huge infratentorial/supratentorial multiloculated arachnoid cystic malformation in an infant.

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

**REVISTA / JOURNAL:** - *Pediatr Neurol.* 2013 Jun;48(6):481-2. doi: 10.1016/j.pediatrneurol.2013.02.016.

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

[1016/j.pediatrneurol.2013.02.016](#)

**AUTORES / AUTHORS:** - Drazin D; McComb JG

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[364]

**TÍTULO / TITLE:** - Nonanaplastic Pleomorphic Xanthoastrocytoma with Meningeal Dissemination Presenting with Bilateral Visual Loss.

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

**REVISTA / JOURNAL:** - *J Neuroimaging.* 2013 May 23. doi: 10.1111/jon.12031.

●●Enlace al texto completo (gratis o de pago) [1111/jon.12031](#)

**AUTORES / AUTHORS:** - Delgado-Alvarado M; Gomez-Roman J; Sanchez-Salmon E; Rodriguez-Rodriguez E; Polo JM; Garcia-Castano A; Berciano J

**INSTITUCIÓN / INSTITUTION:** - Services of Neurology, University Hospital "Marques de Valdecilla (IFIMAV)", University of Cantabria and "Centro de Investigacion Biomedica en Red de Enfermedades Neurodegenerativas (CIBERNED)", Santander, España.

**RESUMEN / SUMMARY:** - Pleomorphic xanthoastrocytoma (PXA) is a brain neoplasm included in the astrocytic group, exceptionally manifesting with meningeal dissemination. We described a 27-year-old patient presented with acute bilateral visual loss and papilledema with normal brain computed tomography scan, initially mimicking idiopathic intracranial hypertension (IIH). Brain and spinal cord magnetic resonance imaging (MRI) study revealed a subtle area of hyperintensity of the gyri surrounding the left central sulcus, and contrast enhancement of the thoracic leptomeninges. Brain biopsy of the parietal lesion revealed nonanaplastic PXA. Treatment with temozolomide was given. Yearly control MRI demonstrated new brain lesions and marked progression of leptomeningeal spinal enhancement. In spite of this, the patient has remained stable with no new symptoms. Nonanaplastic PXA may present with widespread meningeal dissemination with acute visual loss and papilledema mimicking IIH, and no clinical progression at 3 years.

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[365]

**TÍTULO / TITLE:** - The potential effect of gender in CYP1A1 and GSTM1 genotype-specific associations with pediatric brain tumor.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0823-](http://1007/s13277-013-0823-y)

[y](#)

**AUTORES / AUTHORS:** - Salnikova LE; Belopolskaya OB; Zelinskaya NI; Rubanovich AV

**INSTITUCIÓN / INSTITUTION:** - N.I. Vavilov Institute of General Genetics, Russian Academy of Sciences, 3 Gubkin Street, Moscow, 117971, Russia, [salnikovalyubov@gmail.com](mailto:salnikovalyubov@gmail.com).

**RESUMEN / SUMMARY:** - Brain tumors are the common site for solid tumors in childhood. Very few studies have investigated genes with low penetrance in relation to pediatric brain tumor (pBT) development. Brain tumors do occur more frequently in males compared to females regardless of age, tumor histology, or region of the world. Taken into account these facts, we have designed a study aimed to analyse the contribution of some genetic factors to pBP in males and females. Patients with glial and embryonic brain tumors (160 males, 124 females) and healthy controls (277 males, 187 females) were included in the study. All subjects were genotyped for eight polymorphic variants in the genes of xenobiotics detoxification CYP1A1 (rs2606345, rs4646903, rs1048943), GSTM1 (Ins/del), GSTT1 (Ins/del), repair ERCC2 (rs1799793, rs13181), and folate pathway MTHFR (rs1801133). Genotype-specific risks of pBT were sex-dependent. GSTM1 deletion and dual deletions in GSTM1-GSTT1 loci were associated with brain tumor in males ( $P = 1.2 \times 10^{-5}$ ; odds ratio (OR) = 2.56; 95 % confidence interval (CI), 1.45-3.85 and  $P = 4.9 \times 10^{-4}$ ; OR = 3.09; 95 % CI, 1.63-5.89, relatively). The increased risk of brain tumors was evident for CYP1A1 rs2606345 ( $P = 0.0028$ ; OR = 2.06; 95 % CI, 1.27-3.34) and minor haplotypes rs2606345-rs1048943-rs4646903 in females (global haplotype association  $P$  value, 0.0011). This study provides first evidence for the different pronounced pBT associations in males and females. This phenomenon possibly reflects the sexual dimorphism as an important determinant of brain tumor biology.

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[366]

**TÍTULO / TITLE:** - Combining two biomarkers, IDH1/2 mutations and 1p/19q codeletion, to stratify anaplastic oligodendroglioma in three groups: a single-center experience.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 17.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1152-](http://1007/s11060-013-1152-0)

[0](#)

**AUTORES / AUTHORS:** - Frenel JS; Leux C; Loussouarn D; Le Loupp AG; Leclair F; Aumont M; Mervoyer A; Martin S; Denis MG; Campone M

**INSTITUCIÓN / INSTITUTION:** - Medical Oncology Department, Institut de Cancerologie de l'Ouest, Centre Rene Gauducheau, 11 Boulevard Jacques Monod, 44800, Saint-Herblain, Nantes, France, [jean-sebastien.frenel@ico.unicancer.fr](mailto:jean-sebastien.frenel@ico.unicancer.fr).

**RESUMEN / SUMMARY:** - IDH1/2 mutations and 1p/19q codeletion occur frequently in anaplastic gliomas and are prognostic factors. We combined these two biomarkers to stratify patients treated for anaplastic oligodendroglioma (AO). 43 consecutive WHO AO were selected. We combined immunohistochemistry (IHC) with the monoclonal antibody mIDH1R132H and DNA sequencing of IDH1 and IDH2 genes. Fluorescence in situ hybridization was carried out to evaluate 1p/19q codeletion. These biomarkers were correlated with progression-free survival (PFS) and overall survival (OS). IDH1/IDH2 mutations occurred in 23/43 (54 %) patients: 20/43 IDH1-R132H mutation in IHC, 2/43 IDH1-R132G mutation and 1/43 IDH2-R172K mutation identified by DNA sequencing. 1p/19q codeletion was detected for 23/43 patients. With median follow-up of 19 months (range 1.4-128), median PFS and OS were 22 and 35 months respectively. IDH1/IDH2 mutations were strongly associated with improved PFS and OS: 5-year PFS was 86 versus 6 % and 5-year OS was 91 versus 9 % for patients with IDH1/IDH2 mutations versus wild-type IDH respectively. In multivariate analyses, IDH1/IDH2 mutations and 1p/19q loss were independent prognostic factors. Three groups with distinct prognostic features were identified: patients with IDH1/2 mutations and 1p/19q loss (median PFS, median OS not reached), patients with IDH1/2 mutations or 1p/19q loss (median PFS: 22 months, median OS: 30 months), and patients without IDH1/2 mutations nor 1p/19q loss with a bad prognosis (median PFS: 8.6 months, median OS: 9.9 months). Combining two biomarkers, IDH1/2 and 1p/19q codeletion, makes it possible to stratify AO in three groups with very distinct prognostic features.

[367]

**TÍTULO / TITLE:** - Hypoxia induced CA9 inhibitory targeting by two different sulfonamide derivatives including Acetazolamide in human Glioblastoma.

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

**REVISTA / JOURNAL:** - Bioorg Med Chem. 2013 Jul 1;21(13):3949-57. doi: 10.1016/j.bmc.2013.03.068. Epub 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1016/j.bmc.2013.03.068](http://1016/j.bmc.2013.03.068)

**AUTORES / AUTHORS:** - Said HM; Hagemann C; Carta F; Katzer A; Polat B; Staab A; Scozzafava A; Anacker J; Vince GH; Flentje M; Supuran CT

**INSTITUCIÓN / INSTITUTION:** - Dept. of Radiation Oncology, University of Wurzburg, Germany. Electronic address: [said\\_h@klinik.uni-wuerzburg.de](mailto:said_h@klinik.uni-wuerzburg.de).

**RESUMEN / SUMMARY:** - HIF-1alpha regulated genes are mainly responsible for tumour resistance to radiation- and chemo-therapy. Among these genes,

carbonic anhydrase isoform IX (CA9) is highly over expressed in many types of cancer especially in high grade brain cancer like Glioblastoma (GBM). Inhibition of the enzymatic activity by application of specific chemical CA9 inhibitor sulphonamides (CAI) like Acetazolamide (Aza.), the new sulfonamide derivative carbonic anhydrase inhibitor (SU.D2) or indirect inhibitors like the HIF-1alpha inhibitor Chetomin or molecular inhibitors like CA9-siRNA are leading to an inhibition of the functional role of CA9 during tumorigenesis. Human GBM cells were treated with in vitro hypoxia (1, 6, or 24h at 0.1% O<sub>2</sub>). Aza. application was at a range between 250 and 8000nM and the HIF-1alpha inhibitor Chetomin at a concentration range of 150-500nM. Cell culture plates were incubated for 24h under hypoxia (0.1% O<sub>2</sub>). Further, CA9-siRNA constructs were transiently transfected into GBM cells exposed to extreme hypoxic aeration conditions. CA9 protein expression level was detectable in a cell-type specific manner under normoxic conditions. Whereas U87-MG exhibited a strong aerobic expression, U251 and U373 displayed moderate and GaMG very weak normoxic CA9 protein bands. Aza. as well as SU.D2 displayed inhibitory characteristics to hypoxia induced CA9 expression in the four GBM cell lines for 24h of hypoxia (0.1% O<sub>2</sub>) at concentrations between 3500 and 8000nM, on both the protein and mRNA level. Parallel experiments using CA9-siRNA confirmed these results. Application of 150-500nM of the glycolysis inhibitor Chetomin under similar oxygenation conditions led to a sharply reduced expression of both CA IX protein and CA9 mRNA levels, indicating a clear glucose availability involvement for the hypoxic HIF-1alpha and CA9 expression in GBM cells. Hypoxia significantly influences the behaviour of human tumour cells by activation of genes involved in the adaptation to hypoxic stress. The main objective in malignant GBM therapy is either to eradicate the tumour or to convert it into a controlled, quiescent chronic disease. Aza., SU.D2, Chetomin or CA9-siRNA possesses functional CA9 inhibitory characteristics when applied against human cancers with hypoxic regions like GBM. They may be used as alternative or in conjunction with other direct inhibitors possessing similar functionality, thereby rendering them as potential optimal tools for the development of an optimized therapy in human brain cancer treatment.

[368]

**TÍTULO / TITLE:** - Long-Term Health Experience of Jet Engine Manufacturing Workers: VIII. Glioblastoma Incidence in Relation to Workplace Experiences With Parts and Processes.

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

**REVISTA / JOURNAL:** - J Occup Environ Med. 2013 May 24.

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

[1097/JOM.0b013e3182871583](#)

**AUTORES / AUTHORS:** - Marsh GM; Youk AO; Buchanich JM; Downing S; Kennedy KJ; Esmen NA; Hancock RP; Lacey SE; Pierce JS; Fleissner ML

**INSTITUCIÓN / INSTITUTION:** - From the Center for Occupational Biostatistics and Epidemiology (Drs Marsh, Youk, and Buchanich and Ms Downing), Department of Biostatistics, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pa; Division of Environmental and Occupational Health Sciences (Ms Kennedy, Dr Esmen, and Mr Hancock), School of Public Health, University of Illinois at Chicago; Department of Public Health (Dr Lacey), Indiana University School of Medicine, Indianapolis; ChemRisk, LLC (Dr Pierce), Chicago, Ill; and Division of Environmental Epidemiology and Occupational Health (Dr Fleissner), formerly with the Connecticut Department of Public Health, Hartford.

**RESUMEN / SUMMARY:** - **OBJECTIVE::** To determine whether glioblastoma (GB) incidence rates among jet engine manufacturing workers were associated with workplace experiences with specific parts produced and processes performed. **METHODS::** Subjects were 210,784 workers employed between 1952 and 2001. We conducted nested case-control and cohort incidence studies with focus on 277 GB cases. We estimated time experienced with 16 part families, 4 process categories, and 32 concurrent part-process combinations with 20 or more GB cases. **RESULTS::** In both the cohort and case-control studies, none of the part families, process categories, or both considered was associated with increased GB risk. **CONCLUSIONS::** If not due to chance alone, the not statistically significantly elevated GB rates in the North Haven plant may reflect external occupational factors or nonoccupational factors unmeasured in the current evaluation.

[369]

**TÍTULO / TITLE:** - Intramedullary spinal cord astrocytomas: the influence of localization and tumor extension on resectability and functional outcome.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 23.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1762-](http://1007/s00701-013-1762-5)

[5](#)

**AUTORES / AUTHORS:** - Ardeshiri A; Chen B; Hutter BO; Oezkan N; Wanke I; Sure U; Sandalcioglu IE

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospital Essen, University Duisburg-Essen, Essen, Germany, [aardeshiri@aol.com](mailto:aardeshiri@aol.com).

**RESUMEN / SUMMARY:** - **BACKGROUND:** Intramedullary spinal cord tumors (IMSCT) are rare lesions, ependymomas and astrocytomas being the most common ones. Different studies have been published showing results of different treatment strategies as extensive/ limited surgery, biopsy and adjuvant radiation therapy with regard to functional outcome and survival. The present

study was undertaken to analyse our series of surgically treated intramedullary astrocytomas in order to identify factors with impact on functional outcome and resectability. METHODS: Over a period of 20 years, among 215 patients with IMSCT 22 patients with astrocytomas were identified and enrolled into this analysis. Demographic data, clinical symptoms, localization and extension of the tumor, resection rate as well as pre- and postoperative neurological status were obtained. Patients were followed-up clinically and by MRI. RESULTS: Complete resection rate was higher in cervically located tumors (9 of 10) compared to non-cervical tumors (7 of 12). Tumor extension (1-3 segments vs. > 3 segments involved) did not influence on the resection rate. Cervical tumors showed a trend for better postoperative functional outcome than non-cervical lesions (3 of 10 cervical but 6 of 12 non-cervical tumors deteriorated postoperatively). In tumors extending more than 3 segments postoperative worsening was significantly increased. CONCLUSIONS: The present study shows a better resectability and functional outcome for cervically located intramedullary astrocytomas. Tumors extending more than three segments deteriorated significantly. These findings may help for decision-making process and treatment of these tumors.

[370]

**TÍTULO / TITLE:** - MicroRNA-200b targets CREB1 and suppresses cell growth in human malignant glioma.

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

**REVISTA / JOURNAL:** - Mol Cell Biochem. 2013 Jul;379(1-2):51-8. doi: 10.1007/s11010-013-1626-6. Epub 2013 Mar 30.

●●Enlace al texto completo (gratis o de pago) [1007/s11010-013-1626-](#)

[6](#)

**AUTORES / AUTHORS:** - Peng B; Hu S; Jun Q; Luo D; Zhang X; Zhao H; Li D

**INSTITUCIÓN / INSTITUTION:** - Affiliated Cancer Hospital, Guangzhou Medical University, Guangzhou, Guangdong, People's Republic of China, [pengbiaopengbiao@msn.com](mailto:pengbiaopengbiao@msn.com).

**RESUMEN / SUMMARY:** - MicroRNAs can coordinately repress multiple target genes and interfere with the biological functions of the cell, such as proliferation and apoptosis. In the present study, we report that miR-200b was downregulated in malignant glioma cell lines and specimens. Overexpression of miR-200b suppressed the proliferation and colony formation of glioma cells. An oncogene encoding cAMP responsive element-binding protein 1 (CREB1), which has been shown to be an important transcription factor involved in the proliferation, survival, and metastasis of tumor cells, was here confirmed as a direct target gene of miR-200b. CREB1 was also found to be present at a high level in human glioma tissues. This was inversely correlated with miR-200b expression. Ectopic expression of CREB1 attenuated the growth suppressive

phenotypes of glioma cells caused by miR-200b. These results indicate that miR-200b targets the CREB1 gene and suppresses glioma cell growth, suggesting that miR-200b shows tumor-suppressive activity in human malignant glioma.

[371]

**TÍTULO / TITLE:** - Effects of Rab27a on proliferation, invasion, and anti-apoptosis in human glioma cell.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Apr 4.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0756-](http://1007/s13277-013-0756-5)

[5](#)

**AUTORES / AUTHORS:** - Wu X; Hu A; Zhang M; Chen Z

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, The Second Affiliated Hospital of Anhui Medical University, 678 Furong Road, Hefei, 230061, People's Republic of China.

**RESUMEN / SUMMARY:** - This study aims to investigate the relationship between Rab27a and the characteristics of glioma cell U251 such as proliferation, apoptosis, and invasion and to provide an experimental basis for future therapy in human glioma. Recombinant plasmid of pcDNA3.1-Rab27a was constructed and transfected into U251 cells with the help of Lipofectamine2000. The expression of Rab27a was detected by Western blot. Cell viability, cell cycle, cell apoptosis, and cell migration were analyzed, respectively, by (3-(4,5)-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay, flow cytometry, and Transwell invasion chamber methods. Meanwhile, the effect of Rab27a on secretion of cathepsin D in U251 cells was also examined. With the help of luciferase reporter assay system, the relationship between miR-124 and gene Rab27a expression was explored. Western blot showed that the expression of Rab27a was significantly increased in pcDNA3.1-Rab27a transfection group ( $p < 0.01$ ) and that was significantly decreased in Rab27a-shRNA transfection group ( $p < 0.01$ ) compared with control group. MTT assay, flow cytometry, and Transwell invasion chamber experiment indicated that cell viability ( $p < 0.01$ ), proliferation index ( $p < 0.05$ ), and invasion ability ( $p < 0.01$ ) were improved significantly in pcDNA3.1-Rab27a transfection group compared with control group and that cell viability ( $p < 0.01$ ), proliferation index ( $p < 0.05$ ), and invasion ability ( $p < 0.01$ ) were reduced markedly in Rab27a-shRNA transfection group compared with control group. The apoptosis analysis by flow cytometry demonstrated that the ratio of apoptosis in pcDNA3.1-Rab27a transfection group was significantly lower than that in control group ( $p < 0.05$ ) and the ratio was notably higher in Rab27a-shRNA transfection group than that in the control group. Cathepsin D activity assay indicated that the release of cathepsin D was enhanced in pcDNA3.1-Rab27a transfection group compared

to that in the control group ( $p < 0.05$ ). Rab27a could increase the glioma cell ability, promote proliferation and invasion, and suppress cell apoptosis. The above-stated effects of Rab27a possibly were exerted by increasing the secretion of cathepsin D and regulated by miR-124. In addition, the inhibition of expression of Rab27a perhaps benefited the therapy for glioma patients.

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[372]

**TÍTULO / TITLE:** - SPAG9 is overexpressed in human astrocytoma and promotes cell proliferation and invasion.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 May 22.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0845-](#)

[5](#)

**AUTORES / AUTHORS:** - Yi F; Ni W; Liu W; Pan X; Han X; Yang L; Kong X; Ma R; Chang R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, First Affiliated Hospital of Liaoning Medical University, 2, Renmin Street, Jinzhou, 121000, People's Republic of China, [yifuxin@yahoo.com.cn](mailto:yifuxin@yahoo.com.cn).

**RESUMEN / SUMMARY:** - Sperm-associated antigen 9 (SPAG9) is a recently characterized oncoprotein involved in the progression of several human malignancies. The present study aims to investigate the expression pattern and biological roles of SPAG9 protein in human astrocytoma. SPAG9 expression was analyzed in 105 astrocytoma specimens by immunohistochemistry. We observed negative staining in normal astrocytes and positive staining of SPAG9 in 63 out of 105 (60 %) astrocytoma samples. Overexpression of SPAG9 correlated with tumor grade ( $p < 0.001$ ). Small interfering RNA knockdown was performed in U251 and U87 cell lines with relatively high SPAG9 expression. Using methylthiazolyldiphenyl-tetrazolium bromide assay and Matrigel invasion assay, we were able to show that SPAG9 depletion in astrocytoma cell lines inhibited cell proliferation and invasion in both cell lines. In addition, mRNA and protein levels of matrix metalloproteinase 9 (MMP9) were downregulated, while the levels of tissue inhibitor of metalloproteinase 1 (TIMP1) and TIMP2 were not changed, indicating that SPAG9 might regulate invasion through MMP9. In conclusion, SPAG9 serves as an important oncoprotein in human astrocytoma by regulating cell proliferation and invasion.

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[373]

**TÍTULO / TITLE:** - Transventricular endoscopic biopsy of suprasellar tumors: a pediatric case series.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 2.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2085-](http://1007/s00381-013-2085-9)

[9](#)

**AUTORES / AUTHORS:** - Kim K; Yeon JY; Seol HJ; Shin HJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, 50 Irwon-dong, Gangnam-gu, Seoul, 135-710, Korea.

**RESUMEN / SUMMARY:** - **BACKGROUND AND PURPOSE:** The purpose of this study was to investigate the efficacy and safety of transventricular neuroendoscopic biopsies in pediatric patients with suprasellar tumors. **METHODS:** Twenty-three pediatric patients (12 males and 11 females) with suprasellar tumors underwent transventricular neuroendoscopic biopsy at our institute by a single surgeon from 2000 to 2011. Neuronavigation has been combined with endoscopic procedures since 2008. Neuroendoscopic biopsies were performed to verify the histopathological diagnosis of neoplasms and to plan appropriate treatment strategies. **RESULTS:** Neuroendoscopic biopsy specimens were appropriate for diagnosis in 22 of the 23 patients (95.7 %) and revealed 14 germ cell tumors (12 germinomas, one choriocarcinoma, and one immature teratoma), seven astrocytomas, and one craniopharyngioma. Subsequent treatment modalities including chemotherapy, radiation therapy, or microscopic surgery were determined according to the pathological findings. Seventeen of the 23 patients (73.9 %) showed ventriculomegaly. Among them, ventriculomegaly in 14 patients was resolved after an endoscopic procedure and/or adjuvant chemotherapy, but the remaining three patients (17.6 %) required a ventriculoperitoneal shunt to relieve the ventriculomegaly. The pathologic diagnosis of these three patients was uniformly a large astrocytoma. Navigational tracking was helpful to enter small ventricles and the narrow foramen of Monro in patients without hydrocephalus. No mortalities were related to the procedures, but three transient diabetes insipidus (13.0 %) cases occurred but fully recovered before the patients received adjuvant therapy. **CONCLUSION:** Endoscopic biopsy is feasible and shows acceptable operation-related complications to obtain tissue from suprasellar tumors in pediatric patients. Navigation-assisted neuroendoscopic procedure improves the accuracy of the endoscopic approach. An associated endoscopic procedure can resolve hydrocephalus, but it has limitations with large ventricle-occupying tumors.

[374]

**TÍTULO / TITLE:** - Embelin-induced brain glioma cell apoptosis and cell cycle arrest via the mitochondrial pathway.

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

**REVISTA / JOURNAL:** - Oncol Rep. 2013 Jun;29(6):2473-8. doi: 10.3892/or.2013.2369. Epub 2013 Mar 29.

●●Enlace al texto completo (gratis o de pago) [3892/or.2013.2369](https://doi.org/10.1002/or.2013.2369)

**AUTORES / AUTHORS:** - Wang A; Zhang B; Zhang J; Wu W; Wu W

**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine-Neurology, Central Hospital of Nanyang, Nanyang 473009, PR China.

**RESUMEN / SUMMARY:** - Brain glioma is the most common malignant intracranial tumor and has become the focus of research on diseases of the central nervous system due to its high incidence and poor prognosis. As a small molecule inhibitor of X-linked inhibitor of apoptosis protein (XIAP), embelin has the ability to specifically inhibit XIAP to control and regulate the apoptosis of various types of tumor cells. However, to date, the mechanism of action for this effect is not well understood. The aim of this study was to investigate the role that the mitochondrial pathway plays in embelin-induced brain glioma cell apoptosis and the effect of embelin on the cell cycle. Brain glioma cells were treated with different doses of embelin. The MTT method was used to determine cell proliferation, and flow cytometry was used to determine apoptosis, as well as changes in the cell cycle and cell mitochondrial membrane potential. Western blot analysis was performed to determine the expression levels of apoptosis-associated proteins, Bcl-2, Bcl-xL, Bax and Bak as well as cytochrome c. We found that embelin induced a time and dose-dependent apoptosis of brain glioma cells, and that it could arrest the cell cycle in the G0/G1 phase. Embelin also caused changes in brain glioma cell mitochondrial membrane potential. Additionally, embelin regulated the shifting of Bax and Bcl-2 to promote the mitochondrial release of cytochrome c, thus activating the caspase proteins to cause apoptosis. Thus, embelin induces apoptosis in brain glioma cells which is closely associated with the mitochondrial pathway.

[375]

**TÍTULO / TITLE:** - A simple electrodiagnostic method for Morton neuroma.

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

**REVISTA / JOURNAL:** - Muscle Nerve. 2013 May 6. doi: 10.1002/mus.23899.

●●Enlace al texto completo (gratis o de pago) [1002/mus.23899](https://doi.org/10.1002/mus.23899)

**AUTORES / AUTHORS:** - Aydinlar EI; Uzun M; Beksac B; Ozden VE; Karaarslan E; Oge AE

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Acibadem University School of Medicine, Istanbul.

**RESUMEN / SUMMARY:** - Introduction: We describe a simple and quickly applied electrodiagnostic method for confirming the diagnosis of interdigital neuropathy (IDN) caused by Morton neuroma (MN). Methods: Interdigital nerves II-III and III-IV were stimulated with surface electrodes simultaneously touching the lateral side of 1 toe and the medial side of the other. Recording was also made with surface electrodes. The results of 20 normal controls and 14 patients with MN were evaluated. Results: The amplitude and peak latency values elicited in

the patients as well as the interside differences revealed an acceptable abnormality rate between 57.1% and 71.4%. Conclusion: Although the most popular and effective method of MN diagnosis is clinical evaluation supported by imaging, electrophysiological studies can, in selected patients, provide valuable information © 2013 Wiley Periodicals, Inc.

[376]

**TÍTULO / TITLE:** - Impact of anterior clinoidectomy on visual function after resection of meningiomas in and around the optic canal.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 11.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1741-](#)

[x](#)

**AUTORES / AUTHORS:** - Lehmborg J; Krieg SM; Mueller B; Meyer B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Klinikum rechts der Isar, Technische Universität München, Ismaninger Str. 22, 81675, Munich, Germany, [jens.lehmborg@lrz.tu-muenchen.de](mailto:jens.lehmborg@lrz.tu-muenchen.de).

**RESUMEN / SUMMARY:** - BACKGROUND: Meningiomas of the anterior and middle skull base frequently involve the optic nerve and cause progressive visual impairment. Surgical decompression of the optic nerve is the only option to preserve visual function. Depending on the invaded structures, optic nerve decompression can be part of a complete tumor removal or the main surgical intention in terms of local debulking. However, bony decompression of the optic canal including anterior clinoidectomy for optic nerve decompression is still a surgical maneuver under discussion. METHODS: From 2006 to 2011, 46 consecutive patients with skull base meningiomas in and around the optic canal were operated. The pterional approach was tailored for each patient. Resection included bony decompression of the optic canal with or without anterior clinoidectomy. Visual acuity and fields were evaluated pre- and postoperatively. RESULTS: Fifty-three percent of patients underwent anterior clinoidectomy, 23 % optic canal unroofing, and 24 % any bony decompression. In 21 patients (46 %), gross total resection (GTR, Simpson grade I or II) was achieved, while 25 patients (54 %) received subtotal resection (STR, Simpson grade III or IV). Sixty-three percent of patients presented with preoperative visual impairment. Postoperative visual changes were significantly related to preoperative visual function. While all patients with normal preoperative vision remained unchanged, in patients with impaired vision, surgery caused improvement in 70 % and deterioration in 10 % of patients ( $p < 0.0001$ ). In patients with anterior clinoidectomy, vision improved more frequently than without anterior clinoidectomy ( $p < 0.05$ ). CONCLUSIONS: Anterior clinoidectomy is safe and may improve visual outcome in meningiomas in and around the optic canal.

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[377]

**TÍTULO / TITLE:** - Increased glutamate uptake in astrocytes via propentofylline results in increased tumor cell apoptosis using the CNS-1 glioma model.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1158-](#)

[7](#)

**AUTORES / AUTHORS:** - Jacobs VL; De Leo JA

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmacology and Toxicology, Geisel School of Medicine at Dartmouth, Hanover, NH, 03755, USA, [valerie.l.jacobs.gr@dartmouth.edu](mailto:valerie.l.jacobs.gr@dartmouth.edu).

**RESUMEN / SUMMARY:** - Glioblastoma multiforme is one of the most common and aggressive primary brain tumors in adults. High glutamate levels are thought to contribute to glioma growth. While research has focused on understanding glutamate signaling in glioma cells, little is known about the role of glutamate between glioma and astrocyte interactions. To study the relationship between astrocytes and tumor cells, the CNS-1 rodent glioma cell line was used. We hypothesized increased glutamate uptake by astrocytes would negatively affect CNS-1 cell growth. Primary rodent astrocytes and CNS-1 cells were co-cultured for 7 days in a Boyden chamber in the presence of 5 mM glutamate. Cells were treated with propentofylline, an atypical synthetic methylxanthine known to increase glutamate transporter expression in astrocytes. Our results indicate astrocytes can increase glutamate uptake through the GLT-1 transporter, leading to less glutamate available for CNS-1 cells, ultimately resulting in increased CNS-1 cell apoptosis. These data suggest that astrocytes in the tumor microenvironment can be targeted by the drug, propentofylline, affecting tumor cell growth.

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[378]

**TÍTULO / TITLE:** - Rapidly progressive anomia: a rare presentation of temporal lobe tumor.

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

**REVISTA / JOURNAL:** - J Neuropsychiatry Clin Neurosci. 2013 Mar 1;25(2):E18-9. doi: 10.1176/appi.neuropsych.12030067.

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

[1176/appi.neuropsych.12030067](#)

**AUTORES / AUTHORS:** - Feng HM; Kuo SC; Chen CY; Yeh YW

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[379]

**TÍTULO / TITLE:** - Anaplastic Ganglioglioma in the Spinal Cord: Case Report and Literature Review.

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

**REVISTA / JOURNAL:** - Pediatr Neurosurg. 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1159/000348556](#)

**AUTORES / AUTHORS:** - Kuten J; Kaidar-Person O; Vlodayky E; Postovsky S; Billan S; Kuten A; Bortnyak-Abdah R

**INSTITUCIÓN / INSTITUTION:** - Department of Oncology, Rambam Health Care Campus and Technion-Israel Institute of Technology, Haifa, Israel.

**RESUMEN / SUMMARY:** - Anaplastic ganglioglioma (AGG) is a rare tumor. A PubMed database search yielded only a few case reports and fewer case series. An even rarer entity is AGG arising in the spinal cord. We present a case of a pediatric patient with a pathological diagnosis of spinal AGG.

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[380]

**TÍTULO / TITLE:** - Temporal and Optic Pathway Pilomyxoid Astrocytoma Mimicking Dural-Based Lesion: Case Report and Review of the Literature.

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

**REVISTA / JOURNAL:** - Pediatr Neurosurg. 2013 Mar 19.

●●Enlace al texto completo (gratis o de pago) [1159/000345634](#)

**AUTORES / AUTHORS:** - Edwards JR; Kulwin CG; Martin SE; Wilson S; Ho CY; Fulkerson DH

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Neurosurgery, Department of Neurosurgery, Indiana University School of Medicine, Indianapolis, Ind., USA.

**RESUMEN / SUMMARY:** - Pilomyxoid astrocytomas (PMAs) are low-grade tumors that share many common traits with pilocytic astrocytomas. However, PMAs have a more worrisome clinical course, with a higher recurrence rate, lower survival rate, and higher risk of leptomeningeal spread compared to pilocytic tumors. These tumors tend to occur in younger children and are typically located in the area of the optic chiasm or hypothalamus. There are few studies examining the radiographic appearance of these lesions. In this case report, the authors present an unusual radiographic appearance of a PMA in an 11-year-old child. Preoperative images suggested a dural-based, homogeneously enhancing lesion coupled with an enlarged optic nerve. Surgery revealed an intraparenchymal lesion of the right temporal lobe. There was hyperintensity on T2 MRI sequences, suggesting infiltration of the tumor along the optic tracts.

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[381]

**TÍTULO / TITLE:** - Primary extraosseous intradural spinal Ewing's sarcoma: report of two cases.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 18.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1739-](http://1007/s00701-013-1739-4)

[4](#)

**AUTORES / AUTHORS:** - Pancucci G; Simal-Julian JA; Plaza-Ramirez E; Garcia-Marcos R; Mayordomo-Aranda E; Botella-Asuncion C

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Hospital Universitario La Fe, Area Administrativa 5E, c/Bulevar Sur, s/n, 46026, Valencia, España, [gpancucci@gmail.com](mailto:gpancucci@gmail.com).

**RESUMEN / SUMMARY:** - Two cases of primary extraosseous intradural spinal Ewing's sarcoma are reported with a review of the current literature. This rare neoplasm shares features with cerebral primitive neuroectodermal tumors, complicating a correct diagnosis. Gross total resection seems to be the main treatment, although adjuvant therapies could improve the prognosis. In case 1, a 56-year-old man presented with cauda equina syndrome. MRI showed an intradural tumor from L4 to S2. An emergency laminectomy was performed with gross total resection of a hemorrhagic tumor, followed by adjuvant treatment. In the second case, a 25-year-old female developed leg and lumbar pain. MRI study identified a homogeneously enhancing intradural mass at the L2-L3 level. A laminoplasty was performed, followed by tumor resection; no adjuvant treatment was administered afterwards. Immunohistochemical workup confirmed the diagnosis of Ewing's sarcoma in both cases.

[382]

**TÍTULO / TITLE:** - Mimicking white matter tract topography using core-shell electrospun nanofibers to examine migration of malignant brain tumors.

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

**REVISTA / JOURNAL:** - Biomaterials. 2013 Jul;34(21):5181-90. doi: 10.1016/j.biomaterials.2013.03.069. Epub 2013 Apr 16.

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

[1016/j.biomaterials.2013.03.069](http://1016/j.biomaterials.2013.03.069)

**AUTORES / AUTHORS:** - Rao SS; Nelson MT; Xue R; Dejesus JK; Viapiano MS; Lannutti JJ; Sarkar A; Winter JO

**INSTITUCIÓN / INSTITUTION:** - William G. Lowrie Department of Chemical and Biomolecular Engineering, The Ohio State University, Columbus, OH, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM), one of the deadliest forms of human cancer, is characterized by its high infiltration capacity, partially regulated by the neural extracellular matrix (ECM). A major limitation in developing effective treatments is the lack of in vitro models that mimic features of GBM migration highways. Ideally, these models would permit tunable control of mechanics and chemistry to allow the unique role of each of these components to be examined. To address this need, we developed aligned nanofiber biomaterials via core-shell electrospinning that permit systematic

study of mechanical and chemical influences on cell adhesion and migration. These models mimic the topography of white matter tracts, a major GBM migration 'highway'. To independently investigate the influence of chemistry and mechanics on GBM behaviors, nanofiber mechanics were modulated by using different polymers (i.e., gelatin, poly(ethersulfone), poly(dimethylsiloxane)) in the 'core' while employing a common poly(epsilon-caprolactone) (PCL) 'shell' to conserve surface chemistry. These materials revealed GBM sensitivity to nanofiber mechanics, with single cell morphology (Feret diameter), migration speed, focal adhesion kinase (FAK) and myosin light chain 2 (MLC2) expression all showing a strong dependence on nanofiber modulus. Similarly, modulating nanofiber chemistry using extracellular matrix molecules (i.e., hyaluronic acid (HA), collagen, and Matrigel) in the 'shell' material with a common PCL 'core' to conserve mechanical properties revealed GBM sensitivity to HA; specifically, a negative effect on migration. This system, which mimics the topographical features of white matter tracts, should allow further examination of the complex interplay of mechanics, chemistry, and topography in regulating brain tumor behaviors.

[383]

**TÍTULO / TITLE:** - Glioma targeting and blood-brain barrier penetration by dual-targeting doxorubicin liposomes.

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

**REVISTA / JOURNAL:** - Biomaterials. 2013 Jul;34(22):5628-39. doi: 10.1016/j.biomaterials.2013.03.097. Epub 2013 Apr 26.

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

[1016/j.biomaterials.2013.03.097](#)

**AUTORES / AUTHORS:** - Gao JQ; Lv Q; Li LM; Tang XJ; Li FZ; Hu YL; Han M

**INSTITUCIÓN / INSTITUTION:** - Institute of Pharmaceutics, College of Pharmaceutical Sciences, Zhejiang University, 866 Yuhangtang Road, Hangzhou, PR China.

**RESUMEN / SUMMARY:** - Effective chemotherapy for glioblastoma requires a carrier that can penetrate the blood-brain barrier (BBB) and subsequently target the glioma cells. Dual-targeting doxorubicin (Dox) liposomes were produced by conjugating liposomes with both folate (F) and transferrin (Tf), which were proven effective in penetrating the BBB and targeting tumors, respectively. The liposome was characterized by particle size, Dox entrapment efficiency, and in vitro release profile. Drug accumulation in cells, P-glycoprotein (P-gp) expression, and drug transport across the BBB in the dual-targeting liposome group were examined by using bEnd3 BBB models. In vivo studies demonstrated that the dual-targeting Dox liposomes could transport across the BBB and mainly distribute in the brain glioma. The anti-tumor effect of the dual-targeting liposome was also demonstrated by the increased survival time,

decreased tumor volume, and results of both hematoxylin-eosin staining and terminal deoxynucleotidyl transferase dUTP nick end labeling analysis. The dual-targeting Dox liposome could improve the therapeutic efficacy of brain glioma and were less toxic than the Dox solution, showing a dual-targeting effect. These results indicate that this dual-targeting liposome can be used as a potential carrier for glioma chemotherapy.

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[384]

**TÍTULO / TITLE:** - Diagnosis and Management of Epilepsy Associated With Hypothalamic Hamartoma: An Evidence-Based Systematic Review.

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

**REVISTA / JOURNAL:** - J Child Neurol. 2013 May 13.

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

[1177/0883073813488673](#)

**AUTORES / AUTHORS:** - Pati S; Sollman M; Fife TD; Ng YT

**INSTITUCIÓN / INSTITUTION:** - 1Department of Neurology, Massachusetts General Hospital, Boston, MA, USA.

**RESUMEN / SUMMARY:** - The main objective was to review the evidence for management of epilepsy associated with hypothalamic hamartomas. We performed a systemic review of the literature through July 2012 that studied patients with hypothalamic hamartomas and related epilepsy. Articles meeting selection criteria were rated according to the American Academy of Neurology classification of evidence scheme. Recommendations were linked to the strength of the evidence and as follows: (a) precocious puberty is associated more with the pedunculated type and epilepsy typified by gelastic seizures with the sessile form of hypothalamic hamartomas (class III); (b) significant behavioral and cognitive deficits are associated with patients with hypothalamic hamartomas (class III); (c) video electroencephalography (EEG) findings are extremely variable particularly across the different ages and do not affect surgical outcome (class III); (d) various surgical techniques (transcallosal and endoscopic resection) resulted in 49% to 54% seizure freedom, 15% with a pterional approach as well as about 40% with radiosurgery (class III).

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[385]

**TÍTULO / TITLE:** - Delayed lower cranial neuropathies following primary radiotherapy for oropharyngeal squamous cell carcinoma.

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

**REVISTA / JOURNAL:** - Laryngoscope. 2013 May;123(5):1207-9. doi: 10.1002/lary.23938.

●●Enlace al texto completo (gratis o de pago) [1002/lary.23938](#)

**AUTORES / AUTHORS:** - Huang AT; Song S; Dominguez LM; Nguyen J; Goldman RA; Reiter ER

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology-Head and Neck Surgery, Virginia Commonwealth University, Richmond, Virginia; Department of Head and Neck Surgery, The University of Texas M.D. Anderson Cancer Center, Houston, Texas, U.S.A.

**RESUMEN / SUMMARY:** - OBJECTIVES/HYPOTHESIS: Delayed lower cranial neuropathy is a rare complication following primary radiotherapy for head and neck cancer, and has been most associated with nasopharyngeal carcinoma with minimal data regarding this outcome in the treatment of the oropharynx. No reports, to the authors' knowledge, have described this complication following intensity modulated radiation therapy (IMRT) for oropharyngeal primaries. Once encountered, this adverse outcome can have serious impacts on speech and swallowing. We present here our institution's experience with delayed cranial neuropathies following primary radiation therapy for oropharyngeal squamous cell carcinoma, as well as document the only reported case following IMRT.

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[386]

**TÍTULO / TITLE:** - The expression of hypoxia-inducible factor-1 in primary brain tumors.

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

**REVISTA / JOURNAL:** - Int J Neurosci. 2013 May 9.

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

[3109/00207454.2013.789874](http://3109/00207454.2013.789874)

**AUTORES / AUTHORS:** - Reszec J; Rutkowski R; Chyczewski L

**INSTITUCIÓN / INSTITUTION:** - 1Department of Medical Pathomorphology, and.

**RESUMEN / SUMMARY:** - Purpose: Primary brain tumors are common type of neoplasms. The most common are astrocytic tumors, so do meningiomas of various grades. The etiology is still unknown; however, there are lots of data presenting new theories about genetic alterations responsible for low- or high-grade astrocytic tumors development as well as meningiomas, despite this the results are divergent. The aim of the study was to evaluate hypoxia-inducible factor-1 (HIF-1) expression in meningiomas and astrocytic tumors of various grades. Material and methods: One hundred six cases of astrocytic tumors were divided into diffused astrocytoma (24 cases), anaplastic astrocytoma (40 cases) and glioblastoma groups (42 cases). Among glioblastoma group, 30 cases were secondary glioblastoma. One hundred fifty-four meningioma cases were divided as low-grade meningioma (G1: 104 cases) and high-grade meningioma groups (G2: 43 cases and G3: 7 cases). Twelve low-grade meningiomas transformed into high-grade tumors, 17 low-grade meningiomas recur within 12 years. HIF-1 expression was estimated using immunohistochemistry under the light microscope. Statistical analysis was

performed in all examined groups. Results: HIF-1 expression was observed in 37.5% cases of diffused astrocytomas, in anaplastic astrocytomas 27.5% tumors were HIF-1 positive, in the glioblastoma group HIF-1 expression was observed in 83.3% cases. All secondary glioblastomas were positive for HIF-1. Low-grade meningiomas were positive for HIF-1 in 55.7%, in high-grade meningiomas, HIF-1 expression was observed in 84%. All meningiomas, which progressed from low- to high-grade meningiomas, were HIF-1 positive. Conclusion: HIF-1 expression is associated with the development and progression of both astrocytic tumors and meningiomas.

[387]

**TÍTULO / TITLE:** - Intracranial meningiomas and neurofibromatosis type 2.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Jun;155(6):997-1001. doi: 10.1007/s00701-013-1692-2. Epub 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1692-](#)

[2](#)

**AUTORES / AUTHORS:** - Aboukais R; Zairi F; Baroncini M; Bonne NX; Schapira S; Vincent C; Lejeune JP

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Lille University Hospital, rue E. Laine, 59037, Lille cedex, France, [rabihtdoc@hotmail.com](mailto:rabihtdoc@hotmail.com).

**RESUMEN / SUMMARY:** - PURPOSE: In spite of the few clinical studies regarding the occurrence of intracranial meningiomas, their prognosis in neurofibromatosis type 2 (NF2) has not been accurately assessed and their management remains controversial. This study aims to compare NF2 patients with intracranial meningiomas to those without, and consequently to identify prognostic factors in attempt to improve the management of these tumors. METHODS: This retrospective study includes a total of 80 NF2 patients followed at Lille Hospital Center between 1987 and 2011. The diagnosis of NF2 was confirmed either because the patient met the Manchester criteria or by the presence of genetic mutation. Clinical, radiological and genetic data were retrospectively recorded and analyzed. Patients underwent annual cranial and spinal MRI. Both location and size of each tumor were reported. RESULTS: The mean follow-up period was 8.8 years (range 1-24 years; SD: +/-0.8) and the mean age at diagnosis was 27.2 years (range 6-73 years; SD: +/-1.7). Among all patients, 34 harbored intracranial meningiomas. Patients with intracranial meningiomas had a higher number of intracranial schwannomas, spinal tumors and cutaneous tumors ( $p < 0.05$ ). They underwent more surgical procedures ( $p < 0.012$ ). Twenty five intracranial meningiomas were surgically removed in 17 patients. The decision to perform surgery was taken in 10 cases for symptomatic tumors and in 15 cases for growing asymptomatic tumors determined by radiology. The histological analysis found a high rate of

fibroblastic, transitional or grade 2 meningiomas preferentially located at the cerebri falx. CONCLUSION: Intracranial meningiomas are common in NF2. They are associated with poor prognosis factors. Clinical and radiological monitoring could lead to early treatment of these tumors both when clinical symptoms are present and in case of proven radiological evolution, and thus trying to maintain a favorable functional prognosis for as long as possible.

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[388]

**TÍTULO / TITLE:** - Anticancer activity of tolfenamic acid in medulloblastoma: a preclinical study.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 May 18.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0836-](#)

[6](#)

**AUTORES / AUTHORS:** - Eslin D; Lee C; Sankpal UT; Maliakal P; Sutphin RM; Abraham L; Basha R

**INSTITUCIÓN / INSTITUTION:** - MD Anderson Cancer Center Orlando, Orlando, FL, 32806, USA, [don.eslin@orlandohealth.com](mailto:don.eslin@orlandohealth.com).

**RESUMEN / SUMMARY:** - Medulloblastoma (MB) is the most common malignancy in children arising in the brain. Morbidities associated with intensive therapy are serious concerns in treating MB. Our aim was to identify novel targets and agents with less toxicity for treating MB. Specificity protein 1 (Sp1) transcription factor regulates several genes involved in cell proliferation and cell survival including survivin, an inhibitor of apoptosis protein. We previously showed that tolfenamic acid (TA), a nonsteroidal anti-inflammatory drug, inhibits neuroblastoma cell growth by targeting Sp1. We investigated the anticancer activity of TA using human MB cell lines and a mouse xenograft model. DAOY and D283 cells were treated with vehicle (dimethyl sulfoxide) or TA (5-50 µg/ml), and cell viability was measured at 1-3 days posttreatment. TA inhibited MB cell growth in a time- and dose-dependent manner. MB cells were treated with vehicle or TA (10 µg/ml), and the effect on cell apoptosis was measured. Apoptosis was analyzed by flow cytometry (annexin V staining), and caspase 3/7 activity was determined using Caspase-Glo kit. The expression of Sp1, cleaved poly(ADP-ribose) polymerase (c-PARP), and survivin was determined by Western blot analysis. TA inhibited the expression of Sp1 and survivin and upregulated c-PARP. Athymic nude mice were subcutaneously injected with D283 cells and treated with TA (50 mg/kg, three times per week) for 4 weeks. TA caused a decrease of ~40 % in tumor weight and volume. The tumor growth inhibition was accompanied by a decrease in Sp1 and survivin expression in tumor tissue. These preclinical data demonstrate that TA acts as an anticancer agent in MB potentially targeting Sp1 and survivin.

[389]

**TÍTULO / TITLE:** - MicroRNAs involved in chemo- and radioresistance of high-grade gliomas.

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

**REVISTA / JOURNAL:** - Tumour Biol. 2013 Apr 9.

●●Enlace al texto completo (gratis o de pago) [1007/s13277-013-0772-](#)

[5](#)

**AUTORES / AUTHORS:** - Besse A; Sana J; Fadrus P; Slaby O

**INSTITUCIÓN / INSTITUTION:** - Department of Comprehensive Cancer Care, Masaryk Memorial Cancer Institute, Zlutý kopec 7, 656 53, Brno, Czech Republic.

**RESUMEN / SUMMARY:** - High-grade gliomas (HGGs) are malignant primary brain tumors of glial cell origin. Despite optimal course of treatment, including maximal surgical resection followed by adjuvant chemo- and/or radiotherapy, the prognosis still remains poor. The main reason is the commonly occurring chemo- and radioresistance of these tumors. In recent years, several signaling pathways, especially PI3K/AKT and ATM/CHK2/p53, have been linked to the resistance of gliomas. Moreover, additional studies have shown that these pathways are significantly regulated by microRNAs (miRNAs), short endogenous RNA molecules that modulate gene expression and control many biological processes including apoptosis, proliferation, cell cycle, invasivity, and angiogenesis. MiRNAs are not only highly deregulated in gliomas, their expression signatures have also been shown to predict prognosis and therapy response. Therefore, they present promising biomarkers and therapeutic targets that might overcome the resistance to treatment and improve prognosis of glioma patients. In this review, we summarize the current knowledge of the functional role of miRNAs in gliomas resistance to chemo- and radiotherapy.

[390]

**- CASTELLANO -**

**TÍTULO / TITLE:** Neurinoma de la cuerda del timpano.

**TÍTULO / TITLE:** - Chorda tympani neuroma.

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

**REVISTA / JOURNAL:** - Acta Otorrinolaringol Esp. 2013 Mar 26. pii: S0001-6519(13)00033-2. doi: 10.1016/j.otorri.2013.01.005.

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

[1016/j.otorri.2013.01.005](#)

**AUTORES / AUTHORS:** - Undabeitia JI; Undabeitia J; Padilla L; Muncio A

**INSTITUCIÓN / INSTITUTION:** - Servicio de Otorrinolaringología, Hospital Universitario de Cruces, Barakaldo, Vizcaya, España; Departamento de

Dermatología, Oftalmología y Otorrinolaringología, Universidad del País Vasco, Leioa, Vizcaya, España. Electronic address: [ignacioundabeitia@hotmail.com](mailto:ignacioundabeitia@hotmail.com).

[391]

**TÍTULO / TITLE:** - Nasal hamartoma associated with duplicated pituitary.

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

**REVISTA / JOURNAL:** - J Comput Assist Tomogr. 2013 May-Jun;37(3):369-70. doi: 10.1097/RCT.0b013e31828682c7.

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

[1097/RCT.0b013e31828682c7](#)

**AUTORES / AUTHORS:** - Ginat DT; Holbrook EH; Faquin W; Curtin HD

**INSTITUCIÓN / INSTITUTION:** - From the \*Department of Radiology, Massachusetts General Hospital (MGH); daggerDepartment of Otolaryngology, Massachusetts Eye and Ear Infirmary (MEEI); double daggerDepartment of Pathology, MGH; and section signDepartment of Radiology, MEEI, Boston, MA.

**RESUMEN / SUMMARY:** - Nasal hamartomas are rare congenital lesions. We describe a case of nasal hamartoma associated with pituitary duplication and other midline anomalies. A 40-year-old female with a history of breast cancer presented with nasal obstruction. Computed tomography and magnetic resonance imaging revealed a mass arising from the nasal septum, as well as duplication of the pituitary and a skull base canal that extended from the margin of the left pituitary fossa to the nasal mass. The mass was subsequently resected via a transnasal endoscopic approach and histology confirmed the presence of hamartoma. Nasal hamartomas are benign lesions that can be associated with other midline anomalies, such as duplicated pituitary, and can be managed conservatively.

[392]

**TÍTULO / TITLE:** - Low-grade and anaplastic oligodendrogliomas: Differences in tumour microvascular permeability evaluated with dynamic contrast-enhanced magnetic resonance imaging.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 11. pii: S0967-5868(12)00618-2. doi: 10.1016/j.jocn.2012.09.019.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.09.019](#)

**AUTORES / AUTHORS:** - Jia Z; Geng D; Liu Y; Chen X; Zhang J

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Affiliated Hospital of Nantong University, Nantong, China. Electronic address: [jzz2397@163.com](mailto:jzz2397@163.com).

**RESUMEN / SUMMARY:** - This study was designed to quantitatively assess the microvascular permeability of oligodendroglioma using the volume transfer constant (K<sub>trans</sub>) and the volume of the extravascular extracellular space per

unit volume of tissue ( $V_e$ ) with dynamic contrast-enhanced magnetic resonance imaging (DCE-MRI). We aimed to evaluate the effectiveness of  $K_{trans}$  and  $V_e$  in distinguishing between low-grade and anaplastic oligodendroglioma. The maximal values of  $K_{trans}$  and  $V_e$  for 65 patients with oligodendroglioma (27 grade II, 38 grade III) were obtained. Differences in  $K_{trans}$  and  $V_e$  between the two groups were analysed using the Mann-Whitney rank-sum test. Receiver operating characteristic (ROC) curve analyses were performed to determine the cut-off values for the  $K_{trans}$  and  $V_e$  that could differentiate between low-grade and anaplastic oligodendrogliomas. Values for  $K_{trans}$  and  $V_e$  in low-grade oligodendrogliomas were significantly lower than those in anaplastic oligodendrogliomas ( $p < 0.001$  and  $p < 0.001$ , respectively). ROC curve analysis showed that cut-off values of the  $K_{trans}$  ( $0.037 \text{ min}^{-1}$ ) and  $V_e$  (0.079) could be used to distinguish between low-grade and anaplastic oligodendrogliomas in a statistically significant manner. Our results suggest that DCE-MRI can distinguish the differences in microvascular permeability between low-grade and anaplastic oligodendrogliomas.

[393]

**TÍTULO / TITLE:** - Hypofractionated stereotactic radiotherapy for unifocal and multifocal recurrence of malignant gliomas.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1126-](http://1007/s11060-013-1126-2)

[2](#)

**AUTORES / AUTHORS:** - McKenzie JT; Guarnaschelli JN; Vagal AS; Warnick RE; Breneman JC

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Precision Radiotherapy, University of Cincinnati, West Chester, OH, USA.

**RESUMEN / SUMMARY:** - To evaluate the efficacy and safety of stereotactic radiotherapy (SRT) for unifocal and multifocal recurrence of malignant gliomas. Between June 2007 and October 2010, 35 consecutive patients with 47 recurrent lesions were treated with salvage SRT at the University of Cincinnati. Thirty-three patients treated had a diagnosis of high grade glioma, four Grade III and twenty-nine Grade IV, while two patients initially were diagnosed with grade II tumors but recurred as high grade lesions. All patients had previously received a median dose of 59.4 Gy. Twenty-six patients were treated for a single lesion, and nine patients were treated for multiple lesions. Using SRT, patients were re-treated with a median total dose of 30 Gy in a median of five fractions. Median survival from diagnosis was 22 months and median survival following SRT was 8.6 months. The median survival following SRT for those patients treated for multifocal recurrence was 7.9 versus 10 months for those treated for unifocal recurrence ( $p = 0.7$ ). Multivariate analysis showed local

control of the SRT treated lesion(s) 6 months after SRT was associated with a significant improvement in survival ( $p \leq 0.01$ ). All patients tolerated their treatment well and completed their prescribed SRT as planned. Three patients (9 %) were felt to possibly have developed radiation necrosis following therapy. SRT was both well tolerated and efficacious with the local control provided by SRT resulting in improved overall survival. This benefit also seems to be apparent for patients with multi-focal recurrence.

[394]

**TÍTULO / TITLE:** - Pilomyxoid astrocytoma of the cerebellum with Williams syndrome: a case report.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 20.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2107-](http://1007/s00381-013-2107-7)

[7](#)

**AUTORES / AUTHORS:** - Chonan M; Kanamori M; Kumabe T; Saito R; Watanabe M; Tominaga T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tohoku University Graduate School of Medicine, 1-1 Seiryomachi, Aoba-ku, Sendai, 980-8574, Japan.

**RESUMEN / SUMMARY:** - CASE REPORT: A 3-year-old boy with Williams syndrome associated with supra-aortic stenosis was admitted to our hospital with disturbance of consciousness and a 2-month history of truncal ataxia. T1-weighted magnetic resonance imaging with contrast medium showed a heterogeneously enhanced tumor in the right cerebellum with severe hydrocephalus. The patient underwent tumor resection via suboccipital craniotomy. At the end of resection of the tumor, sudden cardiac arrest occurred after ST segment elevation. Despite immediate cardiopulmonary resuscitation, the patient died. Histological examination of the cerebellar tumor revealed that the tumor consisted of monomorphic bipolar spindle cells on a background of myxoid matrix, and angiocentric arrangement without Rosenthal fibers or eosinophilic granular body. The final diagnosis was pilomyxoid astrocytoma. **CONCLUSION:** This case of Williams syndrome with cerebellar pilomyxoid astrocytoma suggests the importance of investigation of the development of brain tumors and occurrence of intraoperative cardiac arrest associated with Williams syndrome.

[395]

**TÍTULO / TITLE:** - Answer to: "Sodium fluorescein-guided resection under the YELLOW 560-nm surgical microscope filter in malignant brain tumor surgery-a feasibility study" (April 2013, Volume 155, Issue 4, pp 693-69).

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 19.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1752-7](#)

**AUTORES / AUTHORS:** - Diez Valle R; Tejada Solis S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Clinica Universidad de Navarra, Pamplona, Navarra, España, [rdiezvalle@mac.com](mailto:rdiezvalle@mac.com).

[396]

**TÍTULO / TITLE:** - Sinonasal undifferentiated carcinoma and esthesioneuroblastoma recurring as nonintestinal adenocarcinoma.

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

**REVISTA / JOURNAL:** - Laryngoscope. 2013 May;123(5):1121-4. doi: 10.1002/lary.23746. Epub 2013 Apr 2.

●●Enlace al texto completo (gratis o de pago) [1002/lary.23746](#)

**AUTORES / AUTHORS:** - Kang SY; McHugh JB; Sullivan SE; Marentette LJ; McKean EL

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology, University of Michigan Health System, Ann Arbor, Michigan, U.S.A.

**RESUMEN / SUMMARY:** - Numerous distinct neoplasms are encountered at the anterior cranial base. Management of these primary tumors and their locoregional recurrences are dictated by the histopathologic diagnosis. We present two unusual cases of extra-axial anterior cranial base malignancies with locoregional recurrence where the recurrent tumor encountered was of a distinct histopathologic type. While rare, this report highlights the possibility of encountering a distinct tumor type in the posttreatment surveillance of patients with anterior cranial base malignancies.

[397]

**TÍTULO / TITLE:** - Awake Craniotomy for Brain Tumor Resection: The Rule Rather Than the Exception?

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

**REVISTA / JOURNAL:** - J Neurosurg Anesthesiol. 2013 Apr 17.

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

[1097/ANA.0b013e318290c230](#)

**AUTORES / AUTHORS:** - Brown T; Shah AH; Bregy A; Shah NH; Thambuswamy M; Barbarite E; Fuhrman T; Komotar RJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of Miami Hospital, Miami, FL.

**RESUMEN / SUMMARY:** - OBJECTIVE:: Awake craniotomy (AC) has seen an expanded role in brain tumor surgery over the past few decades. AC allows

intraoperative cortical mapping and the continuous assessment of neurophysiological parameters, which are otherwise unattainable under general anesthesia (GA). The ability of AC to analyze eloquent brain areas makes it a powerful method for reducing the risks associated with tumor resection, especially in motor and language cortex. We present a review of the literature to examine the benefits and limits of using AC over GA. **METHODS:** A literature search was performed using the Medline and PubMed databases from 1970 and 2012 that compared craniotomy for tumor resection under GA and AC. Data of interest included length of hospital stay, operating time, extent of resection, and neurological sequelae. **RESULTS:** A total of 8 studies with 951 patients (411 utilizing AC and 540 utilizing GA) were included in this review. Our interpretation of the literature suggests that AC (4 d, n=110) results in a shorter hospital stay than GA (9 d, n=116). Mean extent of resection was slightly less under awake conditions (41%, n=321) versus GA (44%, n=444), and postoperative deficits were less frequent under awake conditions (7%, n=411) versus GA (23%, n=520). Surgery time was slightly less in the AC group (165 min, n=324) versus GA (168 min, n=477). **CONCLUSIONS:** Given the effectiveness of AC for resection of eloquent tumors, the data suggests an expanded role for AC in brain tumor surgery regardless of tumor location.

[398]

**TÍTULO / TITLE:** - Relapse in medulloblastoma: what can be done after abandoning high-dose chemotherapy? A mono-institutional experience.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 18.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2104-](#)

[X](#)

**AUTORES / AUTHORS:** - Massimino M; Casanova M; Polastri D; Biassoni V; Modena P; Pecori E; Schiavello E; De Pava MV; Indini A; Rampini P; Bauer D; Catania S; Podda M; Gandola L

**INSTITUCIÓN / INSTITUTION:** - Pediatric Oncology Unit, Fond. IRCCS Istituto Nazionale dei Tumori, Milano, Via Venezian, 1-20133, Milan, Italy, [maura.massimino@istitutotumori.mi.it](mailto:maura.massimino@istitutotumori.mi.it).

**RESUMEN / SUMMARY:** - **PURPOSE:** We retrospectively report strategies used for medulloblastoma patients progressing after craniospinal irradiation where we aimed for: symptom control, a satisfactory quality of life, accrual in phase 1-2 trials, when available, and the first two conditions could no longer be satisfied by already experienced second-line strategies. **METHODS:** Surgery was used in cases of doubtful relapse or when only one site was affected. Radiotherapy was given whenever possible, especially to relieve symptoms. The main chemotherapy regimens were oral temozolomide/etoposide, intravenous (iv.) cisplatin/etoposide, iv. gemcitabine/oxaliplatin, an oral sonic hedgehog pathway

inhibitor and oral melphalan. RESULTS: Between 1998 and 2011, we treated 18 patients relapsed after median 20 months. Nine had relapsed locally, four had dissemination, three single metastases, and two had one synchronous local and metastatic recurrence. Responses to chemotherapy were seen in 32 % of cases. The median hospital stay for treatments/complications was 19 days. The 1- and 3-year progression-free survival (PFS) rates were 28 +/- 10 % and 0 %, respectively, for OS, they were 44 +/- 12 % and 22 +/- 10 % but no patient was cured. The median PFS after a first relapse was 7 months (range 1-29); the median OS was 7 months (range 4-44). No patients died due to treatment toxicity. Late recurrence (more than 1-2 years after diagnosis) and involvement of single sites were favorable prognostic factors. CONCLUSIONS: Without succeeding in patients cure, we ensured them further treatment with short hospital stay thus affording low personal and social costs. The chances of cure may emerge from tailored therapies according to genetic stratification.

[399]

**TÍTULO / TITLE:** - Ultrasonic Morphology of Uterus and Ovaries in Girls with Pituitary Hyperplasia Secondary to Primary Hypothyroidism.

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

**REVISTA / JOURNAL:** - Horm Metab Res. 2013 May 13.

●●Enlace al texto completo (gratis o de pago) [1055/s-0033-1345141](#)

**AUTORES / AUTHORS:** - Hu Y; Wang Q; Li G; Sun X; Liu C

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Provincial Hospital Affiliated to Shandong University, Jinan, Shandong, China.

**RESUMEN / SUMMARY:** - We aimed to study uterine and ovarian morphology, hormonal levels, and pituitary height in prepubertal girls with pituitary hyperplasia secondary to primary hypothyroidism (PH) before and after thyroid hormone replacement therapy. We investigated 24 prepubertal girls with severe PH who were divided into 2 groups: secondary pituitary hyperplasia (group A, n=18), without pituitary hyperplasia (group B, n=6). Serum levels of free triiodothyronine (FT3), free thyroxine (FT4), thyrotropin (TSH), follicle stimulating hormone (FSH), luteinizing hormone (LH), estradiol (E2), testosterone (T) and prolactin (PRL), pituitary height, uterine volume (UV), ovarian volume (OV), follicular diameter (FD), and follicular number (FN) in group A were measured before and 3-month after levothyroxine therapy. Age-matched healthy prepubertal girls (control group, n=30) were also enrolled in the study. The levels of FT3 and FT4 were significantly lower and the values of TSH, FSH, E2, PRL, pituitary height, UV, OV, and FD were significantly higher in group A than in the control group (all p<0.05). In group B, FT4 levels were significantly lower and TSH levels were significantly higher than in the control group (both p<0.05); the values of FSH, E2, PRL, UV, OV, and FD tended to be higher than those in the control group; there were no statistically significant

differences (all  $p > 0.05$ ). After 3-month of therapy, hormonal levels regressed and imaging abnormalities decreased. Our results indicate that PH patients with pituitary hyperplasia have enlarged uterus, ovaries and follicles, as well as high values of FSH, E2, PRL, and pituitary height, which are improved after levothyroxine therapy.

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[400]

**TÍTULO / TITLE:** - Blood-based biomarkers for malignant gliomas.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 14.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1144-](#)

[0](#)

**AUTORES / AUTHORS:** - Holdhoff M; Yovino SG; Boadu O; Grossman SA

**INSTITUCIÓN / INSTITUTION:** - Brain Cancer Program, Department of Oncology, Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine, Cancer Research Building II, 1550 Orleans Street, Suite 1M16, Baltimore, MD, 21287, USA, [mholdho1@jhmi.edu](mailto:mholdho1@jhmi.edu).

**RESUMEN / SUMMARY:** - Malignant gliomas remain incurable and present unique challenges to clinicians, radiologists and clinical and translational investigators. One of the major problems in treatment of these tumors is our limited ability to reliably assess tumor response or progression. The most frequently used neuro-imaging studies (contrast-enhanced MRI and CT) rely on changes of blood-brain barrier (BBB) integrity, providing only an indirect assessment of tumor burden. In addition, the BBB can be altered by commonly used interventions including radiation, glucocorticoids and vascular endothelial growth factor inhibitors, further complicating the interpretation of scans. Newer radiologic techniques including PET and magnetic resonance spectroscopy are theoretically promising but thus far have not meaningfully changed the assessment of patients with malignant gliomas. A tumor-specific, blood-based biomarker would be of immediate use to clinicians and investigators if sufficiently sensitive and specific. This review discusses the potential utility of such a biomarker, the general classes of tumor-derived blood-based biomarkers and it summarizes the currently available data on circulating tumor cells, circulating nucleic acids and circulating proteins in patients with malignant gliomas. It is unclear which marker or marker class appears to be the most promising for these tumors. This article provides thoughts on how novel candidate blood-based markers could be discovered and tested in a more comprehensive way and why these efforts should be among the top priorities in neuro-oncologic research in the coming years.

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[401]

**TÍTULO / TITLE:** - The cytotoxic effect of beta-elemene against malignant glioma is enhanced by base-excision repair inhibitor methoxyamine.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 23.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1136-0](http://1007/s11060-013-1136-0)

**AUTORES / AUTHORS:** - Zhu Y; Hu J; Shen F; Shen H; Liu W; Zhang J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Second Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, Zhejiang, China.

**RESUMEN / SUMMARY:** - This study investigated the effects of beta-elemene + methoxyamine, a DNA base-excision repair inhibitor, on the inhibition of glioma growth. We treated C6 and SHG44 glioma cells with beta-elemene and methoxyamine individually or in combinations, and subsequently analyzed cellular survivals by MTT assay. Comet assay, gamma-H2AX focus formation assay and Western-blot were performed to investigate whether the observed cytotoxicity was associated with DNA damages. Finally, a xenograft tumor model was established in nude mice with C6 cells to analyze in vivo tumor inhibition effects of beta-elemene, which was followed by determination of the expression of anti-apoptotic protein Bcl-2 via immunohistochemistry staining. Results showed that beta-elemene could significantly inhibit the growth of glioma cells in a dose- and time-dependent manner. The combination of methoxyamine with beta-elemene could result in a greater extent of DNA injuries in vitro. Furthermore, in vivo tumors exhibited a marked shrinkage in volume in beta-elemene + methoxyamine treatment group. Immunohistochemistry analysis of the tumor tissues showed a distinctive decrease in Bcl-2 staining in beta-elemene (56 %) and beta-elemene + methoxyamine (36 %) groups when compared with the negative control (77 %). In conclusion, beta-elemene exhibits a significant cytotoxic effect against glioma cells both in vitro and in vivo, which is likely to be mediated by its potential to damage tumor cell DNA and activate apoptotic pathway. Such growth inhibition effect of beta-elemene could be potentiated by methoxyamine co-administration. Therefore, a combination of the two agents as a novel chemotherapeutic option for glioma merits further investigations.

[402]

**TÍTULO / TITLE:** - MicroRNA biomarkers in glioblastoma.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 23.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1155-x](http://1007/s11060-013-1155-x)

[X](#)

**AUTORES / AUTHORS:** - Hermansen SK; Kristensen BW

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Odense University Hospital, Winslowparken 15, 3. Floor, 5000, Odense C, Denmark, [simon.hermansen@rsyd.dk](mailto:simon.hermansen@rsyd.dk).

**RESUMEN / SUMMARY:** - Recent research suggests that deregulation of microRNAs (miRNAs) is involved in initiation and progression of many cancers, including gliomas and that miRNAs hold great potential as future diagnostic and therapeutic tools in cancer. MiRNAs are a class of short non-coding RNA sequences (18-24 nucleotides), which base-pair to target messenger RNA (mRNA) and thereby cause translational repression or mRNA degradation based on the level of complementarity between strands. Profiling miRNAs in clinical glioblastoma samples has shown aberrant expression of numerous miRNAs when compared to normal brain tissues. Understanding these alterations is key to developing new biomarkers and intelligent treatment strategies. This review presents an overview of current knowledge about miRNA alterations in glioblastoma while focusing on the clinical future of miRNAs as biomarkers and discussing the strengths and weaknesses of various methods used in evaluating their expression.

[403]

**TÍTULO / TITLE:** - Valproic acid and its inhibition of tumor growth in systemic malignancies: beyond gliomas.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1129-](http://1007/s11060-013-1129-2)

[2](#)

**AUTORES / AUTHORS:** - Kapoor S

**INSTITUCIÓN / INSTITUTION:** - , 74 Crossing Place, Mechanicsville, VA, USA, [shailendrapoor@yahoo.com](mailto:shailendrapoor@yahoo.com).

[404]

**TÍTULO / TITLE:** - High plasma-GFAP levels in metastatic myxopapillary ependymoma.

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

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

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1134-](http://1007/s11060-013-1134-2)

[2](#)

**AUTORES / AUTHORS:** - Ilhan-Mutlu A; Berghoff AS; Furtner J; Dieckmann K; Slavc I; Czech T; Marosi C; Wagner L; Preusser M

**INSTITUCIÓN / INSTITUTION:** - Clinical Division of Oncology, Department of Medicine I, Medical University of Vienna, Vienna, Austria.

**RESUMEN / SUMMARY:** - Myxopapillary ependymoma (MPE) is a rare tumor of the distal spinal cord. Despite benign histopathology, local recurrences occur in ~30 % of patients and distant metastases have been described in few cases. MPE tumor cells typically express glial fibrillary acidic protein (GFAP), which could be released to the circulation. In this current report, we investigated circulating plasma-GFAP in a series of MPE patients. We analyzed circulating plasma-GFAP using a commercially available ELISA kit in 3 patients with completely resected MPE, 1 patient with locally advanced MPE and 2 patients with pleuropulmonary metastases of MPE. As controls we used blood samples of age and gender-matched healthy volunteers (n = 3), 6 glioblastoma patients with known plasma-GFAP status (positive for 3 and negative for 3 patients) and 3 brain metastases patients with known plasma-GFAP negativity. We found very high concentrations of plasma-GFAP in two MPE patients with pleuropulmonary metastases, while in none of the other MPE patients circulating plasma-GFAP was detectable. Circulating GFAP could be useful as marker for early detection or follow-up of distant metastases in MPE patients.

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[405]

**TÍTULO / TITLE:** - O-methylguanine-DNA methyltransferase (MGMT) immunohistochemistry as a predictor of resistance to temozolomide in primary CNS lymphoma.

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

**REVISTA / JOURNAL:** - J Neurooncol. 2013 May 18.

●●Enlace al texto completo (gratis o de pago) [1007/s11060-013-1162-](http://1007/s11060-013-1162-)

[y](#)

**AUTORES / AUTHORS:** - Jiang X; Reardon DA; Desjardins A; Vredenburgh JJ; Quinn JA; Austin AD; Herndon JE 2nd; McLendon RE; Friedman HS

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Duke University Medical Center, Box 3712 DUMC, Durham, NC, 27710, USA, [jiang009@mc.duke.edu](mailto:jiang009@mc.duke.edu).

**RESUMEN / SUMMARY:** - Temozolomide, an alkylating agent, has shown promise in treating primary central nervous system lymphoma (PCNSL). The enzyme O6-methylguanine-DNA methyltransferase (MGMT) repairs alkylating damage, such as that induced by temozolomide. We hypothesized that MGMT immunohistochemistry would predict resistance to temozolomide in PCNSL. A retrospective study of newly-diagnosed and recurrent PCNSL patients treated at our institution was conducted to study the predictive value of MGMT immunohistochemistry for response to temozolomide. 20 patients who were treated with temozolomide as a single agent were identified during the study time period. 6/20 patients demonstrated a response, corresponding to an objective response rate of 30 % (95 % CI 8-52). Five patients with low MGMT level (<30 %) showed a response to temozolomide. Only one of 10 patients (10 %) with high MGMT level (>=30 %) exhibited a response to temozolomide.

Small sample numbers precluded formal statistical comparisons. Two patients with complete response remain alive without progressive disease 6.7 and 7.2 years after temozolomide initiation. Immunohistochemistry can be performed on small biopsies to selectively assess MGMT status in tumor versus surrounding inflammation. MGMT analysis by immunohistochemistry may predict response to temozolomide in PCNSL and should be prospectively investigated.

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[406]

**TÍTULO / TITLE:** - Use of the O-arm® for skull base resection in a sphenoorbital meningioma.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 7. pii: S0967-5868(13)00002-7. doi: 10.1016/j.jocn.2012.08.016.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.08.016](http://1016/j.jocn.2012.08.016)

**AUTORES / AUTHORS:** - Kerr EE; Shahlaie K; Schrot RJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of California Davis Medical Center, 4860 Y Street, Suite 3740, Sacramento, CA 95817, USA.

**RESUMEN / SUMMARY:** - Intraoperative imaging during skull base surgery allows the surgeon to evaluate surgical results and direct further bone resection prior to closure, avoiding the potential morbidity of inadequate surgical therapy or reoperation. Intraoperative CT (iCT) scanning has become widely available in recent years, but its neurosurgical applications have been limited mostly to spinal and functional operations. We report a patient with a sphenoorbital meningioma with adjacent hyperostosis causing proptosis and optic canal stenosis in which a portable iCT scanner (O-arm®; Medtronic, Fridley, MN, USA) was used to guide further resection. Postoperatively, the patient experienced resolution of her proptosis, and her vision remains clinically normal. The O-arm® can be easily incorporated into standard operating rooms and is useful in tailoring bony skull base resections.

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[407]

**TÍTULO / TITLE:** - Cancer 'survivor-care': II. Disruption of prefrontal brain activation top-down control of working memory capacity as possible mechanism for chemo-fog/brain (chemotherapy-associated cognitive impairment).

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

**REVISTA / JOURNAL:** - J Clin Pharm Ther. 2013 May 8. doi: 10.1111/jcpt.12071.

●●Enlace al texto completo (gratis o de pago) [1111/jcpt.12071](http://1111/jcpt.12071)

**AUTORES / AUTHORS:** - Raffa RB

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmaceutical Sciences, Temple University School of Pharmacy, Philadelphia, PA, USA; Forget-Me-Not Foundation, Norristown, PA, USA.

**RESUMEN / SUMMARY:** - WHAT IS KNOWN AND OBJECTIVE: Cancer chemotherapy-associated cognitive impairments (termed 'chemo-fog' or 'chemo-brain'), particularly in memory, have been self-reported or identified in cancer survivors previously treated with chemotherapy. Although a variety of deficits have been detected, a consistent theme is a detriment in visuospatial working memory. The parietal cortex, a major site of storage of such memory, is implicated in chemotherapy-induced damage. However, if the findings of two recent publications are combined, the (pre)frontal cortex might be an equally viable target. Two recent studies, one postulating a mechanism for 'top-down control' of working memory capacity and another visualizing chemotherapy-induced alterations in brain activation during working memory processing, are reviewed and integrated. COMMENT: A computational model and the proposal that the prefrontal cortex plays a role in working memory via top-down control of parietal working memory capacity is consistent with a recent demonstration of decreased frontal hyperactivation following chemotherapy. WHAT IS NEW AND CONCLUSION: Chemotherapy-associated impairment of visuospatial working memory might include the (pre)frontal cortex in addition to the parietal cortex. This provides new opportunity for basic science and clinical investigation.

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[408]

**TÍTULO / TITLE:** - Primary intraventricular gliosarcoma.

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

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [5414/NP300607](#)

**AUTORES / AUTHORS:** - Baldawa S; Kasegaonkar P; Vani S; Kelkar G

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[409]

**TÍTULO / TITLE:** - The mTOR Inhibitor RAD001 Potentiates Autophagic Cell Death Induced by Temozolomide in a Glioblastoma Cell Line.

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

**REVISTA / JOURNAL:** - Anticancer Res. 2013 May;33(5):1845-51.

**AUTORES / AUTHORS:** - Josset E; Burckel H; Noel G; Bischoff P

**INSTITUCIÓN / INSTITUTION:** - EA 3430, Universite de Strasbourg, Centre regional de Lutte contre le Cancer Paul Strauss, 3 rue de la Porte de l'Hopital, F-67085 Strasbourg Cedex, France. [pbischoff@strasbourg.unicancer.fr](mailto:pbischoff@strasbourg.unicancer.fr).

**RESUMEN / SUMMARY:** - We have studied the consequences of the combination of the mammalian target of rapamycin (mTOR) inhibitor RAD001 and temozolomide on the growth and cell death of the glioblastoma cell line U-87 in

vitro. A progressive decrease of cell proliferation was recorded with increasing concentrations of temozolomide, which was markedly reinforced and prolonged by the addition of RAD001. While this combination treatment resulted in only a low level of apoptosis, it led to a pronounced enhancement of autophagic cell death. When combined with gamma-ray irradiation, a significant reinforcement of the overall cytotoxicity was obtained, suggesting the efficacy of such a multipronged approach for the treatment of glioblastoma. RAD001 strongly contributes to the reinforcement of temozolomide-induced autophagy, which appears to represent a major form of cell death in glioblastoma. The association of such combined chemotherapies with radiotherapy could be useful for the management of these hard-to-treat malignancies.

[410]

**TÍTULO / TITLE:** - Brain tumor epidemiology in Austria and the Austrian Brain Tumor Registry.

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

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [5414/NP300600](#)

**AUTORES / AUTHORS:** - Woehrer A

**RESUMEN / SUMMARY:** - Cancer registries provide incidence and mortality data on patients with cancer at the population level. Cancer registration is most often restricted to the group of malignant neoplasms, whereas information on benign and intermediate tumors is generally not available. Brain tumors however differ from other sites by 1) the large spectrum of different tumor types, and 2) the exclusive localization in proximity to eloquent areas with considerable neurological comorbidity and mortality irrespective of their biological behavior. In order to obtain a comprehensive overview of the brain tumor burden, specialized brain tumor registries, which provide information on all brain tumor types, have emerged in several countries. This thesis synopsis summarizes the Austrian experience on the establishment of such a specialized brain tumor registry: the Austrian Brain Tumor Registry (ABTR). The initial steps are reported - from consensus and commitment of the Austrian Society of Neuropathology, formation of an interdisciplinary team of experts, setup of the infrastructure including data confidentiality issues, to the sustained support of the Austrian neurooncology community and major cooperation with the Austrian National Cancer Registry. ABTR differs from other registries by its scientific setting and neuropathological background warranting strong expertise in brain tumor typing and tissue-based research. Thereby, ABTR constitutes also a virtual brain tumor biobank. By having achieved these steps, first investigational results demonstrate that ABTR provides valid and accurate population-based incidence and survival data for individual brain tumor types. The exact incidence of rare tumor entities is estimated, key diagnostic criteria of newly proposed

tumor entities are refined, common standards for testing of molecular markers are advocated, and medical progress via real-life outcome analyses is assessed. The diverse scientific contributions highlight the enormous scientific potential of ABTR for continued work.

[411]

**TÍTULO / TITLE:** - Hepatic metastasis of a carotid body paraganglioma 5 years after resection of the primary tumor.

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

**REVISTA / JOURNAL:** - Am Surg. 2013 May;79(5):194-6.

**AUTORES / AUTHORS:** - Moris D; Sotiropoulos G; Vernadakis S

**INSTITUCIÓN / INSTITUTION:** - 1st Department of Surgery Athens University School of Medicine "Laikon" General Hospital Athens, Greece.

[412]

**TÍTULO / TITLE:** - Robot-guided convection-enhanced delivery of carboplatin for advanced brainstem glioma.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Apr 18.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1700-](http://1007/s00701-013-1700-6)

[6](#)

**AUTORES / AUTHORS:** - Barua NU; Lowis SP; Woolley M; O'Sullivan S; Harrison R; Gill SS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Frenchay Hospital, Bristol, BS16 1LE, UK.

**RESUMEN / SUMMARY:** - BACKGROUND: Patients with diffuse intrinsic pontine glioma (DIPG) have a poor prognosis with median survival reported as 9 months. The failure of systemic chemotherapy to improve prognosis may be due to inadequate penetration of the blood-brain barrier (BBB). Convection-enhanced delivery (CED) has the potential to improve outcomes by facilitating bypass of the BBB. We describe the first use of carboplatin for the treatment of advanced DIPG using a robot-guided catheter implantation technique.

METHODS: A 5-year-old boy presented with a pontine mass lesion. The tumor continued to progress despite radiotherapy. Using an in-house modification to neuroinspire stereotactic planning software (Renishaw Plc., Gloucestershire, UK), the tumor volume was calculated as 43.6 ml. A transfrontal trajectory for catheter implantation was planned facilitating the in-house manufacture of a recessed-step catheter. The catheter was implanted using a neuromate robot (Renishaw Plc., Gloucestershire, UK). The initial infusion of carboplatin (0.09 mg/ml) was commenced with real-time T2-weighted MRI, facilitating estimation of the volume of infusate distribution. Infusions were repeated on a total of 5

days. RESULTS: The catheter implantation and infusions were well tolerated. A total volume of 49.8 ml was delivered over 5 days. T2-weighted MRI on completion of the final infusion demonstrated signal change through a total volume of 35.1 ml, representing 95 % of the targeted tumor volume. Follow-up at 4 weeks revealed clinical signs of improvement and increased T2 signal change throughout the volume of distribution. However, there was tumor progression in the regions outside the volume of distribution. CONCLUSIONS: This case demonstrates the feasibility of accurately and safely delivering small-diameter catheters to the brainstem using a robot-guided implantation procedure, and real-time MRI tracking of infusate distribution.

[413]

**TÍTULO / TITLE:** - Neurological morbidity of surgical resection of pediatric cerebellar astrocytomas.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 29.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2171-](http://1007/s00381-013-2171-)

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**AUTORES / AUTHORS:** - Steinbok P; Mangat JS; Kerr JM; Sargent M; Suryaningtyas W; Singhal A; Cochrane D

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Neurosurgery, Department of Surgery, BC Children's Hospital and University of British Columbia, 4480 Oak St, #K3-159, V6H 3V4, Vancouver, BC, Canada, [psteinbok@cw.bc.ca](mailto:psteinbok@cw.bc.ca).

**RESUMEN / SUMMARY:** - BACKGROUND: Review of children with low-grade cerebellar astrocytoma (LGCA) prior to 1992 showed a 98 % rate of gross total resection (GTR) but a concerning incidence of permanent neurological dysfunction. The purpose of this study was to determine the rate of GTR of LGCA since 1992 and frequency of neurologic injury. METHODS: Retrospective review of children with LGCA was performed. CT/MR scans were rereviewed to assess extent of resection. Primary outcomes included incidence of GTR and incidence of permanent new neurological deficits. Other outcomes included late effects severity score (LESS), Bloom score for functional status, and educational assessment. RESULTS: Of 50 LGCA, GTR was achieved in 38 (76 %) compared to 43 of 44 (98 %) prior to 1992 ( $p < 0.004$ ). Permanent new neurologic deficits from surgery occurred in 16 % compared to 18 % in the prior era ( $p = 0.61$ ). For 35 patients operated on by the 2 surgeons in the prior study, 74 % had GTR, with permanent neurological deficits in 8.6 %. At latest follow-up, all patients were alive, 16 % with residual tumor. LESS was two or less (mild or no deficit) in 94 %. Bloom score was one or two (no or mild disability) in 90 %. Eighty-six percent attended normal school. CONCLUSIONS: Less aggressive resection of LGCA in children may reduce postoperative neurologic deficits in the hands of the same surgeons as in the prior study but not overall

at our institution. The good long-term outcomes suggest that it may be appropriate to do incomplete resection rather than risk additional neurological deficit.

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[414]

**TÍTULO / TITLE:** - DNA content is associated with malignancy of intracranial neoplasms.

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

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 May 15. pii: S0303-8467(13)00151-0. doi: 10.1016/j.clineuro.2013.04.015.

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

[1016/j.clineuro.2013.04.015](http://1016/j.clineuro.2013.04.015)

**AUTORES / AUTHORS:** - Alexiou GA; Vartholomatos E; Goussia A; Dova L; Karamoutsios A; Fotakopoulos G; Kyritsis AP; Voulgaris S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospital of Ioannina, Ioannina, Greece. Electronic address: [alexiougrg@yahoo.gr](mailto:alexiougrg@yahoo.gr).

**RESUMEN / SUMMARY:** - OBJECTIVE: Flow cytometry has been applied to analyze the DNA-content distribution of tumors, in order to relate this to clinical and biological parameters of tumor behavior. Herewith, we investigated the value of cell cycle analysis in the characterization of intracranial lesions and its possible prognostic role. METHODS: DNA analysis was performed in tumor samples that were taken during surgery over a five year period. Diagnosed tumors were graded according to the World Health Organization 2007 classification scheme. RESULTS: Fifty-six patients were included in the study. There was a significant difference in G0/G1 phase and S-phase between low-grade and high-grade gliomas. There were 12 (57%) diploid and 9 (43%) aneuploid tumors. All aneuploid tumors were glioblastomas. Patients with G0/G1 value  $\leq 69\%$  and S phase value greater than 6% were associated with worse survival. As regards meningiomas, there was a significant difference in G0/G1 phase, S phase and mitoses fraction between benign and both atypical and anaplastic meningiomas. Aneuploidy was observed in the anaplastic tumors and in 2/4 atypical meningiomas. CONCLUSION: The results of the present study, showed that cell cycle analysis could differentiate low from high grade gliomas and benign from atypical/anaplastic meningiomas. Furthermore, a prognostic significance was found in glioma patients. The role of cell cycle analysis in brain tumors thus warrants further investigation.

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[415]

**TÍTULO / TITLE:** - The Activity of Class I, II, III and IV of Alcohol Dehydrogenase (ADH) Isoenzymes and Aldehyde Dehydrogenase (ALDH) in Brain Cancer.

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

**REVISTA / JOURNAL:** - Neurochem Res. 2013 Jul;38(7):1517-21. doi: 10.1007/s11064-013-1053-9. Epub 2013 Apr 27.

●●Enlace al texto completo (gratis o de pago) [1007/s11064-013-1053-](https://doi.org/10.1007/s11064-013-1053-9)

[9](#)

**AUTORES / AUTHORS:** - Laniewska-Dunaj M; Jelski W; Orywal K; Kochanowicz J; Rutkowski R; Szmitkowski M

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemical Diagnostics, Medical University, Sklodowskiej-Curie 24 A, 15-276, Bialystok, Poland.

**RESUMEN / SUMMARY:** - The brain being highly sensitive to the action of alcohol is potentially susceptible to its carcinogenic effects. Alcohol dehydrogenase (ADH) and aldehyde dehydrogenase (ALDH) are the main enzymes involved in ethanol metabolism, which leads to the generation of carcinogenic acetaldehyde. Human brain tissue contains various ADH isoenzymes and possess also ALDH activity. The purpose of this study was to compare the capacity for ethanol metabolism measured by ADH isoenzymes and ALDH activity in cancer tissues and healthy brain cells. The samples were taken from 62 brain cancer patients (36 glioblastoma, 26 meningioma). For the measurement of the activity of class I and II ADH isoenzymes and ALDH activity, the fluorometric methods were used. The total ADH activity and activity of class III and IV isoenzymes were measured by the photometric method. The total activity of ADH, and activity of class I ADH were significantly higher in cancer cells than in healthy tissues. The other tested classes of ADH and ALDH did not show statistically significant differences of activity in cancer and in normal cells. Analysis of the enzymes activity did not show significant differences depending on the location of the tumor. The differences in the activity of total alcohol dehydrogenase, and class I isoenzyme between cancer tissues and healthy brain cells might be a factor for metabolic changes and disturbances in low mature cancer cells and additionally might be a reason for higher level of acetaldehyde which can intensify the carcinogenesis.

[416]

**TÍTULO / TITLE:** - Microsurgical resection for parasagittal meningiomas with preservation of the parasagittal sinus and excellent neurovascular control.

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

**REVISTA / JOURNAL:** - Arq Neuropsiquiatr. 2013 May;71(5):301-6.

**AUTORES / AUTHORS:** - Lynch JC; Schiavini H; Bomfim C; Fonseca JF; Pereira C

**RESUMEN / SUMMARY:** - Objective: It was to observe whether a microsurgical gross total removal (GTR) of a parasagittal meningioma (PSM) outside the sinus is a safe and efficient procedure. Method: We identify 58 parasagittal meningiomas patients. Medical charts, operative reports, imaging studies and clinical follow-up evaluations were reviewed. Results: GTR of the mass was

achieved in 45 (77.7%) instances. The surgical mortality rate was 1.7%. The median follow-up time was 63 months. Conclusion: The surgical approach used in this group of patients afford that the great majority of tumors could be totally removed with low mortality, proving to be safe and effective.

[417]

**TÍTULO / TITLE:** - Expanded endonasal approach to skull base meningiomas.

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

**REVISTA / JOURNAL:** - Arq Neuropsiquiatr. 2013 May;71(5):330-1.

**AUTORES / AUTHORS:** - Monaco BA; Ramos HF; Gomes MQ; Espirito Santo MP; Foroni L; Sennes LU; Teixeira MJ

[418]

**TÍTULO / TITLE:** - Cryptococcal meningitis accompanying lymphocytic inflammation predominantly in cerebral deep white matter: A possible manifestation of immune reconstitution inflammatory syndrome.

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

**REVISTA / JOURNAL:** - Neuropathology. 2013 May 20. doi: 10.1111/neup.12046.

●●Enlace al texto completo (gratis o de pago) [1111/neup.12046](http://1111/neup.12046)

**AUTORES / AUTHORS:** - Kuwahara H; Tsuchiya K; Kobayashi Z; Inaba A; Akiyama H; Mizusawa H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology and Neurological Science, Graduate School, Tokyo Medical and Dental University; Department of Neurology, Yokosuka Kyosai Hospital, Kanagawa, Japan.

**RESUMEN / SUMMARY:** - Cryptococcal meningitis is rarely complicated by immune-mediated leukoencephalopathy, but the precise pathomechanism is uncertain. A 72-year-old Japanese man treated with prednisolone for Sweet disease developed a subacute progression of meningitis, which was considered as neuro-Sweet disease. A treatment by methylprednisolone rapidly improved CSF findings with a remarkable decrease in lymphocyte numbers in the blood, but the patient's consciousness still worsened after the cessation of the treatment. The patient developed cryptococcal meningitis and MRI showed abnormal intensities predominantly in the cerebral deep white matter along with the recovery of lymphocyte numbers in the blood, which resulted in death. A postmortem examination of the brain revealed degenerative lesions, especially at the cerebral white matter and cortex adjacent to the leptomeninges abundantly infiltrated by *Cryptococcus neoformans*. In the affected cerebral deep white matter, perivascular infiltration of lymphocytes was prominent in coexistence with reactive astrocytes and vascular proliferation, but these findings were not observed in the subcortical and cortical lesions. *Cryptococcus neoformans* was not present within the brain parenchyma. This is the first

report of a case suggesting that cryptococcal meningitis can accompany lymphocytic inflammation predominantly in cerebral deep white matter as a possible manifestation of immune reconstitution inflammatory syndrome.

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[419]

**TÍTULO / TITLE:** - Prospective Comparison of 99mTc-GH SPECT/CT and 18F-FDOPA PET/CT for Detection of Recurrent Glioma: A Pilot Study.

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

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Apr 10.

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

[1097/RLU.0b013e318279bcd8](#)

**AUTORES / AUTHORS:** - Karunanithi S; Bandopadhyaya GP; Sharma P; Kumar A; Singla S; Malhotra A; Gupta DK; Bal C

**INSTITUCIÓN / INSTITUTION:** - From the Departments of \*Nuclear Medicine, and daggerNeurosurgery, All India Institute of Medical Sciences, New Delhi, India.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** This study aimed to evaluate and compare the role of Tc-GH SPECT/CT and F-FDOPA PET/CT for diagnosing recurrence in patients with glioma. **METHODS:** Thirty patients with histopathologically proven glioma (glioblastoma multiforme, 14; grade III, 6; grade II, 8; and grade I, 2), who presented with clinical and/or imaging suspicion of recurrence were prospectively evaluated. They were primarily treated with surgery and radiotherapy with or without chemotherapy. Each patient underwent Tc-GH SPECT/CT and F-FDOPA PET/CT within a span of 15 days. Images were evaluated qualitatively and quantitatively by 2 experienced nuclear medicine physicians in consensus. Histopathology and/or clinical/imaging follow-up were used as reference standard. **RESULTS:** Based on reference standard, 22 patients were positive and 8 were negative for recurrence. Tc-GH SPECT/CT was positive for recurrence in 22 and negative in 8 patients. F-FDOPA PET/CT scan was positive for recurrence in 23 and negative in 7 patients. Sensitivity, specificity, and accuracy were 86.4%, 62.5%, and 80% for Tc-GH SPECT/CT and 100%, 87.5%, and 96% for F-FDOPA PET/CT, respectively. No significant difference was found between Tc-GH SPECT/CT and F-FDOPA PET/CT overall ( $P = 1.00$ ), as well as for low-grade ( $P = 0.250$ ) or high-grade tumors ( $P = 0.50$ ). Significant correlation was noted between tumor-brain of Tc-GH with both tumor-striatum ( $r = 0.371$ ;  $P = 0.044$ ) and tumor-cerebellum ratio of F-FDOPA ( $r = 0.369$ ;  $P = 0.045$ ). **CONCLUSIONS:** For detection of recurrence in glioma patients, Tc-GH SPECT/CT is not inferior to F-FDOPA PET/CT and can be used as a low-cost alternative.

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[420]

**TÍTULO / TITLE:** - Encephalocraniocutaneous Lipomatosis With Neurocutaneous Melanosis.

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

**REVISTA / JOURNAL:** - J Child Neurol. 2013 Apr 25.

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

[1177/0883073813485432](#)

**AUTORES / AUTHORS:** - Jain P; Chakrabarty B; Kumar A; Gupta N; Kabra M; Gulati S

**INSTITUCIÓN / INSTITUTION:** - 1Division of Pediatric Neurology, Department of Pediatrics, All India Institute of Medical Sciences, New Delhi, India.

**RESUMEN / SUMMARY:** - Encephalocraniocutaneous lipomatosis is a rare neurocutaneous syndrome characterized by classical cutaneous and ocular lesions with central nervous system anomalies. We describe an infant with classical encephalocraniocutaneous lipomatosis characterized by probable naevus psiloliparus, frontal subcutaneous lipomas, ocular limbal dermoids and arachnoid cysts, and ventriculomegaly. He also had giant congenital nevus with leptomeningeal melanosis. This case represents a rare association between encephalocraniocutaneous lipomatosis and neurocutaneous melanosis.

[421]

**TÍTULO / TITLE:** - Computed tomography analysis of third webspace injections for interdigital neuroma.

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

**REVISTA / JOURNAL:** - Foot Ankle Int. 2013 Apr;34(4):575-8. doi: 10.1177/1071100712468873. Epub 2013 Jan 22.

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

[1177/1071100712468873](#)

**AUTORES / AUTHORS:** - Hembree WC; Groth AT; Schon LC; Guyton GP

**INSTITUCIÓN / INSTITUTION:** - Department of Orthopaedic Surgery, MedStar Union Memorial Hospital, Baltimore, MD, USA.

**RESUMEN / SUMMARY:** - BACKGROUND: Injection for interdigital neuroma (IDN) may not selectively target the common digital nerve. We investigated the anatomical localization and extent of extravasation with injection for IDN. METHODS: Two fellowship-trained foot and ankle surgeons injected radiopaque contrast into the third webspace of 49 cadaveric specimens (29 with 2 mL and 20 with 1 mL). Computed tomography scan of each specimen was obtained. An independent blinded foot and ankle surgeon analyzed the scans. RESULTS: All injections were accurate. Contrast was found in the second (greater than 70%) and fourth (greater than 30%) webspaces in both injection volume groups. No contrast was found within the third metatarsophalangeal joint. Extravasation extent was significantly greater with 2 mL versus 1 mL of solution in the medial to lateral (27.9 [7.8] mm vs 23.7 [6.0] mm; P = .05) and

distal to proximal (52.1 [13.7] mm vs 40.4 [16.1] mm; P = .01) planes. No differences were observed in extravasation extent between surgeons.  
CONCLUSION: Injection for IDN was accurate, and extravasation extended into adjacent webspaces in a large percentage of specimens with both solution volumes. Lower extent of extravasation with 1 mL of solution did not indicate better selectivity of injection. CLINICAL RELEVANCE: Steroid injections for interdigital neuroma were accurate for therapeutic purposes but not diagnostic, except potentially for distinguishing webspace pain from joint pain.

[422]

**TÍTULO / TITLE:** - Rosette-forming glioneuronal tumor of the cerebellum in statu nascendi: an incidentally detected diminutive example indicates derivation from the internal granule cell layer.

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

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 Apr 2.

●●Enlace al texto completo (gratis o de pago) [5414/NP300612](#)

**AUTORES / AUTHORS:** - Thommen F; Hewer E; Schafer SC; Vassella E; Kappeler A; Vajtai I

**RESUMEN / SUMMARY:** - Rosette-forming glioneuronal tumor (RGNT) is a recently introduced, indolent neoplasm composed of diminutive circular aggregates of neurocytic-like cells on a noninfiltrative astrocytic background, typically located in the cerebellar midline. The traded concept of RGNT being derived from site-specific periventricular precursors may be questioned in the face of extracerebellar examples as well as ones occurring in combination with other representatives of the glioneuronal family. We describe a hitherto not documented example of asymptomatic RGNT discovered during autopsy of a 74-year-old male. Located in the tuberal vermis, this lesion of 6 mm diameter consisted of several microscopic nests of what were felt to represent nascent stages of RGNT, all of them centered on the internal granular layer, and ranging from mucoid dehiscences thereof to fully evolved - if small - tumor foci. Molecular genetic analysis revealed a missense mutation in Exon 20 of the PIK3CA gene involving an A-->G transition at Nucleotide 3140. On the other hand, neither codeletion of chromosomes 1p/19q nor pathogenic mutations of IDH1/2 were detected. By analogy with in situ paradigms in other organs, we propose that this tumor is likely to have arisen from the internal granular layer, rather than the plate of the 4th ventricle. A suggestive departure from the wholesale argument of "undifferentiated precursors", this finding also indirectly indicates that a subset of non-classical RGNTs - in particular extracerebellar examples, whose origin cannot be mechanistically accounted for by either of the above structures - may possibly reflect an instance of phenotypic convergence, rather than a lineage-restricted entity.

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[423]

**TÍTULO / TITLE:** - Myoepithelioma of the cerebellopontine angle: a previously not documented benign salivary gland-type neoplasm within the cranium.

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

**REVISTA / JOURNAL:** - Clin Neuropathol. 2013 May-Jun;32(3):176-82. doi: 10.5414/NP300596.

●●Enlace al texto completo (gratis o de pago) [5414/NP300596](#)

**AUTORES / AUTHORS:** - Vajtai I; Hewer E; Neuenschwander M; Schafer SC; Kappeler A; Lukes A

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Pathology, Institute of Pathology, University of Bern, Switzerland. [istavanvajtai@yahoo.com](mailto:istavanvajtai@yahoo.com)

**RESUMEN / SUMMARY:** - Myoepithelioma is a dimorphic neoplasm with contractile-epithelial phenotype, originally interpreted as deriving from, but not actually restricted to the salivary glands. As a novel addition to the list of exquisitely rare intracranial salivary gland-type tumors and tumor-like lesions, we report on an example of myoepithelioma encountered in the left cerebellopontine angle of a 32-year-old male. Clinically presenting with ataxia and dizziness, this extraaxial mass of 4 x 3.5 x 3 cm was surgically resected, and the patient is alive 6 years postoperatively. Histologically, the tumor exhibited a continuum ranging from compact fascicles of spindle cells to epithelial nests and trabeculae partitioned by hyalinized septa, while lacking tubular differentiation. Regardless of architectural variations, there was robust immunoexpression of S100 protein, smooth muscle actin, GFAP, cytokeratin, and vimentin. Cytologic atypia tended to be modest throughout, and the MIB1 labeling index averaged less than 1%. Fluorescent in situ hybridization indicated no rearrangement of the EWSR1 locus. We interpret these results to suggest that myoepithelioma of the posterior fossa - along with related salivary epithelial tumors in this ostensibly incongruous locale - may possibly represent analogous neoplasms to their orthotopic counterparts, ones arising within aberrant salivary anlagen. The presence of the latter lends itself to being mechanistically accounted for by either postulating placodal remnants in the wake of branchial arch development, or linking them to exocrine glandular nests within endodermal cysts. Alternatively, myoepithelioma at this site could be regarded as a non tissue-specific lesion similar to its relatives ubiquitously occurring in the soft parts.

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[424]

**TÍTULO / TITLE:** - Downregulation of chromatin remodeling factor CHD5 is associated with a poor prognosis in human glioma.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 23. pii: S0967-5868(12)00589-9. doi: 10.1016/j.jocn.2012.07.021.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.07.021](http://1016/j.jocn.2012.07.021)

**AUTORES / AUTHORS:** - Wang L; He S; Tu Y; Ji P; Zong J; Zhang J; Feng F; Zhao J; Gao G; Zhang Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tangdu Hospital, No. 569, Xinsi Road, Baqiao District, Xi'an City 710038, China.

**RESUMEN / SUMMARY:** - Chromodomain helicase DNA-binding protein 5 (CHD5), a member of the CHD family, is involved in key cellular processes including chromatin remodeling, cell cycle regulation, and cellular adhesion. Recent studies have demonstrated that CHD5 is the product of a novel tumor suppressor gene and is implicated in certain tumor types. However, the clinicopathological significance of CHD5 expression in human malignant gliomas remains unclear. To address this problem, CHD5 expression in human gliomas and non-neoplastic brain tissues was measured using real-time quantitative polymerase chain reaction (RT-PCR) assay, Western blot, and immunohistochemistry. The association of CHD5 immunostaining with clinicopathological factors or prognosis of glioma patients was statistically analyzed. Genetic and protein expression of CHD5 were downregulated in glioma tissues compared to corresponding non-neoplastic brain tissues (both  $p < 0.001$ ). Additionally, decreased expression of CHD5 in glioma was significantly associated with pathological grade ( $p = 0.007$ ); high pathological grade was associated with low CHD5 expression. Loss of CHD5 protein expression was also significantly correlated with a low Karnofsky performance scale score ( $p = 0.01$ ). Moreover, overall survival of patients with low CHD5 protein expression was dramatically shorter than those of patients with high CHD5 protein expression ( $p = 0.003$ ). Multivariate Cox regression analysis indicated that CHD5 expression was an independent prognostic factor for patients with gliomas ( $p = 0.01$ ). In conclusion, these data offer convincing evidence for the first time that CHD5 might act as a tumor suppressor in glioma, may act as a regulator of aggressive development, and is a candidate prognostic marker for this malignancy.

[425]

**TÍTULO / TITLE:** - Identification of microRNA-205 as a potential prognostic indicator for human glioma.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 15. pii: S0967-5868(12)00646-7. doi: 10.1016/j.jocn.2012.10.015.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.10.015](http://1016/j.jocn.2012.10.015)

**AUTORES / AUTHORS:** - Hou SX; Ding BJ; Li HZ; Wang L; Xia F; Du F; Liu LJ; Liu YH; Liu XD; Jia JF; Li L; Wu ZL; Zhao G; Zhang ZG; Deng YC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Xi-jing Hospital, Fourth Military Medical University, 127 West Chang Le Road, Xi'an 710032, China.

**RESUMEN / SUMMARY:** - Altered microRNA-205 (miR-205) expression has been found in glioma tissue samples and cell lines; however, the clinical significance of this is unclear. The aim of this study was to confirm the miR-205 expression pattern in human glioma and to investigate its clinical relevance. Quantitative reverse-transcription polymerase chain reaction assays showed that miR-205 expression was significantly lower in glioma tissues than in non-neoplastic brain tissues ( $P < 0.001$ ). Statistical analysis revealed a significant correlation between low miR-205 expression and both high grade glioma (World Health Organization [WHO] criteria,  $P = 0.008$ ) and a low Karnofsky performance status score ( $P = 0.02$ ). Survival analysis demonstrated that the cumulative 5-year overall survival rate of patients with glioma in the high miR-205 expression group was significantly higher than that in the low miR-205 expression group ( $P < 0.001$ ). Multivariate Cox regression analysis further indicated that miR-205 expression ( $P = 0.01$ ) and WHO grade ( $P = 0.01$ ) were independent prognostic indicators of the overall survival of patients with glioma. Moreover, subgroup analyses revealed that the cumulative 5-year overall survival rate of patients with high grade (III-IV) glioma was significantly worse for the low miR-205 expression group than for the high miR-205 expression group ( $P < 0.001$ ), but no significant difference was found for patients with low grade (I-II) glioma ( $P = 0.09$ ). In conclusion, down-regulation of miR-205 was associated with glioma progression. Our data are the first to suggest that miR-205 holds potential as a prognostic factor for glioma, especially for patients with advanced disease.

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[426]

**TÍTULO / TITLE:** - Ultrasonographic Findings of Neuroma Formation at Both Divisions of the Sciatic Nerve in a Transfemoral Amputee.

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

**REVISTA / JOURNAL:** - Am J Phys Med Rehabil. 2013 Apr 2.

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

[1097/PHM.0b013e31828cd200](#)

**AUTORES / AUTHORS:** - Oh-Park M; Wendel I; Lammertse TE; McKenna C

**INSTITUCIÓN / INSTITUTION:** - From the Kessler Foundation and the Kessler Institute for Rehabilitation, West Orange, New Jersey (MO-P, CM); the Kessler Institute for Rehabilitation, Chester, New Jersey (TEL), and New Jersey Medical School, Newark, New Jersey (IW).

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[427]

**TÍTULO / TITLE:** - Bortezomib overcomes MGMT-related resistance of glioblastoma cell lines to temozolomide in a schedule-dependent manner.

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

**REVISTA / JOURNAL:** - Invest New Drugs. 2013 May 5.

●●Enlace al texto completo (gratis o de pago) [1007/s10637-013-9968-](#)

[1](#)

**AUTORES / AUTHORS:** - Vlachostergios PJ; Hatzidaki E; Befani CD; Liakos P; Papandreou CN

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, Faculty of Medicine, School of Health Sciences, University of Thessaly, Biopolis, 41110, Larissa, Greece, [pvlacho@med.uth.gr](mailto:pvlacho@med.uth.gr).

**RESUMEN / SUMMARY:** - Development of drug resistance after standard chemotherapy for glioblastoma multiforme (GBM) with temozolomide (TMZ) is associated with poor prognosis of GBM patients and is at least partially mediated by a direct DNA repair pathway involving O6-methylguanine methyltransferase (MGMT). This enzyme is under post-translational control by a multisubunit proteolytic cellular machinery, the 26S proteasome. Inhibition of the proteasome by bortezomib (BZ), a boronic acid dipeptide already in clinical use for the treatment of myeloma, has been demonstrated to induce growth arrest and apoptosis in GBM cells. In this study we investigated the effect of sequential treatment with BZ and TMZ on cell proliferation-viability and apoptosis of the human T98G and U87 GBM cell lines. We also tested for an effect of treatment on MGMT expression and important upstream regulators of the latter, including nuclear factor kappa B (NFkappaB), p44/42 mitogen-activated protein kinase (MAPK), p53, signal transducer and activator of transcription 3 (STAT3) and hypoxia-inducible factor 1alpha (HIF-1alpha). The sequence of drug administration for maximal cytotoxicity favored BZ prior to TMZ in T98G cells while the opposite was the case for U87 cells. Maximal efficacy was associated with downregulation of MGMT, reduced I kappa B alpha-mediated proteasome-dependent nuclear accumulation of NFkappaB, attenuation of p44/42 MAPK, AKT and STAT3 activation, and stabilization of p53 and inactive HIF-1alpha. Collectively, these results suggest that proteasome inhibition by BZ overcomes MGMT-mediated GBM chemoresistance, with scheduling of administration being critical for obtaining the maximal tumoricidal effect of combination with TMZ.

[428]

**TÍTULO / TITLE:** - Suprasellar pediatric craniopharyngioma resection via endonasal endoscopic approach.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 24.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2153-](#)

[1](#)

**AUTORES / AUTHORS:** - Ali ZS; Lang SS; Kamat AR; Adappa ND; Palmer JN; Storm PB; Lee JY

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Pennsylvania, 3400 Spruce Street, 3rd Floor Silverstein Pavilion, Philadelphia, PA, 19104, USA, [Zarina.Ali@uphs.upenn.edu](mailto:Zarina.Ali@uphs.upenn.edu).

**RESUMEN / SUMMARY:** - PURPOSE: Purely endoscopic endonasal approaches to surgical resection of pediatric suprasellar craniopharyngiomas are uncommonly performed. The aim of the study is to assess the feasibility and to describe the short-term outcomes of endonasal endoscopic approaches for the gross total resection of suprasellar craniopharyngiomas in the pediatric population. METHODS: A combined neurosurgical-otolaryngologic team performed gross total resection of craniopharyngiomas in seven pediatric patients (mean age 9.6 years) at The Children's Hospital of Philadelphia over 2011-2012. Short-term outcomes were analyzed over a mean follow-up period of 6.3 months. RESULTS: All tumors involved the sellar and/or suprasellar space and contained some cystic component. The mean maximal tumor diameter was 31.5 mm (range 18.5-62.0 mm). Using a binostril approach, gross total tumor resection was obtained in all patients (100 %). All patients with preoperative visual dysfunction demonstrated improvement in visual acuity. New or stable panhypopituitarism was observed in all cases. All patients developed postoperative diabetes insipidus, and cerebrospinal fluid leak occurred in one patient (15 %). CONCLUSIONS: Complete radiographic resection of pediatric craniopharyngioma can be achieved via a purely endoscopic endonasal approach. In particular, this approach can be performed safely using the "two-nostrils-four-hands" technique with intraoperative neuronavigation. This approach should be highly considered in patients with progressive visual dysfunction. Further studies are needed to characterize the long-term surgical and clinical outcome of pediatric patients treated with this surgical approach.

[429]

**TÍTULO / TITLE:** - Defining pseudoprogression in glioblastoma multiforme.

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

**REVISTA / JOURNAL:** - Eur J Neurol. 2013 May 17. doi: 10.1111/ene.12192.

●●Enlace al texto completo (gratis o de pago) [1111/ene.12192](#)

**AUTORES / AUTHORS:** - Van Mieghem E; Wozniak A; Geussens Y; Menten J; De Vleeschouwer S; Van Calenbergh F; Sciot R; Van Gool S; Bechter OE; Demaerel P; Wilms G; Clement PM

**INSTITUCIÓN / INSTITUTION:** - Leuven Cancer Institute, KU Leuven and University Hospitals Leuven, Leuven, Belgium.

**RESUMEN / SUMMARY:** - BACKGROUND AND PURPOSE: Pseudoprogression is a frequent phenomenon observed since the introduction of postoperative

therapy with radiotherapy and temozolomide (RT/TMZ) in glioblastoma multiforme (GBM) patients. However, the criteria defining pseudoprogression, its incidence, the time of occurrence and its impact on therapy and outcome remain poorly defined. **METHODS:** The objective of this study is to compare two sets of criteria (liberal and stringent), defining pseudoprogression, in a cohort of patients treated before and after the introduction of RT/TMZ in the standard postoperative treatment. This retrospective review includes 136 unselected and consecutively treated patients with pathologically diagnosed GBM. **RESULTS:** Pseudoprogression was observed in 10 (12%) cases applying the stringent criteria, and in 18 (23%) patients when using the liberal criteria, in the cohort treated with RT/TMZ. Pseudoprogression was observed in only one patient treated with RT alone. The median time to pseudoprogression was 4 weeks after the end of RT. Patients with pseudoprogression had a median survival time of 28 months, compared with 12 months for patients without pseudoprogression. **CONCLUSIONS:** The incidence of pseudoprogression after RT/TMZ strongly depends on the applied criteria. However, regardless of the stringency of the criteria, the impact on survival remains the same.

[430]

**TÍTULO / TITLE:** - Epigenetic modification after inhibition of IGF-1R signaling in human central nervous system atypical teratoid rhabdoid tumor (AT/RT).

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 28.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2087-](http://1007/s00381-013-2087-7)

[7](#)

**AUTORES / AUTHORS:** - Shim KW; Xi G; Farnell BM; Kim DS; Tsurubuchi T; Tomita T; Mayanil CS

**INSTITUCIÓN / INSTITUTION:** - Pediatric Neurosurgery Research Lab, Developmental Biology Program, Division of Pediatric Neurosurgery, Children's Hospital of Chicago Research Center and Department of Neurosurgery, Northwestern University Feinberg School of Medicine, Chicago, IL, 60614, USA.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** This study investigated epigenetic modifications in human central nervous system atypical teratoid rhabdoid tumors (AT/RTs), in response to inhibition of insulin-like growth factor receptor 1 (IGF-1R). **MATERIALS AND METHODS:** Tumor tissue was obtained from two pediatric patients, tissue was dissociated, and primary cultures were established. Cultured cells were treated with picropodophyllin (PPP; 0, 1, and 2  $\mu$ M for 48 h), a selective IGF-1R inhibitor. Histone acetylation and methylation patterns (H3K9ac, H3K18ac, H3K4me3, H3K27me3) and levels of histone deacetylases (HDACs; HDAC1, HDAC3, and SirT1) and histone acetyl transferases (GCN5 and p300) were examined. H3K9ac and H3K18ac

decreased in response to treatment with PPP. HDAC levels showed a biphasic response, increasing with 1 μM PPP, but then decreasing with 2 μM PPP. CONCLUSION: Inhibition of IGF-1R modified epigenetic status in AT/RT. Determining the mechanisms behind these modifications will guide the development of novel therapeutic targets for this malignant embryonal cancer.

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[431]

**TÍTULO / TITLE:** - Pituitary metastasis of an unknown neuroendocrine breast carcinoma mimicking a pituitary adenoma.

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

**REVISTA / JOURNAL:** - Pathology. 2013 Jun;45(4):422-4. doi: 10.1097/PAT.0b013e328360dfd1.

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

[1097/PAT.0b013e328360dfd1](#)

**AUTORES / AUTHORS:** - Senetta R; Castellano I; Garbossa D; Sapino A; Cassoni P

**INSTITUCIÓN / INSTITUTION:** - \*Department of Medical Sciences, University of Turin daggerDepartment of Laboratory Diagnostic AO-U San Giovanni Battista of Turin double daggerNeurochirurgia, Department of Neuroscience, University of Turin, Turin, Italy.

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[432]

**TÍTULO / TITLE:** - The use of 5-aminolevulinic acid fluorescence guidance in resection of pediatric brain tumors.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 May 25.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2159-](#)

[8](#)

**AUTORES / AUTHORS:** - Preuss M; Renner C; Krupp W; Christiansen H; Fischer L; Merckenschlager A; Kiess W; Muller W; Manzo N; Meixensberger J; Nestler U

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Pediatric Neurosurgery, University Hospital Leipzig, Liebigstrasse 20, 04103, Leipzig, Germany, [preuss@neurosurgeon.ch](mailto:preuss@neurosurgeon.ch).

**RESUMEN / SUMMARY:** - INTRODUCTION: Whereas in the adult population 5-Aminolevulinic acid (5-ALA) fluorescence guidance has been widely accepted for improving the extent of tumor resection, the application in children remains an off-label use. Even though most pediatric study protocols require a complete resection for improving outcome parameters, only few pediatric patients have been operated with fluorescence guidance, and it remains questionable, whether and which pediatric tumors show useful fluorescence. We present casuistic reports of application of 5-ALA in children collected from three different

neurosurgical departments. PATIENTS AND METHODS: In children with suspected malignant intracerebral tumor or recurrence, individual informed consent was obtained in each case from the parents. 5-ALA was administered according to the adult protocol, with 20 mg/kg, 2 h before induction of anesthesia. We retrospectively analyzed 18 patients (13 male, 5 female; age 3-18 years), using the intraoperative neurosurgical protocol, the postoperative MRI results, and the follow-up clinical examinations. RESULTS: The use of 5-ALA fluorescence guidance proved to be safe in our group of pediatric patients. Fluorescence guidance was most useful for recurrent glioblastoma resection. Medulloblastoma tissue displayed fluorescence only inconsistently, and most pilocytic astrocytoma remained without staining. Ganglioglioma showed partial staining in the central tumor areas, without allowing the use for circumferent resection. CONCLUSION: The off-label use of 5-ALA fluorescence guidance in pediatric patients appears to be most useful in recurrent high-grade gliomas. Fluorescence accumulation in other pediatric brain tumor entities is not predictable and should be evaluated in future clinical studies before being integrated into the current treatment protocols.

[433]

**TÍTULO / TITLE:** - Reversal of multidrug resistance by magnetic chitosan-FeO nanoparticle-encapsulated MDR1 siRNA in glioblastoma cell line.

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

**REVISTA / JOURNAL:** - Neurol Res. 2013 May 3.

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

[1179/1743132813Y.0000000218](#)

**AUTORES / AUTHORS:** - Zhao P; Wang H; Gao H; Li C; Zhang Y

**RESUMEN / SUMMARY:** - OBJECTIVE: To investigate the reversal effects of MDR1 gene on multidrug resistance in the glioblastoma cell line BT325 by magnetic chitosan-Fe<sub>3</sub>O<sub>4</sub> nanoparticle-encapsulated MDR1 siRNA. METHODS: The shRNA expression vector was constructed and the recombinant plasmids were cloned. Magnetic chitosan-Fe<sub>3</sub>O<sub>4</sub> nanoparticles were prepared and the encapsulation rate was determined. After transfection, the BT325 cells were cultured to assay the transfection efficiency. The changing of MDR1 mRNA level and P-gp protein was evaluated. And the sensitivity to different chemotherapeutic drugs was assessed in BT325-siRNA transfected cell and untransfected cell by IC<sub>50</sub> values. RESULTS: The MDR1 RNAi plasmid was successfully designed and preparation. The encapsulation efficiency of the magnetic chitosan-Fe<sub>3</sub>O<sub>4</sub> nanoparticle was 98-99%. The transfection efficiency of the siRNA-nanoparticles in BT325 cells was 70-80%. And the MDR1 mRNA levels were downregulated by reverse transcription (RT)-PCR assay. Furthermore, the results of P-gp protein expression decreased on immunocytochemical assay, Western blot and flow cytometry compared with

control group. The IC50 values of DOX and VCR were decreased between the transfected cell and normal BT325 cell. CONCLUSION: After targeted transfection of the glioblastoma cell line with magnetic chitosan-Fe3O4 nanoparticle-encapsulated MDR1 siRNA, the expression of MDR1 at both the mRNA and protein level decreased, which increased sensitivity to chemotherapy in vitro. It might provide a basis for investigation of the mechanism involved in multidrug resistance in glioma.

[434]

**TÍTULO / TITLE:** - Integration of epidemiology, immunobiology, and translational research for brain tumors.

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

**REVISTA / JOURNAL:** - Ann N Y Acad Sci. 2013 May;1284(1):17-23. doi: 10.1111/nyas.12115.

●●Enlace al texto completo (gratis o de pago) [1111/nyas.12115](#)

**AUTORES / AUTHORS:** - Okada H; Scheurer ME; Sarkar SN; Bondy ML

**INSTITUCIÓN / INSTITUTION:** - University of Pittsburgh Cancer Institute, Pittsburgh, Pennsylvania.

**RESUMEN / SUMMARY:** - We recently identified a pivotal role for the host type I interferon (IFN) pathway in immunosurveillance against de novo mouse glioma development, especially through the regulation of immature myeloid cells (IMCs) in the glioma microenvironment. The present paper summarizes our published work in a number of areas. We have identified single-nucleotide polymorphisms (SNPs) in human IFN genes that dictate altered prognosis of patients with glioma. One of these SNPs (rs12553612) is located in the promoter of IFNA8 and influences its activity. Conversely, recent epidemiologic data show that chronic use of nonsteroidal anti-inflammatory drugs lowers the risk of glioma. We translated these findings back to our de novo glioma model and found that cyclooxygenase-2 inhibition enhances antiglioma immunosurveillance by reducing glioma-associated IMCs. Taken together, these findings suggest that alterations in myeloid cell function condition the brain for glioma development. Finally, in preliminary work, we have begun applying novel immunotherapeutic approaches to patients with low-grade glioma with the aim of preventing malignant transformation. Future research will hopefully better integrate epidemiological, immunobiological, and translational techniques to develop novel, preventive approaches for malignant gliomas.

[435]

**TÍTULO / TITLE:** - Intradural cervical nerve root traumatic neuroma without a history of direct trauma.

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

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 Apr 29. pii: S0303-8467(13)00126-1. doi: 10.1016/j.clineuro.2013.03.018.

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

[1016/j.clineuro.2013.03.018](http://1016/j.clineuro.2013.03.018)

**AUTORES / AUTHORS:** - Salas SJ; McFalls JM; Senders ZJ; Kenyon LC; Harrop JS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Jefferson Medical College, Philadelphia 19107, USA.

[436]

**TÍTULO / TITLE:** - Endoscopic distinction between capsule and pseudocapsule of pituitary adenomas.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 18.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1754-](http://1007/s00701-013-1754-5)

[5](#)

**AUTORES / AUTHORS:** - Ceylan S; Cabuk B; Koc K; Anik I; Vural C

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Kocaeli University, School of Medicine, 41380, Umuttepe, Izmit, Kocaeli, Turkey, [ssceylan@yahoo.com](mailto:ssceylan@yahoo.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Pseudocapsules were first identified in pituitary adenoma surgery in 1936. Since then, the distinction between pituitary capsules and pseudocapsules has been unclear, and the definitions of these entities have varied. In this study, pituitary capsules and extracapsular dissection were examined retrospectively, intra- and extrapseudocapsular resection was evaluated, and dissection of the pituitary adenoma and pseudocapsule was examined prospectively. METHODS: Between January 2009 and May 2012, endoscopic transsphenoidal pituitary surgery was performed on 224 patients in the Department of Neurosurgery, Kocaeli University Faculty of Medicine, Turkey. Data for 174 patients were analyzed retrospectively between January 2009 and December 2011, and 50 patients treated between December 2011 and May 2012 were included in a prospective study. RESULTS: In the retrospective phase of the study, capsules were examined in 21 of the 174 patients on whom extracapsular resection had been performed. In the 50 cases treated between December 2011 and May 2012, dissection of the pituitary capsule, adenohypophysis, and pseudocapsule was performed. In 30 patients in the prospective phase of the study, pseudocapsules were identified during intraoperative endoscopic observation. Remission was achieved in 28 of 33 functioning adenomas in the prospective study. The mean follow-up period in this group was 13 months. CONCLUSION: The endoscopic and histopathological evidence provided in this study demonstrates that the pituitary capsule and pseudocapsule are distinct

structures. In addition, it is also shown that extracapsular dissection can be performed in functioning adenomas that invade the suprasellar region. Significantly higher rates of total resection and higher remission rates were observed in cases where extra- and intrapseudocapsular dissection was required.

[437]

**TÍTULO / TITLE:** - Segmentation, Feature Extraction, and Multiclass Brain Tumor Classification.

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

**REVISTA / JOURNAL:** - J Digit Imaging. 2013 May 4.

●●Enlace al texto completo (gratis o de pago) [1007/s10278-013-9600-0](#)

**AUTORES / AUTHORS:** - Sachdeva J; Kumar V; Gupta I; Khandelwal N; Ahuja CK

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**RESUMEN / SUMMARY:** - Multiclass brain tumor classification is performed by using a diversified dataset of 428 post-contrast T1-weighted MR images from 55 patients. These images are of primary brain tumors namely astrocytoma (AS), glioblastoma multiforme (GBM), childhood tumor-medulloblastoma (MED), meningioma (MEN), secondary tumor-metastatic (MET), and normal regions (NR). Eight hundred fifty-six regions of interest (SROIs) are extracted by a content-based active contour model. Two hundred eighteen intensity and texture features are extracted from these SROIs. In this study, principal component analysis (PCA) is used for reduction of dimensionality of the feature space. These six classes are then classified by artificial neural network (ANN). Hence, this approach is named as PCA-ANN approach. Three sets of experiments have been performed. In the first experiment, classification accuracy by ANN approach is performed. In the second experiment, PCA-ANN approach with random sub-sampling has been used in which the SROIs from the same patient may get repeated during testing. It is observed that the classification accuracy has increased from 77 to 91 %. PCA-ANN has delivered high accuracy for each class: AS-90.74 %, GBM-88.46 %, MED-85 %, MEN-90.70 %, MET-96.67 %, and NR-93.78 %. In the third experiment, to remove bias and to test the robustness of the proposed system, data is partitioned in a manner such that the SROIs from the same patient are not common for training and testing sets. In this case also, the proposed system has performed well by delivering an overall accuracy of 85.23 %. The individual class accuracy for each class is: AS-86.15 %, GBM-65.1 %, MED-63.36 %, MEN-91.5 %, MET-65.21 %, and NR-93.3 %. A computer-aided diagnostic system comprising of developed methods for segmentation, feature extraction, and classification of

brain tumors can be beneficial to radiologists for precise localization, diagnosis, and interpretation of brain tumors on MR images.

[438]

**TÍTULO / TITLE:** - Osteoma of the internal auditory canal.

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

**REVISTA / JOURNAL:** - Intern Med. 2013;52(7):839. Epub 2013 Apr 1.

**AUTORES / AUTHORS:** - Plantone D; Renna R; Primiano G; Servidei S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, Institute of Neurology, Catholic University, Italy. [domenicoplantone@hotmail.com](mailto:domenicoplantone@hotmail.com)

[439]

**TÍTULO / TITLE:** - Inhibitory effects of epigenetic modulators and differentiation inducers on human medulloblastoma cell lines.

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

**REVISTA / JOURNAL:** - J Exp Clin Cancer Res. 2013 May 14;32:27. doi: 10.1186/1756-9966-32-27.

●●Enlace al texto completo (gratis o de pago) [1186/1756-9966-32-27](#)

**AUTORES / AUTHORS:** - Patties I; Kortmann RD; Glasow A

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Therapy, University of Leipzig, Stephanstrasse 9<sup>a</sup>, Leipzig, 04103, Germany. [lna.patties@medizin.uni-leipzig.de](mailto:lna.patties@medizin.uni-leipzig.de).

**RESUMEN / SUMMARY:** - BACKGROUND: Medulloblastoma (MB) is the most common malignant brain tumor in childhood with a 5-year survival of approximately 60%. We have recently shown that treatment of human MB cells with 5-aza-2'-deoxycytidine (5-aza-dC) reduces the clonogenic survival significantly. Here, we tested combinatorial effects of 5-aza-dC with other epigenetic (valproic acid, SAHA) and differentiation-inducing drugs (resveratrol, abacavir, retinoic acid) on human MB cells in vitro to intensify the antitumor therapy further. METHODS: Three human MB cell lines were treated with 5-aza-dC alone or in combination for three or six days. Metabolic activity was measured by WST-1 assay. To determine long-term reproductive survival, clonogenic assays were performed. Induction of DNA double-strand break (DSB) repair was measured by gammaH2AX assay. RESULTS: The applied single drugs, except for ATRA, reduced the metabolic activity dose-dependently in all MB cell lines. Longer treatment times enhanced the reduction of metabolic activity by 5-aza-dC. Combinatorial treatments showed differential, cell line-dependent responses indicating an important impact of the genetic background. 5-Aza-dC together with resveratrol was found to exert the most significant inhibitory effects on metabolic activity in all cell lines. 5-aza-dC alone reduced the clonogenicity of MB cells significantly and induced DSB with no

further changes after adjuvant administration of resveratrol. CONCLUSION: The observed significant decrease in metabolic activity by combinatorial treatment of MB cells with 5-aza-dC and resveratrol does not translate into long-term reproductive survival deficiency in vitro. Further studies in animal models are needed to clarify the resveratrol-mediated anticancer mechanisms in vivo.

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[440]

**TÍTULO / TITLE:** - Second primary brain tumors following cranial irradiation for pediatric solid brain tumors.

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

**REVISTA / JOURNAL:** - Childs Nerv Syst. 2013 Apr 10.

●●Enlace al texto completo (gratis o de pago) [1007/s00381-013-2098-](#)

[4](#)

**AUTORES / AUTHORS:** - You SH; Lyu CJ; Kim DS; Suh CO

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Severance Hospital, Yonsei University College of Medicine, 50 Yonsei-Ro, Seodaemun-gu, Seoul, 120-752, South Korea.

**RESUMEN / SUMMARY:** - PURPOSE: We describe our institution's experience with seven patients who developed second brain tumors following cranial irradiation. METHODS: The median age at first irradiation was 8 years (range, 3-20 years). Initial diagnoses were two cases of germinoma, one non-germinomatous germ cell tumor (NGGCT), three cases of medulloblastoma, and one pineal gland tumor (pathology undetermined). All patients received craniospinal irradiation followed by local boost and the median dose to the initial tumor area was 54.0 Gy (range, 49.8-60.6 Gy). Four patients (two medulloblastomas, one germinoma, and one NGGCT) received chemotherapy. RESULTS: Second brain tumors were diagnosed a median of 114 months (range, 64-203) after initial radiation. Pathologic diagnoses were one glioblastoma, two cases of anaplastic astrocytoma, one medulloblastoma, one low-grade glioma, one high-grade glial tumor, and one atypical meningioma. Five patients underwent surgical resection with subsequent radiotherapy. One anaplastic astrocytoma patient received chemotherapy only following stereotactic biopsy. The meningioma patient was alive 32 months after total resection and radiosurgery for subsequent recurrences. Six patients died within 18 months and most deaths were due to disease progression. CONCLUSIONS: Most patients diagnosed with second brain tumors had received high-dose, large-volume radiotherapy with chemotherapy at a young age. Further studies are required to determine the relationship between radiotherapy/chemotherapy and the development of secondary brain tumors.

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[441]

**TÍTULO / TITLE:** - Coil embolization and surgical removal of carotid body paraganglioma.

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

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 May;24(3):e242-5. doi: 10.1097/SCS.0b013e31828607ef.

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

[1097/SCS.0b013e31828607ef](#)

**AUTORES / AUTHORS:** - Cvjetko I; Erdelez L; Podvez Z; Buhin M; Vidjak V; Borovecki A; Cvjetko T; Grsic K

**INSTITUCIÓN / INSTITUTION:** - From the \*Departments of Vascular Surgery, daggerRadiology and double daggerPathology, University Hospital Meku, Zagreb; section signPolyclinic for Speech and HearingRehabilitation, Suvag, Zagreb; and parallellnstitute for Tumors, Zagreb, Croatia.

**RESUMEN / SUMMARY:** - Carotid body paraganglioma has considerable malignant potential and locally aggressive behavior, so it should be treated as soon as it is discovered. We report the case of 60-year-old male patient with a carotid body paraganglioma (Shamblin group II) that was causing the carotid arteries to spread. Angiography showed 1 dominant feeding artery arising from the right external carotid artery. Selective angiography was performed 2 days before surgical removal of the tumor, and the feeding artery was successfully embolized with coils. Literature review reveals previous reports where preoperative embolization of the feeding arteries was done using ethanol, polymers, or other liquid agents. In our case, angiography (via femoral artery) was performed 2 days before surgical removal of the tumor, and the main feeding artery (a single branch arising from external carotid artery) was successfully embolized with coils rather than liquids. Performing coil embolization before operating reduced subsequent blood loss and made it easier to identify the feeding artery during surgery. Supraselective coiling, although as difficult as embolization with liquids, may reduce the incidence of postoperative stroke. At 1 year after surgery, the patient had no signs of tumor recurrence.

[442]

**TÍTULO / TITLE:** - Transcallosal approach to third ventricle tumors: how I do it.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Jun;155(6):1031-4. doi: 10.1007/s00701-013-1714-0. Epub 2013 Apr 26.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1714-](#)

[0](#)

**AUTORES / AUTHORS:** - Tomasello F; Cardali S; Angileri FF; Conti A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Messina, Via Consolare Valeria, 1, 98125, Messina, Italy.

**RESUMEN / SUMMARY:** - BACKGROUND: The transcallosal approach provides a direct corridor to the lesions lying in the third ventricle with distinct advantages over alternative routes, such as the possibility to use multiple corridors for tumor resection. METHOD: Here we present a personal perspective of the surgery of tumors of the anterior portion of the third ventricle using this approach. CONCLUSIONS: This approach requires the ability to move around many neurovascular, cortical, and white matter structures. Knowledge of regional anatomy and adherence to principles of microsurgery are basic requirements to obtain a favorable outcome.

[443]

**TÍTULO / TITLE:** - Silencing of HEPN1 is responsible for the aggressive biological behavior of pituitary somatotroph adenomas.

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

**REVISTA / JOURNAL:** - Cell Physiol Biochem. 2013;31(2-3):379-88. doi: 10.1159/000343375. Epub 2013 Mar 8.

●●Enlace al texto completo (gratis o de pago) [1159/000343375](#)

**AUTORES / AUTHORS:** - Peng H; Fan J; Wu J; Lang J; Wang J; Liu H; Zhao S; Liao J

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology-Head and Neck Surgery, Changzheng Hospital, Second Military Medical University, Shanghai, China.

**RESUMEN / SUMMARY:** - BACKGROUND/AIMS: The pathogenic mechanisms underlying pituitary adenoma formation, progression, and invasion are poorly understood. To identify candidate tumor suppressor genes, we selected somatotroph adenomas as representative of pituitary adenomas. METHODS/RESULTS: We used genome-wide differential expression analysis in 15 invasive and 12 noninvasive somatotroph adenomas. HEPN1 reduction was more frequent in the invasive group, and this result was confirmed by qRT-PCR. To understand the function of HEPN1, the pituitary adenoma cell lines, GH3 and GT1.1, were stably transfected with short hairpin RNA (shRNA) targeting HEPN1 or ectogenic HEPN1 by lentivirus-mediated transfection. We found that HEPN1 overexpression in GH3 and GT1.1 cells inhibited cell proliferation, induced apoptosis, and attenuated invasive capacity, whereas HEPN1 silencing enhanced cell proliferation and invasion accompanied by decreased apoptosis. Western blot analysis revealed that HEPN1 overexpression decreased MMP-2, MMP-9, and Bcl-2 expression, but increased BAX, p53, and caspase-3 expression. In contrast, HEPN1 silencing increased MMP-2, MMP-9, and Bcl-2 expression, but decreased BAX, p53, and caspase-3 expression. CONCLUSION: Taken together, our results suggest that reduction of HEPN1 may play an important role in the progression of pituitary somatotroph adenomas. HEPN1 may thus be a candidate as a prognostic

predictor or an anticancer therapeutic target for patients with somatotroph adenoma.

[444]

**TÍTULO / TITLE:** - Trans-sylvian transtentorial approach for a giant craniopharyngioma of the posterior fossa.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Jun;155(6):1041-3. doi: 10.1007/s00701-013-1719-8. Epub 2013 Apr 21.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1719-](#)

[8](#)

**AUTORES / AUTHORS:** - Salunke P; Futane S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, PGIMER, Sector 12, Chandigarh, 160012, India, [drpravin\\_salunke@yahoo.co.uk](mailto:drpravin_salunke@yahoo.co.uk).

[445]

**TÍTULO / TITLE:** - Human chorionic gonadotropin elevation is not an intracranial germ cell tumor signature.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 Jun;155(6):1037-8. doi: 10.1007/s00701-013-1711-3. Epub 2013 Apr 20.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1711-](#)

[3](#)

**AUTORES / AUTHORS:** - Bourdillon P; Frappaz D; Vasiljevic A; Jouanneau E

**INSTITUCIÓN / INSTITUTION:** - Department of neurosurgery A, Hopital Neurologique et Neurochirurgical Pierre Wertheimer, Hospices Civils de Lyon, 59 bd Pinel, 69500, Bron, France, [pierre.bourdillon@neurochirurgie.fr](mailto:pierre.bourdillon@neurochirurgie.fr).

[446]

**TÍTULO / TITLE:** - Combined extradural subtemporal and anterior transpetrosal approach to tumors located in the interpeduncular fossa and the upper clivus.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 23.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1765-](#)

[2](#)

**AUTORES / AUTHORS:** - Aoyagi M; Kawano Y; Tamaki M; Tamura K; Ohno K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Graduate School, Tokyo Medical and Dental University, Bunkyo-ku, Tokyo, 113-8519, Japan, [aoyagi@kameda.jp](mailto:aoyagi@kameda.jp).

**RESUMEN / SUMMARY:** - BACKGROUND: Central skull base lesions in the interpeduncular fossa and the upper clival regions can be challenging to access because of their location anterior to the brainstem. We have modified the anterior transpetrosal approach by combination with the extradural subtemporal route to increase the surgical corridor. METHODS: Thirty-seven patients underwent surgical treatment via the anterior transpetrosal approach from 2002 to 2012. The combined surgical approach was primarily applied when the tumors arose from the upper clival portion and extended to the interpeduncular fossa. The combined approach was used in seven of these patients, comprising four patients with petroclival meningiomas, one patient with sphenoclivar meningiomas, one patient with trigeminal schwannoma, and one patient with an epidermoid cyst extending from the interpeduncular fossa to the prepontine cistern. RESULTS: The combined approach permitted excellent visualization of the interpeduncular fossa in addition to the upper clivus and the lateral aspect of the brain stem. Mobilization of the temporal lobe by the entire epidural dissection of the lateral wall of the cavernous sinus facilitates access via the subtemporal route. The transient symptom of the temporal lobe in the dominant site may be the only drawback for this combined approach, although it may disappear immediately after the surgery. CONCLUSION: The present approach combines Dolenc's approach and Kawase's approach, providing a wide exposure to lesions of the interpeduncular fossa and the clivus.

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[447]

**TÍTULO / TITLE:** - Neuroendoscopic aspiration of tumors in the posterior third ventricle and aqueduct lumen: a technical update.

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

**REVISTA / JOURNAL:** - Acta Neurochir (Wien). 2013 May 25.

●●Enlace al texto completo (gratis o de pago) [1007/s00701-013-1763-](#)

[4](#)

**AUTORES / AUTHORS:** - Feletti A; Marton E; Fiorindi A; Longatti P

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Treviso Hospital, University of Padova, Piazzale Ospedale, 1, 31100, Treviso, Italy, [alberto.feletti@gmail.com](mailto:alberto.feletti@gmail.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Small soft ventricular tumors are good candidates for complete removal by a purely endoscopic technique. This approach is particularly interesting for lesions located in the posterior third ventricle and aqueductal lumen. METHODS: We present our method of endoscopic aspiration through direct contact between the tumor and the working channel of a flexible scope. RESULTS: Aspiration without the intermediate use of cannulas is safe and has proved to be effective in the apparently total or partial removal of three soft tumors of different pathologies located in the third ventricle or aqueductal lumen. In one case, a second

neuroendoscopy a few months later to repeat endoscopic third ventriculostomy (ETV) offered a unique opportunity to observe the absence of the tumor and the restored anatomy. CONCLUSIONS: Neuroendoscopy provides a safe, effective way to radically resect small soft tumors in these troublesome locations and can be a valuable alternative to microsurgery.

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[448]

**TÍTULO / TITLE:** - Pseudopapillary pattern in intra-operative squash smear preparations of central nervous system germinomas.

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

**REVISTA / JOURNAL:** - Cytopathology. 2013 Apr 1. doi: 10.1111/cyt.12056.

●●Enlace al texto completo (gratis o de pago) [1111/cyt.12056](#)

**AUTORES / AUTHORS:** - Ates D; Kosemehmetoglu K; Onder S; Soylemezoglu F  
**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Hacettepe University Faculty of Medicine, Ankara, Turkey.

**RESUMEN / SUMMARY:** - BACKGROUND: Although the morphology of central nervous system (CNS) germ cell tumours is very similar to that of gonadal germ cell tumours, some architectural changes may dominate the microscopic appearance of CNS germinomas leading to misdiagnosis at low-power magnification. METHODS: We report five cases of CNS germinoma demonstrating delicate pseudopapillary fronds on squash smear preparations. RESULTS: The age of the patients ranged from 5 to 21 years (mean 14). Three were female and two male. Three patients presented with symptoms of diabetes insipidus, including polydipsia and polyuria, while absence seizures, meaningless speech, hemiparesia, weight loss, insufficient breast development, amenorrhoea and symptoms of raised intracranial pressure were also encountered depending on the location of the tumours. Tumours were located in the hypophysis in two cases and in the suprasellar region in three. During the intra-operative pathological consultation, evenly distributed pseudopapillary or papillary structures formed the dominant pattern in the squash preparations of all cases. The neoplastic cells were characterized by pale variably vacuolated cytoplasm, pleomorphic nuclei with irregular membranes, and several prominent nucleoli. Variable numbers of small lymphocytes were also found. CONCLUSION: Intracranial germinomas may commonly exhibit a pseudopapillary pattern on squash smears that may cause misdiagnosis as neoplasms with papillary morphology. Careful examination of cellular details is essential in order to reach the correct diagnosis.

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[449]

**TÍTULO / TITLE:** - Suppression of STIM1 inhibits human glioblastoma cell proliferation and induces G0/G1 phase arrest.

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

**REVISTA / JOURNAL:** - J Exp Clin Cancer Res. 2013 Apr 11;32:20. doi: 10.1186/1756-9966-32-20.

●●Enlace al texto completo (gratis o de pago) [1186/1756-9966-32-20](#)

**AUTORES / AUTHORS:** - Li G; Zhang Z; Wang R; Ma W; Yang Y; Wei J; Wei Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Peking Union Medical College Hospital, Peking Union Medical College and Chinese Academy of Medical Sciences, No,1 Shuaifuyuan, Wangfujing, Dongcheng District, Beijing 100730, PR China. [yanpingweibj@163.com](mailto:yanpingweibj@163.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Depletion of calcium (Ca<sup>2+</sup>) from the endoplasmic reticulum (ER) activates the ubiquitous store-operated Ca<sup>2+</sup> entry (SOCE) pathway which sustains long-term Ca<sup>2+</sup> signals and is critical for cellular functions. Stromal interacting molecule 1 (STIM1) serves a dual role as an ER Ca<sup>2+</sup> sensor and activator of SOCE. Aberrant expression of STIM1 could be observed in several human cancer cells. However, the role of STIM1 in regulating tumorigenesis of human glioblastoma still remains unclear.

METHODS: Expression of STIM1 protein in a panel of human glioblastoma cell lines (U251, U87 and U373) in different transformation level were evaluated by Western blot method. STIM1 loss of function was performed on U251 cells, derived from grade IV astrocytomas-glioblastoma multiforme with a lentivirus-mediated short harpin RNA (shRNA) method. The biological impacts after knock down of STIM1 on glioblastoma cells were investigated in vitro and in vivo.

RESULTS: We discovered that STIM1 protein was expressed in U251, U87 and U373 cells, and especially higher in U251 cells. RNA interference efficiently downregulated the expression of STIM1 in U251 cells at both mRNA and protein levels. Specific downregulation of STIM1 inhibited U251 cell proliferation by inducing cell cycle arrest in G0/G1 phase through regulation of cell cycle-related genes, such as p21Waf1/Cip1, cyclin D1 and cyclin-dependent kinase 4 (CDK4), and the antiproliferative effect of STIM1 silencing was also observed in U251 glioma xenograft tumor model. CONCLUSION: Our findings confirm STIM1 as a rational therapeutic target in human glioblastoma, and also indicate that lentivirus-mediated STIM1 silencing is a promising therapeutic strategy for human glioblastoma.

[450]

**TÍTULO / TITLE:** - Alcohol Injection for Morton's Neuroma: A Five-Year Follow-Up.

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

**REVISTA / JOURNAL:** - Foot Ankle Int. 2013 May 13.

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

[1177/1071100713489555](#)

**AUTORES / AUTHORS:** - Gurdezi S; White T; Ramesh P

**INSTITUCIÓN / INSTITUTION:** - Kingston Hospital NHS Trust, Kingston-upon-Thames, UK.

**RESUMEN / SUMMARY:** - BACKGROUND: Although many treatment modalities are available for Morton's neuroma (MN), studies looking at the long-term effectiveness of most forms of treatment are scarce. The injection of MN with alcohol has gained popularity over the past 10 years with widespread media coverage. Many surgeons have anecdotally questioned the long-term effectiveness of this treatment. We reviewed a cohort of patients at an average 5-year follow-up to assess the medium-term results of alcohol injection. METHODS: We used the modified Johnson score and visual analogue scales to assess 45 of the original cohort of patients with an average follow-up of 61 months (range, 33-73 months). Any complications from the procedure were also noted. RESULTS: Our results indicated that by 5 years, 16 of 45 patients had undergone surgical treatment and a further 13 patients had return of symptoms. Only 29% (13/45) remained symptom free. The visual analog scale and modified Johnson scores showed statistically significant deterioration in patients' symptoms at 5 years following alcohol injection. CONCLUSION: Injection with alcohol sclerosant for MN has been marketed as a definitive management option comparable to surgical excision. Our investigation illustrated that although short-term results are encouraging, alcohol injection does not offer permanent resolution of symptoms for most patients and can be associated with considerable morbidity. Our investigation provides the only long-term data for alcohol injection treatment of MN. LEVEL OF EVIDENCE: Level II, prospective case series.

[451]

**TÍTULO / TITLE:** - Orbital Invasion by ACTH-Secreting Pituitary Adenomas.

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

**REVISTA / JOURNAL:** - Ophthal Plast Reconstr Surg. 2013 May 2.

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

[1097/IOP.0b013e31829164cb](#)

**AUTORES / AUTHORS:** - Dhaliwal JS; Seibold LK; Kleinschmidt-Demasters BK; Lillehei KO; Hink EM; Prall JA; Durairaj VD

**INSTITUCIÓN / INSTITUTION:** - \*University of Colorado School of Medicine, Aurora, Colorado, U.S.A.; daggerDepartment of Ophthalmology, University of Colorado Eye Center, Aurora, Colorado, U.S.A.; double daggerDepartment of Neurosurgery, School of Medicine, University of Colorado Denver, Aurora, Colorado, U.S.A; and section signSouth Denver Neurosurgery, Denver, Colorado, U.S.A.

**RESUMEN / SUMMARY:** - Orbital invasion by pituitary tumors is rare. To the best of the authors' knowledge, adrenocorticotrophin (ACTH)-secreting pituitary tumors with orbital invasion have not been described in MEDLINE indexed

literature. The authors report 2 cases of ACTH-secreting tumors with orbital invasion. One patient had a history of endoscopic transsphenoidal subtotal resection of an ACTH-secreting tumor and presented with recurrence in the orbit. The second patient had a long history of visual loss considered to be secondary to glaucoma. Neuroimaging revealed a destructive mass involving the sella turcica with extension in the right orbit. Debulking of the mass was performed via a transsphenoidal approach, and histopathology revealed an ACTH-secreting adenoma. ACTH-secreting adenoma should be considered in the differential of tumors involving the sella turcica with orbital invasion.

[452]

**TÍTULO / TITLE:** - Congenital lipomatosis of the scalp: the importance of investigation for intracranial lipoma.

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

**REVISTA / JOURNAL:** - Eur J Dermatol. 2013 Apr 1;23(2):266-7. doi: 10.1684/ejd.2013.1993.

●●Enlace al texto completo (gratis o de pago) [1684/ejd.2013.1993](#)

**AUTORES / AUTHORS:** - Park YJ; Lee YM; Kwon JE; Jang YH

**INSTITUCIÓN / INSTITUTION:** - Department of Dermatology, Ajou University School of Medicine, Suwon 443-749, Korea.

[453]

**TÍTULO / TITLE:** - Intracerebral abscess with dissecting pneumocephalus caused by a gas-producing gram-positive rod following craniotomy for glioblastoma multiforme resection.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 17. pii: S0967-5868(13)00024-6. doi: 10.1016/j.jocn.2012.09.038.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.09.038](#)

**AUTORES / AUTHORS:** - Sarkiss CA; Soleymani T; Caplan JM; Dorsi MJ; Huang J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, David Geffen School of Medicine, University of California, Los Angeles, CA, USA.

**RESUMEN / SUMMARY:** - Propionibacterium acnes (P. acnes), an indolent and slow-growing anaerobic gram-positive bacterium, has largely been known as a commensal organism of the normal skin flora. However, P. acnes is increasingly being recognized as the causative infectious organism complicating craniotomies and shunt insertions. To our knowledge, we present the first reported patient with an intracerebral abscess with dissecting pneumocephalus caused by P. acnes. A 58-year-old woman who was immunocompetent presented 3 weeks after a craniotomy for resection of a glioblastoma multiforme

with worsening mental status, lethargy and left hemiparesis. Head CT scans and MRI demonstrated significant vasogenic edema and dissecting pneumocephalus in the resection cavity. A craniotomy was performed and purulent material was found in the subdural space and resection cavity. Cultures were positive for *P. acnes*. She completed a full course of intravenous antibiotics appropriate for the organism. The infection was eradicated and the patient survived albeit with persistent deficits. This case illustrates the importance of considering an underlying intracerebral abscess in patients with worsening neurological function and pneumocephalus on imaging several weeks after surgery. Our review of the literature underscores the great importance in early recognition and treatment with both surgical debridement and antibiotic therapy in achieving optimal patient recovery.

[454]

**TÍTULO / TITLE:** - Validation study of a fast, accurate, and precise brain tumor volume measurement.

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

**REVISTA / JOURNAL:** - Comput Methods Programs Biomed. 2013 May 18. pii: S0169-2607(13)00119-3. doi: 10.1016/j.cmpb.2013.04.011.

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

[1016/j.cmpb.2013.04.011](#)

**AUTORES / AUTHORS:** - Dang M; Modi J; Roberts M; Chan C; Mitchell JR

**INSTITUCIÓN / INSTITUTION:** - Imaging Informatics Lab, 2500 University Drive NW, Calgary, AB T2N 1N4, Canada. Electronic address: [mdang@ucalgary.ca](mailto:mdang@ucalgary.ca).

**RESUMEN / SUMMARY:** - Precision and accuracy are sometimes sacrificed to ensure that medical image processing is rapid. To address this, our lab had developed a novel level set segmentation algorithm that is 16x faster and >96% accurate on realistic brain phantoms. METHODS: This study reports speed, precision and estimated accuracy of our algorithm when measuring MRIs of meningioma brain tumors and compares it to manual tracing and modified MacDonald (MM) ellipsoid criteria. A repeated-measures study allowed us to determine measurement precisions (MPs) - clinically relevant thresholds for statistically significant change. RESULTS: Speed: the level set, MM, and trace methods required 1:20, 1:35, and 9:35 (mm:ss) respectively on average to complete a volume measurement ( $p < 0.05$ ). Accuracy: the level set was not statistically different to the estimated true lesion volumes ( $p > 0.05$ ). Precision: the MM's within-operator and between-operator MPs were significantly higher (worse) than the other methods ( $p < 0.05$ ). The observed difference in MP between the level set and trace methods did not reach statistical significance ( $p > 0.05$ ). CONCLUSION: Our level set is faster on average than MM, yet has accuracy and precision comparable to manual tracing.

[455]

**TÍTULO / TITLE:** - Acquired capillary hemangioma with features of tufted angioma in the external auditory canal.

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

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 May;24(3):e270-1. doi: 10.1097/SCS.0b013e3182801e97.

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

[1097/SCS.0b013e3182801e97](#)

**AUTORES / AUTHORS:** - Cetinkaya Z; Toplu Y; Kizilay A; Aydin NE

**INSTITUCIÓN / INSTITUTION:** - From the Departments of \*Otolaryngology and Pathology, Faculty of Medicine, Inonu University, Malatya, Turkey.

**RESUMEN / SUMMARY:** - Tufted angiomas may occur in the head and neck region, but the external auditory canal is a previously undefined localization. There are only 19 cases of hemangiomas reported in this unique localization. However, this case is the first capillary hemangioma of the tufted variant being reported with a recurrence after 7 years after surgical excision in a 47-year-old male patient.

[456]

**TÍTULO / TITLE:** - Mediastinal Paraganglioma between the Great Vessels in an 81-Year-Old Woman.

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

**REVISTA / JOURNAL:** - Tex Heart Inst J. 2013;40(2):189-92.

**AUTORES / AUTHORS:** - Ghouri MA; Krishnan E; Singh A; Zaman T; Hallman CH

**INSTITUCIÓN / INSTITUTION:** - Texas Heart Institute at St. Luke's Episcopal Hospital, Houston, Texas 77030.

**RESUMEN / SUMMARY:** - Nonfunctional paragangliomas are slow-growing, typically benign tumors that arise from the extra-adrenal paraganglion of the autonomic nervous system. They are identified and characterized with the use of computed tomography and other imaging methods; for definitive diagnosis, histopathologic evaluation is crucial. Surgical resection is the treatment of choice, and results of postoperative biochemical testing can reveal recurrence. Because of this lesion's familial association, genetic testing is suggested. We report the case of an 81-year-old woman who presented with neck pain, intermittent palpitations, hypertension, and dyspnea. Contrast-enhanced computed tomography of the chest revealed a multilobular, high-density lesion between the aorta and the pulmonary artery in the superior mediastinum. The patient's 24-hour urinary vanillylmandelic acid levels were not elevated, which suggested a nonfunctional tumor. Mediastinal exploration revealed a large, vascular, irregular, consistently firm mass that adhered to the aortic arch. Upon histopathologic analysis after complete resection, the mass was determined to

be a paraganglioma with a low index of mitosis. The patient had postoperative respiratory insufficiency that necessitated tracheostomy, but she recovered well after rehabilitation. In addition to reporting our patient's case, we discuss the nature, diagnosis, and treatment of paragangliomas.

[457]

**TÍTULO / TITLE:** - Pseudomeningocele presenting as a cyst of the external auditory canal.

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

**REVISTA / JOURNAL:** - J Craniofac Surg. 2013 May;24(3):e235-7. doi: 10.1097/SCS.0b013e3182860a0a.

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

[1097/SCS.0b013e3182860a0a](#)

**AUTORES / AUTHORS:** - Kapsuz Z; Ozkiris M; Okur A; Saydam L

**INSTITUCIÓN / INSTITUTION:** - From the \*Departments of Otolaryngology, Head and Neck Surgery and daggerRadiology, Bozok University Medical Faculty, Yozgat, Turkey.

**RESUMEN / SUMMARY:** - Pseudomeningocele is a cerebrospinal fluid collection in an extradural area after meningeal tear. The etiology of pseudomeningocele development is iatrogenic or traumatic in most cases. In this study, we report a case of the postsurgical pseudomeningocele presenting as a cystic mass in the external auditory canal and complete sensorineural hearing loss with a review of the relevant literature.

[458]

**TÍTULO / TITLE:** - Trans-lamina terminalis approach for third ventricle and suprasellar tumours.

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

**REVISTA / JOURNAL:** - Clin Neurol Neurosurg. 2013 May 7. pii: S0303-8467(13)00134-0. doi: 10.1016/j.clineuro.2013.04.010.

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

[1016/j.clineuro.2013.04.010](#)

**AUTORES / AUTHORS:** - Silva PS; Cerejo A; Polonia P; Pereira J; Vaz R

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery Department, Hospital de Sao Joao, Porto, Portugal. Electronic address: [pedrodossantossilva@gmail.com](mailto:pedrodossantossilva@gmail.com).

**RESUMEN / SUMMARY:** - BACKGROUND: The trans-lamina terminalis (TLT) approach to the suprasellar region and third ventricle is complex, with risks of visual and hormonal deficits. However, the postoperative deficits might not be directly related to opening of the lamina terminalis but to the close relationship of tumours with vital neural and vascular structures. The analysis of results using this approach was the objective of this study. MATERIAL AND

**METHODS:** The TLT approach was used in 29 patients (18 craniopharyngiomas, 5 astrocytomas, 5 germinomas and 1 ganglioglioma). The extent of tumour removal, mortality and morbidity (especially visual or hormonal deficits) were studied. **RESULTS:** Complete tumour removal was achieved in 15 patients, subtotal extensive removal (more than 90%) in 9 cases and partial removal in 5 cases. Panhypopituitarism developed in 22 patients. Total tumour removal was associated with the development of endocrinological disturbances. There was worsening or the onset of new visual field defects in 4 cases. Postoperative endocrine and visual deficits were in the range generally described regarding surgery for tumours in this region. **CONCLUSION:** The TLT approach allows for extensive removal of third ventricle and suprasellar tumours, without increased risks of visual and hormonal deficits, compared to those described regarding surgery for lesions in this region.

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[459]

**TÍTULO / TITLE:** - Response to: Extraventricular neurocytoma of the sellar region.

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

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

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

[3109/02688697.2013.798861](#)

**AUTORES / AUTHORS:** - Wang Y; Tao R; Liu B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Shandong Cancer Hospital, Jinan, P. R. China.

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[460]

**TÍTULO / TITLE:** - Appendicitis in a Spigelian hernia: an unusual cause for a tender right iliac fossa mass.

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

**REVISTA / JOURNAL:** - Ann R Coll Surg Engl. 2013 May;95(4):66-8. doi: 10.1308/003588413X13511609957731.

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

[1308/003588413X13511609957731](#)

**AUTORES / AUTHORS:** - Thomas MP; Avula SK; England R; Stevenson L

**INSTITUCIÓN / INSTITUTION:** - North Cumbria University Hospitals NHS Trust, UK.

**RESUMEN / SUMMARY:** - Spigelian hernias are a rare type of hernia through the Spigelian aponeurosis, whose contents commonly include omentum or small bowel. In the absence of incarceration or strangulation, they can be difficult to diagnose clinically. In the emergency setting, they can present rarely as a painful abdominal mass and computed tomography provides a reliable diagnostic imaging modality. We report an emergency presentation of a Spigelian hernia containing the appendix.

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[461]

**TÍTULO / TITLE:** - Increased 99mTc TRODAT-1 Uptake in Anaplastic Oligodendroglioma.

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

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 Apr 18.

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

[1097/RLU.0b013e3182815f43](#)

**AUTORES / AUTHORS:** - Chen YR; Hsieh TC; Yen KY; Kao CH

**INSTITUCIÓN / INSTITUTION:** - From the \*Department of Nuclear Medicine and PET Center, China Medical University Hospital, Taichung, daggerGraduate Institute of Clinical Medicine Science, double daggerDepartment of Biomedical Imaging and Radiological Science, and section signSchool of Medicine, China Medical University, Taichung, Taiwan.

**RESUMEN / SUMMARY:** - Tc TRODAT-1, a selective dopamine transporter SPECT imaging agent, has demonstrated its efficacy in identifying patients with Parkinson disease. Primary or metastatic brain neoplasm uptake of TRODAT-1 is rarely reported in literatures. A 51-year-old female patient underwent TRODAT-1 study for bradykinesia and altered cognitive function; the images showed abnormal extrastriatal uptake in the right frontal lobe subsequent to operation, and pathological examination confirmed anaplastic oligodendroglioma. Care should be taken in interpreting TRODAT-1 image; any focus on abnormal accumulation of radiotracer should not be overlooked because it can be brain neoplasm as demonstrated in this case.

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[462]

**TÍTULO / TITLE:** - The Comparison of 13N-Ammonia and 18F-FDG in the Evaluation of Untreated Gliomas.

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

**REVISTA / JOURNAL:** - Clin Nucl Med. 2013 May 21.

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

[1097/RLU.0b013e318295298d](#)

**AUTORES / AUTHORS:** - Shi X; Liu Y; Zhang X; Yi C; Wang X; Chen Z; Zhang B  
**INSTITUCIÓN / INSTITUTION:** - From the Department of Nuclear Medicine, the First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, China.

**RESUMEN / SUMMARY:** - OBJECTIVE: Noninvasive evaluation of glioma is of great help for clinical practice. In this study, we investigated the utility of N-ammonia in the evaluation of untreated gliomas and compared the results with that of F-FDG. METHODS: Forty-five consecutive patients with final diagnosis of glioma were included in this study. PET/CT imaging was performed for all of them with both F-FDG and N-ammonia as tracers. Imaging results were

analyzed by tumor-to-gray matter (T/G) ratios. Receiver operating characteristic curve analysis was conducted to determine the optimal T/G cutoff values of each tracer between low-grade and high-grade gliomas. RESULTS: Forty-eight separate lesions were identified in all (grade II, n = 16; grade III, n = 12; and grade IV, n = 20). Twenty-nine out of 32 high-grade lesions (91%) showed higher uptakes than normal gray matter with N-ammonia in comparison with the result of 21 lesions (66%) with F-FDG. The optimal T/G cutoff values for F-FDG and N-ammonia were 0.64 and 0.86 separately with the area under each curve 0.910 and 0.943. The sensitivity and specificity of predicting high-grade gliomas with optimal cutoff values were 83% and 93% for F-FDG and 94% and 94% for N-ammonia, respectively. CONCLUSION: N-Ammonia is superior to F-FDG not only in separating low-grade gliomas from high-grade ones but also in the detection of high-grade gliomas for better tumor to normal gray matter contrast.

[463]

**TÍTULO / TITLE:** - Short-lasting unilateral neuralgiform headache with conjunctival injection and tearing caused by a pituitary adenoma.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 9. pii: S0967-5868(12)00645-5. doi: 10.1016/j.jocn.2012.10.014.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.10.014](http://1016/j.jocn.2012.10.014)

**AUTORES / AUTHORS:** - Musuka TD; Edis RH; Kermode AG

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Sir Charles Gairdner Hospital, Hospital Avenue, Nedlands, WA 6008, Australia. Electronic address: [tapuwa.musuka@gmail.com](mailto:tapuwa.musuka@gmail.com).

**RESUMEN / SUMMARY:** - Short-lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT) syndrome is a rare primary headache syndrome first described in 1978. We report on a 43-year-old man with a 10 year history of SUNCT in whom a pituitary macroadenoma was eventually detected. His pain rapidly improved with medical treatment of the prolactinoma and we propose that this is a case of symptomatic SUNCT.

[464]

**TÍTULO / TITLE:** - Uncal decompression in gliomatosis cerebri.

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

**REVISTA / JOURNAL:** - Neurochirurgie. 2013 Apr;59(2):85-8. doi: 10.1016/j.neuchi.2013.02.006. Epub 2013 Apr 22.

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

[1016/j.neuchi.2013.02.006](http://1016/j.neuchi.2013.02.006)

**AUTORES / AUTHORS:** - Perez-Bovet J; Rimbau Munoz J; Martin Ferrer S

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery Department, University Hospital Dr. Josep Trueta, Girona, España. Electronic address: [sgf\\_39@hotmail.com](mailto:sgf_39@hotmail.com).

**RESUMEN / SUMMARY:** - Gliomatosis cerebri is defined as an infiltration, by an infiltrative glioma, of more than two cerebral lobes. Depending on response to treatment (chemotherapy and radiotherapy), clinical course may prolong over several months. Surgical excision has a very limited role in the management of this diagnosis. We present the case of a 48 year-old woman in whom a decompressive temporal lobectomy was performed in the context of a gliomatosis. Relief of intracranial hypertension allowed further treatment and a survival of 23months. Relevant literature on the subject has been reviewed. There is the possibility of offering a decompressive lobectomy in selected cases of gliomatosis, allowing to undergo other treatment modalities.

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[465]

**TÍTULO / TITLE:** - Superficial siderosis of the central nervous system due to chronic hemorrhage from a giant invasive prolactinoma.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 8. pii: S0967-5868(12)00595-4. doi: 10.1016/j.jocn.2012.07.022.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.07.022](http://1016/j.jocn.2012.07.022)

**AUTORES / AUTHORS:** - Steinberg J; Cohen JE; Gomori JM; Fraifeld S; Moscovici S; Rosenthal G; Shoshan Y; Itshayek E

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hadassah-Hebrew University Medical Center, P.O. Box 12000, Jerusalem 91120, Israel.

**RESUMEN / SUMMARY:** - Superficial siderosis of the central nervous system (CNS) is a rare disorder caused by deposition of hemosiderin in neuronal tissue in the subpial layer of the CNS due to slow subarachnoid or intraventricular hemorrhage. The most common neurologic manifestations include progressive gait ataxia, sensorineural hearing loss, and corticospinal tract signs. We present a case of superficial siderosis in a 43-year-old man who presented to the Emergency Department with sudden onset bilateral visual deterioration and a loss of consciousness. A hemorrhagic giant prolactinoma was diagnosed based on brain CT scan, T1-weighted MRI, and an endocrine blood examination. Susceptibility-weighted non-contrast MRI showed pathognomonic signs of superficial siderosis in the form of a hypointensity rim surrounding the brainstem, cerebellar fissures, and cranial nerves VII and VIII. This report demonstrates that superficial siderosis can be caused by pituitary apoplexy.

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[466]

**TÍTULO / TITLE:** - Undifferentiated sarcoma of the cavernous sinus after gamma knife radiosurgery for pituitary adenoma.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Apr 12. pii: S0967-5868(13)00012-X. doi: 10.1016/j.jocn.2012.09.032.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.09.032](#)

**AUTORES / AUTHORS:** - Sasagawa Y; Tachibana O; Iizuka H

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**RESUMEN / SUMMARY:** - We report a rare case of gamma knife radiation-induced undifferentiated sarcoma in the cavernous sinus. A 24-year-old woman underwent resection of a growth hormone-secreting pituitary adenoma and gamma knife radiosurgery (maximal dose 24 Gray (Gy); marginal dose 16Gy) for residual adenoma in the right cavernous sinus. Follow-up MRI showed the disappearance of the adenoma. Fifteen years later, she developed right oculomotor nerve palsy. MRI revealed a new tumor in the right cavernous sinus. Partial removal of the tumor was performed via a transsphenoidal approach. Histological diagnosis revealed undifferentiated sarcoma. The patient received three cycles of chemotherapy containing doxorubicin and ifosfamide, then carbon ion radiotherapy (65 GyE in 26 fractions). Subsequent MRI showed tumor regression for five months. To our knowledge, this is the first report of undifferentiated sarcoma following gamma knife radiosurgery for pituitary adenoma. As patients undergoing radiosurgery face the possibility of such neoplasms developing, long-term follow-up is required.

[467]

**TÍTULO / TITLE:** - The role of Stat3 in glioblastoma multiforme.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 May 17. pii: S0967-5868(13)00198-7. doi: 10.1016/j.jocn.2013.03.006.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.03.006](#)

**AUTORES / AUTHORS:** - Luwor RB; Stylli SS; Kaye AH

**INSTITUCIÓN / INSTITUTION:** - Level 5, Clinical Sciences Building, Department of Surgery, The University of Melbourne, The Royal Melbourne Hospital, Parkville, VIC 3050, Australia. Electronic address: [rluwor@unimelb.edu.au](mailto:rluwor@unimelb.edu.au).

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common brain tumor and has the worst prognosis. Several signaling molecules have been clearly implicated in the development, progression, and aggressiveness of GBM. Here we review the role of signal transducer and activator of transcription-3 (Stat3) in GBM. We particularly focus on its expression in clinical GBM samples, its role in brain tumorigenicity in cell lines and animal models, and discuss possible therapeutic strategies targeting Stat3. This review also summarizes the current knowledge regarding the role of Stat3 regulation by

upstream activators and repressors in promoting GBM progression in both translational and clinical studies.

[468]

**TÍTULO / TITLE:** - Enterogenous cyst of the third ventricle.

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

**REVISTA / JOURNAL:** - J Clin Neurosci. 2013 Apr 17. pii: S0967-5868(13)00056-8. doi: 10.1016/j.jocn.2012.10.035.

●●Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.10.035](#)

**AUTORES / AUTHORS:** - Salvetti DJ; Williams BJ; Posthumus JS; Shaffrey ME

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Virginia, Box 800212, Charlottesville, VA 22908, USA.

**RESUMEN / SUMMARY:** - We present the second case of an enterogenous cyst of the third ventricle. This is a 28-year-old woman who presented with a 2-year history of progressive headaches and memory loss. A cystic lesion of the anterior third ventricle was noted on MRI. The cyst was resected via a transcallosal approach and demonstrated simple cystic morphology lined by ciliated cuboidal epithelium with numerous goblet cells. The presentation was unusual with signs of memory loss presumably due to a mass effect on the fornices. Although uncommon, this entity should be considered in the differential diagnosis of a cystic lesion of the third ventricle.

[469]

**TÍTULO / TITLE:** - Anaplastic oligodendroglioma arising from the brain stem and featuring 1p/19q co-deletion.

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

**REVISTA / JOURNAL:** - Neuropathology. 2013 May 27. doi: 10.1111/neup.12043.

●●Enlace al texto completo (gratis o de pago) [1111/neup.12043](#)

**AUTORES / AUTHORS:** - Hwer E; Beck J; Vassella E; Vajtai I

**INSTITUCIÓN / INSTITUTION:** - Institute of Pathology, University of Bern, Bern, Switzerland.

**RESUMEN / SUMMARY:** - With respect to localization, oligodendrogliomas are characterized by a marked preponderance of the cerebral hemispheres. Outside these typical sites, any tumor histopathologically reminiscent of oligodendroglioma a priori is likely to represent one of its morphological mimics, including clear cell ependymoma, neurocytoma, pilocytic astrocytoma or glioneuronal tumors. This is particularly relevant as several of the latter are in principle curable by surgery. Among extrahemispherical sites, bona fide oligodendroglioma - as characterized by loss of heterozygosity (LOH) of chromosome arms 1p and 19q - so far has not been documented to occur in the brain stem. Here, we report the case of a 55-year-old female patient with an

anaplastic oligodendroglioma (WHO grade III) of the brain stem and cerebellum diagnosed by stereotactic biopsy and featuring combined LOH of 1p and 19q. A morphological peculiarity was a population of interspersed tumor giant cells, a phenomenon that has been referred to as polymorphous oligodendroglioma. Our findings confirm the notion that - although very infrequently - true oligodendrogliomas do occur in the infratentorial compartment.

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[470]

**TÍTULO / TITLE:** - Primary central nervous system lymphoma: what a neurologist/neurosurgeon should know?

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

**REVISTA / JOURNAL:** - Arq Neuropsiquiatr. 2013 Apr;71(4):254-7.

**AUTORES / AUTHORS:** - Perini GF; Campregher PV; Santos FP; Hamerschlak N

**INSTITUCIÓN / INSTITUTION:** - Hematology Department, Hospital Israelita Albert Einstein, Sao Paulo SP, Brazil. [guilherme.perini@einstein.br](mailto:guilherme.perini@einstein.br)

**RESUMEN / SUMMARY:** - Primary central nervous system lymphoma is a rare disease, with bad prognosis. Neurologists and neurosurgeons should be familiar with the diagnostic, and biologic features, as well as the initial management of patients. A correct approach to these patients is mandatory for a better outcome.

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[471]

**TÍTULO / TITLE:** - Phase I trial of capecitabine rapidly disintegrating tablets and concomitant radiation therapy in children with newly diagnosed brainstem gliomas and high-grade gliomas.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Jun;15(6):759-66. doi: 10.1093/neuonc/nos315. Epub 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/nos315](http://1093/neuonc/nos315)

**AUTORES / AUTHORS:** - Kilburn LB; Kocak M; Schaedeli Stark F; Meneses-Lorente G; Brownstein C; Hussain S; Chintagumpala M; Thompson PA; Gururangan S; Banerjee A; Paulino AC; Kun L; Boyett JM; Blaney SM

**INSTITUCIÓN / INSTITUTION:** - Corresponding Author: Lindsay B. Kilburn, MD, Children's National Medical Center, 111 Michigan Ave., NW, Washington DC, 20010. [lkilburn@childrensnational.org](mailto:lkilburn@childrensnational.org).

**RESUMEN / SUMMARY:** - Background We conducted a phase I study to estimate the maximum tolerated dose and describe the dose-limiting toxicities and pharmacokinetics of oral capecitabine rapidly disintegrating tablets given concurrently with radiation therapy to children with newly diagnosed brainstem or high-grade gliomas. Methods Children 3-21 y with newly diagnosed intrinsic brainstem or high-grade gliomas were eligible for enrollment. The starting dose

was 500 mg/m<sup>2</sup>, given twice daily, with subsequent cohorts enrolled at 650 mg/m<sup>2</sup> and 850 mg/m<sup>2</sup> using a 3 + 3 phase I design. Children received capecitabine at the assigned dose daily for 9 wks starting from the first day of radiation therapy (RT). Following a 2-wk break, patients received 3 courses of capecitabine 1250 mg/m<sup>2</sup> twice daily for 14 days followed by a 7-day rest. Pharmacokinetic sampling was performed in consenting patients. Six additional patients with intrinsic brainstem gliomas were enrolled at the maximum tolerated dose to further characterize the pharmacokinetic and toxicity profiles. Results Twenty-four patients were enrolled. Twenty were fully assessable for toxicity. Dose-limiting toxicities were palmar plantar erythroderma (grades 2 and 3) and elevation of alanine aminotransferase (grades 2 and 3). Systemic exposure to capecitabine and metabolites was similar to or slightly lower than predicted based on adult data. Conclusions Capecitabine with concurrent RT was generally well tolerated. The recommended phase II capecitabine dose when given with concurrent RT is 650 mg/m<sup>2</sup>, administered twice daily. A phase II study to evaluate the efficacy of this regimen in children with intrinsic brainstem gliomas is in progress (PBTC-030).

[472]

**TÍTULO / TITLE:** - Long-term outcomes of surgical resection with or without adjuvant radiation therapy for treatment of spinal ependymoma: a retrospective multicenter study by the Korea Spinal Oncology Research Group.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Apr 10.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not038](#)

**AUTORES / AUTHORS:** - Lee SH; Chung CK; Kim CH; Yoon SH; Hyun SJ; Kim KJ; Kim ES; Eoh W; Kim HJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul (S.-H.L., E.-S.K., W.E.); Department of Neurosurgery, Seoul National University College of Medicine, Seoul (C.K.C., C.H.K.); Department of Neurosurgery, Seoul National University Bundang Hospital, Seongnam, South Korea (S.H.Y., S.-J.H., K.-J.K., H.-J.K.).

**RESUMEN / SUMMARY:** - Background We sought to determine the surgical treatment and functional outcome and identify the predictors of survival in a retrospective cohort of patients with spinal cord ependymoma using data collected from the Korea Spinal Oncology Research Group database. Methods The data regarding 88 patients who had been surgically treated for histologically confirmed spinal cord intramedullary and extramedullary ependymoma from January 1989 to December 2009 were retrospectively reviewed. Results Histopathological examination revealed myxopapillary ependymoma in 24 patients, ependymoma in 61 patients, and

anaplastic ependymoma in 3 patients. Gross total removal was achieved in 72 patients, subtotal removal in 15 patients, and partial removal in 1 patient. Twenty patients were treated with postoperative radiation. Fifty-two patients had stable or improved postoperative neurological function, while 36 experienced neurological deterioration. A permanent decrease in McCormick classification grade was seen in 17 patients. The progression-free survival rate was 87% for all patients at 5 years and 80% at 10 years. During follow-up, local recurrence/progression was seen in 13 patients. Diffuse meningeal spread developed in 2 anaplastic ependymoma patients. Postoperative radiotherapy after incomplete resection did not significantly correlate with longer times to recurrence. Multivariate analysis revealed histology and surgical extent of resection as independent predictors of longer progression-free survival. Conclusions Gross total removal alone is a good treatment strategy for spinal ependymomas. Early diagnosis and surgery, before severe paralysis, are important to obtain good functional outcomes. Subtotal resection with radiation therapy for intramedullary lesions appears to offer no advantages over gross total removal.

[473]

**TÍTULO / TITLE:** - Sturge-Weber syndrome: clinical and radiological correlates in 86 patients.

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

**REVISTA / JOURNAL:** - Ideggyogy Sz. 2013 Jan 30;66(1-2):53-7.

**AUTORES / AUTHORS:** - Fogarasi A; Loddenkemper T; Mellado C; Tuxhorn I; Evers G; Sarco D; Burgess RC; Halasz P; Barsis P; Gyorsok Z; Gyimesi C; Kobor J; Siegler Z; Janszky J; Jakus R; Rasonyi G; Ebner A; Woermann FG; Sahin M

**INSTITUCIÓN / INSTITUTION:** - Epilepsy Center, Bethesda Children's Hospital, Budapest, Hungary. [fogarasi@bethesda.hu](mailto:fogarasi@bethesda.hu)

**RESUMEN / SUMMARY:** - **BACKGROUND AND PURPOSE:** To correlate the extent of the leptomeningeal angiomatosis with clinical features in Sturge-Weber syndrome (SWS). **METHODS:** The study group consisted of 86 consecutive patients aged two months to 56 (mean 7.9 +/- 10.3) years with SWS and epilepsy. Clinical and MRI data were analyzed. **RESULTS:** Based on the extent of leptomeningeal angiomatosis, patients were divided into two subgroups: 43 patients had hemispheric angiomatosis and atrophy, whereas, another 43 had focal involvement. Nine of the 43 hemispheric patients (10%) showed bilateral involvement: all of these bilateral cases demonstrated dominance in a single side with hemispheric leptomeningeal angiomatosis and contralateral focal extension. Hemispheric and focal subgroups were clinically different. Patients with hemispheric SWS were younger at the age of epilepsy onset ( $p < 0.001$ ) and age at MRI examination ( $p < 0.05$ ). Neither gender,

lateralization, duration of epilepsy, appearance of secondarily generalized seizures, nor seizure frequency revealed a significant difference between subgroups. CONCLUSION: Bilateral involvement is frequent and occurs in cases with a hemispheric involvement on one side. The age of epilepsy onset is related to the extent of leptomeningeal angiomatosis. Patients with hemispheric form of SWS presented with earlier age of seizure onset. Focal pial angiomatoses do not tend to progress (a longer duration is not associated with more frequent hemispheric involvement). Other variables including seizure frequency and secondary generalized tonic-clonic seizures are not associated with the extent of angiomatosis.

[474]

**TÍTULO / TITLE:** - A Pediatric Phase 1 Trial of Vorinostat and Temozolomide in Relapsed or Refractory Primary Brain or Spinal Cord Tumors: A Children's Oncology Group Phase 1 Consortium Study.

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

**REVISTA / JOURNAL:** - *Pediatr Blood Cancer*. 2013 Mar 28. doi: 10.1002/pbc.24541.

●●Enlace al texto completo (gratis o de pago) [1002/pbc.24541](#)

**AUTORES / AUTHORS:** - Hummel TR; Wagner L; Ahern C; Fouladi M; Reid JM; McGovern RM; Ames MM; Gilbertson RJ; Horton T; Ingle AM; Weigel B; Blaney SM

**INSTITUCIÓN / INSTITUTION:** - Division of Oncology, Cincinnati Children's Hospital Medical Center, Cancer and Blood Diseases Institute, Cincinnati, Ohio.

**RESUMEN / SUMMARY:** - **PURPOSE:** We conducted a pediatric phase I study to estimate the maximum tolerated dose (MTD), dose-limiting toxicities (DLT), and pharmacokinetic properties of vorinostat, a histone deacetylase (HDAC) inhibitor, when given in combination with temozolomide in children with refractory or recurrent CNS malignancies. **PATIENTS AND METHODS:** Vorinostat, followed by temozolomide approximately 1 hour later, was orally administered, once daily, for 5 consecutive days every 28 days at three dose levels using the rolling six design. Studies of histone accumulation in peripheral blood mononuclear cells were performed on Day 1 at 0, 6, and 24 hours after vorinostat dosing. Vorinostat pharmacokinetics (PK) and serum MGMT promoter status were also assessed. **RESULTS:** Nineteen eligible patients were enrolled and 18 patients were evaluable for toxicity. There were no DLTs observed at dose level 1 or 2. DLTs occurred in four patients at dose level 3: thrombocytopenia (4), neutropenia (3), and leucopenia (1). Non-dose limiting grade 3 or 4 toxicities related to protocol therapy were also hematologic and included neutropenia, lymphopenia, thrombocytopenia, anemia, and leucopenia. Three patients exhibited stable disease and one patient had a partial response. There was no clear relationship between vorinostat dosage

and drug exposure over the dose range studied. Accumulation of acetylated H3 histone in PBMC was observed after administration of vorinostat.

CONCLUSION: Five-day cycles of vorinostat in combination with temozolomide are well tolerated in children with recurrent CNS malignancies with myelosuppression as the DLT. The recommended phase II combination doses are vorinostat, 300 mg/m<sup>2</sup> /day and temozolomide, 150 mg/m<sup>2</sup> /day. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[475]

**TÍTULO / TITLE:** - Enhancing radiation therapy for patients with glioblastoma.

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

**REVISTA / JOURNAL:** - *Expert Rev Anticancer Ther.* 2013 May;13(5):569-81. doi: 10.1586/era.13.44.

●●Enlace al texto completo (gratis o de pago) [1586/era.13.44](#)

**AUTORES / AUTHORS:** - Alexander BM; Ligon KL; Wen PY

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**RESUMEN / SUMMARY:** - Radiation therapy has been the foundation of therapy following maximal surgical resection in patients with newly diagnosed glioblastoma for decades and the primary therapy for unresected tumors. Using the standard approach with radiation and temozolomide, however, outcomes are poor, and glioblastoma remains an incurable disease with the majority of recurrences and progression within the radiation treatment field. As such, there is much interest in elucidating the mechanisms of resistance to radiation therapy and in developing novel approaches to overcoming this treatment resistance.

[476]

**TÍTULO / TITLE:** - Magnetic resonance spectroscopy as an early indicator of response to anti-angiogenic therapy in patients with recurrent glioblastoma: RTOG 0625/ACRIN 6677.

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

**REVISTA / JOURNAL:** - *Neuro Oncol.* 2013 May 3.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not044](#)

**AUTORES / AUTHORS:** - Ratai EM; Zhang Z; Snyder BS; Boxerman JL; Safriel Y; McKinstry RC; Bokstein F; Gilbert MR; Sorensen AG; Barboriak DP

**INSTITUCIÓN / INSTITUTION:** - A. A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Department of Radiology, Neuroradiology Division, Harvard Medical School, Charlestown, Massachusetts (E.-M.R., A.G.S.); Center for Statistical Sciences, Brown University, Providence, Rhode

Island (Z.Z., B.S.S.); Department of Diagnostic Imaging, Alpert Medical School of Brown University, Providence, Rhode Island (J.L.B.); Radiology Associates of Clearwater, University of South Florida, Clearwater, Florida (Y.S.); Mallinckrodt Institute of Radiology, Washington University in St. Louis, St. Louis, Missouri (R.C.M.), Neuro-Oncology Service, Tel Aviv Sourasky Medical Center (F.B.), Department of Neuro-Oncology, The University of Texas MD Anderson Cancer Center, Houston, Texas (M.R.G.); Department of Radiology, Duke University Medical Center, Durham, North Carolina (D.P.B.).

**RESUMEN / SUMMARY:** - BackgroundThe prognosis for patients with recurrent glioblastoma remains poor. The purpose of this study was to assess the potential role of MR spectroscopy as an early indicator of response to anti-angiogenic therapy.MethodsThirteen patients with recurrent glioblastoma were enrolled in RTOG 0625/ACRIN 6677, a prospective multicenter trial in which bevacizumab was used in combination with either temozolomide or irinotecan. Patients were scanned prior to treatment and at specific timepoints during the treatment regimen. Postcontrast T1-weighted MRI was used to assess 6-month progression-free survival. Spectra from the enhancing tumor and peritumoral regions were defined on the postcontrast T1-weighted images. Changes in the concentration ratios of n-acetylaspartate/creatine (NAA/Cr), choline-containing compounds (Cho)/Cr, and NAA/Cho were quantified in comparison with pretreatment values.ResultsNAA/Cho levels increased and Cho/Cr levels decreased within enhancing tumor at 2 weeks relative to pretreatment levels ( $P = .048$  and  $P = .016$ , respectively), suggesting a possible antitumor effect of bevacizumab with cytotoxic chemotherapy. Nine of the 13 patients were alive and progression free at 6 months. Analysis of receiver operating characteristic curves for NAA/Cho changes in tumor at 8 weeks revealed higher levels in patients progression free at 6 months (area under the curve = 0.85), suggesting that NAA/Cho is associated with treatment response. Similar results were observed for receiver operating characteristic curve analyses against 1-year survival. In addition, decreased Cho/Cr and increased NAA/Cr and NAA/Cho in tumor periphery at 16 weeks posttreatment were associated with both 6-month progression-free survival and 1-year survival.ConclusionChanges in NAA and Cho by MR spectroscopy may potentially be useful as imaging biomarkers in assessing response to anti-angiogenic treatment.

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[477]

**TÍTULO / TITLE:** - The role of secondary motor and language cortices in morbidity and mortality: a retrospective functional MRI study of surgical planning for patients with intracranial tumors.

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

**REVISTA / JOURNAL:** - Neurosurg Focus. 2013 Apr;34(4):E7. doi: 10.3171/2013.2.FOCUS12410.

- Enlace al texto completo (gratis o de pago)

[3171/2013.2.FOCUS12410](#)

**AUTORES / AUTHORS:** - Voss J; Meier TB; Freidel R; Kundu B; Nair VA; Holdsworth R; Kuo JS; Prabhakaran V

**INSTITUCIÓN / INSTITUTION:** - Departments of Radiology, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin 53705, USA.

**RESUMEN / SUMMARY:** - OBJECT: Functional MRI (fMRI) is commonly used by neurosurgeons preoperatively to identify brain regions associated with essential behaviors, such as language and motor abilities. In this study the authors investigated the relationship between patient morbidity and mortality and the distance from the tumor border area to functional activations in secondary motor and language cortices. METHODS: Patients with primary or metastatic brain tumors who underwent preoperative fMRI motor and language mapping were selected from a large database of patients with tumors. The lesion-to-activation distance (LAD) was measured in each patient relative to the supplementary motor area (SMA) for motor tasks and the presupplementary motor area (pSMA) for language tasks. The association between LAD and the incidence of deficits was investigated using the Fisher exact tests of significance. The impact of other variables, including age, handedness, sex, and tumor grade, was also investigated. In a subset of patients, logistic regression was performed to identify the likelihood of deficits based on the LAD to primary and secondary regions. Finally, Mantel-Cox log-rank tests were performed to determine whether survival time was significantly related to the LAD to secondary motor and language areas. RESULTS: A significant association was observed between the LAD to the SMA and the incidence of motor deficits, with the percentage of patients with deficits dropping for those in the LAD > 2 cm group. The relationship between the LAD to the pSMA and the incidence of language deficits was not significant. Logistic regression demonstrated that the LAD to primary sensorimotor cortex does affect the incidence of motor deficits, but that the LAD to SMA does not. Finally, the authors observed no relationship between the LAD to secondary regions and patient mortality rates. CONCLUSIONS: These results demonstrate that the LAD to SMA structures does affect morbidity, although not to the extent of LAD to primary structures. In addition, motor deficits are significantly associated with LAD to secondary structures, but language deficits are not. This should be considered by neurosurgeons for patient consultation and preoperative planning.

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[478]

**TÍTULO / TITLE:** - Association of functional magnetic resonance imaging indices with postoperative language outcomes in patients with primary brain tumors.

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

**REVISTA / JOURNAL:** - Neurosurg Focus. 2013 Apr;34(4):E6. doi: 10.3171/2013.2.FOCUS12413.

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

[3171/2013.2.FOCUS12413](#)

**AUTORES / AUTHORS:** - Kundu B; Penwarden A; Wood JM; Gallagher TA; Andreoli MJ; Voss J; Meier T; Nair VA; Kuo JS; Field AS; Moritz C; Meyerand ME; Prabhakaran V

**INSTITUCIÓN / INSTITUTION:** - School of Medicine and Public Health, University of Wisconsin, Madison, Wisconsin, USA. [bkundu@wisc.edu](mailto:bkundu@wisc.edu)

**RESUMEN / SUMMARY:** - **OBJECT:** Functional MRI (fMRI) has the potential to be a useful presurgical planning tool to treat patients with primary brain tumor. In this study the authors retrospectively explored relationships between language-related postoperative outcomes in such patients and multiple factors, including measures estimated from task fMRI maps (proximity of lesion to functional activation area, or lesion-to-activation distance [LAD], and activation-based language lateralization, or lateralization index [LI]) used in the clinical setting for presurgical planning, as well as other factors such as patient age, patient sex, tumor grade, and tumor volume. **METHODS:** Patient information was drawn from a database of patients with brain tumors who had undergone preoperative fMRI-based language mapping of the Broca and Wernicke areas. Patients had performed a battery of tasks, including word-generation tasks and a text-versus-symbols reading task, as part of a clinical fMRI protocol. Individually thresholded task fMRI activation maps had been provided for use in the clinical setting. These clinical imaging maps were used to retrospectively estimate LAD and LI for the Broca and Wernicke areas. **RESULTS:** There was a relationship between postoperative language deficits and the proximity between tumor and Broca area activation (the LAD estimate), where shorter LADs were related to the presence of postoperative aphasia. Stratification by tumor location further showed that for posterior tumors within the temporal and parietal lobes, more bilaterally oriented Broca area activation (LI estimate close to 0) and a shorter Wernicke area LAD were associated with increased postoperative aphasia. Furthermore, decreasing LAD was related to decreasing LI for both Broca and Wernicke areas. Preoperative deficits were related to increasing patient age and a shorter Wernicke area LAD. **CONCLUSIONS:** Overall, LAD and LI, as determined using fMRI in the context of these paradigms, may be useful indicators of postsurgical outcomes. Whereas tumor location may influence postoperative deficits, the results indicated that tumor proximity to an activation area might also interact with how the language network is affected as a whole by the lesion. Although the derivation of LI must be further validated in individual patients by using spatially specific statistical methods, the current results indicated that fMRI is a useful tool for predicting postoperative outcomes in patients with a single brain tumor.

[479]

**TÍTULO / TITLE:** - Effect of valproic acid on seizure control and on survival in patients with glioblastoma multiforme.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not057](#)

**AUTORES / AUTHORS:** - Kerkhof M; Dielemans JC; van Breemen MS; Zwinkels H; Walchenbach R; Taphoorn MJ; Vecht CJ

**INSTITUCIÓN / INSTITUTION:** - Neuro-oncology Unit, Department of Neurology, Medical Center Haaglanden, The Hague, the Netherlands (M.K., J.C.M.D., M.S.v.B., H.Z., M.J.T., C.J.V.); Department of Neurosurgery, Medical Center Haaglanden, The Hague, the Netherlands (R.W.); Department of Neurology, VU Medical Center, Amsterdam, the Netherlands (M.J.T.); Department of Neurology Mazarin, CHU Pitie-Salpetriere, Paris, France (C.J.V.).

**RESUMEN / SUMMARY:** - BackgroundTo examine the efficacy of valproic acid (VPA) given either with or without levetiracetam (LEV) on seizure control and on survival in patients with glioblastoma multiforme (GBM) treated with chemoradiation.MethodsA retrospective analysis was performed on 291 patients with GBM. The efficacies of VPA and LEV alone and as polytherapy were analyzed in 181 (62%) patients with seizures with a minimum follow-up of 6 months. Cox-regression survival analysis was performed on 165 patients receiving chemoradiation with temozolomide of whom 108 receiving this in combination with VPA for at least 3 months.ResultsMonotherapy with either VPA or LEV was instituted in 137/143 (95.8%) and in 59/86 (68.6%) on VPA/LEV polytherapy as the next regimen. Initial freedom from seizure was achieved in 41/100 (41%) on VPA, in 16/37 (43.3%) on LEV, and in 89/116 (76.7%) on subsequent VPA/LEV polytherapy. At the end of follow-up, seizure freedom was achieved in 77.8% (28/36) on VPA alone, in 25/36 (69.5%) on LEV alone, and in 38/63 (60.3%) on VPA/LEV polytherapy with ongoing seizures on monotherapy. Patients using VPA in combination with temozolomide showed a longer median survival of 69 weeks (95% confidence interval [CI]: 61.7-67.3) compared with 61 weeks (95% CI: 52.5-69.5) in the group without VPA (hazard ratio, 0.63; 95% CI: 0.43-0.92; P = .016), adjusting for age, extent of resection, and O6-DNA methylguanine-methyltransferase promoter methylation status.ConclusionsPolytherapy with VPA and LEV more strongly contributes to seizure control than does either as monotherapy. Use of VPA together with chemoradiation with temozolomide results in a 2-months' longer survival of patients with GBM.

[480]

**TÍTULO / TITLE:** - Malignant astrocytomas of elderly patients lack favorable molecular markers: an analysis of the NOA-08 study collective.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Apr 17.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not043](#)

**AUTORES / AUTHORS:** - Wiestler B; Claus R; Hartlieb SA; Schliesser MG; Weiss EK; Hielscher T; Platten M; Dittmann LM; Meisner C; Felsberg J; Happold C; Simon M; Nikkhah G; Papsdorf K; Steinbach JP; Sabel M; Grimm C; Weichenhan D; Tews B; Reifenberger G; Capper D; Muller W; Plass C; Weller M; Wick W

**INSTITUCIÓN / INSTITUTION:** - German Cancer Consortium, Heidelberg, Germany (B.W., R.C., S.A.H., M.G.S., E.K.W., T.H., M.P., L.M.D., C.G., D.W., B.T., D.C., W.M., C.P., W.W.); Department of Neuro-oncology, National Centre for Tumour Diseases (B.W., E.K.W., M.P., C.G., W.W.); Department of Neuropathology, University of Heidelberg, Heidelberg, Germany (D.C., W.M.); Clinical Cooperation Units Neurooncology (B.W., S.A.H., M.G.S., E.K.W., C.G., W.W.); Neuropathology (D.C., W.M.); Division of Epigenomics and Cancer Risk Factors (R.C., D.W., C.P.); Division of Biostatistics (T.H.); Division of Molecular Genetics, German Cancer Research Centre, Heidelberg, Germany (L.M.D.); Department of Medical Biometry, Tübingen, Germany (C.M.); University of Tübingen, Tübingen, Germany (C.M.); Department of Neuropathology (J.F., G.R.); Department of Neurosurgery, Heinrich Heine University, Düsseldorf, Germany (M.Sa.); Department of Neurosurgery, University of Bonn, Bonn, Germany (M.S.); Department of Stereotactic Neurosurgery, University Clinic Freiburg, Freiburg, Germany (G.N.); Department of Radiation Oncology, University Hospital Leipzig, Leipzig, Germany (K.P.); Dr Senckenberg Institute for Neurooncology, University of Frankfurt, Frankfurt, Germany (J.P.S.); CHS Group Molecular Mechanism of Tumor Cell Invasion, German Cancer Research Centre, Heidelberg, Germany (B.T.); Department of Neurology, University Hospital Zurich, Zurich, Switzerland (C.H., M.W.).

**RESUMEN / SUMMARY:** - BackgroundThe number of patients age >65 years with malignant gliomas is increasing. Prognosis of these patients is worse compared with younger patients. To determine biological differences among malignant gliomas of different age groups and help to explain the survival heterogeneity seen in the NOA-08 trial, the prevalence and impact of recently established biomarkers for outcome in younger patients were characterized in elderly patients. MethodsPrevalences of mutations of isocitrate dehydrogenase 1 (IDH1) and histone H3.3 (H3F3A), the glioma cytosine-phosphate-guanine island methylator phenotype (G-CIMP), and methylation of alkylpurine DNA N-glycosylase (APNG) and peroxiredoxin 1 (PRDX1) promoters were determined in a representative biomarker subset (n = 126 patients with anaplastic astrocytoma or glioblastoma) from the NOA-08 trial. ResultsIDH1 mutations (R132H) were detected in only 3/126 patients, precluding determination of an

association between IDH mutation and outcome. These 3 patients also displayed the G-CIMP phenotype. None of the IDH1 wild-type tumors were G-CIMP positive. Mutations in H3F3A were absent in all 103 patients sequenced for H3F3A. MassARRAY analysis of the APNG promoter revealed generally low methylation levels and failed to confirm any predictive properties for benefit from alkylating chemotherapy. Neither did PRDX1 promoter methylation show differential methylation or association with outcome in this cohort. In a 170-patient cohort from The Cancer Genome Atlas database matched for relevant prognostic factors, age  $\geq 65$  years was strongly associated with shorter survival. Conclusions Despite an age-independent stable frequency of O6-methylguanine-DNA methyltransferase (MGMT) promoter hypermethylation, tumors in this age group largely lack prognostically favorable markers established in younger glioblastoma patients, which likely contributes to the overall worse prognosis of elderly patients. However, the survival differences hint at fundamental further differences among malignant gliomas of different age groups.

[481]

**TÍTULO / TITLE:** - Differential Expression of MicroRNAs in Patients with Glioblastoma after Concomitant Chemoradiotherapy.

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

**REVISTA / JOURNAL:** - OMICS. 2013 May;17(5):259-68. doi: 10.1089/omi.2012.0065. Epub 2013 Apr 15.

●●Enlace al texto completo (gratis o de pago) [1089/omi.2012.0065](#)

**AUTORES / AUTHORS:** - Park EC; Kim G; Jung J; Wang K; Lee S; Jeon SS; Lee ZW; Kim SI; Kim S; Oh YT; Shin JH; Jang HS; Choi BO; Kim GH

**INSTITUCIÓN / INSTITUTION:** - 1 Division of Life Science, Korea Basic Science Institute, Daejeon, Republic of Korea.

**RESUMEN / SUMMARY:** - Abstract Glioblastoma multiforme (GBM) is the most aggressive primary brain tumor, and notorious for resistance to chemoradiotherapy. MicroRNAs (miRNAs) are significantly involved in the initiation and progression of numerous cancers; however, the role of miRNAs in recurrence of tumors remains unknown. Here we tried to identify novel miRNAs that are differentially expressed in recurrent GBM. Tissue samples were obtained from patients with primary and recurrent GBM treated with chemoradiotherapy, and the expression changes of miRNAs were measured by microarray. A total of 318 miRNAs were expressed in the GBM patients. The expression of 43 miRNAs were significantly altered at least 2-fold in primary and recurrent GBMs. Bioinformatic analysis revealed that the differentially expressed miRNAs and their putative target genes were mainly involved in cell death, cellular development, and cellular growth and proliferation, which are the key regulators for stem cells. Pathway analysis supported that the miRNAs may

regulate signaling associated with induction and maintenance of cancer and stem cell, such as p53, ErbB1, Notch, Wnt, and TGF-beta signaling pathways. These data suggest that, in recurrent GBM, growth factor and anti-apoptotic signalings for cancer cell growth and proliferation are regulated by miRNAs. Our findings will aid future research in understanding the pathophysiology of recurrent GBM and identifying diagnostic markers and/or therapeutic targets for recurrence of GBM.

[482]

**TÍTULO / TITLE:** - Health-related Quality of Life in Patients with Brain Tumors: Limitations and Additional Outcome Measures.

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

**REVISTA / JOURNAL:** - Curr Neurol Neurosci Rep. 2013 Jul;13(7):359. doi: 10.1007/s11910-013-0359-y.

●●Enlace al texto completo (gratis o de pago) [1007/s11910-013-0359-](#)

[y](#)

**AUTORES / AUTHORS:** - Dirven L; Reijneveld JC; Aaronson NK; Bottomley A; Uitdehaag BM; Taphoorn MJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, VU University Medical Center, PO Box 7057, 1007 MB, Amsterdam, the Netherlands, [l.dirven@vumc.nl](mailto:l.dirven@vumc.nl).

**RESUMEN / SUMMARY:** - Health-related quality of life (HRQOL) is a multidimensional concept used to measure patients' functioning and well-being. In recent decades, HRQOL has become an important (secondary) outcome measure in clinical trials for brain tumor patients. It could be questioned, however, whether HRQOL is the only useful outcome measure for assessing the level of functioning and well-being of these patients. As described in this review, several general methodological issues can hamper the interpretation of HRQOL data collected in the oncology setting. Additionally, because brain tumor patients have a progressive brain disease resulting in cognitive impairments, patient-reported outcomes may not always be the most informative and accurate measures of HRQOL in brain tumor patients. Supplementary or alternative measures, such as proxy-rated HRQOL measures and measures of instrumental activities of daily living, may provide a more complete picture of brain tumor patients' functioning in daily life.

[483]

**TÍTULO / TITLE:** - Predictors of neoplastic disease in children with isolated pituitary stalk thickening.

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

**REVISTA / JOURNAL:** - *Pediatr Blood Cancer*. 2013 May 14. doi: 10.1002/pbc.24577.

●●Enlace al texto completo (gratis o de pago) [1002/pbc.24577](https://doi.org/10.1002/pbc.24577)

**AUTORES / AUTHORS:** - Robison NJ; Prabhu SP; Sun P; Chi SN; Kieran MW; Manley PE; Cohen LE; Goumnerova L; Smith ER; Scott RM; London WB; Ullrich NJ

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Oncology, Dana-Farber Cancer Institute, Boston Children's Hospital, Boston, Massachusetts; Division of Hematology/Oncology, Boston Children's Hospital, Boston, Massachusetts.

**RESUMEN / SUMMARY:** - **BACKGROUND:** The significance of pituitary stalk thickening (PST) on magnetic resonance imaging (MRI) is often unclear. We evaluated presenting symptoms, MRI findings, clinical course, and outcome predictors of patients with PST. **PROCEDURE:** We used a computerized search of the medical record from 1995 to 2008 to identify patients with PST without pituitary mass on MRI. Baseline and follow-up MRIs were reviewed in a blinded fashion. Relevant clinical data were abstracted. **RESULTS:** 69 patients with reported PST and adequate imaging for review were identified; 42 met study criteria. Median age at first abnormal MRI was 13.6 years (range: 0.8-19.7); 43% were male. Median follow-up was 3.4 years (range 0-12.8). Patients with diabetes insipidus (DI) were significantly more likely to have a neoplastic process than those without ( $P = 0.0008$ ). Of 16 patients with DI, 8 (50%) had a neoplastic process, including germ cell tumor ( $n = 4$ ), Langerhans cell histiocytosis ( $n = 3$ ), and lymphoma ( $n = 1$ ). Among patients with DI, 7 (44%) also developed anterior pituitary hormone dysfunction (APD), either at presentation or on pre-biopsy follow-up, including 6/8 patients with stalk neoplasm and only 1/8 patients with non-neoplastic PST ( $P = 0.04$ ). Twenty-six patients presented without DI; none was found to have neoplasm of the stalk except one patient with craniopharyngioma. Progression of PST on follow-up imaging was significantly associated with a subsequent neoplastic diagnosis ( $P = 0.04$ ). **CONCLUSION:** Patients with PST without DI are unlikely to have a neoplastic process. Among patients with DI, APD or progressive stalk increase over time are predictive of neoplasia. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[484]

**TÍTULO / TITLE:** - Subarachnoid hemorrhage in a patient with a meningioma and an unruptured aneurysm.

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

**REVISTA / JOURNAL:** - *Neurol Med Chir (Tokyo)*. 2013;53(5):343-6.

**AUTORES / AUTHORS:** - Kanamori M; Tomita T; Sasaki T; Murakami K; Takahashi N; Kakehata S; Kurotaki H; Nishijima M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Aomori Prefectural Central Hospital.

**RESUMEN / SUMMARY:** - Subarachnoid hemorrhage (SAH) is usually elicited by cerebrovascular disease and infrequently by brain tumors. A 64-year-old woman presented with SAH with a left petrous meningioma and an unruptured left internal carotid-posterior communicating artery (IC-PcomA) aneurysm. She suffered sudden onset of headache and nausea followed by consciousness disturbance 7 days after onset. Computed tomography (CT) revealed diffuse SAH and a tumor at the petrous portion. Angiography demonstrated a left IC-PcomA aneurysm. Under a diagnosis of a ruptured aneurysm and a coincidental meningioma, we performed neck clipping of the aneurysm. However, intraoperatively we found that the aneurysm was unruptured and we subsequently performed tumor resection. Intraoperatively we could not find the cause of SAH during resection of the meningioma. The histological diagnosis was transitional meningioma with deposition of fibrin on the surface of the tumor. The findings of initial CT and magnetic resonance imaging, and pathological results could not conclude the definitive etiology of SAH in this case.

[485]

**TÍTULO / TITLE:** - Detection of MGMT, RASSF1A, p15INK4B, and p14ARF promoter methylation in circulating tumor-derived DNA of central nervous system cancer patients.

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

**REVISTA / JOURNAL:** - J Appl Genet. 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [1007/s13353-013-0149-](http://1007/s13353-013-0149-x)

[x](#)

**AUTORES / AUTHORS:** - Majchrzak-Celinska A; Paluszczak J; Kleszcz R; Magiera M; Barciszewska AM; Nowak S; Baer-Dubowska W

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmaceutical Biochemistry, Poznan University of Medical Sciences, ul. Swiecickiego 4, 60-781, Poznan, Poland.

**RESUMEN / SUMMARY:** - Despite the growing understanding of the mechanisms of carcinogenesis, cancers of the central nervous system are usually associated with unfavorable prognosis. The use of an appropriate molecular marker may improve the treatment outcome by allowing early diagnosis and treatment susceptibility monitoring. Since methylation of tumor-derived DNA can be detected in the serum of cancer patients, this makes DNA methylation-based biomarkers one of the most promising diagnostic strategies. In this study, the methylation profiles of MGMT, RASSF1A, p15INK4B, and p14ARF genes were evaluated in serum free-circulating DNA and the corresponding tumor tissue in a group of 33 primary or metastatic central nervous system cancer patients.

Gene promoter methylation was assessed using methylation-specific polymerase chain reaction (PCR). All the tested genes were found to be methylated to a different extent in both serum and tumor samples. In comparison to metastatic brain tumor patients, the patients with glial tumors were characterized by a higher frequency of gene hypermethylation. The hypermethylation of RASSF1A differentiated primary from metastatic brain cancers. Moreover, the gene methylation profiles observed in serum, in most cases, matched the methylation profiles detected in paired tumor samples.

[486]

**TÍTULO / TITLE:** - Pilot study of vincristine, oral irinotecan, and temozolomide (VOIT regimen) combined with bevacizumab in pediatric patients with recurrent solid tumors or brain tumors.

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

**REVISTA / JOURNAL:** - *Pediatr Blood Cancer*. 2013 Apr 29. doi: 10.1002/pbc.24547.

●●Enlace al texto completo (gratis o de pago) [1002/pbc.24547](#)

**AUTORES / AUTHORS:** - Wagner L; Turpin B; Nagarajan R; Weiss B; Cripe T; Geller J

**INSTITUCIÓN / INSTITUTION:** - Division of Oncology, Cincinnati Children's Hospital Medical Center, University of Cincinnati College of Medicine, Lexington, Kentucky.

**RESUMEN / SUMMARY:** - BACKGROUND: The combination of vincristine, oral irinotecan, and temozolomide (VOIT regimen) has shown antitumor activity in a pediatric Phase I trial. To further potentiate synergy, we assessed the safety and feasibility of adding bevacizumab to VOIT for children and young adults with recurrent tumors. METHODS: Patients received vincristine (1.5 mg/m<sup>2</sup> on day 1), oral irinotecan (90 mg/m<sup>2</sup> on days 1-5), temozolomide (100-150 mg/m<sup>2</sup> on days 1-5), and bevacizumab (15 mg/kg on day 1) in 3-week cycles, which were repeated for up to six cycles. Cefixime prophylaxis was used to reduce irinotecan-associated diarrhea. RESULTS: Thirteen patients received 36 total cycles. Six of the first 10 patients required dose reductions due to toxicity during the first cycle (n = 3) or subsequent cycles (n = 3), and these grade 3 side effects included prolonged nausea, dehydration, anorexia, neuropathy, diarrhea, and abdominal pain, as well as prolonged grade 4 neutropenia. After reducing daily temozolomide to 100 mg/m<sup>2</sup>, three additional patients tolerated therapy well without the need for dose reductions. Toxicities attributed to bevacizumab were limited to grade 1 epistaxis (1) and grade 2 proteinuria (1). Tumor responses were seen in both patients with Ewing sarcoma. CONCLUSIONS: Reducing temozolomide from 150 to 100 mg/m<sup>2</sup>/day improved tolerability, and treatment with this lower temozolomide dose was feasible and convenient as outpatient therapy. Although responses were seen

in Ewing sarcoma, the benefit of adding bevacizumab remains unclear. *Pediatr Blood Cancer* 2013;9999:XX-XX. © 2013 Wiley Periodicals, Inc.

[487]

**TÍTULO / TITLE:** - Can the prognosis of individual patients with glioblastoma be predicted using an online calculator?

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

**REVISTA / JOURNAL:** - *Neuro Oncol.* 2013 Mar 29.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not033](#)

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**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Salford Royal NHS Foundation Trust, Stott Lane, Salford (C.P., J.H., I.K.-A.), and Royal Preston Hospital, Sharoe Green Lane, Fulwood, Preston (G.H.), United Kingdom.

**RESUMEN / SUMMARY:** - BackgroundIn an exploratory subanalysis of the European Organisation for Research and Treatment of Cancer and National Cancer Institute of Canada (EORTC/NCIC) trial data, Gorlia et al. identified a variety of factors that were predictive of overall survival, including therapy administered, age, extent of surgery, mini-mental score, administration of corticosteroids, World Health Organization (WHO) performance status, and O-methylguanine-DNA methyltransferase (MGMT) promoter methylation status. Gorlia et al. developed 3 nomograms, each intended to predict the survival times of patients with newly diagnosed glioblastoma on the basis of individual-specific combinations of prognostic factors. These are available online as a “GBM Calculator” and are intended for use in patient counseling. This study is an external validation of this calculator. MethodOne hundred eighty-seven patients from 2 UK neurosurgical units who had histologically confirmed glioblastoma (WHO grade IV) had their information at diagnosis entered into the GBM calculator. A record was made of the actual and predicted median survival time for each patient. Statistical analysis was performed to assess the accuracy, precision, correlation, and discrimination of the calculator. ResultsThe calculator gives both inaccurate and imprecise predictions. Only 23% of predictions were within 25% of the actual survival, and the percentage bias is 140% in our series. The coefficient of variance is 76%, where a smaller percentage would indicate greater precision. There is only a weak positive correlation between the predicted and actual survival among patients ( $R^2$  of 0.07). Discrimination is inadequate as measured by a C-index of 0.62. ConclusionsThe authors would not recommend the use of this tool in patient counseling. If departments were considering its use, we would advise that a similar validating exercise be undertaken.

[488]

**TÍTULO / TITLE:** - Long-term effect of everolimus on epilepsy and growth in children under 3 years of age treated for subependymal giant cell astrocytoma associated with tuberous sclerosis complex.

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

**REVISTA / JOURNAL:** - Eur J Paediatr Neurol. 2013 Apr 6. pii: S1090-3798(13)00028-7. doi: 10.1016/j.ejpn.2013.03.002.

●●Enlace al texto completo (gratis o de pago) [1016/j.ejpn.2013.03.002](http://1016/j.ejpn.2013.03.002)

**AUTORES / AUTHORS:** - Kotulska K; Chmielewski D; Borkowska J; Jurkiewicz E; Kuczynski D; Kmiec T; Lojszczyk B; Dunin-Wasowicz D; Jozwiak S

**INSTITUCIÓN / INSTITUTION:** - Department of Science, The Children's Memorial Health Institute, Warsaw, Poland; Department of Neurology, The Children's Memorial Health Institute, Warsaw, Poland. Electronic address: [k.kotulska@czd.pl](mailto:k.kotulska@czd.pl).

**RESUMEN / SUMMARY:** - BACKGROUND: Tuberous sclerosis complex (TSC) is a genetic disorder characterized by increased mammalian target of rapamycin (mTOR) activation and growth of benign tumors in several organs throughout the body. In young children with TSC, drug-resistant epilepsy and subependymal giant cell astrocytomas (SEGAs) present the most common causes of mortality and morbidity. There are also some reports on the antiepileptic and antiepileptogenic potential of mTOR inhibitors in TSC. However, the data on everolimus efficacy and safety in young children are very limited. AIMS: To show the long-term safety data and the effect of everolimus treatment on epilepsy in children under the age of 3 who received everolimus for SEGAs associated with TSC. METHODS: We present the results of everolimus treatment in 8 children under the age of 3 who participated in EXIST-1 study. Five patients presented with active, drug-resistant epilepsy at baseline. The mean follow-up is 35 months (33-38 months) and all children are still on treatment. RESULTS: In 6 out of 8 children, at least a 50% reduction in SEGA volume was observed. In 1 child with drug-resistant epilepsy, everolimus treatment resulted in cessation of seizures and in 2 other children, at least a 50% reduction in the number of seizures was noted. The incidence of adverse events (AE) was similar to that observed in older children and adults. CONCLUSIONS: This study suggests that everolimus is effective and safe in infants and young children with epilepsy and SEGA associated with TSC and offers a valuable treatment option.

[489]

**TÍTULO / TITLE:** - Validating the Penn Acoustic Neuroma Quality of Life Scale in a Sample of Dutch Patients Recently Diagnosed With Vestibular Schwannoma.

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

**REVISTA / JOURNAL:** - Otol Neurotol. 2013 May 24.

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

[1097/MAO.0b013e31828bb2bb](https://doi.org/10.1097/MAO.0b013e31828bb2bb)

**AUTORES / AUTHORS:** - van Leeuwen BM; Herruer JM; Putter H; Jansen JC; van der Mey AG; Kaptein AA

**INSTITUCIÓN / INSTITUTION:** - \*Department of Otorhinolaryngology and Head and Neck Surgery, daggerDepartment of Medical Statistics, and double daggerDepartment of Medical Psychology, Leiden University Medical Center, Leiden, The Netherlands.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To examine the validity of the Penn Acoustic Neuroma Quality-of-Life Scale (PANQOL) in a sample of Dutch patients recently diagnosed with vestibular schwannoma. **STUDY DESIGN AND SETTING:** Cross-sectional study in a university tertiary referral center. **METHODS:** Between April 2011 and March 2012 consecutive patients (mean age, 56.4; range, 17-85 yr) diagnosed with vestibular schwannoma (n = 155) were included. The PANQOL was translated into Dutch according to the accepted rules of forward-backward translation. Quality of life at diagnosis was measured with the generic SF-36 and the disease-specific PANQOL. Factor analysis was used to explore the factor structure of the PANQOL. The scores of the patients in the current study were compared with those of patients from the United States of America. Correlations between SF-36 and PANQOL were examined to study psychometric characteristics of the PANQOL. **RESULTS:** One hundred nineteen patients (76.8%) completed the questionnaires. SF-36 scores are comparable to previously published studies measuring Quality of Life at diagnosis. Factor analysis on our data has confirmed the original 7-dimensional structure of the PANQOL. The PANQOL scores from the Dutch and the USA patients are comparable. Correlations between PANQOL and SF-36 dimensions corroborate the validity of the Dutch PANQOL version. **CONCLUSION:** Vestibular schwannoma patients experience a reduced quality of life immediately after the diagnostic process. The PANQOL seems to be a valid disease-specific measure of quality of life in Dutch patients who have recently been diagnosed with vestibular schwannoma.

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[490]

**TÍTULO / TITLE:** - In reply: superior recovery profiles of propofol-based regimen as compared to isoflurane-based regimen in patients undergoing craniotomy for primary brain tumor excision: a retrospective study.

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

**REVISTA / JOURNAL:** - J Anesth. 2013 Apr 11.

●●Enlace al texto completo (gratis o de pago) [1007/s00540-013-1604-](https://doi.org/10.1007/s00540-013-1604-x)

[X](#)

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[491]

**TÍTULO / TITLE:** - Management of elderly patients with primary central nervous system lymphoma.

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

**REVISTA / JOURNAL:** - Curr Neurol Neurosci Rep. 2013 May;13(5):344. doi: 10.1007/s11910-013-0344-5.

●●Enlace al texto completo (gratis o de pago) [1007/s11910-013-0344-5](http://dx.doi.org/10.1007/s11910-013-0344-5)

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**RESUMEN / SUMMARY:** - Primary central nervous system lymphoma (PCNSL) is a rare form of non-Hodgkin lymphoma, but in recent years the incidence in the immunocompetent population has been increasing. Elderly patients, or those over the age of 60 years, represent an important subgroup and account for over half of PCNSL patients. Treatment of older patients poses a number of challenges, and the optimum approach is yet to be defined. Chemotherapy, particularly with high-dose methotrexate as a single agent or in combination, is the mainstay of treatment of PCNSL. However, chemotherapy is associated with systemic toxicities, such as myelosuppression, to which the older patient is more vulnerable. Radiotherapy is also effective but is limited by significant delayed neurotoxicity, especially in older patients. Most studies support the use of chemotherapy-only treatments for elderly patients given the high risks of neurotoxicity associated with radiotherapy. Nevertheless, the prognosis remains poor regardless of the chemotherapy chosen. This article reviews the principles guiding the treatment of PCNSL in the elderly, identifies the limitations of current studies, and critically reports on the available literature.

[492]

**TÍTULO / TITLE:** - IMRT or 3D-CRT in Glioblastoma? A Dosimetric Criterion for Patient Selection.

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

**REVISTA / JOURNAL:** - Technol Cancer Res Treat. 2013 Apr 24.

●●Enlace al texto completo (gratis o de pago) [7785/tcrt.2012.500341](http://dx.doi.org/10.1007/s11910-013-0344-5)

**AUTORES / AUTHORS:** - Lorentini S; Amelio D; Giri MG; Fellin F; Meliardo G; Rizzotti A; Amichetti M; Schwarz M

**INSTITUCIÓN / INSTITUTION:** - Agenzia Provinciale per la Protonterapia, Trento, Italy. [lorentini@atrep.it](mailto:lorentini@atrep.it).

**RESUMEN / SUMMARY:** - Intensity modulated radiation therapy (IMRT) is increasingly employed in glioblastoma (GBM) treatment. The present work aimed to assess which clinical-dosimetric scenario could benefit the most from IMRT application, with respect to three-dimensional conformal radiation therapy (3D-CRT). The number of organs at risk (OARs) overlapping the planning target volume (PTV) was the parameter describing the clinical-dosimetric pattern. Based on the results, a dosimetric decision criterion to select the most appropriate treatment technique is provided. Seventeen previously irradiated patients were retrieved and re-planned with both 3D-CRT and IMRT. The prescribed dose was 60 Gy/30fx. The cases were divided into 4 groups (4 patients in each group). Each group represents the scenario where 0, 1, 2 or 3 OARs overlapped the target volume, respectively. Furthermore, in one case, 4 OARs overlapped the PTV. The techniques were compared also in terms of irradiated healthy brain tissue. The results were evaluated by paired t-test. IMRT always provided better target coverage (V95%) than 3D-CRT, regardless the clinical-dosimetric scenario: difference ranged from 0.82% ( $p = 0.4$ ) for scenario 0 to 7.8% ( $p = 0.02$ ) for scenario 3, passing through 2.54% ( $p = 0.18$ ) and 5.93% ( $p = 0.08$ ) for scenario 1 and 2, respectively. IMRT and 3D-CRT achieved comparable results in terms of dose homogeneity and conformity. Concerning the irradiation of serial-kind OARs, both techniques provided nearly identical results. A statistically significant dose reduction to the healthy brain in favor of IMRT was scored. IMRT seems a superior technique compared to 3D-CRT when there are multiple overlaps between OAR and PTV. In this scenario, IMRT allows for a better target coverage while maintaining equivalent OARs sparing and reducing healthy brain irradiation. The results from our patients dataset suggests that the overlap of three OARs can be used as a dosimetric criterion to select which patients should receive IMRT treatment.

[493]

**TÍTULO / TITLE:** - Navigated transcranial magnetic stimulation for mapping the motor cortex in patients with rolandic brain tumors.

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

**REVISTA / JOURNAL:** - Neurosurg Focus. 2013 Apr;34(4):E3. doi: 10.3171/2013.1.FOCUS133.

●●Enlace al texto completo (gratis o de pago) [3171/2013.1.FOCUS133](#)

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**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Charite-Universitätsmedizin, Berlin 13353, Germany.

**RESUMEN / SUMMARY:** - OBJECT: Navigated transcranial magnetic stimulation (nTMS) is a novel technology in the field of neurosurgery for noninvasive

delineation of cortical functional topography. This study addresses the spatial accuracy and clinical usefulness of nTMS in brain tumor surgery in or near the motor cortex based on a systematic review of observational studies.

**METHODS:** A systematic search retrieved 11 reports published up to October 2012 in which adult patients were examined with nTMS prior to surgery. Quality criteria consisted of documentation of the influence of nTMS brain mapping on clinical decision making in a standardized prospective manner and/or performance of intraoperative direct electrical stimulation (DES) and comparison with nTMS results. Cross-observational assessment of nTMS accuracy was established by calculating a weighted mean distance between nTMS and DES. **RESULTS:** All studies reviewed in this article concluded that nTMS correlated well with the “gold standard” of DES. The mean distance between motor cortex identified on nTMS and DES by using the mean distance in 81 patients described in 6 quantitatively evaluated studies was 6.18 mm. The nTMS results changed the surgical strategy based on anatomical imaging alone in 25.3% of all patients, based on the data obtained in 87 patients in 2 studies. **CONCLUSIONS:** The nTMS technique spatially correlates well with the gold standard of DES. Its functional information benefits surgical decision making and changes the treatment strategy in one-fourth of cases.

[494]

**TÍTULO / TITLE:** - C]-®PK11195 tracer kinetics in the brain of glioma patients and a comparison of two referencing approaches.

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

**REVISTA / JOURNAL:** - Eur J Nucl Med Mol Imaging. 2013 May 29.

●●Enlace al texto completo (gratis o de pago) [1007/s00259-013-2447-](http://1007/s00259-013-2447-2)

[2](#)

**AUTORES / AUTHORS:** - Su Z; Herholz K; Gerhard A; Roncaroli F; Du Plessis D; Jackson A; Turkheimer F; Hinz R

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**RESUMEN / SUMMARY:** - **PURPOSE:** Translocator protein (TSPO) is a biomarker of neuroinflammation that can be imaged by PET using [11C]-®PK11195. We sought to characterize the [11C]-®PK11195 kinetics in gliomas of different histotypes and grades, and to compare two reference tissue input functions (supervised cluster analysis versus cerebellar grey matter) for the estimation of [11C]-®PK11195 binding in gliomas and surrounding brain structures.

**METHODS:** Twenty-three glioma patients and ten age-matched controls underwent structural MRI and dynamic [11C]-®PK11195 PET scans. Tissue time-activity curves (TACs) were extracted from tumour regions as well as grey matter (GM) and white matter (WM) of the brains. Parametric maps of binding

potential (BPND) were generated with the simplified reference tissue model using the two input functions, and were compared with each other. TSPO expression was assessed in tumour tissue sections by immunohistochemistry. RESULTS: Three types of regional kinetics were observed in individual tumour TACs: GM-like kinetics (n = 6, clearance of the tracer similar to that in cerebellar GM), WM-like kinetics (n = 8, clearance of the tracer similar to that in cerebral WM) and a form of mixed kinetics (n = 9, intermediate rate of clearance). Such kinetic patterns differed between low-grade astrocytomas (WM-like kinetics) and oligodendrogliomas (GM-like and mixed kinetics), but were independent of tumour grade. There was good agreement between parametric maps of BPND derived from the two input functions in all controls and 10 of 23 glioma patients. In 13 of the 23 patients, BPND values derived from the supervised cluster input were systematically smaller than those using the cerebellar input. Immunohistochemistry confirmed that TSPO expression increased with tumour grade. CONCLUSION: The three types of [11C]-@PK11195 kinetics in gliomas are determined in part by tracer delivery, and indicated that kinetic analysis is a valuable tool in the study of gliomas with the potential for in vivo discrimination between low-grade astrocytomas and oligodendrogliomas. Supervised cluster and cerebellar input functions produced consistent BPND estimates in approximately half of the gliomas investigated, but had a systematic difference in the remainder. The cerebellar input is preferred based on theoretical and practical considerations.

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[495]

**TÍTULO / TITLE:** - Language areas involving the inferior temporal cortex on intraoperative mapping in a bilingual patient with glioblastoma.

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

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013;53(4):256-8.

**AUTORES / AUTHORS:** - Kin H; Ishikawa E; Takano S; Ayuzawa S; Matsushita A; Muragaki Y; Aiyama H; Sakamoto N; Yamamoto T; Matsumura A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Faculty of Medicine, University of Tsukuba.

**RESUMEN / SUMMARY:** - A 40-year-old bilingual man underwent removal of glioblastoma multiforme with intraoperative language mapping, mainly using the picture-naming and auditory responsive-naming tasks under cortical stimulation. Multiple language areas were identified, including one located in the middle of the inferior temporal cortex (ITC). Individual mapping for glioma patients must be performed because language areas might be located in various and unexpected regions, including the ITC.

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[496]

**TÍTULO / TITLE:** - Treating brain tumor-initiating cells using a combination of myxoma virus and rapamycin.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not035](#)

**AUTORES / AUTHORS:** - Zemp FJ; Lun X; McKenzie BA; Zhou H; Maxwell L; Sun B; Kelly JJ; Stechishin O; Luchman A; Weiss S; Cairncross JG; Hamilton MG; Rabinovich BA; Rahman MM; Mohamed MR; Smallwood S; Senger DL; Bell J; McFadden G; Forsyth PA

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**RESUMEN / SUMMARY:** - Background Intratumoral heterogeneity in glioblastoma multiforme (GBM) poses a significant barrier to therapy in certain subpopulation such as the tumor-initiating cell population, being shown to be refractory to conventional therapies. Oncolytic virotherapy has the potential to target multiple compartments within the tumor and thus circumvent some of the barriers facing conventional therapies. In this study, we investigate the oncolytic potential of myxoma virus (MYXV) alone and in combination with rapamycin in vitro and in vivo using human brain tumor-initiating cells (BTICs). Methods We cultured fresh GBM specimens as neurospheres and assayed their growth characteristics in vivo. We then tested the susceptibility of BTICs to MYXV infection with or without rapamycin in vitro and assessed viral biodistribution/survival in vivo in orthotopic xenografts. Results The cultured neurospheres were found to retain stem cell markers in vivo, and they closely resembled human infiltrative GBM. In this study we determined that (i) all patient-derived BTICs tested, including those resistant to temozolomide, were susceptible to MYXV replication and killing in vitro; (ii) MYXV replicated within BTICs in vivo, and intratumoral administration of MYXV significantly prolonged survival of BTIC-bearing mice; (iii) combination therapy with MYXV and rapamycin improved antitumor activity, even in mice bearing "advanced" BTIC tumors; (iv) MYXV treatment decreased expression of stem cell markers in vitro and in vivo. Conclusions Our study

suggests that MYXV in combination with rapamycin infects and kills both the BTICs and the differentiated compartments of GBM and may be an effective treatment even in TMZ-resistant patients.

[497]

**TÍTULO / TITLE:** - Feline anaplastic oligodendroglioma: long-term remission through radiation therapy and chemotherapy.

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

**REVISTA / JOURNAL:** - J Feline Med Surg. 2013 May 7.

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

[1177/1098612X13488383](#)

**AUTORES / AUTHORS:** - Tamura M; Hasegawa D; Uchida K; Kuwabara T; Mizoguchi S; Ochi N; Fujita M

**INSTITUCIÓN / INSTITUTION:** - 1Department of Veterinary Science, Nippon Veterinary and Life Science University, Tokyo, Japan.

**RESUMEN / SUMMARY:** - A 10-year-old spayed female Abyssinian cat was presented with cluster limbic focal seizures with secondarily generalisation. From magnetic resonance imaging (MRI) findings, the cat was diagnosed clinically as having a glioma in the left piriform lobe, and hypofractionated radiation therapy (RT) was performed using a linear accelerator. Although the tumour size had reduced significantly at 4 months after RT, recurrence was observed at 11 months after RT. Additional RT was performed and was effective; however, recurrence was observed at 11 months after the additional RT. Chemotherapy was started using nimustine (ACNU; 30 mg/m<sup>2</sup>, every 6 weeks). Tumour regression was confirmed by follow-up MRIs from 2 to 5 months after starting chemotherapy. Four years and 2 months after the first presentation the cat died as a result of tumour lysis syndrome following treatment of a high-grade lymphoma. Histopathological diagnosis of the brain tumour confirmed anaplastic oligodendroglioma.

[498]

**TÍTULO / TITLE:** - Interplay between the intracellular energy sensor AMP-activated protein kinase (AMPK) and the estrogen receptor activities in regulating rat pituitary tumor cell (GH3) growth in vitro.

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

**REVISTA / JOURNAL:** - Pituitary. 2013 May 7.

●●Enlace al texto completo (gratis o de pago) [1007/s11102-013-0488-](#)

[y](#)

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**RESUMEN / SUMMARY:** - Estrogen receptor alpha has a role in regulating rat somatolactotroph tumor cell growth (GH3 cells). AMP-activated protein kinase (AMPK) is a metabolic checkpoint which is able to negatively regulate intracellular signaling downstream of growth factors receptors in conditions increasing cellular AMP levels. We have recently reported on the role of AMPK activation in affecting viability and proliferation of GH3 cells. In the present study, we investigated the interplay between ER- and AMPK-pathways. Results can be regarded as relevant to the development of novel multi-targeted pharmacological therapies against pituitary tumors. We confirmed that estradiol (E2) and the ER antagonist fulvestrant exert stimulatory and inhibitory effects, respectively on GH3 cell growth in a competitive manner. The upstream kinase LKB1 is known to phosphorylate and activate AMPK. Here we showed that neither E2 nor fulvestrant caused a downregulation of LKB1 expression and phospho-AMPK levels in GH3 cells. Actually, fulvestrant strongly reduced the phosphorylation of ACC, which is a direct target of AMPK and a known index of AMPK activity. 2-deoxyglucose, a compound reducing glucose utilization, caused an increase in AMPK activity vs baseline and was able to hinder the stimulatory effect of E2 on cell viability, confirming that the exposure of GH3 cells to estrogens does not prevent them from being responsive to the inhibitory activity of compounds activating AMPK. Finally, the AMPK activator AICAR (AMP analog) did not cause further decrease in cell viability in the course of co-treatments with fulvestrant versus fulvestrant alone, in agreement with impaired phospho-AMPK activity in the presence of the anti-estrogen.

[499]

**TÍTULO / TITLE:** - Eurythmy therapy in the aftercare of pediatric posterior fossa tumour survivors—a pilot study.

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

**REVISTA / JOURNAL:** - Complement Ther Med. 2013 Apr;21 Suppl 1:S3-9. doi: 10.1016/j.ctim.2012.02.007. Epub 2012 Mar 23.

●●Enlace al texto completo (gratis o de pago) [1016/j.ctim.2012.02.007](https://doi.org/10.1016/j.ctim.2012.02.007)

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**RESUMEN / SUMMARY:** - BACKGROUND: Pediatric posterior fossa brain tumour survivors are burdened with extensive neurologic, emotional, behavioral and mental impairments. Even long-term common remediation therapies such as

conventional physical therapy and occupational therapy do not warrant full recovery. Innovative complementary therapy strategies offer a new option that needs evaluation. EYT is a movement therapy that belongs to the field of mind-body therapies (MBTs). This holistic approach aims to promote self-regulation and self-healing powers e.g. in cancer patients. This pilot study is a first attempt to assess the feasibility, treatment adherence and impact of eurythmy therapy (EYT) in pediatric neurooncology. METHODS: Seven posterior fossa tumour survivors who each participated in 25 EYT interventions over 6 months were followed for an additional 6 months. The outcome parameters cognitive functioning, neuromotor functioning and visuomotor integration were assessed at baseline as well as six and 12 months afterwards. RESULTS: We found good adherence and improvements in cognitive and neuromotor functioning in all children and better visuomotor integration in 5/7 children after 6 months. After 12 months, neuromotor functioning and visuomotor integration diminished again to some extent. CONCLUSION: EYT in pediatric cerebellar tumour survivors is feasible and patients may profit from this new approach.

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[500]

**TÍTULO / TITLE:** - Correlation between MRI findings and histological diagnosis of brainstem glioma.

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

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 May;40(3):348-54.

**AUTORES / AUTHORS:** - Yin L; Zhang L

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

**RESUMEN / SUMMARY:** - Objective: In most studies, treatment decisions of brainstem glioma are based solely on MRI features and do not incorporate a histopathological diagnosis. In the current study, we sought to compare MRI characteristics with histopathological findings of brainstem glioma. Methods: From April 2003 through April 2012, 150 patients were diagnosed with brainstem gliomas by MRI and microsurgically treated in Tiantan Hospital, Beijing, China. All the MRI and histopathological findings of these patients were respectively reviewed. Results: Of the 150 patients, 65 were female and 85 were male, 120 were adults and 30 were children (age < 18 years), 108 were low-grade glioma (72.0%), 35 were high-grade glioma (23.3%). The accuracy of the MRI diagnosis for brainstem glioma was 95.3%. Data analysis of the MRI findings revealed that a focal lesion was associated with a more favorable histopathological diagnosis in intrinsic (P=0.005) and exophytic (P=0.001) brainstem glioma patients. In the intrinsic diffuse type, tumors without enhancement had more favorable pathological findings (P=0.009). Conclusions: To our knowledge, this is the largest case series of this nature reported in the literature to date. The results of this study suggest that MRI features of

brainstem gliomas could predict some pathological features and guide prognosis, choice of biopsy and treatment modalities. The pathology of tumors with a focal appearance on MRI was associated with a prognosis that was significantly better than their diffuse counterparts. For the intrinsic diffuse gliomas, non-enhancing tumors had pathology suggestive of a favorable prognosis.

[501]

**TÍTULO / TITLE:** - Serial MR diffusion to predict treatment response in high-grade pediatric brain tumors: a comparison of regional and voxel-based diffusion change metrics.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not034](#)

**AUTORES / AUTHORS:** - Rodriguez Gutierrez D; Manita M; Jaspán T; Dineen RA; Grundy RG; Auer DP

**INSTITUCIÓN / INSTITUTION:** - Division of Radiological and Imaging Sciences, University of Nottingham (D.R.G., M.M., R.A.D., D.P.A.), Nottingham University Hospital Trust (T.J.), and The Children's Brain Tumor Research Centre, University of Nottingham, Nottingham, United Kingdom (D.R.G., T.J., D.P.A., R.G.G.).

**RESUMEN / SUMMARY:** - Background Assessment of treatment response by measuring tumor size is known to be a late and potentially confounded response index. Serial diffusion MRI has shown potential for allowing earlier and possibly more reliable response assessment in adult patients, with limited experience in clinical settings and in pediatric brain cancer. We present a retrospective study of clinical MRI data in children with high-grade brain tumors to assess and compare the values of several diffusion change metrics to predict treatment response. Methods Eighteen patients (age range, 1.9-20.6 years) with high-grade brain tumors and serial diffusion MRI (pre- and posttreatment interval range, 1-16 weeks posttreatment) were identified after obtaining parental consent. The following diffusion change metrics were compared with the clinical response status assessed at 6 months: (1) regional change in absolute and normalized apparent diffusivity coefficient (ADC), (2) voxel-based fractional volume of increased (fiADC) and decreased ADC (fdADC), and (3) a new metric based on the slope of the first principal component of functional diffusion maps (fDM). Results Responders (n = 12) differed significantly from nonresponders (n = 6) in all 3 diffusional change metrics demonstrating higher regional ADC increase, larger fiADC, and steeper slopes (P < .05). The slope method allowed the best response prediction (P < .01, eta<sup>2</sup> = 0.78) with a classification accuracy of 83% for a slope of 58 degrees using receiver operating characteristic (ROC) analysis. Conclusions We demonstrate that

diffusion change metrics are suitable response predictors for high-grade pediatric tumors, even in the presence of variable clinical diffusion imaging protocols.

[502]

**TÍTULO / TITLE:** - Meningeal hemangiopericytoma and solitary fibrous tumors carry the NAB2-STAT6 fusion and can be diagnosed by nuclear expression of STAT6 protein.

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

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 May;125(5):651-8. doi: 10.1007/s00401-013-1117-6. Epub 2013 Apr 11.

●●Enlace al texto completo (gratis o de pago) [1007/s00401-013-1117-](#)

[6](#)

**AUTORES / AUTHORS:** - Schweizer L; Koelsche C; Sahm F; Piro RM; Capper D; Reuss DE; Pusch S; Habel A; Meyer J; Gock T; Jones DT; Mawrin C; Schittenhelm J; Becker A; Heim S; Simon M; Herold-Mende C; Mechttersheimer G; Paulus W; König R; Wiestler OD; Pfister SM; von Deimling A

**INSTITUCIÓN / INSTITUTION:** - Department of Neuropathology, Institute of Pathology, Ruprecht-Karls-University Heidelberg, INF 224, 69120, Heidelberg, Germany.

**RESUMEN / SUMMARY:** - Non-central nervous system hemangiopericytoma (HPC) and solitary fibrous tumor (SFT) are considered by pathologists as two variants of a single tumor entity now subsumed under the entity SFT. Recent detection of frequent NAB2-STAT6 fusions in both, HPC and SFT, provided additional support for this view. On the other hand, current neuropathological practice still distinguishes between HPC and SFT. The present study set out to identify genes involved in the formation of meningeal HPC. We performed exome sequencing and detected the NAB2-STAT6 fusion in DNA of 8/10 meningeal HPC thereby providing evidence of close relationship of these tumors with peripheral SFT. Due to the considerable effort required for exome sequencing, we sought to explore surrogate markers for the NAB2-STAT6 fusion protein. We adopted the Duolink proximity ligation assay and demonstrated the presence of NAB2-STAT6 fusion protein in 17/17 HPC and the absence in 15/15 meningiomas. More practical, presence of the NAB2-STAT6 fusion protein resulted in a strong nuclear signal in STAT6 immunohistochemistry. The nuclear reallocation of STAT6 was detected in 35/37 meningeal HPC and 25/25 meningeal SFT but not in 87 meningiomas representing the most important differential diagnosis. Tissues not harboring the NAB2-STAT6 fusion protein presented with nuclear expression of NAB2 and cytoplasmic expression of STAT6 proteins. In conclusion, we provide strong evidence for meningeal HPC and SFT to constitute variants of a single entity which is defined by NAB2-STAT6 fusion. In addition, we demonstrate that this

fusion can be rapidly detected by STAT6 immunohistochemistry which shows a consistent nuclear reallocation. This immunohistochemical assay may prove valuable for the differentiation of HPC and SFT from other mesenchymal neoplasms.

[503]

**TÍTULO / TITLE:** - ProBDNF and its receptors are upregulated in glioma and inhibit the growth of glioma cells in vitro.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Apr 10.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not039](#)

**AUTORES / AUTHORS:** - Xiong J; Zhou L; Yang M; Lim Y; Zhu YH; Fu DL; Li ZW; Zhong JH; Xiao ZC; Zhou XF

**INSTITUCIÓN / INSTITUTION:** - Key Laboratory of Stem Cells and Regenerative Medicine, Institute of Molecular and Clinical Medicine, Kunming Medical University, Kunming, Yunnan Province, PR China (J.X., L.Z., Z.-C.X., X.-F.Z.); School of Pharmacology and Medical Sciences, University of South Australia, Adelaide, Australia (M.Y., Y.L., J.-H.Z., X.-F.Z.); the Second Affiliated Hospital of Kunming Medical University, Kunming, Yunnan Province, PR China (J.X., Y.-H.Z., D.-L.F., Z.-W.L.); Department of Immunology and Stem Cell Laboratories, Monash University, Clayton, Victoria, Australia (Z.-C.X.).

**RESUMEN / SUMMARY:** - BackgroundHigh-grade glioma is incurable, with a short survival time and poor prognosis. The increased expression of p75 neurotrophin receptor (NTR) is a characteristic of high-grade glioma, but the potential significance of increased p75NTR in this tumor is not fully understood. Since p75NTR is the receptor for the precursor of brain-derived neurotrophic factor (proBDNF), it is suggested that proBDNF may have an impact on glioma.MethodsIn this study we investigated the expression of proBDNF and its receptors p75NTR and sortilin in 52 cases of human glioma and 13 cases of controls by immunochemistry, quantitative real-time PCR, and Western blot methods. Using C6 glioma cells as a model, we investigated the roles of proBDNF on C6 glioma cell differentiation, growth, apoptosis, and migration in vitro.ResultsWe found that the expression levels of proBDNF, p75NTR, and sortilin were significantly increased in high-grade glioma and were positively correlated with the malignancy of the tumor. We also observed that tumors expressed proBDNF, p75NTR, and sortilin in the same cells with different subcellular distributions, suggesting an autocrine or paracrine loop. The ratio of proBDNF to mature BDNF was decreased in high-grade glioma tissues and was negatively correlated with tumor grade. Using C6 glioma cells as a model, we found that proBDNF increased apoptosis and differentiation and decreased cell growth and migration in vitro via p75NTR.ConclusionsOur data indicate that

proBDNF and its receptors are upregulated in high-grade glioma and might play an inhibitory effect on glioma.

[504]

**TÍTULO / TITLE:** - Central nervous system involvement in anaplastic large cell lymphoma in childhood: Results from a multicentre European and Japanese study.

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

**REVISTA / JOURNAL:** - *Pediatr Blood Cancer*. 2013 May 29. doi: 10.1002/pbc.24591.

●●Enlace al texto completo (gratis o de pago) [1002/pbc.24591](#)

**AUTORES / AUTHORS:** - Williams D; Mori T; Reiter A; Woessman W; Rosolen A; Wrobel G; Zsiros J; Uyttebroeck A; Marky I; Le Deley MC; Brugieres L

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Oncology, Cambridge University Hospital NHS Trust, Cambridge, United Kingdom.

**RESUMEN / SUMMARY:** - In an international study of systemic childhood ALCL, 12/463 patients had CNS involvement, three of which had isolated CNS disease. Comparative analysis of CNS positive and negative patients showed no difference in ALK positivity, immunophenotype, presence of B symptoms or other sites of disease. The lymphohistiocytic variant was over represented in the CNS positive group (36% vs. 5%). With multi-agent chemotherapy, including high dose methotrexate, Ara-C and intrathecal treatment, the event free and overall survival of the CNS positive group at 5 years were 50% (95%CI, 25-75%) and 74% (45-91%), respectively with a median follow up of 4.1 years. *Pediatr Blood Cancer* 2013;9999:XX-XX. © 2013 Wiley Periodicals, Inc.

[505]

**TÍTULO / TITLE:** - Diagnosis and treatment of 29 cases of adrenal ganglioneuroma.

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

**REVISTA / JOURNAL:** - *Eur Rev Med Pharmacol Sci*. 2013 Apr;17(8):1110-3.

**AUTORES / AUTHORS:** - Li J; Yang CH; Li LM

**INSTITUCIÓN / INSTITUTION:** - Department of Urology, Tianjin Medical University General Hospital, Tianjin, China. [lijiangff@163.com](mailto:lijiangff@163.com).

**RESUMEN / SUMMARY:** - AIM: To evaluate diagnosis and treatment experience for adrenal ganglioneuroma and provide data for clinical surgery. PATIENTS AND METHODS: Analysis clinical feature and iconography and endocrine examination and clinical data of 29-cases adrenal ganglioneuroma in our Hospital. RESULTS: Back discomfort in 10 cases and convulsivum dizziness in 6-cases (hypertension in 2 cases), central obesity in 1 case. 12-cases were found by physical examination. 9-cases were diagnosed as adrenal

ganglioneuroma and others were diagnosed as adrenal tumor. After operation, all of the cases were diagnosed as adrenal ganglioneuroma by pathology. Beside one patient were still dizzy with BP (blood pressure): 150/95 mmHg, all of patients completely recovered. CONCLUSIONS: For diagnosis on adrenal ganglioneuroma, we should depend on iconography and pathology. The operation is main method and most of patients can be cured.

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[506]

**TÍTULO / TITLE:** - Epidermal growth factor receptor as a therapeutic target in glioblastoma.

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

**REVISTA / JOURNAL:** - Neuromolecular Med. 2013 Jun;15(2):420-34. doi: 10.1007/s12017-013-8229-y. Epub 2013 Apr 11.

●●Enlace al texto completo (gratis o de pago) [1007/s12017-013-8229-](#)

[y](#)

**AUTORES / AUTHORS:** - Kalman B; Szep E; Garzuly F; Post DE

**INSTITUCIÓN / INSTITUTION:** - Departments of Molecular Medicine, Markusovszky Hospital, Markusovszky Street 5, 9700, Szombathely, Hungary, [Kalman.bernadett@markusovszky.hu](mailto:Kalman.bernadett@markusovszky.hu).

**RESUMEN / SUMMARY:** - Glioblastoma represents one of the most challenging problems in neurooncology. Among key elements driving its behavior is the transmembrane epidermal growth factor receptor family, with the first member epidermal growth factor receptor (EGFR) centered in most studies. Engagement of the extracellular domain with a ligand activates the intracellular tyrosine kinase (TK) domain of EGFR, leading to autophosphorylation and signal transduction that controls proliferation, gene transcription, and apoptosis. Oncogenic missense mutations, deletions, and insertions in the EGFR gene are preferentially located in the extracellular domain in glioblastoma and cause constitutive activation of the receptor. The mutant EGFR may also transactivate other cell surface molecules, such as additional members of the EGFR family and the platelet-derived growth factor receptor, which ignite signaling cascades that synergize with the EGFR-initiated cascade. Because of the cell surface location and increased expression of the receptor along with its important biological function, EGFR has triggered much effort for designing targeted therapy. These approaches include TK inhibition, monoclonal antibody, vaccine, and RNA-based downregulation of the receptor. Treatment success requires that the drug penetrates the blood-brain barrier and has low systemic toxicity but high selectivity for the tumor. While the blockade of EGFR-dependent processes resulted in experimental and clinical treatment success, cells capable of using alternative signaling ultimately escape this strategy. A combination of interventions targeting tumor-specific cell surface regulators along with convergent downstream signaling pathways will likely enhance efficacy. Studies

on EGFR in glioblastoma have revealed much information about the complexity of gliomagenesis and also facilitated the development of strategies for targeting drivers of tumor growth and combination therapies with increasing complexity.

[507]

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**- CASTELLANO -**

**TÍTULO / TITLE:** Kurzzeitstrahlentherapie bei älteren Glioblastompatienten: Durchführbarkeit und Effektivität der Ergebnisse einer einzelnen Einrichtung.

**TÍTULO / TITLE:** - Short-course radiotherapy in elderly patients with glioblastoma: feasibility and efficacy of results from a single centre.

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

**REVISTA / JOURNAL:** - Strahlenther Onkol. 2013 Jun;189(6):456-461. Epub 2013 Apr 28.

●●Enlace al texto completo (gratis o de pago) [1007/s00066-013-0346-](http://1007/s00066-013-0346-x)

[x](#)

**AUTORES / AUTHORS:** - Fariselli L; Pinzi V; Milanesi I; Silvani A; Marchetti M; Farinotti M; Salmaggi A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Division of Radiotherapy, Neurological Carlo Besta Institute Foundation, via Celoria 11, 20133, Milan, Italy.

**RESUMEN / SUMMARY:** - BACKGROUND: The incidence of glioblastoma (GBM) in the elderly population is currently increasing, with a peak seen between 65 and 84 years. The optimal treatment in terms of both efficacy and quality of life still remains a relevant and debated issue today. The purpose of our study was to evaluate the feasibility of short-course hypofractionated accelerated radiotherapy (HART) in GBM patients aged over 70 years and with a good Karnofsky performance score (KPS). METHODS: A review of medical records at the "Istituto Neurologico C. Besta" was undertaken; patients aged  $\geq 70$  years who had undergone adjuvant HART for GBM between January 2000 and January 2004 were included in the study. HART was administered to a total dose of 45 Gy, 2.5 Gy/fraction, in three daily fractions for three consecutive days/cycle fractions each, delivered in two cycles (split 15 days). RESULTS: A total of 33 patients were evaluable for the current analysis. Median follow-up was 10 months. According to CTCAE (version 3.0) criteria, none of the patients developed radiation-induced neurological status deterioration or necrosis. KPS evaluation after HART was found to be stable in 73 % of patients, improved in 24 %, and worse in 3 %. The median overall survival time of the entire study population was 8 months (range 2-24). CONCLUSIONS: Our findings suggest that a hypofractionated accelerated schedule can be a safe and effective option in the treatment of GBM in the elderly.

[508]

**TÍTULO / TITLE:** - Molecular interactions of ErbB1 (EGFR) and integrin-beta1 in astrocytoma frozen sections predict clinical outcome and correlate with Akt-mediated in vitro radioresistance.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Apr 17.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not046](#)

**AUTORES / AUTHORS:** - Petras M; Lajtos T; Friedlander E; Klekner A; Pintye E; Feuerstein BG; Szollosi J; Vereb G

**INSTITUCIÓN / INSTITUTION:** - Department of Biophysics and Cell Biology (M.P., T.L., E.F., J.S., G.V.); Department of Neurosurgery (A.K.); Department of Radiotherapy (E.P.); MTA Cell Biology and Signaling Research Group (J.S., G.V.), Medical and Health Science Center, University of Debrecen, Debrecen, Hungary; and Department of Neurology, Barrow Neurological Institute-St. Joseph's Hospital and Medical Center, University of Arizona College of Medicine, Phoenix, Arizona (B.G.F.).

**RESUMEN / SUMMARY:** - Introduction Treatment of astrocytoma is frequently hampered by radioresistance of the tumor. In addition to overexpression of ErbB1/EGFR, functional crosstalk between receptor tyrosine kinases and cell adhesion molecules may also contribute to therapy resistance. Methods Acceptor photobleaching FRET was implemented on frozen sections of clinical astrocytoma to check the role of ErbB1-integrin-beta1 interaction. U251 glioma subclones were obtained by introducing extra CHR7 material or the ErbB1 gene to test the relevance and mechanism of this interaction in vitro. Results Grade IV tumors showed higher ErbB1 and integrin-beta1 expression and greater ErbB1-integrin-beta1 heteroassociation than did grade II tumors. Of these, the extent of molecular association was a single determinant of tumor grade and prognosis in stepwise logistic regression. In vitro, integrin-beta1 was upregulated, and radiosensitivity was diminished by ectopic ErbB1 expression. Great excess of ErbB1 provided colony forming advantage over medium excess but did not yield better radiation resistance or faster proliferation and decreased to medium level over time, whereas integrin-beta1 levels remained elevated and defined the extent of radioresistance. Increased expression of ErbB1 and integrin-beta1 was paralleled by decreasing ErbB1 homoassociation and increasing ErbB1-integrin-beta1 heteroassociation. Microscopic two-sided FRET revealed that pixels with higher ErbB1-integrin-beta1 heteroassociation exhibited lower ErbB1 homoassociation, indicating competition for association partners among these molecules. Boosted Akt phosphorylation response to EGF accompanied this shift toward heteroassociation, and the consequentially increased radioresistance could be reverted by inhibiting PI3K. Conclusion The clinically relevant ErbB1-integrin-beta1 heteroassociation may be used as a target of both predictive diagnostics and molecular therapy.

[509]

**TÍTULO / TITLE:** - A potential antitumor agent, (6-amino-1-methyl-5-nitrosouracilato-N3)-triphenylphosphine-gold(I): Structural studies and in vivo biological effects against experimental glioma.

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

**REVISTA / JOURNAL:** - Eur J Med Chem. 2013 Apr 10;64C:260-272. doi: 10.1016/j.ejmech.2013.03.067.

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

[1016/j.ejmech.2013.03.067](#)

**AUTORES / AUTHORS:** - Illan-Cabeza NA; Garcia-Garcia AR; Martinez-Martos JM; Ramirez-Exposito MJ; Pena-Ruiz T; Moreno-Carretero MN

**INSTITUCIÓN / INSTITUTION:** - Department of Inorganic and Organic Chemistry, University of Jaen, España.

**RESUMEN / SUMMARY:** - The synthesis and molecular and supramolecular structures of the compound (6-amino-1-methyl-5-nitrosouracilato-N3)-triphenylphosphine-gold(I) with interesting abilities to inhibit tumor growth in an animal model of experimental glioma are reported. Thus, its antitumor properties, effects on both enzyme and non-enzyme antioxidant defense systems and the response of several biochemical biomarkers have been analyzed. After seven days of treatment, the gold compound decreased the tumor growth to ca. one-tenth and reduced oxidative stress biomarkers (thiobarbituric acid-reactive substances (TBARS) and protein oxidation levels) compared to animals treated with the vehicle. Also, gold compound maintained non-enzyme antioxidant defense systems as in non-tumor animals and increased enzyme antioxidant defenses, such as superoxide dismutase and glutathione peroxidase activities, and decreased catalase activity. Analysis of serum levels of electrolytes, nitrogenous compounds, glucose, lipids, total protein, albumin, transaminases and alkaline phosphatase indicated that gold compound treatment showed few adverse effects, while effectively inhibiting tumor growth through mechanisms that involved endogenous antioxidant defenses.

[510]

**TÍTULO / TITLE:** - Factors Influencing Overall Survival Specific to Adult Low-grade Astrocytoma: A Population-based Study.

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

**REVISTA / JOURNAL:** - Clin Oncol (R Coll Radiol). 2013 May 17. pii: S0936-6555(13)00198-2. doi: 10.1016/j.clon.2013.04.005.

●●Enlace al texto completo (gratis o de pago) [1016/j.clon.2013.04.005](#)

**AUTORES / AUTHORS:** - Sahgal A; Ironside SA; Perry J; Mainprize T; Keith JL; Laperriere N; Tsao M; Paszat L

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, Ontario, Canada; Department of Radiation Oncology, Princess Margaret Cancer Centre, University of Toronto, Toronto, Ontario, Canada. Electronic address: [Arjun.Sahgal@sunnybrook.ca](mailto:Arjun.Sahgal@sunnybrook.ca).

**RESUMEN / SUMMARY:** - AIMS: We report a population-based overall survival and prognostic factor analysis specific to adult patients diagnosed with low-grade astrocytoma (LGA). MATERIALS AND METHODS: All histologically confirmed cases of LGA diagnosed between 1992 and 1996 in the province of Ontario, Canada, were identified from the Ontario Cancer Registry and reviewed. RESULTS: In total, 182 patients were identified; the mean age was 50 years and the mean survival time was 4.1 years (standard deviation = 5.1 years). Fifty-four per cent of patients had a surgical excision and 46% were biopsied alone. Both univariate and multivariate analyses showed that patients aged <30 years were significantly more likely to undergo an excision as compared with a biopsy alone (odds ratio = 4.26, 95% confidence interval 1.54-11.77). For the entire cohort, we observed a significant relationship between decreasing survival as a function of increasing age at diagnosis. In the biopsy sub-group, relative to patient's age <30 years, the hazard of dying increased significantly according to age when stratified by decade. However, in those patients having had a primary surgical excision, the hazard of dying relative to patient's age <30 years was similar for those aged 30-49 years and then significantly greater as patient age surpassed 50 years. CONCLUSIONS: Age is a significant prognostic factor for LGA. Our analysis suggests that in those patients amenable to a primary tumour excision, a survival benefit may be confined to those under age 50 years.

[511]

**TÍTULO / TITLE:** - Identification and characterization of a small molecule inhibitor of Wnt signaling in glioblastoma cells.

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

**REVISTA / JOURNAL:** - Mol Cancer Ther. 2013 Apr 25.

●●Enlace al texto completo (gratis o de pago) [1158/1535-7163.MCT-12-1176-T](#)

**AUTORES / AUTHORS:** - De Robertis A; Valensin S; Rossi M; Tunici P; Verani M; De Rosa A; Giordano C; Varrone M; Nencini A; Pratelli C; Benicchi T; Bakker A; Hill J; Sangthongpitag K; Pendharkar V; Boping L; Fui Mee N; Siew Wen T; Shi Jing T; Cheong SM; He X; Caricasole A; Salerno M

**INSTITUCIÓN / INSTITUTION:** - 1Pharmacology, Siena Biotech.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common and prognostically unfavorable form of brain tumor. The aggressive and highly invasive phenotype of these tumors makes them among the most anatomically

damaging human cancers with a median survival of less than one year. Although canonical WNT pathway activation in cancers has been historically linked to the presence of mutations involving key components of the pathway (APC, beta-CATENIN or AXIN proteins), an increasing number of studies suggest that elevated WNT signaling in GBM is initiated by several alternative mechanisms that are involved in different steps of the disease. Therefore, inhibition of WNT signaling may represent a therapeutically relevant approach for GBM treatment. After the selection of a GBM cell model responsive to WNT inhibition, we set out to develop a screening approach for the identification of compounds capable of modulating canonical WNT signaling and associated proliferative responses in GBM cells. Here we show that the small molecule SEN461 inhibits the canonical WNT signaling pathway in GBM cells, with relevant effects at both molecular and phenotypic levels in vitro and in vivo. These include SEN461-induced AXIN stabilization, increased beta-CATENIN phosphorylation/degradation, and inhibition of anchorage-independent growth of human GBM cell lines and patient-derived primary tumor cells in vitro. Moreover, in vivo administration of SEN461 antagonized WNT signaling in Xenopus embryos and reduced tumor growth in a GBM xenograft model. These data represent the first demonstration that small molecule-mediated inhibition of WNT signaling may be a potential approach for GBM therapeutics.

[512]

**TÍTULO / TITLE:** - Human three prime exonuclease TREX1 is induced by genotoxic stress and involved in protection of glioma and melanoma cells to anticancer drugs.

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

**REVISTA / JOURNAL:** - Biochim Biophys Acta. 2013 Aug;1833(8):1832-43. doi: 10.1016/j.bbamcr.2013.03.029. Epub 2013 Apr 8.

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

[1016/j.bbamcr.2013.03.029](http://1016/j.bbamcr.2013.03.029)

**AUTORES / AUTHORS:** - Tomicic MT; Aasland D; Nikolova T; Kaina B; Christmann M

**INSTITUCIÓN / INSTITUTION:** - Department of Toxicology, University Medical Center, Obere Zahlbacher Str. 67, D-55131 Mainz, Germany.

**RESUMEN / SUMMARY:** - To counteract genotoxic stress, DNA repair functions are in effect. Most of them are constitutively expressed while some of them can be up-regulated depending on the level of DNA damage. In human cells, only few DNA repair functions are subject of induction following DNA damage, and thus there is a need to identify and characterize inducible repair functions more thoroughly. Here, we provide evidence that the “three prime exonuclease I” (TREX1) is up-regulated in human fibroblasts and cancer cells on mRNA and protein level. Transcriptional upregulation of TREX1 was observed upon

exposure to ultraviolet light and various anticancer drugs in glioma and malignant melanoma cells. Induction of TREX1 was found following treatment with the crosslinking alkylating agents nimustine, carmustine, fotemustine and the topoisomerase I inhibitor topotecan, but not following temozolomide, etoposide and ionizing radiation. Induction of TREX1 following DNA damage requires the AP-1 components c-Jun and c-Fos, as shown by siRNA knockdown, EMSA experiments, ChIP analysis and reporter assays with the TREX1 promoter and constructs harboring mutations in the AP-1 binding site. To analyze whether TREX1 expression impacts the sensitivity of cancer cells to therapeutics, TREX1 expression was down-regulated by siRNA in malignant glioma and melanoma cells. TREX1 knockdown resulted in enhanced cell death following nimustine, fotemustine and topotecan and to a reduced recovery from the anticancer drug induced block to replication. The data revealed that induction of TREX1 is a survival response evoked by various genotoxic anticancer drugs and identified TREX1 as a potential therapeutic target for anticancer therapy.

[513]

**TÍTULO / TITLE:** - Fractionated radiation-induced nitric oxide promotes expansion of glioma stem-like cells.

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

**REVISTA / JOURNAL:** - Cancer Sci. 2013 May 29. doi: 10.1111/cas.12207.

●●Enlace al texto completo (gratis o de pago) [1111/cas.12207](#)

**AUTORES / AUTHORS:** - Kim RK; Suh Y; Cui YH; Hwang E; Lim EJ; Yoo KC; Lee GH; Yi JM; Kang SG; Lee SJ

**INSTITUCIÓN / INSTITUTION:** - Department of Chemistry, Research Institute for Natural Sciences, Hanyang University, Seoul, 133-791, Korea.

**RESUMEN / SUMMARY:** - Glioblastoma remains as incurable brain disease owing to the prevalence of its recurrence. Considerable evidence suggests that glioma stem-like cells are responsible for glioma relapse after treatment, which commonly involves ionizing radiation. Here, we found that fractionated ionizing radiation (2 Gy/day for 3 days) induced glioma stem-like cell expansion and resistance to anticancer treatment such as cisplatin (50  $\mu$ M) or taxol (500 nM), or by ionizing radiation (10 Gy) in both glioma cell lines (U87, U373) and patient-derived glioma cells. Of note, concomitant increase of nitric oxide production occurred with the radiation-induced increase of glioma stem-like cell population through up-regulation of inducible nitric oxide synthase (iNOS). In line with this observation, down-regulation of iNOS effectively reduced the glioma stem-like cell population and decreased resistance to anticancer treatment. Collectively, our results suggest that targeting iNOS in combination with ionizing radiation may increase the efficacy of radiotherapy for glioma treatment. This article is protected by copyright. All rights reserved.

[514]

**TÍTULO / TITLE:** - Phosphorylation of EZH2 Activates STAT3 Signaling via STAT3 Methylation and Promotes Tumorigenicity of Glioblastoma Stem-like Cells.

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

**REVISTA / JOURNAL:** - Cancer Cell. 2013 May 14. pii: S1535-6108(13)00177-3. doi: 10.1016/j.ccr.2013.04.008.

●●Enlace al texto completo (gratis o de pago) [1016/j.ccr.2013.04.008](http://1016/j.ccr.2013.04.008)

**AUTORES / AUTHORS:** - Kim E; Kim M; Woo DH; Shin Y; Shin J; Chang N; Oh YT; Kim H; Rhee Y; Nakano I; Lee C; Joo KM; Rich JN; Nam DH; Lee J

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

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) displays cellular hierarchies harboring a subpopulation of stem-like cells (GSCs). Enhancer of Zeste Homolog 2 (EZH2), the lysine methyltransferase of Polycomb repressive complex 2, mediates transcriptional repression of prodifferentiation genes in both normal and neoplastic stem cells. An oncogenic role of EZH2 as a transcriptional silencer is well established; however, additional functions of EZH2 are incompletely understood. Here, we show that EZH2 binds to and methylates STAT3, leading to enhanced STAT3 activity by increased tyrosine phosphorylation of STAT3. The EZH2-STAT3 interaction preferentially occurs in GSCs relative to non-stem bulk tumor cells, and it requires a specific phosphorylation of EZH2. Inhibition of EZH2 reverses the silencing of Polycomb target genes and diminishes STAT3 activity, suggesting therapeutic strategies.

[515]

**TÍTULO / TITLE:** - The Expressions of Wnt/beta-catenin Pathway-Related Components in Brainstem Gliomas.

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

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 May;40(3):355-60.

**AUTORES / AUTHORS:** - Wu W; Tian Y; Wan H; Song Y; Li J; Zhang L

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital.

**RESUMEN / SUMMARY:** - Background: The overall prognosis of brainstem gliomas is very poor, and the current treatment cannot significantly prolong the overall survival of these patients; therefore, studying the molecular biological mechanisms of the occurrence and development of brainstem gliomas has important significance for their treatment. The Wnt/beta-catenin signaling pathway is closely associated with the occurrence and development of tumors,

but its relationship with brainstem gliomas remains unclear. Methods: This study used Western blot and immunohistochemistry methods to detect the expressions of Wnt/beta-catenin signaling pathway-related components such as Wnt-1, Wnt-2, beta-catenin and C-myc in six cases of normal brain tissues and 24 cases of brainstem gliomas and analyzed the relationship between their expressions and clinicopathological characteristics. Results: Wnt-1 had no obvious expression in normal brain tissues and did not show any significant difference between high- and low-grade brainstem gliomas; the expressions of Wnt-2, beta-catenin and C-myc in high-grade brainstem gliomas were significantly higher than that in low-grade brainstem gliomas and normal brain tissues and were positively correlated with the expression of Ki-67. Moreover, the expressions of Wnt-2 and C-myc were significantly associated with the prognosis of brainstem glioma patients; additionally, there was a trend toward increased beta-catenin expression with shorter survival, but there was no statistical difference. Conclusions: Wnt/beta-catenin signaling pathway might be abnormally activated and plays an important role in the occurrence and development of brainstem gliomas. Wnt-2, beta-catenin and C-myc may be potential targets for brainstem glioma treatment.

[516]

**TÍTULO / TITLE:** - Pathological features of highly invasive glioma stem cells in a mouse xenograft model.

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

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 May 14.

●●Enlace al texto completo (gratis o de pago) [1007/s10014-013-0149-](#)

[X](#)

**AUTORES / AUTHORS:** - Sadahiro H; Yoshikawa K; Ideguchi M; Kajiwara K; Ishii A; Ikeda E; Owada Y; Yasumoto Y; Suzuki M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery and Clinical Neuroscience, Yamaguchi University School of Medicine, 1-1-1 Minami-Kogushi, Ube, Yamaguchi, Japan, [sadapiro@yamaguchi-u.ac.jp](mailto:sadapiro@yamaguchi-u.ac.jp).

**RESUMEN / SUMMARY:** - Glioma stem cells (GSCs) may be a source of tumor progression and recurrence after multimodal therapy, because of their high invasive potential. The purpose of this study was to compare the invasive and migratory properties of GSCs and non-GSCs and examine the distribution of these cells in a mouse xenograft model. Three GSC lines, G144, Y02, and Y10, cultured from human glioblastoma, were used in the study. Matrigel-invasion assays of infiltration and time-lapse studies of migration were performed for comparison of the GSCs with the corresponding differentiated non-GSC lines. Cells were also transplanted into mouse brain and the different distribution of GSCs and non-GSCs was examined in the tumor xenograft model. All 3 GSC lines had greater invasion and migration ability than the

corresponding non-GSCs. In vivo, GSCs infiltrated more widely than non-GSCs and reached the contralateral hemisphere via the corpus callosum in the early stage of tumorigenesis. GSCs also primarily penetrated the subventricular zone (SVZ). GSCs have high invasive potential and tend to be present in the outer tumor bulk and infiltrate the contralateral hemisphere via the corpus callosum, in addition to penetrating the SVZ.

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[517]

**TÍTULO / TITLE:** - Disruption of the Dynamics of Microtubules and Selective Inhibition of Glioblastoma Cells by Nanofibers of Small Hydrophobic Molecules.

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

**REVISTA / JOURNAL:** - Angew Chem Int Ed Engl. 2013 May 17. doi: 10.1002/anie.201302658.

●●Enlace al texto completo (gratis o de pago) [1002/anie.201302658](#)

**AUTORES / AUTHORS:** - Kuang Y; Xu B

**INSTITUCIÓN / INSTITUTION:** - Department of Chemistry, Brandeis University, 415 South Street, Waltham, MA 02453 (USA) <http://people.brandeis.edu/> approximately bxu/

**RESUMEN / SUMMARY:** - Ganging up against the bad guys: Nanofibers of 1 efficiently inhibited the growth of glioblastoma cells but exhibited little acute toxicity toward a neuronal cell line. The selective cytotoxicity probably stems from the Warburg effect of cancer cells and the existence of microtubule-stabilizing proteins in neurons. Supramolecular nanofibers that can interrupt the self-organization of proteins may have potential as nanomedicines for the treatment of cancer.

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[518]

**TÍTULO / TITLE:** - Treatment options in newly diagnosed glioblastoma.

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

**REVISTA / JOURNAL:** - Curr Treat Options Neurol. 2013 Jun;15(3):281-8. doi: 10.1007/s11940-013-0226-9.

●●Enlace al texto completo (gratis o de pago) [1007/s11940-013-0226-](#)

[9](#)

**AUTORES / AUTHORS:** - Lee EQ; Nayak L; Wen PY; Reardon DA

**INSTITUCIÓN / INSTITUTION:** - Center for Neuro-Oncology, Dana-Farber/Brigham and Women's Cancer Center, 450 Brookline Avenue, Boston, MA, 02215, USA.

**RESUMEN / SUMMARY:** - OPINION STATEMENT: Regardless of MGMT status, standard of care for a patient with newly diagnosed glioblastoma (GBM), age  $\leq 70$  years, and adequate functional status is radiation and concurrent temozolomide followed by adjuvant temozolomide. For elderly patients, recent studies have suggested that standard radiation, hypofractionated radiation, or

single agent temozolomide are acceptable treatment options. Randomized phase III studies of bevacizumab in combination with radiation and temozolomide for newly diagnosed GBM have completed accrual. Preliminary results reveal a clear progression-free survival benefit. Overall survival appears unchanged although follow-up has not fully matured and cross-over to bevacizumab upon progression among control patients may limit definitive conclusions. Although bevacizumab in the upfront setting may be considered for a subset of patients, it should not be used routinely in newly diagnosed patients until final results are available. Clinical trials evaluating promising therapeutics given in combination with standard temozolomide chemoradiation are critically needed.

[519]

**TÍTULO / TITLE:** - Her2neu Amplification Associates with Co-deletion 1p/14q in Recurrent Meningiomas.

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

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 May;40(3):361-5.

**AUTORES / AUTHORS:** - Hamilton BO; Sy JS; Megyesi JF; Ang LC

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Pathology, London Health Science Center, London, Ontario, Canada.

**RESUMEN / SUMMARY:** - Background: The current methods to predict recurrence and aggressive behaviour of meningiomas rely mainly on histological grading, histological subtype, proliferative index, as well as brain invasion. In many instances, histological grade alone fails to predict recurrence in the grade I and grade II meningiomas. Deletions of 1p and 14q have previously been reported to correlate with poor prognosis in terms of either recurrence or higher histological grades. The Her2neu (ErbB2) amplification has been shown to be a useful predictor of aggressive behaviour in breast and ovarian tumours, but its significance in meningioma is so far uncertain. Method: In order to determine the cytogenetic differences between 22 recurrent and 25 non-recurrent meningiomas of all grades, we used fluorescent in situ hybridization (FISH) DNA probes for 1p36, 14q11.2 and 17q11.2-12 (Her2neu) on formalin fixed paraffin embedded (FFPE) tissue from the Brain Tumour Tissue Bank (BTTB), London Health Science Center (LHSC). Results: We showed a positive association for meningioma recurrence correlated with 1p36 deletion plus or minus 14q 11.2 deletions in all grades of meningiomas. The Her2neu amplification was strongly associated with 1p/14q co-deletion in cases of recurrent meningiomas, especially the higher grade tumours. Conclusion: These cytogenetic markers can be applied in addition to histological grading for predicting the risk of recurrence and biological behaviour.

[520]

**TÍTULO / TITLE:** - Bifocal intracranial tumors of nongerminomatous germ cell etiology: diagnostic and therapeutic implications.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 7.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not050](#)

**AUTORES / AUTHORS:** - Aizer AA; Sethi RV; Hedley-Whyte ET; Ebb D; Tarbell NJ; Yock TI; Macdonald SM

**INSTITUCIÓN / INSTITUTION:** - Harvard Radiation Oncology Program, Boston, Massachusetts (A.A.A.); Harvard Medical School, Boston, Massachusetts (R.V.S.); Department of Pathology and Neuropathology, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts (E.T.H.-W.); Department of Pediatrics, Division of Pediatric Hematology/Oncology, Massachusetts General Hospital, Boston, Massachusetts (D.E.); Department of Radiation Oncology, Massachusetts General Hospital, Pediatric Radiation Oncology, Francis H. Burr Proton Therapy Center, Boston, Massachusetts (N.J.T., T.I.Y., S.M.M.).

**RESUMEN / SUMMARY:** - BackgroundPatients presenting with synchronous bifocal intracranial tumors (masses in the pineal and neurohypophyseal region), detectable human chorionic gonadotropin (hCG) levels (5-100 mIU/mL), and normal alpha fetoprotein (AFP) levels ( $\leq 10$  ng/mL) are often diagnosed empirically with pure germinoma. In such scenarios, pathologic confirmation is often deferred, given that bifocal nongerminomatous germ cell tumors (NGGCTs) are considered rare and because available literature and research protocols support such an approach. We sought to characterize the association between bifocal intracranial tumors and NGGCT histology. MethodsSeventy-one patients treated for intracranial germ cell tumors at Massachusetts General Hospital in 1998-2012 were identified. Patients presenting with synchronous bifocal disease were selected for further review. ResultsOf the 71 patients presenting with intracranial germ cell tumors, 14 (19.7%) had synchronous bifocal disease. Of these 14 patients, 7 (50.0%) had germinoma, 3 (21.4%) had NGGCT, and 4 (28.6%) had hCG levels  $< 200$  mIU/mL and normal AFP levels and were treated without pathologic confirmation. Of the 3 patients with confirmed bifocal NGGCT, 2 had detectable hCG levels with AFP  $< 10$  ng/mL and 1 patient had a detectable hCG level with a modest elevation in AFP. ConclusionsNGGCTs should be considered in the differential diagnosis for patients presenting with bifocal intracranial tumors. Given differences in the management of germinomas and NGGCTs, clinicians should strongly consider a biopsy in patients presenting with bifocal masses and normal or modestly elevated biomarkers. Misclassification of such cases as germinomas could result in undertreatment and a possible increased risk for recurrence.

[521]

**TÍTULO / TITLE:** - Refined brain tumor diagnostics and stratified therapies: the requirement for a multidisciplinary approach.

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

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 May 21.

●●Enlace al texto completo (gratis o de pago) [1007/s00401-013-1127-](http://dx.doi.org/10.1007/s00401-013-1127-4)

[4](#)

**AUTORES / AUTHORS:** - Riemenschneider MJ; Louis DN; Weller M; Hau P

**INSTITUCIÓN / INSTITUTION:** - Department of Neuropathology, Regensburg University Hospital, Franz-Josef-Strauss-Allee 11, 93053, Regensburg, Germany, [Markus.Riemenschneider@ukr.de](mailto:Markus.Riemenschneider@ukr.de).

**RESUMEN / SUMMARY:** - Individualized therapies are popular current concepts in oncology and first steps towards stratified medicine have now been taken in neurooncology through implementation of stratified therapeutic approaches. Knowledge about the molecular basis of brain tumors has expanded greatly in recent years and a few molecular alterations are studied routinely because of their clinical relevance. However, no single targeted agent has yet been fully approved for the treatment of glial brain tumors. In this review, we argue that multidisciplinary and integrated approaches are essential for translational research and the development of new treatments for patients with malignant gliomas, and we present a conceptual framework in which to place the components of such an interdisciplinary approach. We believe that this ambitious goal can be best realized through strong cooperation of brain tumor centers with local hospitals and physicians; such an approach enables close dialogue between expert subspecialty clinicians and local therapists to consider all aspects of this increasingly complex set of diseases.

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[522]

**TÍTULO / TITLE:** - Alkylphospholipids deregulate cholesterol metabolism and induce cell-cycle arrest and autophagy in U-87 MG glioblastoma cells.

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

**REVISTA / JOURNAL:** - Biochim Biophys Acta. 2013 May 21. pii: S1388-1981(13)00110-8. doi: 10.1016/j.bbaliip.2013.05.004.

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

[1016/j.bbaliip.2013.05.004](http://dx.doi.org/10.1016/j.bbaliip.2013.05.004)

**AUTORES / AUTHORS:** - Rios-Marco P; Martin-Fernandez M; Soria-Bretones I; Rios A; Carrasco MP; Marco C

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry and Molecular Biology I, Faculty of Sciences, University of Granada, Av. Fuentenueva s/n, Granada 18001, España.

**RESUMEN / SUMMARY:** - Glioblastoma is the most common malignant primary brain tumour in adults and one of the most lethal of all cancers. Growing

evidence suggests that human tumours undergo abnormal lipid metabolism, characterised by an alteration in the mechanisms that regulate cholesterol homeostasis. We have investigated the effect that different antitumoural alkylphospholipids (APLs) exert upon cholesterol metabolism in the U-87 MG glioblastoma cell line. APLs altered cholesterol homeostasis by interfering with its transport from the plasma membrane to the endoplasmic reticulum (ER), thus hindering its esterification. At the same time they stimulated the synthesis of cholesterol from radiolabelled acetate and its internalisation from low-density lipoproteins (LDLs), inducing both 3-hydroxy-3-methylglutaryl-CoA reductase (HMGCR) and LDL receptor (LDLR) genes. Fluorescent microscopy revealed that these effects promoted the accumulation of intracellular cholesterol. Filipin staining demonstrated that this accumulation was not confined to the late endosome/lysosome (LE/LY) compartment since it did not colocalise with LAMP2 lysosomal marker. Furthermore, APLs inhibited cell growth, producing arrest at the G2/M phase. We also used transmission electron microscopy (TEM) to investigate ultrastructural alterations induced by APLs and found an abundant presence of autophagic vesicles and autolysosomes in treated cells, indicating the induction of autophagy. Thus our findings clearly demonstrate that antitumoural APLs interfere with the proliferation of the glioblastoma cell line via a complex mechanism involving cholesterol metabolism, cell-cycle arrest or autophagy. Knowledge of the interrelationship between these processes is fundamental to our understanding of tumoural response and may facilitate the development of novel therapeutics to improve treatment of glioblastoma and other types of cancer.

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[523]

**TÍTULO / TITLE:** - Long-term tumor control of benign intracranial tumors after Gamma Knife radiosurgery in 280 patients followed more than 5 years.

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

**REVISTA / JOURNAL:** - Acta Neurol Belg. 2013 May 25.

●●Enlace al texto completo (gratis o de pago) [1007/s13760-013-0211-](#)

[9](#)

**AUTORES / AUTHORS:** - Massager N; De Smedt F; Devriendt D

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Gamma Knife Center, University Hospital Erasme, Université Libre de Bruxelles, Route de Lennik 808, 1070, Brussels, Belgium, [nmessage@ulb.ac.be](mailto:nmessage@ulb.ac.be).

**RESUMEN / SUMMARY:** - The objective of the study was to assess the long-term radiological outcome of benign intracranial tumors (BIT) after Gamma Knife radiosurgery. We report the radiological outcome of 280 patients who underwent radiosurgical irradiation for BIT in a single center. Our series included 120 meningiomas, 139 vestibular schwannomas, 12 other schwannomas and 9 pituitary adenomas. Serial imaging studies were

performed after irradiation for at least 5 years for all patients. The median tumor volume was 1.9 cc, and the median margin dose was 12 Gy. After a median follow-up of 6.8 years, the tumor control rate was 92.1 %: tumor decreased in 176 cases (62.9 %), remained unchanged in 82 lesions (29.3 %) and increased in 22 cases (7.9 %). The actuarial tumor control rate was 93.2 % at 5 years, 92.3 % at 7.5 years and 91.0 % at 10 years. No atypical or malignant transformation of irradiated tumors occurred during the follow-up period. Gamma Knife radiosurgery provides a high rate of tumor control for BIT even in the medium to long-term.

[524]

**TÍTULO / TITLE:** - Enhancing drug delivery for boron neutron capture therapy of brain tumors with focused ultrasound.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 7.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not052](#)

**AUTORES / AUTHORS:** - Alkins RD; Brodersen PM; Sodhi RN; Hynynen K

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Biophysics, University of Toronto, Ontario, Canada (R.D.A., K.H.); Sunnybrook Research Institute, Sunnybrook Health Sciences Centre (R.D.A., K.H.), and Surface Interface Ontario, University of Toronto (P.M.B., R.N.S.S.), Toronto, Ontario, Canada.

**RESUMEN / SUMMARY:** - Background Glioblastoma is a notoriously difficult tumor to treat because of its relative sanctuary in the brain and infiltrative behavior. Therapies need to penetrate the CNS but avoid collateral tissue injury. Boron neutron capture therapy (BNCT) is a treatment whereby a  $^{10}\text{B}$ -containing drug preferentially accumulates in malignant cells and causes highly localized damage when exposed to epithermal neutron irradiation. Studies have suggested that  $^{10}\text{B}$ -enriched L-4-boronophenylalanine-fructose (BPA-f) complex uptake can be improved by enhancing the permeability of the cerebrovasculature with osmotic agents. We investigated the use of MRI-guided focused ultrasound, in combination with injectable microbubbles, to noninvasively and focally augment the uptake of BPA-f. Methods With the use of a 9L gliosarcoma tumor model in Fisher 344 rats, the blood-brain and blood-tumor barriers were disrupted with pulsed ultrasound using a 558 kHz transducer and Definity microbubbles, and BPA-f (250 mg/kg) was delivered intravenously over 2 h.  $^{10}\text{B}$  concentrations were estimated with imaging mass spectrometry and inductively coupled plasma atomic emission spectroscopy. Results The tumor to brain ratio of  $^{10}\text{B}$  was  $6.7 \pm 0.5$  with focused ultrasound and only  $4.1 \pm 0.4$  in the control group ( $P < .01$ ), corresponding to a mean tumor [ $^{10}\text{B}$ ] of  $123 \pm 25$  ppm and  $85 \pm 29$  ppm, respectively.  $^{10}\text{B}$  uptake in infiltrating clusters treated with ultrasound was  $0.86 \pm 0.10$  times the main tumor concentration, compared with only  $0.29 \pm 0.08$

in controls. Conclusions Ultrasound increases the accumulation of 10B in the main tumor and infiltrating cells. These findings, in combination with the expanding clinical use of focused ultrasound, may offer improvements in BNCT and the treatment of glioblastoma.

[525]

**TÍTULO / TITLE:** - Antitumor activity of methyl gallate by inhibition of focal adhesion formation and Akt phosphorylation in glioma cells.

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

**REVISTA / JOURNAL:** - Biochim Biophys Acta. 2013 Apr 3;1830(8):4017-4029. doi: 10.1016/j.bbagen.2013.03.030.

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

[1016/j.bbagen.2013.03.030](#)

**AUTORES / AUTHORS:** - Lee SH; Kim JK; Kim DW; Hwang HS; Eum WS; Park J; Han KH; Oh JS; Choi SY

**INSTITUCIÓN / INSTITUTION:** - Department of Biomedical Science and Research Institute of Bioscience and Biotechnology, Hallym University, Chuncheon 200-702, Republic of Korea.

**RESUMEN / SUMMARY:** - BACKGROUND: Methyl gallate (MG) possesses a wide range of biological properties that include anti-oxidant, anti-inflammatory, and anti-microbial activities. However, its anti-tumor activity has not been extensively examined in cancer cells. Thus, we examined the effect of MG in both glutamate-induced rat C6 and human U373 glioma cell proliferation and migration. METHODS: MG was isolated from the stem bark of Acer barbinerve. Cell viability and migration were analyzed by 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) and scratch wound-healing assay, respectively. Focal adhesion formation was detected with immunofluorescence. RESULTS: Treatment of C6 and U373 glioma cells with MG significantly reduced cell viability, migration, and Akt phosphorylation level. Glutamate stimulation markedly increased the level of ERK1/2 phosphorylation. However, cells treated with MG displayed decreased ERK1/2 phosphorylation. Inhibition of ERK1/2 by MG or MEK1/2 inhibitor significantly inhibited paxillin phosphorylation at Ser83 and focal adhesion turn-over produced inefficient glioma cell migration. In addition, activation of Akt and ERK1/2 upon glutamate stimulation was independently regulated by Ca<sup>2+</sup> and protein kinase C activity, respectively, via the alpha-amino-3-hydroxy-5-methy-4-isoxazolepropionate acid glutamate receptor and metabotropic glutamate receptor. GENERAL SIGNIFICANCE: Our results clearly indicate that MG has a strong anti-tumor effect through the down-regulation of the Akt and ERK1/2 signaling pathways. Thus, methyl gallate is a potent anti-tumor and novel therapeutic agent for glioma.

[526]

**TÍTULO / TITLE:** - NVP-BEZ235, a novel dual PI3K/mTOR inhibitor, enhances the radiosensitivity of human glioma stem cells in vitro.

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

**REVISTA / JOURNAL:** - Acta Pharmacol Sin. 2013 May;34(5):681-90. doi: 10.1038/aps.2013.22. Epub 2013 Apr 22.

●●Enlace al texto completo (gratis o de pago) [1038/aps.2013.22](#)

**AUTORES / AUTHORS:** - Wang WJ; Long LM; Yang N; Zhang QQ; Ji WJ; Zhao JH; Qin ZH; Wang Z; Chen G; Liang ZQ

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmacology, Medical School of Soochow University, Suzhou 215123, China.

**RESUMEN / SUMMARY:** - Aim:NVP-BEZ235 is a novel dual PI3K/mTOR inhibitor and shows dramatic effects on gliomas. The aim of this study was to investigate the effects of NVP-BEZ235 on the radiosensitivity and autophagy of glioma stem cells (GSCs) in vitro.Methods:Human GSCs (SU-2) were tested. The cell viability and survival from ionizing radiation (IR) were evaluated using MTT and clonogenic survival assay, respectively. Immunofluorescence assays were used to identify the formation of autophagosomes. The apoptotic cells were quantified with annexin V-FITC/PI staining and flow cytometry, and observed using Hoechst 33258 staining and fluorescence microscope. Western blot analysis was used to analyze the expression levels of proteins. Cell cycle status was determined by measuring DNA content after staining with PI. DNA repair in the cells was assessed using a comet assay.Results:Treatment of SU-2 cells with NVP-BEZ235 (10-320 nmol/L) alone suppressed the cell growth in a concentration-dependent manner. A low concentration of NVP-BEZ235 (10 nmol/L) significantly increased the radiation sensitivity of SU-2 cells, which could be blocked by co-treatment with 3-MA (50 μmol/L). In NVP-BEZ235-treated SU-2 cells, more punctate patterns of microtubule-associated protein LC3 immunoreactivity was observed, and the level of membrane-bound LC3-II was significantly increased. A combination of IR with NVP-BEZ235 significantly increased the apoptosis of SU-2 cells, as shown in the increased levels of BID, Bax, and active caspase-3, and decreased level of Bcl-2. Furthermore, the combination of IR with NVP-BEZ235 led to G1 cell cycle arrest. Moreover, NVP-BEZ235 significantly attenuated the repair of IR-induced DNA damage as reflected by the tail length of the comet.Conclusion:NVP-BEZ235 increases the radiosensitivity of GSCs in vitro by activating autophagy that is associated with synergistic increase of apoptosis and cell-cycle arrest and decrease of DNA repair capacity.

[527]

**TÍTULO / TITLE:** - Brain tumors: a multimodality approach with diffusion-weighted imaging, diffusion tensor imaging, magnetic resonance spectroscopy, dynamic susceptibility contrast and dynamic contrast-enhanced magnetic resonance imaging.

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

**REVISTA / JOURNAL:** - Magn Reson Imaging Clin N Am. 2013 May;21(2):199-239. doi: 10.1016/j.mric.2013.02.003.

●●Enlace al texto completo (gratis o de pago) [1016/j.mric.2013.02.003](http://1016/j.mric.2013.02.003)

**AUTORES / AUTHORS:** - Brandao LA; Shiroishi MS; Law M

**INSTITUCIÓN / INSTITUTION:** - Radiologic Department, Clinica Felipe Mattoso, Fleury Medicina Diagnostica, Av. Das Americas 700, Sala 320, Barra da Tijuca, Rio de Janeiro 22640-100, Brazil; Clinica IRM, Ressonancia Magnetica, Rua Capita Salomao 44-Humaita, Rio de Janeiro 22271-040, Brazil. Electronic address: [larabrandao.rad@terra.com.br](mailto:larabrandao.rad@terra.com.br).

**RESUMEN / SUMMARY:** - This article focuses on advanced magnetic resonance (MR) imaging techniques and how they can be used to help diagnose a specific tumor, suggest tumor grade and prognosis, follow tumor progression, evaluate tumor extension, suggest the ideal site for biopsy, and assess therapeutic response. Advanced MR imaging techniques may also help to distinguish between lesions that simulate brain tumors on conventional MR imaging studies.

[528]

**TÍTULO / TITLE:** - Intravenous injection of oncolytic picornavirus SVV-001 prolongs animal survival in a panel of primary tumor-based orthotopic xenograft mouse models of pediatric glioma.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/ot065](http://1093/neuonc/ot065)

**AUTORES / AUTHORS:** - Liu Z; Zhao X; Mao H; Baxter PA; Huang Y; Yu L; Wadhwa L; Su JM; Adesina A; Perlaky L; Hurwitz M; Idamakanti N; Police SR; Hallenbeck PL; Hurwitz RL; Lau CC; Chintagumpala M; Blaney SM; Li XN

**INSTITUCIÓN / INSTITUTION:** - Diana Helis Henry Medical Research Foundation, New Orleans, LA (Z.L.); Laboratory of Molecular Neuro-oncology (X.Z., H.M., P.A.B., Y.H., L.Y., X.-N.L.); Texas Children's Cancer Center (X.Z., H.M., P.A.B., Y.H., L.Y., J.M.S., L.P., M.H., R.L.H., C.C.L., M.C., S.M.B., X.-N.L.); Center for Cell and Gene Therapy (L.W., M.H. R.L.H.); Department of Pathology (A.A.), Texas Children's Hospital; Department of Pediatrics (P.A.B., J.M.S., A.A., L.P., M.H., R.L.H. C.C.L., M.C., S.M.B., X.-N. L.); Department of Ophthalmology (M.H., R.L.H.); Molecular and Cellular Biology (M.H., R.L.H.), Baylor College of Medicine, Houston, Texas (M.H., R.L.H.); Neotropix, Inc., Malvern, Pennsylvania, (N.I., S.R.P., P.L.H.).

**RESUMEN / SUMMARY:** - Background Seneca Valley virus (SVV-001) is a nonpathogenic oncolytic virus that can be systemically administered and can pass through the blood-brain barrier. We examined its therapeutic efficacy and the mechanism of tumor cell infection in pediatric malignant gliomas. Methods In vitro antitumor activities were examined in primary cultures, preformed neurospheres, and self-renewing glioma cells derived from 6 patient tumor orthotopic xenograft mouse models (1 anaplastic astrocytoma and 5 GBM). In vivo therapeutic efficacy was examined by systemic treatment of preformed xenografts in 3 permissive and 2 resistant models. The functional role of sialic acid in mediating SVV-001 infection was investigated using neuraminidase and lectins that cleave or competitively bind to linkage-specific sialic acids. Results SVV-001 at a multiplicity of infection of 0.5 to 25 replicated in and effectively killed primary cultures, preformed neurospheres, and self-renewing stemlike single glioma cells derived from 4 of the 6 glioma models in vitro. A single i.v. injection of SVV-001 ( $5 \times 10^{12}$  viral particles/kg) led to the infection of orthotopic xenografts without harming normal mouse brain cells, resulting in significantly prolonged survival in all 3 permissive and 1 resistant mouse models ( $P < .05$ ). Treatment with neuraminidase and competitive binding using lectins specific for alpha2,3-linked and/or alpha2,6-linked sialic acid significantly suppressed SVV-001 infectivity ( $P < .01$ ). Conclusion SVV-001 possesses strong antitumor activity against pediatric malignant gliomas and utilizes alpha2,3-linked and alpha2,6-linked sialic acids as mediators of tumor cell infection. Our findings support the consideration of SVV-001 for clinical trials in children with malignant glioma.

[529]

**TÍTULO / TITLE:** - Vertebrate animal models of glioma: Understanding the mechanisms and developing new therapies.

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

**REVISTA / JOURNAL:** - Biochim Biophys Acta. 2013 Aug;1836(1):158-65. doi: 10.1016/j.bbcan.2013.04.003. Epub 2013 Apr 22.

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

[1016/j.bbcan.2013.04.003](http://1016/j.bbcan.2013.04.003)

**AUTORES / AUTHORS:** - Chen L; Zhang Y; Yang J; Hagan JP; Li M

**INSTITUCIÓN / INSTITUTION:** - The Vivian L. Smith Department of Neurosurgery, the University of Texas Medical School at Houston, Houston, TX 77030, USA.

**RESUMEN / SUMMARY:** - Glioblastoma Multiforme (GBM) is recognized as one of the most deadly cancers characterized by cellular atypia, severe necrosis, and high rate of angiogenesis. In this review, we discuss a diversified group of GBM xenograft models and compare them with the genetically engineered mouse (GEM) model systems. Next, we describe common genetic defects observed in GBM and numerous GEM models that recapitulate these abnormalities. Finally,

we focus on the clinical value of other vertebrate animal models such as the canine model by examining their contributions to GBM research.

[530]

**TÍTULO / TITLE:** - In Vivo RNAi Screen for BMI1 Targets Identifies TGF-beta/BMP-ER Stress Pathways as Key Regulators of Neural- and Malignant Glioma-Stem Cell Homeostasis.

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

**REVISTA / JOURNAL:** - Cancer Cell. 2013 May 13;23(5):660-76. doi: 10.1016/j.ccr.2013.03.030.

●●Enlace al texto completo (gratis o de pago) [1016/j.ccr.2013.03.030](#)

**AUTORES / AUTHORS:** - Gargiulo G; Cesaroni M; Serresi M; de Vries N; Hulsman D; Bruggeman SW; Lancini C; van Lohuizen M

**INSTITUCIÓN / INSTITUTION:** - Division of Molecular Genetics and Centre for Biomedical Genetics, The Netherlands Cancer Institute, 1066CX Amsterdam, The Netherlands.

**RESUMEN / SUMMARY:** - In mouse and human neural progenitor and glioblastoma “stem-like” cells, we identified key targets of the Polycomb-group protein BMI1 by combining ChIP-seq with in vivo RNAi screening. We discovered that Bmi1 is important in the cellular response to the transforming growth factor-beta/bone morphogenetic protein (TGF-beta/BMP) and endoplasmic reticulum (ER) stress pathways, in part converging on the Atf3 transcriptional repressor. We show that Atf3 is a tumor-suppressor gene inactivated in human glioblastoma multiforme together with Cbx7 and a few other candidates. Acting downstream of the ER stress and BMP pathways, ATF3 binds to cell-type-specific accessible chromatin preloaded with AP1 and participates in the inhibition of critical oncogenic networks. Our data support the feasibility of combining ChIP-seq and RNAi screens in solid tumors and highlight multiple p16(INK4a)/p19(ARF)-independent functions for Bmi1 in development and cancer.

[531]

**TÍTULO / TITLE:** - CDH5 is specifically activated in glioblastoma stemlike cells and contributes to vasculogenic mimicry induced by hypoxia.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 3.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not029](#)

**AUTORES / AUTHORS:** - Mao XG; Xue XY; Wang L; Zhang X; Yan M; Tu YY; Lin W; Jiang XF; Ren HG; Zhang W; Song SJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery (X.G.M., X.Z., W.L., X.F.J., W.Z.) Department of Orthopaedic Surgery (M. Y.), Xijing Hospital, Xi'an,

China; Department of Pharmacology, School of Pharmacy (X.Y.X.); Department of Neurosurgery (L.W.); Department of Emergency (Y.Y.T.), Tangdu Hospital at the Fourth Military Medical University, Xi'an, China; Department of Neurosurgery, Linfen People's Hospital, Linfen, Shanxi Province, China (H.G.R.); Department of Neurosurgery, PLA 254 Hospital, Tianjin, China (X.G.M., S.J.S.).

**RESUMEN / SUMMARY:** - Background A proportion of glioblastoma stemlike cells (GSCs) expressing endothelial cell marker CDH5 (vascular-endothelial-cadherin or CD144) can transdifferentiate into endothelial cells and form blood vessels. However, the implications of CDH5 expression in gliomas and how it is regulated in GSCs remain to be clarified. Methods The mRNA and protein levels of CDH5 were detected in glioma samples and cultured cell lines, and the prognostic value of the CDH5 expression level for GBM patients was evaluated. Bioinformatics analysis was performed to reveal the potential functional roles of CDH5 in glioblastoma multiforme. Gene knockdown induced by short hairpin RNA, chromatin immunoprecipitation analysis, and a vasculogenic tube formation assay were performed to investigate the relationships among hypoxia, CDH5 expression level, and angiogenesis. Results CDH5 was overexpressed in gliomas, correlated with tumor grades, and was an independent adverse prognostic predictor for glioblastoma multiforme patients. CDH5 was specifically activated in GSCs but not in non-GSCs or neural stem cells, and CDH5+ cells could produce xenografts in immunocompromised mice. Bioinformatics analysis demonstrated that CDH5 might interact directly with hypoxia-inducible factor (HIF)2 $\alpha$ . CDH5 expression was significantly upregulated in GSCs, but not in non-GSCs or normal neural stem cells, under a 1% O<sub>2</sub> condition. Both HIF1 $\alpha$  and HIF2 $\alpha$  positively regulated CDH5 level in GSCs and could bind to the promoter of CDH5. Furthermore, CDH5 contributed to the vasculogenic mimicry of GSCs, especially under hypoxic conditions. Conclusions The specific expression of CDH5 in GSCs may contribute to GSC-derived neovasculogenesis in glioblastoma multiforme, especially under hypoxic conditions, revealing novel tumorigenic mechanisms contributed by GSCs.

[532]

**TÍTULO / TITLE:** - Celecoxib enhances radiosensitivity of hypoxic glioblastoma cells through endoplasmic reticulum stress.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 7.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not062](#)

**AUTORES / AUTHORS:** - Suzuki K; Gerelchuluun A; Hong Z; Sun L; Zenkoh J; Moritake T; Tsuboi K

**INSTITUCIÓN / INSTITUTION:** - Graduate School of Comprehensive Human Sciences (K.S., A.G., Z.H., L.S.) and Proton Medical Research Center, Faculty of Medicine (J.Z., T.M., K.T.), University of Tsukuba, Tsukuba, Ibaraki, Japan.

**RESUMEN / SUMMARY:** - Background Refractoriness of glioblastoma multiforme (GBM) largely depends on its radioresistance. We investigated the radiosensitizing effects of celecoxib on GBM cell lines under both normoxic and hypoxic conditions. Methods Two human GBM cell lines, U87MG and U251MG, and a mouse GBM cell line, GL261, were treated with celecoxib or gamma-irradiation either alone or in combination under normoxic and hypoxic conditions. Radiosensitizing effects were analyzed by clonogenic survival assays and cell growth assays and by assessing apoptosis and autophagy. Expression of apoptosis-, autophagy-, and endoplasmic reticulum (ER) stress-related genes was analyzed by immunoblotting. Results Celecoxib significantly enhanced the radiosensitivity of GBM cells under both normoxic and hypoxic conditions. In addition, combined treatment with celecoxib and gamma-irradiation induced marked autophagy, particularly in hypoxic cells. The mechanism underlying the radiosensitizing effect of celecoxib was determined to be ER stress loading on GBM cells. Conclusion Celecoxib enhances the radiosensitivity of GBM cells by a mechanism that is different from cyclooxygenase-2 inhibition. Our results indicate that celecoxib may be a promising radiosensitizing drug for clinical use in patients with GBM.

[533]

**TÍTULO / TITLE:** - Characteristics of glioma stem cells.

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

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 Apr 13.

●●Enlace al texto completo (gratis o de pago) [1007/s10014-013-0141-](#)

[5](#)

**AUTORES / AUTHORS:** - Sampetean O; Saya H

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**RESUMEN / SUMMARY:** - The cancer stem cell theory postulates that tumors are sustained by a select cell population with specific features, such as self-renewal ability and the capacity to give rise to a heterogeneous mass of tumor cells. The existence of such cells has been demonstrated for glioblastoma, with these cells being referred to as glioma stem cells (GSCs). Glioblastomas are notoriously heterogeneous tumors, however, and the isolation and characterization of their stem cells will require further investigations. Furthermore, the lack of unequivocal markers for GSCs and a partial overlap in characteristics with other cells often lead to confusion. Here, we review the characteristics necessary for a glioma cell to be considered a stem cell, and we

adopt our murine glioblastoma model based on genetically modified neural stem cells to illustrate and discuss the GSC concept.

[534]

**TÍTULO / TITLE:** - Codeletion of 1p and 19q determines distinct gene methylation and expression profiles in IDH-mutated oligodendroglial tumors.

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

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 May 21.

●●Enlace al texto completo (gratis o de pago) [1007/s00401-013-1130-9](http://1007/s00401-013-1130-9)

**AUTORES / AUTHORS:** - Mur P; Mollejo M; Ruano Y; de Lope AR; Fiano C; Garcia JF; Castresana JS; Hernandez-Lain A; Rey JA; Melendez B

**INSTITUCIÓN / INSTITUTION:** - Molecular Pathology Research Unit, Department of Pathology, Virgen de la Salud Hospital, Avda. Barber 30, 45004, Toledo, España.

**RESUMEN / SUMMARY:** - Oligodendroglial tumors (OTs) are primary brain tumors that show variable clinical and biological behavior. The 1p/19q codeletion is frequent in these tumors, indicating a better prognosis and/or treatment response. Recently, the prognostically favorable CpG island methylator phenotype (CIMP) in gliomas (G-CIMP+) was associated with mutations in the isocitrate dehydrogenase 1 and isocitrate dehydrogenase 2 (IDH) genes, as opposed to G-CIMP- tumors, highlighting the relevance of epigenetic mechanisms. We performed a whole-genome methylation study in 46 OTs, and a gene expression study of 25 tumors, correlating the methylation and transcriptomic profiles with molecular and clinical variables. Here, we identified two different epigenetic patterns within the previously described main G-CIMP+ profile. Both IDH mutation-associated methylation profiles featured one group of OTs with 1p/19q loss (CD-CIMP+), most of which were pure oligodendrogliomas, and a second group with intact 1p/19q and frequent TP53 mutation (CIMP+), most of which exhibited a mixed histopathology. A third group of OTs lacking the CIMP profile (CIMP-), and with a wild-type IDH and an intact 1p/19q, similar to the G-CIMP- subgroup, was also observed. The three CIMP groups presented a significantly better (CD-CIMP+), intermediate (CIMP+) or worse (CIMP-) prognosis. Furthermore, transcriptomic analyses revealed CIMP-specific gene expression signatures, indicating the impact of genetic status (IDH mutation, 1p/19q codeletion, TP53 mutation) on gene expression, and pointing to candidate biomarkers. Therefore, the CIMP profiles contributed to the identification of subgroups of OTs characterized by different prognoses, histopathologies, molecular features and gene expression signatures, which may help in the classification of OTs.

[535]

**TÍTULO / TITLE:** - Differential expression and methylation of brain developmental genes define location-specific subsets of pilocytic astrocytoma.

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

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 May 10.

●●Enlace al texto completo (gratis o de pago) [1007/s00401-013-1124-](http://1007/s00401-013-1124-7)

[7](#)

**AUTORES / AUTHORS:** - Lambert SR; Witt H; Hovestadt V; Zucknick M; Kool M; Pearson DM; Korshunov A; Ryzhova M; Ichimura K; Jabado N; Fontebasso AM; Lichter P; Pfister SM; Collins VP; Jones DT

**INSTITUCIÓN / INSTITUTION:** - Division of Molecular Histopathology, Department of Pathology, University of Cambridge, Addenbrooke's Hospital, Cambridge, UK, [sl575@cam.ac.uk](mailto:sl575@cam.ac.uk).

**RESUMEN / SUMMARY:** - Pilocytic astrocytomas (PAs) are the most common brain tumors in pediatric patients and can cause significant morbidity, including chronic neurological deficiencies. They are characterized by activating alterations in the mitogen-activated protein kinase pathway, but little else is known about their development. To map the global DNA methylation profiles of these tumors, we analyzed 62 PAs and 7 normal cerebellum samples using Illumina 450K microarrays. These data revealed two subgroups of PA that separate according to tumor location (infratentorial versus supratentorial), and identified key neural developmental genes that are differentially methylated between the two groups, including NR2E1 and EN2. Integration with transcriptome microarray data highlighted significant expression differences, which were unexpectedly associated with a strong positive correlation between methylation and expression. Differentially methylated probes were often identified within the gene body and/or regions up- or downstream of the gene, rather than at the transcription start site. We also identified a large number of differentially methylated genes between cerebellar PAs and normal cerebellum, which were again enriched for developmental genes. In addition, we found a significant association between differentially methylated genes and SUZ12 binding sites, indicating potential disruption of the polycomb repressor complex 2 (PRC2). Taken together, these data suggest that PA from different locations in the brain may arise from region-specific cells of origin, and highlight the potential disruption of key developmental regulators during tumorigenesis. These findings have implications for future basic research and clinical trials, as therapeutic targets and drug sensitivity may differ according to tumor location.

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[536]

**TÍTULO / TITLE:** - Impact of tumor location on medulloblastoma subtyping and treatment (Commentary on teo et al., page xxx).

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

**REVISTA / JOURNAL:** - Pediatr Blood Cancer. 2013 Apr 20. doi: 10.1002/pbc.24549.

●●Enlace al texto completo (gratis o de pago) [1002/pbc.24549](https://doi.org/10.1002/pbc.24549)

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[537]

**TÍTULO / TITLE:** - Organotypic slice cultures of human glioblastoma reveal different susceptibilities to treatments.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Jun;15(6):670-81. doi: 10.1093/neuonc/not003. Epub 2013 Apr 10.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not003](https://doi.org/10.1093/neuonc/not003)

**AUTORES / AUTHORS:** - Merz F; Gaunitz F; Dehghani F; Renner C; Meixensberger J; Gutenberg A; Giese A; Schopow K; Hellwig C; Schafer M; Bauer M; Stocker H; Taucher-Scholz G; Durante M; Bechmann I

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**RESUMEN / SUMMARY:** - Background Glioblastoma multiforme is the most common lethal brain tumor in human adults, with no major therapeutic breakthroughs in recent decades. Research is based mostly on human tumor cell lines deprived of their organotypic environment or inserted into immune-deficient animals required for graft survival. Here, we describe how glioblastoma specimens obtained from surgical biopsy material can be sectioned and transferred into cultures within minutes. Methods Slices were kept in 6-well plates, allowing direct observation, application of temozolomide, and irradiation. At the end of experiments, slice cultures were processed for histological analysis including hematoxylin-eosin staining, detection of proliferation (Ki67), apoptosis/cell death (cleaved caspase 3, propidium iodide), DNA double-strand breaks (gammaH2AX), and neural subpopulations. First clinical trials employed irradiation with the heavy ion carbon for the treatment of glioblastoma patients, but the biological effects and most effective dose regimens remain to be established. Therefore, we developed an approach to expose glioblastoma slice cultures to (12)C and X-rays. Results We found preservation of the individual histopathology over at least 16 days. Treatments resulted in activation of caspase 3, inhibition of proliferation, and cell loss. Irradiation induced gammaH2AX. In line with clinical observations, individual tumors differed significantly in their susceptibility to temozolomide (0.4%-2.5% apoptosis and 1%-15% cell loss). Conclusion Glioblastoma multiforme slice cultures provide a

unique tool to explore susceptibility of individual tumors for specific therapies including heavy ions, thus potentially allowing more personalized treatments plus exploration of mechanisms of (and strategies to overcome) tumor resistance.

[538]

**TÍTULO / TITLE:** - Current Progress for the Use of miRNAs in Glioblastoma Treatment.

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

**REVISTA / JOURNAL:** - Mol Neurobiol. 2013 Apr 28.

●●Enlace al texto completo (gratis o de pago) [1007/s12035-013-8464-](http://1007/s12035-013-8464-0)

[0](#)

**AUTORES / AUTHORS:** - Tivnan A; McDonald KL

**INSTITUCIÓN / INSTITUTION:** - Cure for Life Neuro-Oncology Group, Lowy Cancer Research Centre, Prince of Wales Clinical School, University of New South Wales, Sydney, 2052, Australia, [a.tivnan@unsw.edu.au](mailto:a.tivnan@unsw.edu.au).

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is a highly aggressive brain cancer with the worst prognosis of any central nervous system disease despite intensive multimodal therapy. Inevitably, glioblastoma is fatal, with recurrence of treatment-resistant tumour growth at distal sites leading to an extremely low median survival rate of 12-15 months from the time of initial diagnosis. With the advent of microarray and gene profiling technology, researchers have investigated trends in genetic alterations and, in this regard, the role of dysregulated microRNAs (highly conserved endogenous small RNA molecules) in glioblastoma has been studied with a view to identifying novel mechanisms of acquired drug resistance and allow for development of microRNA (miRNA)-based therapeutics for GBM patients. Considering the development of miRNA research from initial association to GBM to commercial development of miR-based therapeutics in less than a decade, it is not beyond reasonable doubt to anticipate significant advancements in this field of study, hopefully with the ultimate conclusion of improved patient outcome. This review discusses the recent advancements in miRNA-based therapeutic development for use in glioblastoma treatment and the challenges faced with respect to in vivo and clinical application.

[539]

**TÍTULO / TITLE:** - Current and Future Treatments for Malignant Pheochromocytoma and Sympathetic Paraganglioma.

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

**REVISTA / JOURNAL:** - Curr Oncol Rep. 2013 May 15.

●●Enlace al texto completo (gratuito o de pago) [1007/s11912-013-0320-](https://doi.org/10.1186/1476-4598-12-31)

[X](#)

**AUTORES / AUTHORS:** - Jimenez C; Rohren E; Habra MA; Rich T; Jimenez P; Ayala-Ramirez M; Baudin E

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**RESUMEN / SUMMARY:** - Pheochromocytomas (PHs) and sympathetic paragangliomas (SPGs) are rare neuroendocrine tumors. Approximately 17 % of these tumors are malignant, but because no molecular or histologic markers for malignancy exist, patients are often diagnosed with malignant PHs or SPGs after unresectable disease has formed. Patients with progressive metastatic tumors and overwhelming symptoms are currently treated with systemic chemotherapy and radiopharmaceutical agents such as metaiodobenzylguanidine. These therapies lead to partial radiographic response, disease stabilization, and symptomatic improvement in approximately 40 % of patients, and systemic chemotherapy is associated with a modest improvement in overall survival duration. However, over the past decade, substantial progress has been made in clinical, biochemical, and radiographic diagnosis of PHs and SPGs. Approximately 50 % of patients with malignant PHs and SPGs have been found to carry hereditary germline mutations in the succinate dehydrogenase subunit B gene (SDHB), and anti-angiogenic agents such as sunitinib have been found to potentially play a role in the treatment of malignant disease, especially in patients with SDHB mutations. In some patients, treatment with sunitinib has been associated with partial radiographic response, disease stabilization, decreased fluorodeoxyglucose uptake on positron emission tomography, and improved blood pressure control. These findings have led to the development of prospective clinical trials of new targeted therapies for metastatic disease. Here, we provide an updated review of the clinical and genetic predictors of malignant disease, radiographic diagnosis of malignant disease, and information from the most relevant studies of systemic therapies, as well as proposed treatment guidelines for patients with metastatic or potentially malignant PHs and SPGs.

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[540]

**TÍTULO / TITLE:** - Epidermal growth factor receptor variant type III markedly accelerates angiogenesis and tumor growth via inducing c-myc mediated angiopoietin-like 4 expression in malignant glioma.

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

**REVISTA / JOURNAL:** - Mol Cancer. 2013 Apr 25;12:31. doi: 10.1186/1476-4598-12-31.

●●Enlace al texto completo (gratuito o de pago) [1186/1476-4598-12-31](https://doi.org/10.1186/1476-4598-12-31)

**AUTORES / AUTHORS:** - Katanasaka Y; Kodera Y; Kitamura Y; Morimoto T; Tamura T; Koizumi F

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**RESUMEN / SUMMARY:** - BACKGROUND: Expression of the constitutively activated mutant EGFR variant III (EGFRvIII), the most common mutation in glioblastoma multiforme (GBMs), has been clinically correlated with tumor proliferation, invasion, and angiogenesis. In this study, we examined the role of EGFRvIII on the tumor microenvironment, especially on angiogenesis. METHODS: To study the role of EGFRvIII in tumor angiogenesis, we prepared LN229 glioblastoma transfected with enhanced green fluorescent protein (EGFP), wild-type EGFR, or EGFRvIII (LN229-WT or -vIII), and examined tumor growth and microvessel density in the tumors. Additionally, the potential angiogenic factors were identified by real-time PCR analysis, and the functions in LN229-vIII cells were examined. RESULTS: LN229-vIII cells showed more aggressive tumor growth and higher vascularity as compared to LN229-WT cells in vivo, although there was no significant difference in the cell growth rates in vitro. We next investigated the expression of 60 angiogenesis-related factors to clarify the mechanisms underlying the difference in vascularity between tumor xenografts of LN229-vIII and LN229-WT. We found that the mRNA and protein expressions of angiopoietin-like 4 (Angptl4), a secreted protein involved in angiogenesis and metabolism regulation, were significantly induced by EGFRvIII overexpression, both in vitro and in vivo. Constitutive knockdown of Angptl4 in LN229-vIII using shRNA significantly decreased the microvessel density in the tumor xenografts and suppressed tumor growth. To clarify the regulatory mechanisms of Angptl4 by EGFRvIII, we analyzed the signaling pathways and transcription factors by pharmacological inhibition and RNA interference. U0126, an ERK signal inhibitor dramatically suppressed Angptl4 expression. The transcription factor c-Myc, which is regulated by ERK, was activated in the LN229-vIII cells and knockdown of c-Myc using siRNA also attenuated Angptl4 expression in the LN229-vIII cells. Furthermore, chromatin immunoprecipitation (ChIP) assay revealed increased recruitment of c-Myc to the promoter region of Angptl4 in the LN229-vIII cells. CONCLUSIONS: In summary, we demonstrated that EGFRvIII induces Angptl4 expression through the ERK/c-Myc pathway and promotes tumor angiogenesis in malignant gliomas.

[541]

**TÍTULO / TITLE:** - iNOS: A Potential Therapeutic Target for Malignant Glioma.

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

**REVISTA / JOURNAL:** - Curr Mol Med. 2013 Apr 15.

**AUTORES / AUTHORS:** - Jahani-Asl A; Bonni A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurobiology, Harvard Medical School, 220 Longwood Avenue, Boston, MA 02115, USA. [bonni@wustl.edu](mailto:bonni@wustl.edu).

**RESUMEN / SUMMARY:** - Glioblastoma is the most aggressive adult primary brain tumor. Although progress has been made in understanding the molecular mechanisms underlying these tumors, current treatments are ineffective. Recent studies have identified iNOS as a critical regulator of glial transformation downstream of EGFRvIII/STAT3 signaling, a key oncogenic pathway in glioblastoma. STAT3 directly binds the promoter of the iNOS gene and thereby stimulates its expression. Importantly, inhibition of iNOS by genetic and pharmacological approaches impedes glial cell proliferation, invasiveness, and tumor growth in vivo. iNOS expression is also elevated in a population of human brain tumor stem cells (BTSCs), and iNOS is required for BTSC proliferation and tumorigenesis. Together, these findings suggest that development of iNOS-targeted therapies may prove valuable in the treatment of glioblastoma. Here, we review our current understanding of iNOS signaling in the regulation of glioblastoma pathogenesis and the potential mechanisms by which iNOS inhibition might suppress the malignant behavior of these devastating tumors.

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[542]

**TÍTULO / TITLE:** - Metastatic brain tumors: current therapeutic options and historical perspective.

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

**REVISTA / JOURNAL:** - J Am Osteopath Assoc. 2013 May;113(5):418-23.

**AUTORES / AUTHORS:** - Rivkin M; Kanoff RB

**INSTITUCIÓN / INSTITUTION:** - 32 Conshohocken State Rd F-3, Bala Cynwyd, PA 19004-3321. [mrivkin@charter.net](mailto:mrivkin@charter.net).

**RESUMEN / SUMMARY:** - Metastatic brain tumors affect more than 150,000 patients annually in the United States. The therapeutic paradigms for these tumors have evolved over the years and currently encompass numerous modalities implemented by treating physicians across several medical disciplines. The armamentarium of brain tumor treatment involves neurosurgical intervention, whole-brain and focused radiation modalities, chemotherapy, and immunotherapy. Patient selection, however, remains critical to achieve maximal therapeutic benefit and depends on functional status, number and location of lesions, and tissue histologic findings. Best outcomes can be expected with a multidisciplinary approach to patient care where state-of-the-art treatment options are readily available.

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[543]

**TÍTULO / TITLE:** - Therapeutic approach to chordoid glioma of the third ventricle.

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

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013;53(4):249-55.

**AUTORES / AUTHORS:** - Kobayashi T; Tsugawa T; Hashizume C; Arita N; Hatano H; Iwami K; Nakazato Y; Mori Y

**INSTITUCIÓN / INSTITUTION:** - Nagoya Radiosurgery Center, Nagoya Kyoritsu Hospital.

**RESUMEN / SUMMARY:** - Chordoid glioma of the third ventricle is considered to be a benign glial tumor located exclusively in the mid-anterior portion of the third ventricle near the hypothalamus and optic nerves, with the histological features of a chordoma and immuno-labeling for glial fibrillary acidic protein.

Unfortunately, the clinical outcome of chordoid glioma has been poor, even in patients receiving gross total or partial removal with or without radiotherapy. Three cases of chordoid glioma of the third ventricle were treated with less invasive microsurgery for pathological diagnosis or partial removal without neuro-endocrinological complication, followed by gamma knife radiosurgery using a lower marginal dose for the optic nerves and hypothalamus. Gamma knife radiosurgery was performed after open biopsy in two patients, and after partial removal in the third patient using a lower marginal dose of 10.5 to 12 Gy. Serial magnetic resonance imaging revealed gradual decrease or at least no change in the tumor size, without significant complication at follow up 70 and 66 months later in two cases. The third patient accidentally died 13 months after gamma knife treatment. We conclude that low dose gamma knife radiosurgery after less invasive microsurgery is both safe and effective for the control of chordoid glioma of the third ventricle over a very long follow-up period.

[544]

**TÍTULO / TITLE:** - From GWAS risk foci to glioma molecular subclass.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May;15(5):513-4. doi: 10.1093/neuonc/not061.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not061](#)

**AUTORES / AUTHORS:** - Yung WK

[545]

**TÍTULO / TITLE:** - Diffuse leptomeningeal glioneuronal tumours: clinico-pathological follow-up.

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

**REVISTA / JOURNAL:** - Pathologica. 2012 Dec;104(6):428-31.

**AUTORES / AUTHORS:** - Gardiman MP; Fassan M; Nozza P; Orvieto E; Garre ML; Milanaccio C; Severino M; Perilongo G; Giangaspero F

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**RESUMEN / SUMMARY:** - Glioneuronal tumours are a group of primary brain neoplasms of relatively recent acquisition in the World Health Organization (WHO) Classification of the Central Nervous System tumours. In diagnostic practice it is still possible to encounter glioneuronal tumours that cannot be placed into any of the well-defined WHO categories despite a growing list of entities. We have recently published four paediatric cases of diffuse leptomeningeal tumours that cannot be easily classified in the currently used CNS WHO classification, but which have histological and immunohistochemical criteria to be considered as glioneuronal tumours. The clinical, neuroradiological and pathological long-term follow-up of an unusual diffuse leptomeningeal glioneuronal tumour is presented herein.

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[546]

**TÍTULO / TITLE:** - Intracranial germinoma with leptomeningeal seeding along both trigeminal nerves.

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

**REVISTA / JOURNAL:** - Can J Neurol Sci. 2013 May;40(3):420-2.

**AUTORES / AUTHORS:** - Badhiwala J; Baronia B

**INSTITUCIÓN / INSTITUTION:** - Michael G. DeGroote School of Medicine, McMaster University, Hamilton, Ontario, Canada.

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[547]

**TÍTULO / TITLE:** - Changes in Transcriptional Factor Binding Capacity Resulting from Promoter Region Methylation Induce Aberrantly High GDNF Expression in Human Glioma.

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

**REVISTA / JOURNAL:** - Mol Neurobiol. 2013 Apr 19.

●●Enlace al texto completo (gratis o de pago) [1007/s12035-013-8443-](http://1007/s12035-013-8443-5)

[5](#)

**AUTORES / AUTHORS:** - Yu ZQ; Zhang BL; Ren QX; Wang JC; Yu RT; Qu DW; Liu ZH; Xiong Y; Gao DS

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**RESUMEN / SUMMARY:** - Glial cell line-derived neurotrophic factor (GDNF), which belongs to transforming growth factor beta superfamily, plays important roles in glioma pathogenesis. Gdnf mRNA is aberrantly increased in glioma cells, but the underlying transcription mechanism is unclear. Here, we found that although the base sequence in the promoter region of the gdnf gene was unchanged in glioma cells, there were significant changes in the methylation level of promoter region I ( $P < 0.05$ ) in both high- and low-grade glioma tissues. However, the

methylation degree in promoter region II was notably decreased in low-grade glioma tissue compared to normal brain tissue ( $P < 0.05$ ), and the demethylation sites were mainly located in the enhancer region. Conversely, methylation was markedly increased in high-grade glioma tissue ( $P < 0.05$ ), and the sites with decreased methylation level were mainly located in the silencer region. The binding capacities of several transcriptional factors, such as activating protein 2, specificity protein 1, ETS-related gene 2, and cAMP response element binding protein, which specifically bind to regions with altered methylation status decreased along with the pathological grade of glioma, and the differences between high-grade glioma and normal brain tissue were significant ( $P < 0.05$ ). The results suggest that changes in transcriptional factor binding capacity are due to changes in promoter region methylation and might be the underlying mechanism for aberrantly high *gdnf* expression in glioma.

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[548]

**TÍTULO / TITLE:** - Retraction of “Enhanced expression of coproporphyrinogen oxidase in malignant brain tumors: CPOX expression and 5-ALA-induced fluorescence”

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 14.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not060](http://1093/neuonc/not060)

**AUTORES / AUTHORS:** - Takahashi K; Ikeda N; Nonoguchi N; Kajimoto Y; Miyatake SI; Hagiya Y; Ogura SI; Nakagawa H; Ishikawa T; Kuroiwa T

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[549]

**TÍTULO / TITLE:** - Adult case of large sinonasal embryonal rhabdomyosarcoma with intracranial extension.

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

**REVISTA / JOURNAL:** - Ear Nose Throat J. 2013 Apr-May;92(4-5):177-8.

**AUTORES / AUTHORS:** - Palacios E; Quiroz-Casian A; Garza Garcia L; Daroca PJ; Neitzschman HR

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Tulane University Hospital and Clinics, New Orleans, LA, USA.

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[550]

**TÍTULO / TITLE:** - Temozolomide modulated glioma proteome: Role of Interleukin-1 receptor associated kinase-4 (IRAK4) in chemosensitivity.

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

**REVISTA / JOURNAL:** - Proteomics. 2013 Apr 18. doi: 10.1002/pmic.201200261.

●●Enlace al texto completo (gratis o de pago) [1002/pmic.201200261](http://1002/pmic.201200261)

**AUTORES / AUTHORS:** - Kumar DM; Patil V; Ramachandran B; Nila MV; Dharmalingam K; Somasundaram K

**INSTITUCIÓN / INSTITUTION:** - Microbiology and Cell Biology, Indian Institute of Science, Bangalore, 560 012.

**RESUMEN / SUMMARY:** - The current treatment for glioblastoma (GBM) includes temozolomide (TMZ) chemotherapy, yet the mechanism of action of TMZ is not thoroughly understood. Here, we investigated the TMZ induced changes in the proteome of the glioma derived cell line (U251) by 2D-DIGE. We found 95 protein spots to be significantly altered in their expression after TMZ treatment. Mass spectrometry identified four up-regulated spots: aspartyl tRNA synthetase (DARS) glutathione synthetase (GSS), interleukin-1 receptor associated kinase-4 (IRAK4), and breast carcinoma amplified sequence-1 (BCAS1) and one down-regulated spot: optineurin (OPTN). TMZ induced regulation of these five genes was validated by RT-qPCR and western blot analysis. RNAi mediated knockdown of IRAK4, an important mediator of Toll-like receptors (TLR) signaling and chemoresistance, rendered the glioma cells resistant to TMZ. High levels of IRAK4 induced upon TMZ treatment resulted in IRAK1 downregulation and inhibition of NFkB pathway. Endogenous IRAK4 protein, but not transcript levels in glioma cell lines, correlated with TMZ sensitivity. Thus we have identified several TMZ modulated proteins and discovered an important novel role for IRAK4 in determining TMZ sensitivity of glioma cells through its ability to inhibit TLR signaling and NFkB pathway This article is protected by copyright. All rights reserved.

[551]

**TÍTULO / TITLE:** - Essential role of gli proteins in glioblastoma multiforme.

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

**REVISTA / JOURNAL:** - Curr Protein Pept Sci. 2013 Mar 1;14(2):133-40.

**AUTORES / AUTHORS:** - Santoni M; Burattini L; Nabissi M; Morelli MB; Berardi R; Santoni G; Cascinu S

**INSTITUCIÓN / INSTITUTION:** - Clinica di Oncologia Medica, AOU "Ospedali Riuniti", Universita Politecnica delle Marche, via Conca, 60020, Ancona, Italy. [mattymo@alice.it](mailto:mattymo@alice.it).

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common and malignant primary brain tumor in adults. Despite several advances, little is known about GBM-specific aberrant signalling processes. The hedgehog (Hh) signalling pathway plays a central role in GBM pathogenesis and tumor progression. Its activation is mediated by sonic hedgehog (Shh), which binds to its receptor patched, PTCH, promoting Gli1 activation. Gli1 is a member of the Kruppel family of zinc finger transcription factors. Hh/Gli1 axis controls glioma stem cells (GSCs) behaviour, which is essential to GBM chemoand radioresistance. Thus, Gli1 modulates the expression of stemness genes and

the self-renewal of CD133+ GSCs. The activation of Hh/Gli1 in GSCs seems to be dependent on the insulin-like growth factor (IGF) signaling, which also contributes to intrinsic and acquired resistance of GSCs to temozolomide (TMZ). Beyond Hh signals, Gli1 activity is also regulated by several elements, including Ras, Myc, Akt, p53 and PTEN. Recently, a truncated variant of Gli1 (tGli1) has been demonstrated to gain the ability to regulate expression of genes that are not modulated by Gli1, such as the migration/invasion-associated CD24 or the human vascular endothelial growth factor-A (VEGF-A), leading to their upregulation. This review will summarize the role of Gli proteins in GBM tumorigenesis and their potential impact on GBM therapy and treatment resistance.

[552]

**TÍTULO / TITLE:** - Genetics of pituitary adenomas.

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

**REVISTA / JOURNAL:** - Front Horm Res. 2013;41:111-40. doi: 10.1159/000345673. Epub 2013 Mar 19.

●●Enlace al texto completo (gratis o de pago) [1159/000345673](#)

**AUTORES / AUTHORS:** - Gadelha MR; Trivellin G; Hernandez Ramirez LC; Korbonits M

**INSTITUCIÓN / INSTITUTION:** - Division of Endocrinology, Clementino Fraga Filho University Hospital, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil.

**RESUMEN / SUMMARY:** - Pituitary adenomas are common tumors of the adenohypophysis which can cause considerable morbidity, due to excessive hormonal secretion or compression and local invasion of surrounding structures. The vast majority of pituitary adenomas occur sporadically. Altered gene expression is commonly detected but somatic mutations, epigenetic changes and abnormal microRNAs have also been described. Occurrence of GNAS mutations at a postzygotic stage lead to McCune-Albright syndrome (MAS), a disease causing endocrine hyperfunction and tumors in several organs, including the pituitary. Familial pituitary adenomas occur as part of a syndrome affecting other organs, such as in MEN1 or Carney complex, or occur with pituitary adenomas only as in familial isolated pituitary adenoma (FIPA). FIPA, an autosomal-dominant disease with variable penetrance, is explained in 20% of patients by germline mutations in the tumor suppressor aryl hydrocarbon receptor interacting protein(AIP), while no gene abnormality has been identified to date in the majority of the FIPA families. AIP mutation-positive patients have a characteristic clinical phenotype with usually young- or childhood-onset growth hormone (GH) and/or prolactin (PRL)-secreting adenomas and can be seen in cases with no apparent family history as well. Understanding the tumorigenic process in AIP-positive and AIP-negative FIPA

patients could result in better diagnostic and treatment options for both familial and sporadic cases.

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[553]

**TÍTULO / TITLE:** - Subgrouping of gliomas on the basis of genetic profiles.

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

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 Apr 20.

●●Enlace al texto completo (gratis o de pago) [1007/s10014-013-0148-](#)

[y](#)

**AUTORES / AUTHORS:** - Hirose Y; Sasaki H; Abe M; Hattori N; Adachi K; Nishiyama Y; Nagahisa S; Hayashi T; Hasegawa M; Yoshida K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Fujita Health University, 1-98 Dengakugakubo, Kutsukake-cho, Toyoake, Aichi, 470-1192, Japan, [yhirose@fujita-hu.ac.jp](mailto:yhirose@fujita-hu.ac.jp).

**RESUMEN / SUMMARY:** - Management of gliomas depends on histological diagnosis; there are, however, limitations to the systems presently used. Tumors in the same entity can have different clinical courses, especially when they are diagnosed as WHO grade II-III. Previous studies revealed that genetic subgrouping of gliomas provides useful information that could help establishment of treatment procedures on the basis of the genetic background of the tumors. Recently, the authors analyzed the chromosomal copy number aberrations (CNAs) of adult supratentorial gliomas by comparative genomic hybridization using microdissected tissue sections. The tumors were classified into subgroups according to chromosomal CNAs. WHO grade II-III gliomas contained a variety of genetic subgroups that correlated well with the clinical course. Of these, long progression-free survival was observed for tumors with +7q and those with -1p/19q, low-grade tumors of 2 major lineages, and, in our preliminary data, both were closely correlated with mutation of IDH1. Furthermore, in contrast with +7q tumors, the great majority of +7 or +7/-10q groups had wildtype IDH1. Genetic studies suggest that cytogenetic characterization may provide an additional classification system for gliomas, and new criteria could help to establish rational and objective means for analysis of treatment procedures.

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[554]

**TÍTULO / TITLE:** - Integrative analysis of miRNA and mRNA expression profiles in pheochromocytoma and paraganglioma identifies genotype-specific markers and potentially regulated pathways.

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

**REVISTA / JOURNAL:** - Endocr Relat Cancer. 2013 May 16.

●●Enlace al texto completo (gratis o de pago) [1530/ERC-12-0183](#)

**AUTORES / AUTHORS:** - de Cubas AA; Leandro-Garcia LJ; Schiavi F; Mancikova V; Comino-Mendez I; Inglada-Perez L; Perez M; Ibarz N; Ximenez-Embun P; Lopez-Jimenez E; Leton R; Maliszewska A; Gomez Grana A; Bernal C; Alvarez-Escola C; Rodriguez-Antona C; Opocher G; Munoz J; Megias D; Cascon A; Robledo M

**INSTITUCIÓN / INSTITUTION:** - A de Cubas, Hereditary Endocrine Cancer Group (Human Cancer Genetic Programme), Spanish National Cancer Research Centre (CNIO), Madrid, 28029, España.

**RESUMEN / SUMMARY:** - Pheochromocytoma (PCC) and paraganglioma (PGL) are rare neuroendocrine neoplasias of neural crest origin that can be part of several inherited syndromes. Although their mRNA profiles are known to depend on genetic background, a number of questions related to tumor biology and clinical behavior remain unanswered. Since microRNAs are key players in the modulation of gene expression, their comprehensive analysis could resolve some of these issues. Through characterization of microRNA profiles in 69 frozen tumors with germline mutations in the genes SDHD, SDHB, VHL, RET, NF1, TMEM127, and MAX, we identified microRNA signatures specific to, as well as common among, the genetic groups of PCC/PGLs. MicroRNA expression profiles were validated in an independent series of 30 composed of VHL-, SDHB-, SDHD- and RET-related formalin-fixed paraffin-embedded PCC/PGL samples using qRT-PCR. Up-regulation of miR-210 in VHL- and SDHB-related PCC/PGL, while miR-137 and miR-382 were confirmed as generally up-regulated in PCC/PGL (except in MAX-related tumors). Also, we confirmed over-expression of miR-133b as VHL-specific, miR-488 and miR-885-5p as RET-specific, and miR-183 and miR-96 as SDHB-specific microRNAs. To determine the potential roles microRNAs play in PCC/PGL pathogenesis, we performed bioinformatic integration and pathway analysis using matched mRNA profiling data that indicated a common enrichment of pathways associated with neuronal and neuroendocrine-like differentiation. We demonstrated that miR-183 and/or miR-96 impede NGF-induced differentiation in PC12 cells. Finally, global proteomic analysis in SDHB and MAX-tumors allowed us to determine that microRNA regulation occurs primarily through mRNA degradation in PCC/PGL, which partially confirmed our miRNA-mRNA integration results.

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[555]

**TÍTULO / TITLE:** - Correlation between preoperative imaging features and intraoperative blood loss of meningioma: a new scoring system for predicting intraoperative blood loss.

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

**REVISTA / JOURNAL:** - J Neurosurg Sci. 2013 Jun;57(2):153-61.

**AUTORES / AUTHORS:** - Lu J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Second Affiliated Hospital, Xi'an Jiaotong University, Xi'an City, People's Republic of China - [surgeonlv@yahoo.com.cn](mailto:surgeonlv@yahoo.com.cn).

**RESUMEN / SUMMARY:** - Aim: The aim of this paper was to analyze the correlation between preoperative imaging features and intraoperative blood loss and transfusion of meningioma in order to explore the possibility of reasonable blood preparation based on the preoperative images. Methods: The data of 93 adults with meningioma having undergone microsurgical operations was retrospectively analyzed. The intraoperative blood loss of meningioma was evaluated with "estimated blood loss (EBL)". The preoperative imaging features including volume, origin, peritumoral edema, invasive behavior, calcification, dural tail sign, adjacent bone involvement, blood vessel or venous sinus involvement were reviewed. Logistic regression analysis was used to determine the correlations between the imaging factors and the EBL or blood requirement. Results: Origin, volume, and blood vessel or venous sinus involvement of meningioma affected its EBL statistically. Calcification, invasive behaviors, dural tail sign, peritumoral edema and adjacent bone involvement did not influence EBL statistically. Origin and volume were independent risk factors for the high intraoperative blood loss. Origin, volume and blood vessel or venous sinus involvement were independent risk factors for the intraoperative red blood cell transfusion requirement. A scoring method was proposed to predict the intraoperative blood loss and transfusion of meningioma based on preoperative images. Conclusion: It is feasible to predict the intraoperative blood loss and transfusion of meningioma surgery according to the preoperative images.

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[556]

**TÍTULO / TITLE:** - BRAF(V600E) mutation is a negative prognosticator in pediatric ganglioglioma.

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

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Jun;125(6):901-10. doi: 10.1007/s00401-013-1120-y. Epub 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [1007/s00401-013-1120-](http://1007/s00401-013-1120-y)

[y](#)

**AUTORES / AUTHORS:** - Dahiya S; Haydon DH; Alvarado D; Gurnett CA; Gutmann DH; Leonard JR

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Immunology, Washington University School of Medicine, St. Louis, MO, USA.

**RESUMEN / SUMMARY:** - Gangliogliomas are typically low-grade neuroepithelial tumors seen in the pediatric and young adult populations. Despite their often bland histologic appearance, these tumors recur with varying frequencies; however, little data exist that adequately predict ganglioglioma recurrence in children. To identify potential histopathologic features predictive of recurrence-

free survival, a series of 53 patients with World Health Organization (WHO) grade I gangliogliomas were evaluated, representing the largest cohort of pediatric gangliogliomas with accompanying histopathologic and survival data. Fifteen patients (28 %) exhibited disease recurrence during the study period. BRAF(V600E) immunohistochemistry was performed on 47 of these tumors. Histopathologic features associated with shorter recurrence-free survival included an absence of oligodendroglial morphology, higher glial cell density, microvascular proliferation, and the presence of a high lymphoplasmacytic inflammatory infiltrate. Eighteen tumors (38.3 %) had positive BRAF(V600E) staining, which was associated with shorter recurrence-free survival. Collectively, the combined use of histopathologic and molecular features to stratify grade I gangliogliomas into low and high-risk groups provides important information relevant to the management of children and young adults with these rare tumors.

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[557]

**TÍTULO / TITLE:** - Intracranial arachnoid cyst; an unusual cause of epiphora.

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

**REVISTA / JOURNAL:** - Orbit. 2013 Jun;32(3):211-3. doi: 10.3109/01676830.2013.771373. Epub 2013 Apr 25.

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

[3109/01676830.2013.771373](#)

**AUTORES / AUTHORS:** - Ziahosseini K; Din I; Bhargava J

**INSTITUCIÓN / INSTITUTION:** - Department of Ophthalmology and.

**RESUMEN / SUMMARY:** - ABSTRACT Purpose: To describe a case of unilateral intracranial arachnoid cyst in association with enophthalmos and epiphora on the same side. Methods: Case report. Results: A young man with symptoms of unilateral epiphora is described. He had a large intracranial arachnoid cyst with an unusually large orbit leading to enophthalmos and symptomatic epiphora on that side. Radiological features of the orbit and associated pneumosinus dilatants are described. We also offer hypotheses to describe the paradoxical occurrence of an expanding intracranial mass and inward growth of the orbit and paranasal sinuses. Conclusion: A new cause for enophthalmos is described.

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[558]

**TÍTULO / TITLE:** - Lymphomatoid papulosis with associated cerebellar lesion of similar histology and T-cell clonality.

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

**REVISTA / JOURNAL:** - Australas J Dermatol. 2013 May 29. doi: 10.1111/ajd.12064.

●●Enlace al texto completo (gratis o de pago) [1111/ajid.12064](http://1111/ajid.12064)

**AUTORES / AUTHORS:** - McKay C; Nelson A; Sugo E; Cohn R; Wargon O

**INSTITUCIÓN / INSTITUTION:** - Department of Dermatology, Sydney Children's Hospital, Sydney, New South Wales, Australia.

**RESUMEN / SUMMARY:** - A 9-year old boy presented with a 4-month history of a truncal monomorphic eruption with self-healing papulonecrotic lesions. A skin biopsy revealed a dermal infiltrate of CD4, CD8 and CD30-positive T-cells, consistent with lymphomatoid papulosis. He responded to 4 months of treatment with narrowband UVB phototherapy (311 nm) which stabilised his disease. Five years later he presented with an acute onset of nausea and vomiting, dizziness, headache and ataxia. Magnetic resonance imaging of the brain revealed a lesion in the cerebellum and stereotactic resection was undertaken. Histology showed CD4, CD8 and CD30-positive T-cells similar to his skin lesions, with a monoclonal T-cell receptor (TCR) gamma gene rearrangement. Subsequent analysis of the skin detected a monoclonal band of the same size as the cerebellar lesion. Treatment was initiated for a primary central nervous system (CNS) lymphoma but ceased after one course of high-dose methotrexate. Opinion on the pathology was divided as to whether the cerebellar lesion represented an atypical reactive T-cell lymphoproliferative response or a T-cell lymphoma. On follow-up 2 years later, the patient remains clinically and radiologically clear, making CNS lymphoma unlikely.

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[559]

**TÍTULO / TITLE:** - Management of Diffuse Pontine Gliomas in Children: Recent Developments.

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

**REVISTA / JOURNAL:** - Paediatr Drugs. 2013 May 30.

●●Enlace al texto completo (gratis o de pago) [1007/s40272-013-0033-](http://1007/s40272-013-0033-5)

[5](#)

**AUTORES / AUTHORS:** - Kebudi R; Cakir FB

**INSTITUCIÓN / INSTITUTION:** - Istanbul University Cerrahpasa Medical Faculty Pediatric Hematology-Oncology, P.C: 34090, Millet Street, Capa, Istanbul, Turkey, [rejinkebudi@yahoo.com](mailto:rejinkebudi@yahoo.com).

**RESUMEN / SUMMARY:** - The prognosis for children with diffuse intrinsic pontine gliomas (DIPGs) is dismal. Although DIPGs constitute only 10-15 % of all pediatric brain tumors, they are the main cause of death in this group with a median survival of less than 12 months. Standard therapy involves radiotherapy, which produces transient neurologic improvement. Despite several clinical trials having been conducted, including trials on targeted agents to assess their efficacy, there is no clear improvement in prognosis. However, knowledge of DIPG biology is increasing, mainly as a result of research using biopsy and autopsy samples. In this review, we discuss recent studies in which

systemic therapy was administered prior to, concomitantly with, or after radiotherapy. The discussion also includes novel therapeutic options in DIPG. Continuing multimodal and multitargeted therapies might lead to an improvement in the dismal prognosis of the disease.

[560]

**TÍTULO / TITLE:** - Bilateral temporal lobe agenesis with bilateral arachnoid cysts - a rare congenital anomaly.

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

**REVISTA / JOURNAL:** - J Basic Clin Physiol Pharmacol. 2013;24(2):159-61. doi: 10.1515/jbcpp-2012-0067.

●●Enlace al texto completo (gratis o de pago) [1515/jbcpp-2012-0067](#)

**AUTORES / AUTHORS:** - Ghay R; Thaman D; Kahlon N

**RESUMEN / SUMMARY:** - Abstract Background: Bilateral temporal lobe agenesis/hypogenesis along with middle cranial fossa arachnoid cysts (ACs) is extremely rare, and very few cases have been reported in the literature. Methods: We present the case of 2-year-old female presenting with chief complaints of headache, vomiting, and fever. There was a history of premature delivery in the seventh month and up-rolling of eyes since birth. Results: Magnetic resonance imaging findings revealed bilateral temporal lobe agenesis with bilateral ACs, along with encephalomalacia in both parietal lobes. Ultrasound abdomen findings and biochemical tests revealed renal parenchymal disease. The lipid profile analysis revealed highly elevated triglyceride levels to 457.4 mg% and also enhanced very-low-density lipoprotein levels to 91.5 mg%. Presently, the patient is being treated on conservative lines. Conclusions: To our knowledge, this is the first report of an unusual association between bilateral temporal lobe agenesis associated with renal parenchymal disease and dyslipidaemia.

[561]

**TÍTULO / TITLE:** - Bilateral retrocerebellar arachnoid cysts exerting mass effect and associated with cerebellar tonsillar ectopia in an otherwise healthy adult.

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

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013;53(4):266-9.

**AUTORES / AUTHORS:** - Killeen T; Tromop-VAN-Dalen C; Alexander H; Wickremesekera A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Wellington Regional Hospital.

**RESUMEN / SUMMARY:** - Rarely, midline or unilateral posterior fossa arachnoid cysts (ACs) exert local mass effect resulting in the symptoms and signs of cerebellar and brainstem dysfunction. These cysts are sometimes seen in

conjunction with cerebellar tonsillar ectopia (TE), although the relationship between these two entities is unclear. Bilateral ACs in the posterior fossa are virtually unprecedented. We describe the case of a 33-year-old man with a history of multiple minor head injuries observed to harbour asymptomatic, bilateral cerebrospinal fluid-density collections over the cerebellar hemispheres. Six years later, he presented with headaches, limb paraesthesias, and drop attacks. Computed tomography, magnetic resonance imaging, and operative findings during burrhole drainage of the lesions showed bilateral posterior fossa ACs, with associated cerebellar TE of 11 mm. The cysts partially recurred, necessitating reopening of the burrholes, after which the patient's symptoms resolved entirely. We then discuss the challenges in diagnosing this unusual case, the relationship between AC and TE, and the role of minor head injury in the symptomatic progression of AC.

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[562]

**TÍTULO / TITLE:** - Supratentorial extraventricular anaplastic ependymoma in an adult with repeated intratumoral hemorrhage.

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

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 Apr 2.

●●Enlace al texto completo (gratis o de pago) [1007/s10014-013-0146-](http://1007/s10014-013-0146-0)

[0](#)

**AUTORES / AUTHORS:** - Iwamoto N; Murai Y; Yamamoto Y; Adachi K; Teramoto A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Nippon Medical School, 1-1-5 Bunkyo-ku Sendagi, Tokyo, 113-8602, Japan, [4649nao-iwamoto@nms.ac.jp](mailto:4649nao-iwamoto@nms.ac.jp).

**RESUMEN / SUMMARY:** - We report the case of a 61-year-old man with supratentorial extraventricular anaplastic ependymoma who presented with repeated intratumoral hemorrhage. The patient was admitted with headache. Computed tomography and magnetic resonance imaging showed an enhancing mass with intratumoral hemorrhage in the right temporal lobe. Gross total resection was performed. The tumor was well demarcated from the brain tissue, and showed no continuity with the ventricular system. Histopathological examination revealed the features of anaplastic ependymoma. Therefore, additional radiation therapy and adjuvant chemotherapy were administered. Ten months later, the tumor recurred with hemorrhage in the spinal canal. This case showed rapid malignant progression and repeated intratumoral hemorrhage within a short period of time, both of which are characteristics of anaplastic ependymomas. Close observation of the central nervous system and adjuvant radiotherapy are mandatory, even if the ependymoma presents with repeated intratumoral hemorrhage.

[563]

**TÍTULO / TITLE:** - Is There a Role for Radiotherapy in the Primary Management of Primary Central Nervous System Lymphoma? A Single-centre Case Series.

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

**REVISTA / JOURNAL:** - Clin Oncol (R Coll Radiol). 2013 May 17. pii: S0936-6555(13)00200-8. doi: 10.1016/j.clon.2013.04.007.

●●Enlace al texto completo (gratis o de pago) [1016/j.clon.2013.04.007](http://1016/j.clon.2013.04.007)

**AUTORES / AUTHORS:** - Muirhead R; Murray EC; Bell SL; Stewart W; James A

**INSTITUCIÓN / INSTITUTION:** - The Beatson, West of Scotland Cancer Centre, Glasgow, UK; The Gray Institute for Radiation Oncology and Biology, Oxford, UK. Electronic address: [rebeccamuirhead@hotmail.com](mailto:rebeccamuirhead@hotmail.com).

**RESUMEN / SUMMARY:** - AIMS: In recent years, the optimum primary management of primary central nervous system lymphoma (PCNSL) has evolved from combined modality chemoradiotherapy to chemotherapy alone. We describe a single-centre case series of PCNSL with a view to assessing the role of radiotherapy in primary disease management. MATERIALS AND METHODS: West of Scotland PCNSL cases between 2001 and 2010 were identified by neuropathology. Observational data were collected retrospectively from case notes and electronic systems. RESULTS: Forty-nine patients fulfilled the eligibility criteria. The median age was 61 years. Chemotherapy with a view to consolidation radiotherapy on completion was delivered to 61% (n = 30). Regimens varied, but were generally methotrexate-based. Chemotherapy was discontinued prematurely in 80% (n = 24) due to progressive disease (n = 12), intolerable toxicity (n = 7) or death (n = 4). In all patients who progressed or did not tolerate chemotherapy, treatment was changed to immediate salvage radiotherapy; modal irradiation was 40 Gy. Radiotherapy alone was delivered to those not suitable for chemotherapy (18%, n = 9) and best supportive care to those with poor performance status (18%, n = 9). The overall median survival was 8 months. In those receiving single modality radiotherapy or chemotherapy, the median survival was 5 and 8 months, respectively. For those completing chemoradiotherapy in its entirety, 3 year survival was 100%; in groups receiving salvage radiotherapy despite progressive disease or chemotherapy toxicity, moderate survival was maintained with immediate radiotherapy with 3 year survival rates of 33 and 60%, respectively. CONCLUSIONS: Although chemotherapy alone remains the optimal treatment of PCNSL, out with clinical trials only a minority of patients complete chemotherapy due to toxicity and disease progression; in such patients, immediate salvage radiotherapy provides an effective and safe alternative with maintenance of good outcomes.

[564]

**TÍTULO / TITLE:** - Acute Toxicity of Proton Beam Radiation for Pediatric Central Nervous System Malignancies.

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

**REVISTA / JOURNAL:** - *Pediatr Blood Cancer*. 2013 Apr 22. doi: 10.1002/pbc.24554.

●●Enlace al texto completo (gratis o de pago) [1002/pbc.24554](#)

**AUTORES / AUTHORS:** - Suneja G; Poorvu PD; Hill-Kayser C; Lustig RA

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, The University of Pennsylvania, Philadelphia, Pennsylvania.

**RESUMEN / SUMMARY:** - **BACKGROUND:** Proton beam therapy (PBT) for pediatric CNS malignancies may reduce late toxicity, but acute toxicity is not well defined. We examined acute toxicity for children with CNS malignancies treated with PBT. **PROCEDURE:** We conducted a retrospective review of 48 children with malignant brain tumors treated with PBT at our facility from 2010 to 2012. For each patient, we recorded age at diagnosis, tumor location, histologic subtype, radiation dose, extent of radiation, and use of concurrent chemotherapy. Acute toxicity scores were recorded per the National Cancer Institute Common Terminology Criteria for Adverse Events version 4.0 at weekly on treatment visits. Maximum grade of fatigue, headache, insomnia, anorexia, nausea, vomiting, alopecia, and dermatitis over the radiation therapy treatment course were recorded, and rates of acute toxicity were calculated. **RESULTS:** The cohort consisted of 16 glial tumors, 9 medulloblastomas, 6 germinomas, 5 ependymomas, 4 craniopharyngiomas, 3 atypical teratoid rhabdoid tumors, and 5 other CNS tumors. The mean age was 10.8 years, and median dose was 5,400 cGy (RBE). Acute toxicities were generally low-grade and manageable. The most commonly observed acute toxicities were fatigue, alopecia, and dermatitis. The least common were insomnia and vomiting. Higher maximum grades for headache, nausea, and vomiting over the treatment course were associated with infratentorial location, while higher maximum grades for anorexia, nausea, and alopecia were associated with craniospinal radiation. **CONCLUSIONS:** PBT appears to be well tolerated in pediatric patients with CNS malignancies. Acute toxicity can be managed with supportive care. *Pediatr Blood Cancer* 2013;9999:XX-XX. © 2013 Wiley Periodicals, Inc.

[565]

**TÍTULO / TITLE:** - Analysis of hsa-miR-30<sup>a</sup>-5p Expression in Human Gliomas.

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

**REVISTA / JOURNAL:** - *Pathol Oncol Res*. 2013 Apr 20.

●●Enlace al texto completo (gratis o de pago) [1007/s12253-012-9593-](#)

[X](#)

**AUTORES / AUTHORS:** - Wang K; Jia Z; Zou J; Zhang A; Wang G; Hao J; Wang Y; Yang S; Pu P

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Hangzhou Xiasha Hospital, Sir Run Run Shaw Hospital, Medical College, Zhejiang University, Hangzhou, 310016, People's Republic of China.

**RESUMEN / SUMMARY:** - Our previous study demonstrated that miR-30<sup>a</sup>-5p was upregulated in six malignant glioma cell lines by microRNA(miRNA) array. For further verification of this finding, the expression of miR-30<sup>a</sup>-5p in 7 more malignant glioma cell lines, 43 freshly resected glioma samples and 75 archival paraffin embedded glioma specimens with different grade of malignancy were examined by qRT-PCR and in situ hybridization(ISH). Here, we present the first evidence that miR-30<sup>a</sup>-5p is overexpressed in glioma cell lines and glioma samples as compared to the normal brain tissues (NBTs), and its expression level is positively correlated with tumor grade of malignancy. It is concluded that miR-30<sup>a</sup>-5p may have the potential as a diagnostic or prognostic marker of gliomas and as the target of miRNA-based glioma therapy in further studies.

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[566]

**TÍTULO / TITLE:** - AGR2 Expression is Regulated by HIF-1 and Contributes to Growth and Angiogenesis of Glioblastoma.

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

**REVISTA / JOURNAL:** - Cell Biochem Biophys. 2013 May 28.

●●Enlace al texto completo (gratis o de pago) [1007/s12013-013-9650-](#)

[4](#)

**AUTORES / AUTHORS:** - Hong XY; Wang J; Li Z

**INSTITUCIÓN / INSTITUTION:** - Department of Vascular Surgery, China-Japan Union Hospital Affiliated to Jilin University, Changchun, 130031, China.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) tumors are the most common type of brain tumors characterized by extensive angiogenesis that is mostly orchestrated by tumor hypoxia. The hypoxia induced factor-1 (HIF-1) transcriptional complex is the "master control switch" for hypoxia. Dysregulation of anterior gradient protein 2 (AGR2) expression is associated with tumor growth and metastasis. Whether AGR2 is a hypoxia-responsive factor and affects tumor progression via angiogenesis remains unknown. Here, we show that GBM cell lines, U87 and LN18, exhibited enhanced hypoxic responses compared with control normal human astrocytes, and a corresponding HIF-1-dependent increase in AGR2 mRNA and protein. Recombinant AGR2 and conditioned medium from GBM cells induced human umbilical vein endothelial cell (HUVEC) migration and tube formation, which were abrogated by anti-AGR2 neutralizing antibodies. Expression of the HIF-1alpha oxygen-dependent degradation domain mutant in cells resulted in elevated AGR2 levels and an increased ability to induce HUVEC migration and tube formation in vitro and

enhanced growth and vascularity of tumor xenografts in vivo, which were prevented by AGR2 knockdown. Taken together, these results indicate that AGR2 expression is regulated by HIF-1 and plays an important role in control of glioblastoma growth and vascularity. Our findings suggest that inhibiting AGR2 may represent a new therapeutic target for anti-angiogenic cancer treatment.

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[567]

**TÍTULO / TITLE:** - Expression and Functional Significance of Ezrin in Human Brain Astrocytoma.

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

**REVISTA / JOURNAL:** - Cell Biochem Biophys. 2013 May 28.

●●Enlace al texto completo (gratis o de pago) [1007/s12013-013-9653-](#)

[1](#)

**AUTORES / AUTHORS:** - Mao J; Yuan XR; Xu SS; Jiang XC; Zhao XT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Yijishan Hospital, Wannan Medical College, 2 West Zheshan Road, Wuhu, 241001, People's Republic of China, [myw921@yahoo.com](mailto:myw921@yahoo.com).

**RESUMEN / SUMMARY:** - Ezrin is overexpressed in a variety of neoplastic cells and is involved in the later stages of tumor progression and metastasis. The present study investigated the expression and functional significance of ezrin in human brain astrocytoma. Ezrin expression was examined in specimens from healthy human brains (10 autopsies) or human astrocytoma (107 cases) by immunohistochemistry. All healthy specimens were negative for ezrin expression, while this expression was positive in a great majority of human astrocytoma tissues (96/107; 89.7 %;  $p < 0.05$  vs. healthy). Ezrin expression was positively correlated with tumor grade ( $r = 0.551$ ,  $p < 0.01$ ). Analysis of clinicopathologic data revealed that the post-operation disease-free survival times were significantly ( $p < 0.001$ ) different between those with a strong positive ezrin expression and those with a weak or negative expression. Specifically, median DFS in patients with a strongly positive ezrin expression was 13 months (range 2-46 months), while it was significantly ( $p < 0.001$ ) longer in patients with weakly positive or negative expression (median of 28 months, range 6-56 months). In conclusion, there is a strong association between ezrin expression and increased malignancy in astrocytoma. Thus, enhanced ezrin expression may play an important role in the development of astrocytoma. Our results further indicate that ezrin may be useful for grading of astrocytoma and as a molecular marker for the prognosis.

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[568]

**TÍTULO / TITLE:** - The expression status of CD133 is associated with the pattern and timing of primary glioblastoma recurrence.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 7.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not066](#)

**AUTORES / AUTHORS:** - Shibahara I; Sonoda Y; Saito R; Kanamori M; Yamashita Y; Kumabe T; Watanabe M; Suzuki H; Watanabe T; Ishioka C; Tominaga T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery (I.S., Y.S., R.S., M.K., Y.Y., T.K., T.T.); Department of Pathology (M.W.); Department of Public Health (T.W.); Department of Clinical Oncology, Tohoku University School of Medicine, Japan (C.I.); Department of Pathology, Sendai Medical Center, Sendai, Japan (H.S.).

**RESUMEN / SUMMARY:** - Background Glioblastoma carries a poor prognosis primarily because of its high rate of recurrence. The ability to predict the recurrence pattern and timing would be highly useful for determining effective treatment strategies. We examined the correlation between prognostic factors and the pattern of recurrence in patients with primary glioblastoma. In particular, we examined whether there was a correlation between the expression of CD133 and glioblastoma recurrence. Methods We retrospectively analyzed 112 patients with primary glioblastoma. The timing and pattern (local or distant) of the initial recurrence were obtained from medical records. To identify factors predictive of recurrence, we examined CD133 expression by Western blots and immunohistochemistry, clinical (age, sex, KPS, Ki67 labeling index, surgery, ventricular entry) and genetic (IDH1, 7p, 9p, 10q, MGMT) factors. Results Of the 112 patients, 99 suffered recurrence. The first recurrence was local in 77 patients and distant in 22 patients. Among the factors to predict the pattern of recurrence, CD133 expression was significantly higher in distant than in local recurrence. Of the factors to predict the timing of recurrence, high CD133 expression was associated with shorter time to distant recurrence in both univariate and multivariate analyses ( $P = .0011$  and  $P = .038$ , respectively). Conclusions The expression of CD133 may be a predictor of the pattern and timing of recurrence of primary glioblastoma.

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[569]

**TÍTULO / TITLE:** - Arborizing vessels under dermoscopy: a case of cellular neurothekeoma instead of basal cell carcinoma.

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

**REVISTA / JOURNAL:** - Dermatol Online J. 2013 Mar 15;19(3):5.

**AUTORES / AUTHORS:** - Aydingoz IE; Mansur AT; Dikicioglu-Cetin E

**INSTITUCIÓN / INSTITUTION:** - Acibadem University, School of Medicine Istanbul, Turkey.

**RESUMEN / SUMMARY:** - Neurothekeoma is a slow-growing, benign tumor of nerve sheath origin. Herein we present a 62-year-old female who presented

with a 5-month history of a nodule that had shown a slight enlargement. She had a diagnosis of non-Hodgkin lymphoma for 10 years for which she had received multiple sessions of chemotherapy and radiotherapy. Cutaneous examination showed a well-defined, firm, 2 cm, pink-red nodule of the right supraclavicular area, which showed thick and arborizing vessels under dermoscopy. A diagnosis of cellular neurothekeoma was made after histopathologic examination with immunohistochemistry. Thick and arborizing vessels have been described as the dermoscopic hallmark of nodular and cystic basal cell carcinoma. In the past, hydradenoma and intraepidermal poroma have been defined as dermoscopic mimics of basal cell carcinoma because of the characteristic appearance of arborizing vessels. With this report a neurogenic tumor has been added to this list.

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[570]

**TÍTULO / TITLE:** - Robust molecular subgrouping and copy-number profiling of medulloblastoma from small amounts of archival tumour material using high-density DNA methylation arrays.

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

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Jun;125(6):913-6. doi: 10.1007/s00401-013-1126-5. Epub 2013 May 14.

●●Enlace al texto completo (gratis o de pago) [1007/s00401-013-1126-](#)

[5](#)

**AUTORES / AUTHORS:** - Hovestadt V; Remke M; Kool M; Pietsch T; Northcott PA; Fischer R; Cavalli FM; Ramaswamy V; Zapatka M; Reifenberger G; Rutkowski S; Schick M; Bewerunge-Hudler M; Korshunov A; Lichter P; Taylor MD; Pfister SM; Jones DT

**INSTITUCIÓN / INSTITUTION:** - Division of Molecular Genetics, German Cancer Research Center (DKFZ), Im Neuenheimer Feld 280, 69120, Heidelberg, Germany.

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[571]

**TÍTULO / TITLE:** - Tanycytic ependymoma of the filum terminale associated with multiple endocrine neoplasia Type 1: first reported case.

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

**REVISTA / JOURNAL:** - Spine J. 2013 Apr 3. pii: S1529-9430(13)00266-0. doi: 10.1016/j.spinee.2013.02.066.

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

[1016/j.spinee.2013.02.066](#)

**AUTORES / AUTHORS:** - Funayama T; Sakane M; Yoshizawa T; Takeuchi Y; Ochiai N

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**RESUMEN / SUMMARY:** - BACKGROUND CONTEXT: Ependymoma associated with multiple endocrine neoplasia Type 1 (MEN-1) is an extremely rare clinical entity. To the best of our knowledge, only five cases of ependymoma associated with MEN-1 have been previously described. Furthermore, there has been no case of tanycytic ependymoma of the filum terminale associated with MEN-1. PURPOSE: The present case report illustrates a 53-year-old man with tanycytic ependymoma of the filum terminale associated with MEN-1. We review the literature on ependymoma with MEN-1 and tanycytic ependymoma of the cauda equina region and also discuss the risk of recurrence. STUDY DESIGN: A case report. METHODS: The patient presented with complaints of nocturnal pain in the lower back, accompanied by numbness around the anus and intermittent claudication for approximately 1 year. Magnetic resonance imaging (MRI) identified an intradural-enhancing, large mass lesion at the level from Th12 to L2 vertebrae, with a cranial cystic lesion. RESULTS: Open-door laminoplasty of the Th12, L1, and L2 and en bloc tumor resection with thickened filum terminale were performed. Histopathologic examination of the tumor specimens showed tanycytic ependymoma (World Health Organization Classification Grade II). At the time of the 2-year and 8-month follow-up examination, MRI did not show tumor recurrence. CONCLUSIONS: This is the first reported case of this clinical entity. A careful follow-up of patients with this unusual tumor is strongly recommended.

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[572]

**TÍTULO / TITLE:** - Supratentorial neurenteric cyst with spontaneous repetitive intracystic hemorrhage mimicking brain abscess: a case report.

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

**REVISTA / JOURNAL:** - Neurosurg Rev. 2013 May 28.

●●Enlace al texto completo (gratis o de pago) [1007/s10143-013-0476-](http://1007/s10143-013-0476-8)

[8](#)

**AUTORES / AUTHORS:** - Kitamura Y; Sasaki H; Hashiguchi A; Momoshima S; Shidoh S; Yoshida K

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Keio University School of Medicine, 35 Shinanomachi, Shinjuku-ku, Tokyo, 160-8582, Japan, [ykita@sc4.so-net.ne.jp](mailto:ykita@sc4.so-net.ne.jp).

**RESUMEN / SUMMARY:** - Neurenteric cyst (NC) is a benign epithelial cyst (BEC) of endodermal origin that mostly occurs in the spinal subdural space or posterior cranial fossa. A 28-year-old male presented with a left frontal lobe NC associated with spontaneous repetitive intracystic hemorrhage, which was

initially diagnosed and treated as a brain abscess. He presented with headache and disorientation, without underlying diseases. A cystic tumor was suspected because of a hypointense signal on diffusion-weighted magnetic resonance imaging (MRI). One day after admission, his condition deteriorated rapidly and emergency cyst aspiration was performed. A brown viscous liquid like bloody pus comprising many neutrophils and macrophages was obtained. Although culture was negative, we initially started antibiotic treatment because of cyst content characteristics and rapid clinical course compatible with brain abscess. He was discharged without neurological deficits, but occasionally complained of intense headache. Computed tomography/MRI showed repetitive intracystic hemorrhage and gradual re-enlargement of the lesion. He underwent radical cyst excision by frontal craniotomy 34 months after aspiration. The pathological diagnosis was NC. We believe this is the first report of a supratentorial NC with spontaneous repetitive intracystic hemorrhage. BECs, especially with intracystic hemorrhage, are difficult to be distinguished from brain abscesses. In cases of cystic lesions or presumed brain abscesses refractory to treatment with aspiration and/or antibiotics, BECs should be considered, and radical cyst wall removal should be considered a treatment option.

[573]

**TÍTULO / TITLE:** - Bevacizumab and Glioblastoma Multiforme: A Thrombosis and Bleeding Dilemma (A Case Report and a Brief Review of the Literature).

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

**REVISTA / JOURNAL:** - Am J Ther. 2013 Apr 11.

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

[1097/MJT.0b013e31824ea634](#)

**AUTORES / AUTHORS:** - Patel D; Salkeni M; Chaudhary R

**INSTITUCIÓN / INSTITUTION:** - Oncology Department, University of Cincinnati College of Medicine/University Cincinnati Medical Center, Cincinnati, OH.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most aggressive malignant primary brain tumor in adults. It is a highly vascularized tumor, and the advent of angiogenic inhibitors, in particular bevacizumab, is thought to be promising for the treatment of these tumors. However, bevacizumab has been associated with an increased risk of arterial and venous thromboembolism and hemorrhage. We report a case of superior vena cava syndrome developing in a glioblastoma patient treated with bevacizumab. Superior vena cava thrombosis in the setting of treatment with vascular endothelial growth factor has not been well-described. The issue arises as how to best manage the hemostatic complications of antiangiogenic agents in patients who have an established risk of bleeding and thrombosis with their GBM. This report discusses the individual risk of bleeding and thrombosis associated with GBM and the use of bevacizumab. Studies suggest that GBM patients who require therapeutic

anticoagulation for venous thromboembolic complications while on bevacizumab therapy can be anticoagulated with the risk of bleeding being comparable to that expected from therapeutic anticoagulation alone. However, the potential risks and benefits should be thoroughly discussed with each patient before starting anticoagulation therapy for thrombotic complications.

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[574]

**TÍTULO / TITLE:** - A case of intradural osteosarcoma of the spine.

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

**REVISTA / JOURNAL:** - Spine J. 2013 Apr 9. pii: S1529-9430(13)00273-8. doi: 10.1016/j.spinee.2013.01.051.

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

[1016/j.spinee.2013.01.051](#)

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**RESUMEN / SUMMARY:** - BACKGROUND CONTEXT: Intradural-extramedullary spinal tumors and extradural osteosarcomas are both rare entities. Only one case of primary intradural-extramedullary osteosarcoma of the spine has been previously reported. This is the second reported case. PURPOSE: To describe a case of primary intradural-extramedullary osteosarcoma of the spine associated with rapid clinical deterioration. STUDY DESIGN: Case report of a 70-year-old woman who presented with a constellation of neurologic symptoms. METHODS: Review of patient files, radiographic studies, surgical images, histopathology, and relevant literature. RESULTS: The patient underwent tumor debulking but exhibited rapid, postsurgical, functional deterioration and died within 6 weeks. This case and the only previous case of its kind both occurred in individuals with a remote history of iophendylate (Myodil) myelogram. CONCLUSIONS: Primary intradural-extramedullary extraosseous osteosarcoma of the spine is an exceedingly rare entity with no established management approach. Iophendylate myelography may be implicated in the etiology of this tumor type.

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[575]

**TÍTULO / TITLE:** - ZIP4 is a novel molecular marker for glioma.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 15.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not042](#)

**AUTORES / AUTHORS:** - Lin Y; Chen Y; Wang Y; Yang J; Zhu VF; Liu Y; Cui X; Chen L; Yan W; Jiang T; Hergenroeder GW; Fletcher SA; Levine JM; Kim DH; Tandon N; Zhu JJ; Li M

**INSTITUCIÓN / INSTITUTION:** - The Vivian L. Smith Department of Neurosurgery, The University of Texas Medical School at Houston, Houston, Texas (Y.L., Y.W., J.Y., V.F.Z., X.C., L.C., G.W.H., D.H.K., N.T., J.-J.Z., M.L.); Department of Neurosurgery, First Hospital of China Medical University, Shenyang, China (Y.L.); Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, China (Y.L., Y.W., W.Y., T.J.); Division of Biostatistics, School of Public Health, The University of Texas Health Science Center at Houston, Houston, Texas (Y.C., Y.L.); Department of Pediatric Surgery, The University of Texas Medical School at Houston, Houston, Texas (S.A.F.); Department of Small Animal Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, Texas (J.M.L.).

**RESUMEN / SUMMARY:** - BackgroundDysregulated zinc transport has been observed in many cancers. However, the status of zinc homeostasis and the expression profile of zinc transporters in brain and brain tumors have not been reported.MethodsThe gene profiles of 14 zinc importers (ZIPs) and 10 zinc exporters (ZnTs) in patients with glioma were studied by investigating the association between the zinc transporters and brain tumor characteristics (tumor grade and overall survival time). Three independent cohorts were analyzed to cross-validate the findings: the Chinese Glioma Genome Atlas (CGCA) cohort (n = 186), the US National Cancer Institute Repository for Molecular Brain Neoplasia Data (REMBRANDT) cohort (n = 335), and The University of Texas (UT) cohort (n = 34).ResultsThe expression of ZIP3, 4, 8, 14, ZnT5, 6, and 7 were increased, and the expression of ZnT10 was decreased in grade IV gliomas, compared with grade II gliomas. Among all 24 zinc transporters, ZIP4 is most significantly associated with tumor grade and overall survival; this finding is consistent across 2 independent cohorts (CGCA and REMBRANDT) and is partially validated by the third cohort (UT). High ZIP4 expression was significantly associated with higher grade of gliomas and shorter overall survival (hazard ratio = 1.61, 95% confidence interval = 1.02-2.53, P = .040 in CGCA cohort; hazard ratio = 1.32, 95% confidence interval = 1.08-1.61, P = .007 in REMBRANDT cohort).ConclusionsDysregulated expression of zinc transporters is involved in the progression of gliomas. Our results suggest that ZIP4 may serve as a potential diagnostic and prognostic marker for gliomas.

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[576]

**TÍTULO / TITLE:** - Quasi-VMAT in high-grade glioma radiation therapy.

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

**REVISTA / JOURNAL:** - Strahlenther Onkol. 2013 May;189(5):367-71. doi: 10.1007/s00066-012-0296-8. Epub 2013 Apr 4.

●●Enlace al texto completo (gratis o de pago) [1007/s00066-012-0296-8](http://dx.doi.org/10.1007/s00066-012-0296-8)

**AUTORES / AUTHORS:** - Fadda G; Massazza G; Zucca S; Durzu S; Meleddu G; Possanzini M; Farace P

**INSTITUCIÓN / INSTITUTION:** - Department of Radio-Oncology, Regional Oncological Hospital, via Jenner, 09121, Cagliari, Italy.

**RESUMEN / SUMMARY:** - **PURPOSE:** To compare a quasi-volumetric modulated arc therapy (qVMAT) with three-dimensional conformal radiation therapy (3D-CRT) and intensity-modulated radiation therapy (IMRT) for the treatment of high-grade gliomas. The qVMAT technique is a fast method of radiation therapy in which multiple equispaced beams analogous to those in rotation therapy are radiated in succession. **PATIENTS AND METHODS:** This study included 12 patients with a planning target volume (PTV) that overlapped at least one organ at risk (OAR). 3D-CRT was planned using 2-3 non-coplanar beams, whereby the field-in-field technique (FIF) was used to divide each field into 1-3 subfields to shield the OAR. The qVMAT strategy was planned with 15 equispaced beams and IMRT was planned using 9 beams with a total of 80 segments. Inverse planning for qVMAT and IMRT was performed by direct machine parameter optimization (DMPO) to deliver a homogenous dose distribution of 60 Gy within the PTV and simultaneously limit the dose received by the OARs to the recommended values. Finally, the effect of introducing a maximum dose objective (max. dose < 54 Gy) for a virtual OAR in the form of a 0.5 cm ring around the PTV was investigated. **RESULTS:** The qVMAT method gave rise to significantly improved PTV95% and conformity index (CI) values in comparison to 3D-CRT (PTV95% = 90.7 % vs. 82.0 %; CI = 0.79 vs. 0.74, respectively). A further improvement was achieved by IMRT (PTV95% = 94.4 %, CI = 0.78). In qVMAT and IMRT, the addition of a 0.5 cm ring around the PTV produced a significant increase in CI (0.87 and 0.88, respectively), but dosage homogeneity within the PTV was considerably reduced (PTV95% = 88.5 % and 92.3 %, respectively). The time required for qVMAT dose delivery was similar to that required using 3D-CRT. **CONCLUSION:** These findings suggest that qVMAT should be preferred to 3D-CRT for the treatment of high-grade gliomas. The qVMAT method could be applied in hospitals, for example, which have limited departmental resources and are not equipped with systems capable of VMAT delivery.

[577]

**TÍTULO / TITLE:** - Surgical navigation-assisted endoscopic biopsy is feasible for safe and reliable diagnosis of unresectable solid brain tumors.

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

**REVISTA / JOURNAL:** - Neurosurg Rev. 2013 Apr 9.

●●Enlace al texto completo (gratis o de pago) [1007/s10143-013-0467-9](http://1007/s10143-013-0467-9)

**AUTORES / AUTHORS:** - Nagahisa S; Watabe T; Sasaki H; Nishiyama Y; Hayashi T; Hasegawa M; Hirose Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Fujita Health University, 1-98 Dengakugakubo, Kutsukake-cho, Toyoake, Aichi, 470-1192, Japan, [nagahisa2@gmail.com](mailto:nagahisa2@gmail.com).

**RESUMEN / SUMMARY:** - Stereotactic biopsy has been validated for tissue sampling of deep-seated lesions that cannot be easily resected via open craniotomy. However, some inherent problems including the inability to directly observe the lesion and difficulty in confirming hemostasis limit its usefulness. To overcome these issues, we used the endoscope in brain tumor biopsy, for not only intraventricular tumors but also intraparenchymal tumors. The rigid scope was used in association with a surgical navigation system for intraparenchymal lesions via a transcortical route. There were no useful anatomical landmarks when the trajectory to the lesions was decided; therefore, surgical navigation system was required for the transcortical procedures. The endoscopic procedure described here was attempted in 21 cases of intraparenchymal lesions between January 2007 and February 2012. A definitive diagnosis was obtained in all cases, and genetic analysis was performed when required. Serious postsurgical hemorrhage or neurological deficits were not observed in any cases. Endoscopic surgery provides a clear view of the target and makes it easier to differentiate tumor tissue from normal brain tissue. Moreover, the endoscope helped to confirm hemostasis during the procedure. Thus, endoscopic biopsy has the potential to contribute toward safe and reliable diagnosis of brain tumors.

[578]

**TÍTULO / TITLE:** - Synergistic suppression of noscapine and conventional chemotherapeutics on human glioblastoma cell growth.

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

**REVISTA / JOURNAL:** - Acta Pharmacol Sin. 2013 May 27. doi: 10.1038/aps.2013.40.

●●Enlace al texto completo (gratis o de pago) [1038/aps.2013.40](http://1038/aps.2013.40)

**AUTORES / AUTHORS:** - Qi Q; Liu X; Li S; Joshi HC; Ye K

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Laboratory Medicine, Emory University School of Medicine, Atlanta, GA 30322, USA.

**RESUMEN / SUMMARY:** - Aim:Noscapine (NOS) is a non-narcotic opium alkaloid with anti-tumor activity. The aim of this study was to investigate the effects of the combination of NOS with conventional chemotherapeutics temozolamide (TMZ), bis-chloroethylnitrosourea (BCNU), or cisplatin (CIS) on human

glioblastoma cells. Methods: U87MG human glioblastoma cells were examined. Cell proliferation was quantified using MTT assay. Western blotting and flow cytometry were used to examine apoptosis and the expression of active caspase-3 and cleaved PARP. Mouse tumor xenograft model bearing U87MG cells was treated with TMZ (2 mg.kg<sup>-1</sup>.d<sup>-1</sup>, ip) or CIS (2 mg/kg, ip 3 times a week) alone or in combination with NOS (200 mg.kg<sup>-1</sup>.d<sup>-1</sup>, ig) for 3 weeks. Immunohistochemistry was used to investigate the expression of active caspase-3 and Ki67 following treatment in vivo. The safety of the combined treatments was evaluated based on the body weight and histological studies of the animal's organs. Results: NOS (10 or 20 mol/L) markedly increased the anti-proliferation effects of TMZ, BCNU, and CIS on U87MG cells in vitro. The calculated combination index (CI) values of NOS-CIS, NOS-TMZ, and NOS-BCNU (20 μmol/L) were 0.45, 0.51, and 0.57, respectively, demonstrating synergistic inhibition of the drug combinations. In tumor xenograft models, combined treatment with NOS robustly augmented the anti-cancer actions of TMZ and CIS, and showed no detectable toxicity. The combined treatments significantly enhanced the apoptosis, the activated caspase-3 and PARP levels in U87MG cells in vitro, and reduced Ki67 staining and increased the activated caspase-3 level in the shrinking xenografts in vivo. Conclusion: NOS synergistically potentiated the efficacy of FDA-approved anti-cancer drugs against human glioblastoma cells, thereby allowing them to be used at lower doses and hence minimizing their toxic side effects.

[579]

**TÍTULO / TITLE:** - Use of diffusion tensor imaging in glioma resection.

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

**REVISTA / JOURNAL:** - Neurosurg Focus. 2013 Apr;34(4):E1. doi: 10.3171/2013.1.FOCUS12412.

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

[3171/2013.1.FOCUS12412](#)

**AUTORES / AUTHORS:** - Abdullah KG; Lubelski D; Nucifora PG; Brem S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Section of Neuroradiology, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania 19104, USA.

**RESUMEN / SUMMARY:** - Diffusion tensor imaging (DTI) is increasingly used in the resection of both high- and low-grade gliomas. Whereas conventional MRI techniques provide only anatomical information, DTI offers data on CNS connectivity by enabling visualization of important white matter tracts in the brain. Importantly, DTI allows neurosurgeons to better guide their surgical approach and resection. Here, the authors review basic scientific principles of DTI, include a primer on the technology and image acquisition, and outline the modality's evolution as a frequently used tool for glioma resection. Current

literature supporting its use is summarized, highlighting important clinical studies on the application of DTI in preoperative planning for glioma resection, preoperative diagnosis, and postoperative outcomes. The authors conclude with a review of future directions for this technology.

[580]

**TÍTULO / TITLE:** - Phase 2 study of dose-intense temozolomide in recurrent glioblastoma.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 Apr 3.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/ot040](http://1093/neuonc/ot040)

**AUTORES / AUTHORS:** - Norden AD; Lesser GJ; Drappatz J; Ligon KL; Hammond SN; Lee EQ; Reardon DR; Fadul CE; Plotkin SR; Batchelor TT; Zhu JJ; Beroukhi R; Muzikansky A; Doherty L; Lafrankie D; Smith K; Tafoya V; Lis R; Stack EC; Rosenfeld MR; Wen PY

**INSTITUCIÓN / INSTITUTION:** - Center for Neuro-Oncology, Dana-Farber/Brigham and Women's Cancer Center, Boston, Massachusetts (A.D.N., S.N.H., E.Q.L., L.D., D.L., K.S., V.T., P.Y.W.); Division of Neuro-Oncology, Department of Neurology, Brigham and Women's Hospital, Boston, Massachusetts (A.D.N., E.Q.L., P.Y.W.); Section of Hematology and Oncology, Wake Forest University Baptist Medical Center, Winston-Salem, North Carolina (G.J.L.); Division of Hematology/Oncology, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania (J.D.); Department of Medical Oncology, Dana-Farber Cancer Institute, Boston, Massachusetts (K.L.L., R.B.); Neuro-oncology Program, Norris Cotton Cancer Center, Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire (C.E.F.); Massachusetts General Hospital Cancer Center, Pappas Center for Neuro-Oncology, Boston, Massachusetts (S.R.P., T.T.B.); The Vivian L. Smith Department of Neurosurgery, The University of Texas Health Science Center at Houston, Mischer Neuroscience Institute, Memorial Hermann Hospital, Houston, Texas (J-J.Z.); Massachusetts General Hospital Biostatistics Center, Boston, Massachusetts (A.M.), Department of Pathology, Brigham and Women's Hospital, Boston, Massachusetts (R.L., E.C.S., K.L.L.), Center for Molecular Oncologic Pathology, Dana-Farber Cancer Institute, Boston, Massachusetts (R.L., E.C.S., K.L.L.); Division of Neuro-Oncology, Department of Neurology, University of Pennsylvania, Philadelphia, Pennsylvania (M.R.R.).

**RESUMEN / SUMMARY:** - BackgroundAmong patients with glioblastoma (GBM) who progress on standard temozolomide, the optimal therapy is unknown. Resistance to temozolomide is partially mediated by O6-methylguanine-DNA methyltransferase (MGMT). Because MGMT may be depleted by prolonged temozolomide administration, dose-intense schedules may overcome resistance.MethodsThis was a multicenter, phase 2, single-arm study of temozolomide (75-100 mg/m<sup>2</sup>/day) for 21 days of each 28-day cycle. Patients

had GBM in first recurrence after standard therapy. The primary end point was 6-month progression-free survival (PFS6). Results Fifty-eight participants were accrued, 3 of whom were ineligible for analysis; one withdrew before response assessment. There were 33 men (61%), with a median age of 57 years (range, 25-79 years) and a median Karnofsky performance score of 90 (range, 60-100). Of 47 patients with MGMT methylation results, 36 (65%) had methylated tumors. There were 7 (13%) partial responses, and PFS6 was only 11%. Response and PFS did not depend on MGMT status; MSH2, MLH1, or ERCC1 expression; the number of prior temozolomide cycles; or the time off temozolomide. Treatment was well tolerated, with limited grade 3 neutropenia (n = 2) or thrombocytopenia (n = 2). Conclusions Dose-intense temozolomide on this schedule is safe in recurrent GBM. However, efficacy is marginal and predictive biomarkers are needed.

[581]

**TÍTULO / TITLE:** - Fractional anisotropy of the optic radiations is associated with visual acuity loss in optic pathway gliomas of neurofibromatosis type 1.

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

**REVISTA / JOURNAL:** - Neuro Oncol. 2013 May 7.

●●Enlace al texto completo (gratis o de pago) [1093/neuonc/not068](#)

**AUTORES / AUTHORS:** - de Blank PM; Berman JI; Liu GT; Roberts TP; Fisher MJ

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Hematology and Oncology, Rainbow Babies and Children's Hospital and Department of Pediatrics, Case Western Reserve University, Cleveland, Ohio (P.M.K. d.B.); Department of Radiology, The Children's Hospital of Philadelphia and the Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania (J.I.B., T.P.L.R.); Neuro-ophthalmology Service, The Children's Hospital of Philadelphia, and the Departments of Neurology and Ophthalmology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania (G.T.L.); and Division of Oncology, The Children's Hospital of Philadelphia, and Department of Pediatrics, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania (M.J.F.).

**RESUMEN / SUMMARY:** - Background No more than half of patients with neurofibromatosis type 1 (NF1)-associated optic pathway gliomas (OPGs) develop vision loss. Prospectively identifying those who will require therapy remains challenging, because no reliable factors have yet been identified that predict future vision loss. To determine whether brain tissue microstructure is associated with visual acuity loss, we examined diffusion tensor imaging (DTI) and ophthalmologic evaluations in children with NF1-associated OPG. Methods We retrospectively reviewed ophthalmology records and concurrent DTI measurements of the optic nerves, tracts, and radiations from 50 children with NF1-associated OPGs. Multivariate linear regression measured

the association between fiber trajectory quantity and white matter integrity on visual acuity measured by the logarithm of the minimal angle of resolution (logMAR). Results In multivariate analysis, fractional anisotropy (FA) of the optic radiations was associated with visual acuity loss (adjusted coefficient = -6.081 logMAR/FA; P = .006) after adjusting for age, extent of tumor, DTI acquisition type, prior chemotherapy, and fundus examination findings. The association remained after eliminating tumors involving the optic radiations. In an evaluation of 15 subjects with paired ophthalmologic examination and DTI a year apart, initial FA of the optic radiation was associated with a trend toward change in visual acuity a year later (coefficient = -2.652 logMAR/FA; P = .069). Conclusions A decrease in FA of the optic radiations is associated with abnormal visual acuity in NF1-associated OPGs and may be predictive of visual acuity loss during the following year.

[582]

**TÍTULO / TITLE:** - Voxel-based analysis of TI SPECT for grading and diagnostic accuracy of gliomas: comparison with ROI analysis.

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

**REVISTA / JOURNAL:** - Ann Nucl Med. 2013 Apr 17.

●●Enlace al texto completo (gratis o de pago) [1007/s12149-013-0711-](http://1007/s12149-013-0711-y)

[y](#)

**AUTORES / AUTHORS:** - Kuwako T; Mizumura S; Murakami R; Yoshida T; Shiiba M; Sato H; Fukushima Y; Teramoto A; Kumita SI

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Nippon Medical School, 1-1-5 Sendagi, Bunkyo-ku, Tokyo, 113-8603, Japan, [kuwako@nms.ac.jp](mailto:kuwako@nms.ac.jp).

**RESUMEN / SUMMARY:** - PURPOSE: The aim of this retrospective study was to assess the utility of a voxel-based analysis (VBA) method for 201TI SPECT in glioma, compared to conventional ROI analysis. METHODS: We recruited 24 patients with glioma (high-grade 15; low-grade 9), for whom pre-operative 201TI SPECT and MRI were performed. SPECT images were coregistered with MRI. The uptake ratio (UR) images of tumor to contralateral normal tissue were measured on early and delayed images, and the 201TI retention index (RI) map was calculated from the early and delayed uptake ratio maps. In the ROI analysis, tumors were traced on a UR map, and the mean and maximal uptake ratio values on the early images were, respectively, defined as the mean and maximal UR. The mean and maximal RI values (mean and maximal RI) were calculated by division of the mean and maximal UR, respectively, on the delayed image by the mean and maximal UR on the early image. For the RI map calculated voxel by voxel, the maximal RI value was defined as VBA-RI. We evaluated sensitivity and accuracy of differential analysis with the mean and maximal UR, RI, and VBA-RI. RESULTS: The high- and low-grade groups showed no significant difference in mean and maximal RI (0.98 +/- 0.12 vs. 1.05

+/- 0.09 and 0.98 +/- 0.18 vs. 1.05 +/- 0.14, respectively). The AUC and accuracy of the mean and maximal RI were 0.681 and 66.7 %, and 0.622 and 62.5 %, respectively. In contrast, VBA-RI was higher in high-grade than in low-grade glioma (1.69 +/- 0.27 vs. 0.68 +/- 0.66,  $p < 0.001$ ). The AUC and accuracy of VBA-RI were 0.963 and 95.8 %, which are higher than those obtained for mean ( $p < 0.05$ ) and maximal RI ( $p < 0.01$ ). There was no significant difference in ROC between the VBA-RI and the mean UR (0.911,  $p = 0.456$ ) and maximal UR (0.933,  $p = 0.639$ ); however, the AUC, sensitivity, and diagnostic accuracy of VBA-RI were all higher than those of the mean and maximal UR. CONCLUSION: The voxel-based analysis method of 201TI SPECT may improve diagnostic performance for gliomas, compared with ROI analysis.

[583]

**TÍTULO / TITLE:** - Cytologic diagnosis of spinal cord ependymoma in cerebrospinal fluid.

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

**REVISTA / JOURNAL:** - Pathologica. 2012 Dec;104(6):425-7.

**AUTORES / AUTHORS:** - Kalogeraki A; Tamiolakis D; Sinatkas V; Xekalou A; Papadakis M; Stathopoulos EN

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology-Cytopathology, University of Crete, Faculty of Medicine, Heraklion, Crete, Greece.

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**RESUMEN / SUMMARY:** - Ependymoma cells are known to rarely exfoliate into cerebrospinal fluid (CSF). However, the frequency of CSF involvement in patients with ependymoma is unclear, and to the author's knowledge the cytomorphologic features of tumour cells have not been well described to date. In this study, the CSF findings in a patient with ependymoma and the cytopathological features of this tumor are reported. The patient presented at the University Hospital of Heraklion, Crete, suffering from a chest to back pain. Computed tomography, scanning and magnetic resonance imaging (MRI) were performed and a mass of 3x2 cm in the thoracic aspect of the spinal cord was found. A sample of cerebrospinal fluid (CSF) was sent for cytologic examination and a diagnosis of ependymoma was made. A biopsy was performed and histology confirmed the cytologic diagnosis of ependymoma grade II (WHO). Exfoliated cells from ependymomas of spinal cord are rarely recognizable in CSF samples. Except in patients with myxopapillary tumours and anaplastic tumours, cytomorphologic features of ependymoma have been described only in case reports of intraoperative imprinting or fine needle aspiration biopsies (FNABs) and not in CSF cytology.

[584]

**TÍTULO / TITLE:** - VE1 immunohistochemistry in pituitary adenomas is not associated with BRAF V600E mutation.

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

**REVISTA / JOURNAL:** - Acta Neuropathol. 2013 Jun;125(6):911-2. doi: 10.1007/s00401-013-1118-5. Epub 2013 Apr 16.

●●Enlace al texto completo (gratis o de pago) [1007/s00401-013-1118-](#)

[5](#)

**AUTORES / AUTHORS:** - Sperveslage J; Gierke M; Capper D; Honegger J; Sipos B; Beschorner R; Schittenhelm J

**INSTITUCIÓN / INSTITUTION:** - Institute of Pathology, University of Tuebingen, Tuebingen, Germany.

[585]

**TÍTULO / TITLE:** - SDH Mutations Establish a Hypermethylator Phenotype in Paraganglioma.

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

**REVISTA / JOURNAL:** - Cancer Cell. 2013 May 21. pii: S1535-6108(13)00183-9. doi: 10.1016/j.ccr.2013.04.018.

●●Enlace al texto completo (gratis o de pago) [1016/j.ccr.2013.04.018](#)

**AUTORES / AUTHORS:** - Letouze E; Martinelli C; Lorient C; Burnichon N; Abermil N; Ottolenghi C; Janin M; Menara M; Nguyen AT; Benit P; Buffet A; Marcaillou C; Bertherat J; Amar L; Rustin P; De Reynies A; Gimenez-Roqueplo AP; Favier J

**INSTITUCIÓN / INSTITUTION:** - Programme Cartes d'Identite des Tumeurs, Ligue Nationale Contre Le Cancer, 75013 Paris, France.

**RESUMEN / SUMMARY:** - Paragangliomas are neuroendocrine tumors frequently associated with mutations in RET, NF1, VHL, and succinate dehydrogenase (SDHx) genes. Methylome analysis of a large paraganglioma cohort identified three stable clusters, associated with distinct clinical features and mutational status. SDHx-related tumors displayed a hypermethylator phenotype, associated with downregulation of key genes involved in neuroendocrine differentiation. Succinate accumulation in SDH-deficient mouse chromaffin cells led to DNA hypermethylation by inhibition of 2-OG-dependent histone and DNA demethylases and established a migratory phenotype reversed by decitabine treatment. Epigenetic silencing was particularly severe in SDHB-mutated tumors, potentially explaining their malignancy. Finally, inactivating FH mutations were identified in the only hypermethylated tumor without SDHx mutations. These findings emphasize the interplay between the Krebs cycle, epigenomic changes, and cancer.

[586]

**TÍTULO / TITLE:** - Second surgery for recurrent glioblastoma: advantages and pitfalls.

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

**REVISTA / JOURNAL:** - Expert Rev Anticancer Ther. 2013 May;13(5):583-7. doi: 10.1586/era.13.32.

●●Enlace al texto completo (gratis o de pago) [1586/era.13.32](#)

**AUTORES / AUTHORS:** - Brandes AA; Bartolotti M; Franceschi E

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, Azienda USL, Bologna, Italy.

**RESUMEN / SUMMARY:** - Deciding upon the therapeutic approach for patients with recurrent glioblastoma is a challenge. Although second surgery may provide effective palliation, it has yet to be established whether it prolongs survival and/or improves quality of life; nor have data been reported in literature to demonstrate that repeat surgery is indicated for patients with recurrence. The few studies investigating this issue are retrospective and have been conducted on small series, and their data sets are not homogeneous. The aim of the present study was, therefore, to analyze predictors of outcome in patients with recurrent glioblastoma and to make a critical review of data in literature with a view to comparing the effect on outcome of second surgery against well-known prognostic determinants.

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[587]

**TÍTULO / TITLE:** - Internal carotid arterial shift after transsphenoidal surgery in pituitary adenomas with cavernous sinus invasion.

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

**REVISTA / JOURNAL:** - Pituitary. 2013 May 30.

●●Enlace al texto completo (gratis o de pago) [1007/s11102-013-0492-](#)

[2](#)

**AUTORES / AUTHORS:** - Sasagawa Y; Tachibana O; Doai M; Akai T; Tonami H; Iizuka H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Kanazawa Medical University, 1-1 Daigaku, Uchinada, Ishikawa, 920-0293, Japan, [yacchan1218@yahoo.co.jp](mailto:yacchan1218@yahoo.co.jp).

**RESUMEN / SUMMARY:** - The intercarotid distance (ICD) between cavernous carotid arteries (CCAs) is an important factor for avoiding injury of the internal carotid artery during transsphenoidal surgery. The ICD between CCAs in pituitary adenoma patients is generally larger than in normal individuals. However, the movement of the CCA during transsphenoidal surgery is not known. The aim of this study is to measure the ICD between CCAs in pituitary adenoma patients before and after surgery. We reviewed 138 pituitary adenoma patients who were treated with resection via the transsphenoidal approach. The

CCA diameter and the ICD between CCAs were measured from preoperative and postoperative MR images. The CCA diameter was similar at the preoperative and postoperative time points. On the other hand, the ICD between CCAs was shorter at postoperative time point (19.4 +/- 4.5 mm) than at the preoperative time point (20.9 +/- 4.9 mm) (P = 0.048). Above all, invasion type adenomas had more significant ICD change at the postoperative time point (23.8 +/- 3.8 mm) than at the preoperative time point (21.6 +/- 3.9 mm) (P = 0.008). Also in multivariate analysis, cavernous sinus invasion of adenoma was independently associated with ICD contraction >2 mm (P = 0.027). It is important to know the change in ICD between CCAs after transsphenoidal surgery, particularly for pituitary adenomas with cavernous sinus invasion. The position of the CCA should be known before and during transsphenoidal surgery, as well before and during the second operation to avoid vascular injuries.

[588]

**TÍTULO / TITLE:** - Develop a novel superparamagnetic nano-carrier for drug delivery to brain glioma.

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

**REVISTA / JOURNAL:** - Drug Deliv. 2013 May 23.

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

[3109/10717544.2013.779328](#)

**AUTORES / AUTHORS:** - Zhao M; Li A; Chang J; Fu X; Zhang Z; Yan R; Wang H; Liang S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Affiliated Hospital of Chinese PLA General Hospital, Beijing, P.R. China and.

**RESUMEN / SUMMARY:** - Abstract Magnetic drug carrier has been employed in drug delivery for over 30 years. Modern nanotechnology has improved its efficiency dramatically by decreasing its diameter into nano-scale. It may help chemotherapeutic agents penetrate BBB and raise local drug concentration in brain, which is the ideal model for glioma treatment. In our study, magnetic carrier was fabricated with octadecyl quaternized carboxymethyl chitosan (OQCMC), hydrophobic Fe<sub>3</sub>O<sub>4</sub> ferrofluid and cholesterol, which showed a uniform diameter of 20 nm under transmission electronic microscopy and superparamagnetic character in vibration sample magnetical measurement system. To investigate the efficacy of drug delivery, paclitaxel was used as loaded drug and analyzed by the HPLC. Results showed that magnetic carrier released drugs for more than 20 d in vitro and maintain the drug concentration above 0.4 µg/g for 16 h in rat brain after magnetic targeting. Drug concentration increased by 1-3 folds when delivered by carrier without magnetic targeting, and by 3-15 folds after magnetic targeting. Cellular study revealed that the magnetic carrier was clearly localized in the targeted cortex neural cells

and U251-MG cell lines. These results showed that this magnetic carrier is capable of maintaining high drug concentration in magnetically targeted area and carrying drugs or genes into cells, which is potentially promising for local chemotherapy to brain tumors.

[589]

**TÍTULO / TITLE:** - Exploring spirituality in family caregivers of patients with primary malignant brain tumors across the disease trajectory.

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

**REVISTA / JOURNAL:** - Oncol Nurs Forum. 2013 May 1;40(3):E119-25. doi: 10.1188/13.ONF.E119-E125.

●●Enlace al texto completo (gratis o de pago) [1188/13.ONF.E119-E125](#)

**AUTORES / AUTHORS:** - Newberry AG; Choi CW; Donovan HS; Schulz R; Bender C; Given B; Sherwood P

**INSTITUCIÓN / INSTITUTION:** - School of Nursing, University of Pittsburgh, Pennsylvania.

**RESUMEN / SUMMARY:** - Purpose/Objectives: To determine whether the perceived level of spirituality in family caregivers of patients with primary malignant brain tumors (PMBTs) changes across the disease trajectory. Design: Ongoing descriptive, longitudinal study. Setting: Southwestern Pennsylvania. Sample: 50 family caregivers of patients with PMBT. Methods: Caregivers and care recipients were recruited at time of diagnosis. Participants were interviewed at two subsequent time points, four and eight months following diagnosis. Main Research Variables: Care recipients' symptoms, neuropsychologic status, and physical function, as well as caregiver social support. Findings: Results showed no significant difference in spirituality scores reported at baseline and eight months ( $p = 0.8$ ), suggesting that spirituality may be a stable trait across the disease trajectory. Conclusions: Spirituality remains relatively stable along the course of the disease trajectory. Reports of caregiver depressive symptoms and anxiety were lower when paired with higher reports of spirituality. Implications for Nursing: Clinicians can better identify caregivers at risk for negative outcomes by identifying those who report lower levels of spirituality. Future interventions should focus on the development and implementation of interventions that provide protective buffers such as increased social support. Knowledge Translation: Spirituality is a relatively stable trait. High levels of spirituality can serve as a protective buffer from negative mental health outcomes. Caregivers with low levels of spirituality may be at risk for greater levels of burden, anxiety, and stress.

[590]

**TÍTULO / TITLE:** - Role of radiotherapy for high grade gliomas management.

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

**REVISTA / JOURNAL:** - J Neurosurg Sci. 2013 Jun;57(2):163-9.

**AUTORES / AUTHORS:** - Caruso C; Carcaterra M; Donato V

**INSTITUCIÓN / INSTITUTION:** - Radiation Therapy Department, Ospedale S. CamilloForlanini, Rome, Italy - [cristinacaruso@virgilio.it](mailto:cristinacaruso@virgilio.it).

**RESUMEN / SUMMARY:** - We have analyzed the therapeutic standard options for high grade gliomas, with particular attention to the different radiation therapy modalities and techniques and their application considering the natural history of the disease. Of the several therapeutic options, surgical resection remains the initial treatment of choice for patients with high grade glioma; of all adjuvant treatments tested, radiotherapy offers the greatest magnitude of survival benefit, so radiotherapy, which must be started within 6 weeks of surgery, is mandatory for practically all patients with high grade gliomas. In this paper we perform an overview considering the integration between the different therapeutic modalities, with particular attention to the radiation therapy role in the management of high grade gliomas.

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[591]

**TÍTULO / TITLE:** - Radiotherapy and radiosurgery for tumors of the central nervous system.

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

**REVISTA / JOURNAL:** - Surg Oncol Clin N Am. 2013 Jul;22(3):445-61. doi: 10.1016/j.soc.2013.02.008. Epub 2013 Mar 19.

●●Enlace al texto completo (gratis o de pago) [1016/j.soc.2013.02.008](http://1016/j.soc.2013.02.008)

**AUTORES / AUTHORS:** - Kirkpatrick JP; Yin FF; Sampson JH

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Duke Cancer Institute, Duke University Medical Center, Durham, NC 27710, USA; Department of Surgery, Duke Cancer Institute, Duke University Medical Center, Durham, NC 27710, USA. Electronic address: [john.kirkpatrick@dm.duke.edu](mailto:john.kirkpatrick@dm.duke.edu).

**RESUMEN / SUMMARY:** - In this article, the application of radiotherapy, alone and in combination with surgery and chemotherapy, in the treatment of metastases to the brain (the most common malignant brain lesion), primary malignant gliomas (the most common malignant primary brain tumor), and metastases to the osseous spine is reviewed. Brain metastases may be treated with surgical resection, whole-brain radiotherapy, stereotactic radiosurgery, or some combination of these treatments. The optimum treatment of brain metastases is a matter of controversy, and patient and disease factors favoring one approach over another are presented.

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[592]

**TÍTULO / TITLE:** - Hoffmann's syndrome and pituitary hyperplasia in an adolescent secondary to Hashimoto thyroiditis.

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

**REVISTA / JOURNAL:** - J Pediatr Endocrinol Metab. 2012 Nov 1:1-5. doi: 10.1515/jpem-2012-0249.

●●Enlace al texto completo (gratis o de pago) [1515/jpem-2012-0249](#)

**AUTORES / AUTHORS:** - Cebeci AN; Guven A; Saltik S; Mesci C

**RESUMEN / SUMMARY:** - Abstract Background: Diffuse muscle hypertrophy is a rare complication of acquired hypothyroidism. When accompanied by stiffness, weakness, and painful muscle cramps, the condition is known as Hoffmann's syndrome (HS). HS is usually seen in young adults due to long-standing untreated primary hypothyroidism. We report a very rare case of HS with muscle hypertrophy and pituitary hyperplasia complicating hypothyroidism in an adolescent. Case: A 12-year-old male admitted with muscle pain, headache, and fatigue. He had marked hypertrophy of both calf and shoulder muscles. Laboratory tests indicated elevated muscle enzymes and lipids with an elevated thyrotropin and low thyroxine levels. Hashimoto thyroiditis was confirmed on thyroid studies. He had also papilledema bilaterally and magnetic resonance imaging showed an enlargement of the pituitary gland. Treatment with thyroid hormone resulted in complete improvement of symptoms within 3 months. Conclusions: HS is a rare but treatable form of acquired myopathies and can be seen in children due to untreated hypothyroidism. All patients with an acquired myopathy and muscular pseudohypertrophy should be screened regarding thyroid hormones.

[593]

**TÍTULO / TITLE:** - Concurrent somatotroph and plurihormonal pituitary adenomas in a cat.

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

**REVISTA / JOURNAL:** - J Feline Med Surg. 2013 Apr 3.

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

[1177/1098612X13483461](#)

**AUTORES / AUTHORS:** - Sharman M; Fitzgerald L; Kiupel M

**INSTITUCIÓN / INSTITUTION:** - 1Department of Veterinary Clinical Sciences, School of Veterinary and Biomedical Sciences, Murdoch University, Murdoch, WA, Australia.

**RESUMEN / SUMMARY:** - An 8-year-old, male neutered, domestic longhair cat was referred for investigation of insulin resistant diabetes mellitus. Routine haematology, serum biochemistry, urinalysis (including culture), total T4 and urine creatinine:cortisol ratio were unremarkable, but markedly increased insulin-like growth factor-1 concentration was identified and a pituitary mass was subsequently documented. The cat was treated conservatively with the

dopamine agonist L-deprenyl and was re-presented 16 months later for worsening polyuria, polydipsia, polyphagia, marked lumbar muscle atrophy, development of a pendulous abdomen and marked thinning of the abdominal skin. Hyperadrenocorticism was diagnosed based on abdominal ultrasonography, dexamethasone suppression testing and endogenous adrenocorticotrophic hormone (ACTH). The cat was treated with trilostane (30 mg q24h PO) and showed some clinical improvement, but developed an opportunistic fungal infection and skin fragility syndrome 4.5 months after commencing treatment, and was euthanased. A double-pituitary adenoma comprising a discrete somatotroph adenoma and a separate plurihormonal adenoma (positive immunoreactivity for ACTH, melanocyte-stimulating hormone and follicle-stimulating hormone) was identified on post-mortem examination. These two pituitary adenomas were suspected to have arisen as independent neoplastic entities with the plurihormonal tumour either being clinically silent at the initial presentation or having developed over the subsequent 16 months.

[594]

**TÍTULO / TITLE:** - Suppression of tumorigenicity by MicroRNA-138 through inhibition of EZH2-CDK4/6-pRb-E2F1 signal loop in glioblastoma multiforme.

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

**REVISTA / JOURNAL:** - Biochim Biophys Acta. 2013 May 22. pii: S0925-4439(13)00177-4. doi: 10.1016/j.bbadis.2013.05.015.

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

[1016/j.bbadis.2013.05.015](http://1016/j.bbadis.2013.05.015)

**AUTORES / AUTHORS:** - Qiu S; Huang D; Li F; Yin D; Kung HF; Peng Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, The Sun Yat-sen Memorial Hospital, Sun Yat-sen University, Guangzhou, China.

**RESUMEN / SUMMARY:** - Deregulation of microRNAs (miRNAs) is implicated in tumor progression. We attempt to identify the tumor suppressive miRNA not only down-regulated in glioblastoma multiforme (GBM) but also potent to inhibit the oncogene EZH2, and then investigate the biological function and pathophysiologic role of the candidate miRNA in GBM. In this study, we show that miRNA-138 is reduced in both GBM clinical specimens and cell lines, and is effective to inhibit EZH2 expression. Moreover, high levels of miR-138 are associated with long overall and progression-free survival of GBM patients from The Cancer Genome Atlas dataset (TCGA) data portal. Ectopic expression of miRNA-138 effectively inhibits GBM cell proliferation in vitro and tumorigenicity in vivo through inducing cell cycles G1/S arrest. Mechanism investigation reveals that miRNA-138 acquires tumor inhibition through directly targeting EZH2, CDK6, E2F2 and E2F3. Moreover, an EZH2-mediated signal loop, EZH2-CDK4/6-pRb-E2F1, is probably involved in GBM tumorigenicity, and this loop can be blocked by miRNA-138. Additionally, miRNA-138 negatively

correlates to mRNA levels of EZH2 and CDK6 among GBM clinical samples from both TCGA and our small amount datasets. In conclusion, our data demonstrate a tumor suppressive role of miRNA-138 in GBM tumorigenicity, suggesting a potential application in GBM therapy.

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[595]

**TÍTULO / TITLE:** - Cavernous hemangioma of the external auditory canal.

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

**REVISTA / JOURNAL:** - Ear Nose Throat J. 2013 Apr-May;92(4-5):168.

**AUTORES / AUTHORS:** - Shu MT; Wu KC; Chen YC

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology-Head and Neck Surgery, Mackay Memorial Hospital, Taipei, Taiwan.

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[596]

**TÍTULO / TITLE:** - Subgaleal recurrence of craniopharyngioma of rapid growing pattern.

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

**REVISTA / JOURNAL:** - Pituitary. 2013 May 18.

●●Enlace al texto completo (gratis o de pago) [1007/s11102-013-0490-4](http://1007/s11102-013-0490-4)

**AUTORES / AUTHORS:** - Goncalves CB; Lima GA; Nogueira J; do Souto AA; Chimelli L; Taboada GF

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery Unit, Hospital Universitario Antonio Pedro, Universidade Federal Fluminense, Niteroi, Brazil.

**RESUMEN / SUMMARY:** - The purpose of the present clinical case is to remind clinicians that craniopharyngiomas, which are benign neoplasms with a high incidence of local recurrences, may also present ectopic recurrences which may at first go unsuspected. These tumors most commonly arise in the suprasellar region and despite their benign histology, they may infiltrate the surrounding neurovascular structures making total removal challenging. Ectopic recurrences of craniopharyngiomas are very rare. We describe an adult patient with ectopic recurrence of craniopharyngioma, emphasizing unique features of the case presentation and its physiopathological aspects. A 49-year-old male presented with headache and visual field defect and was diagnosed with a suprasellar tumor. He was submitted to neurosurgery and histological examination revealed an adamantinomatous craniopharyngioma. Postoperative magnetic resonance imaging (MRI) showed complete tumor resection. The patient remained asymptomatic with no imaging signs of local recurrence during follow up. Five years after surgery, the patient noticed a rapidly growing lump at the surgical incision site. He reported a mild to moderate local trauma 4 months before. A MRI showed a subgaleal cystic tumor arising in the pathway of the craniotomy.

Surgical resection of that cystic lesion was performed and histological examination revealed an adamantinomatous craniopharyngioma. One year later no recurrences have been detected. The case reported has two particular features: the local trauma as a potential trigger for tumor progression and the rapidly growing pattern of the ectopic recurrent tumor. We emphasize that although ectopic recurrences of craniopharyngiomas are rare, they may occur away from the primary tumor and quite late in the follow up of the patient.

[597]

**TÍTULO / TITLE:** - Posttreatment evaluation of central nervous system gliomas.

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

**REVISTA / JOURNAL:** - Magn Reson Imaging Clin N Am. 2013 May;21(2):241-68. doi: 10.1016/j.mric.2013.02.004. Epub 2013 Mar 16.

●●Enlace al texto completo (gratis o de pago) [1016/j.mric.2013.02.004](http://1016/j.mric.2013.02.004)

**AUTORES / AUTHORS:** - Shiroishi MS; Booker MT; Agarwal M; Jain N; Naghi I; Lerner A; Law M

**INSTITUCIÓN / INSTITUTION:** - Division of Neuroradiology, Department of Radiology, Keck School of Medicine, University of Southern California, Los Angeles, CA 90033, USA. Electronic address: [mark.shiroishi@med.usc.edu](mailto:mark.shiroishi@med.usc.edu).

**RESUMEN / SUMMARY:** - Although conventional contrast-enhanced MR imaging remains the standard-of-care imaging method in the posttreatment evaluation of gliomas, recent developments in therapeutic options such as chemoradiation and antiangiogenic agents have caused the neuro-oncology community to rethink traditional imaging criteria. This article highlights the latest recommendations. These recommendations should be viewed as works in progress. As more is learned about the pathophysiology of glioma treatment response, quantitative imaging biomarkers will be validated within this context. There will likely be further refinements to glioma response criteria, although the lack of technical standardization in image acquisition, postprocessing, and interpretation also need to be addressed.

[598]

**TÍTULO / TITLE:** - Cytoplasmic non-epithelial mucin accumulation associated with CD44 in an astrocytic tumor with signet ring features.

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

**REVISTA / JOURNAL:** - Brain Tumor Pathol. 2013 May 22.

●●Enlace al texto completo (gratis o de pago) [1007/s10014-013-0151-](http://1007/s10014-013-0151-3)

[3](#)

**AUTORES / AUTHORS:** - Okabe H; Nagata A; Katsura K; Ishida M; Osaka Y; Tenjin H

**INSTITUCIÓN / INSTITUTION:** - Division of Diagnostic Pathology, Department of Laboratory Medicine, Shiga University of Medical Science, Seta Tsukinowa-cho, Otsu, 520-2192, Japan, [okabe@belle.shiga-med.ac.jp](mailto:okabe@belle.shiga-med.ac.jp).

**RESUMEN / SUMMARY:** - We report a case of an atypical astrocytic tumor rich in signet ring cells with cytoplasmic mucin and glycogen in the left lower temporal lobe of the brain found in a Japanese female tricenarian. The signet ring cell cytoplasm contained bovine testicular hyaluronidase sensitive non-epithelial mucin together with CD44 and laminin. Glycogen was also detected. After subtotal resection, the residual tumor rapidly enlarged; hence, it was finally extirpated 8 months later followed by post-surgical irradiation. The recurrent tumor did not have signet ring cells and was entirely comprised of solid nests of large pale polygonal cells filled with glycogen and hyperchromatic nuclei. Mucin was not demonstrated in their cytoplasm, but their surface was diffusely coated with non-epithelial mucin together with CD44. The results of our analysis revealed that non-epithelial mucin could accumulate in or on the surface of neoplastic astrocytes in close association with CD44, findings that give new insights into the spectrum of non-epithelial mucin metabolism in astrocytic tumors. The tumor has not recurred for more than 3 years after the irradiation therapy following the second surgery, but further clinical observation is needed to evaluate the exact clinical behavior of this unusual tumor.

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[599]

**TÍTULO / TITLE:** - Anaplastic astrocytoma.

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

**REVISTA / JOURNAL:** - Curr Treat Options Neurol. 2013 Jun;15(3):302-15. doi: 10.1007/s11940-013-0228-7.

●●Enlace al texto completo (gratis o de pago) [1007/s11940-013-0228-](http://1007/s11940-013-0228-7)

[7](#)

**AUTORES / AUTHORS:** - Grimm SA; Pfiffner TJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, University of Minnesota School of Medicine, 420 Delaware Street SE, MMC 295, Minneapolis, MN, 55455, USA, [sgrimm@umn.edu](mailto:sgrimm@umn.edu).

**RESUMEN / SUMMARY:** - OPINION STATEMENT: Standard treatment of anaplastic astrocytoma (AA) in good performance patients consists of maximal safe surgical resection followed by focal, fractionated, external beam radiotherapy (RT) alone or in combination with concurrent and adjuvant temozolomide (TMZ). Since prospective data regarding the use of chemoradiotherapy for AA is lacking, the practice is based on the extrapolation of results from a randomized study in glioblastoma (GB). Whether the data from the GB study can and should be extrapolated is controversial, although a large multicenter, randomized, phase III study is underway to define optimal initial AA treatment. Patients should be tapered off corticosteroids completely or to the

lowest dose necessary to treat neurologic dysfunction. Anti-epileptic drugs (AED) are not indicated unless there is a history of seizure; levetiracetam is the preferred AED in malignant glioma (MG). Unless there is evidence of intracranial hemorrhage, venous thromboembolism (VTE) should be treated with low-molecular-weight heparin (LMWH) therapy. At recurrence, patients with good performance status are usually treated with cytotoxic chemotherapy following, or in lieu of, repeat surgery. TMZ is the preferred chemotherapeutic agent in patients without prior exposure; lomustine is recommended for tumors resistant to TMZ. In patients with neurologic dysfunction secondary to tumor edema and mass effect who are not amenable to surgery, the use of bevacizumab is associated with improved neurologic function and better quality of life. Given the limited treatment options at tumor recurrence, consideration for enrollment on a clinical trial is encouraged.

[600]

**TÍTULO / TITLE:** - Primary cardiac paraganglioma arising from interatrial septum.

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

**REVISTA / JOURNAL:** - J Card Surg. 2013 May;28(3):274-5. doi: 10.1111/jocs.12103.

●●Enlace al texto completo (gratis o de pago) [1111/jocs.12103](http://1111/jocs.12103)

**AUTORES / AUTHORS:** - Wang Y; Xiao Y; Wang X

**INSTITUCIÓN / INSTITUTION:** - Department of Cardiovascular Surgery, Xinqiao Hospital, The Third Military Medical University, Chongqing, China.

**RESUMEN / SUMMARY:** - doi: 10.1111/jocs.12103 (J Card Surg 2013;28:274-275).

[601]

**TÍTULO / TITLE:** - Unilateral Papilledema in Pseudotumor Cerebri.

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

**REVISTA / JOURNAL:** - Semin Ophthalmol. 2013 Apr 29.

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

[3109/08820538.2013.768677](http://3109/08820538.2013.768677)

**AUTORES / AUTHORS:** - Brosh K; Strassman I

**INSTITUCIÓN / INSTITUTION:** - Shaarey Zedek Medical Center , Department of Ophthalmology , Jerusalem , Israel.

**RESUMEN / SUMMARY:** - Abstract Purpose: To report a case of a 25-year-old girl with pseudotumor cerebri who presented with unilateral swollen optic disk. Methods: A 25-year-old obese patient admitted to our ophthalmic department complaining of headaches, tinnitus, and transient visual obscurations for the last three months. Upon ophthalmic examination, the left optic nerve was swollen with a few hemorrhages compared to the normal-appearing right optic nerve.

Following lumbar puncture with opening pressure of 350 mmHg, a diagnosis of pseudotumor cerebri was made and treatment with acetazolamide was started. Results: Three months later there were no episodes of visual obscurations and headache improved. Conclusion: Although rare, unilateral swollen disk could be a sign of unilateral papilledema due to increased intracranial pressure.

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[602]

**TÍTULO / TITLE:** - Myxopapillary ependymoma in the third ventricle area and sacral canal: dropped or retrograde metastasis?

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

**REVISTA / JOURNAL:** - Neurol Med Chir (Tokyo). 2013;53(4):237-41.

**AUTORES / AUTHORS:** - Wang M; Wang H; Zhou Y; Zhan R; Wan S

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, the First Affiliated Hospital, College of Medicine, Zhejiang University.

**RESUMEN / SUMMARY:** - Myxopapillary ependymoma (MPE) is a rare type of central nervous system neoplasm mostly located in the cauda equina and filum terminale regions. A previously healthy 22-year-old Chinese man presented with the first case of MPE in the third ventricle area and sacral canal initially manifesting as spinal cord compression. The patient was admitted with pain in the right lower extremity for 5 months and encopresis for 3 months. Magnetic resonance imaging of the lumbar spine revealed an intradural lesion at the S2 level. The patient accordingly underwent lumbar laminectomy surgery and gross total resection of the tumor. Shortly after surgery, a mass was found in the third ventricle. The patient subsequently underwent further craniotomy surgery, and the histopathological examination eventually revealed MPE. MPE usually undergoes intracranial retrograde metastasis, but we consider that our case was a dropped metastasis of the primary intracranial MPE. Neurosurgeons need to be aware of intracranial MPEs in patients with isolated spinal lesions, and long-term follow-up is important in patients who are diagnosed with MPE after surgical excision.

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[603]

**TÍTULO / TITLE:** - Update on bevacizumab and other angiogenesis inhibitors for brain cancer.

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

**REVISTA / JOURNAL:** - Expert Opin Emerg Drugs. 2013 Jun;18(2):137-53. doi: 10.1517/14728214.2013.794784. Epub 2013 May 14.

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

[1517/14728214.2013.794784](#)

**AUTORES / AUTHORS:** - Rinne ML; Lee EQ; Nayak L; Norden AD; Beroukhir R; Wen PY; Reardon DA

**INSTITUCIÓN / INSTITUTION:** - Dana-Farber/Brigham and Women's Cancer Center, Center for Neuro-Oncology , Boston, MA, USA.

**RESUMEN / SUMMARY:** - Introduction: Primary and metastatic brain tumors remain a major challenge. The most common primary adult malignant brain tumor, glioblastoma (GBM), confers a dismal prognosis as does the development of CNS metastases for most systemic malignancies. Anti-angiogenic therapy has been a major clinical research focus in neuro-oncology over the past 5 years. Areas covered: Culmination of this work includes US FDA accelerated approval of bevacizumab for recurrent GBM and the completion of two placebo-controlled Phase III studies of bevacizumab for newly diagnosed GBM. A multitude of anti-angiogenics are in evaluation for neuro-oncology patients but none has thus far surpassed the therapeutic benefit of bevacizumab. Expert opinion: These agents demonstrate adequate safety and the majority of GBM patients derive benefit. Furthermore, their anti-permeability effect can substantially decrease tumor-associated edema leading to stable or improved neurologic function and quality of life. In particular, anti-angiogenics significantly prolong progression-free survival - a noteworthy achievement in the context of infiltrative and destructive brain tumors like GBM; however, in a manner analogous to other cancers, their impact on overall survival for GBM patients is modest at best. Despite substantial clinical research efforts, many fundamental questions regarding anti-angiogenic agents in brain tumor patients remain unanswered.

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[604]

**TÍTULO / TITLE:** - Isolated colonic polypoid ganglioneuroma.

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

**REVISTA / JOURNAL:** - J Am Osteopath Assoc. 2013 May;113(5):433.

**AUTORES / AUTHORS:** - Alkhatib AA; Tamara C

**INSTITUCIÓN / INSTITUTION:** - Division of Gastroenterology, Cancer Treatment Centers of America, 10109 E 79th St, Tulsa, OK 74133-4564.

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[605]

**TÍTULO / TITLE:** - Occurrence of extensive spherical amyloid deposits in a prolactin-secreting pituitary macroadenoma: a radiologic-pathologic correlation.

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

**REVISTA / JOURNAL:** - Ann Diagn Pathol. 2013 Apr 17. pii: S1092-9134(13)00020-8. doi: 10.1016/j.anndiagpath.2013.03.001.

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

[1016/j.anndiagpath.2013.03.001](http://1016/j.anndiagpath.2013.03.001)

**AUTORES / AUTHORS:** - Levine SN; Ishaq S; Nanda A; Wilson JD; Gonzalez-Toledo E

**INSTITUCIÓN / INSTITUTION:** - Department of Medicine, Section of Endocrinology and Metabolism, Louisiana State University Health Sciences Center, Shreveport, LA 71103, USA. Electronic address: [slevin@lsuhsc.edu](mailto:slevin@lsuhsc.edu).

**RESUMEN / SUMMARY:** - Pituitary adenomas are the most common tumors of the sellar region, but the occurrence of spherical amyloid deposits in a pituitary adenoma is rare. We describe the clinical features, radiologic characteristics, and pathologic findings of 45-year-old man who presented with galactorrhea, hypogonadism, and hyperprolactinemia who had a pituitary adenoma with extensive spherical amyloid deposits. Approximately 30 cases have been reported, almost exclusively in patients with prolactinomas. Treatment with dopaminergic agonists will result in the expected reduction in prolactin levels; however, in most cases, macroadenomas with spherical amyloid deposits fail to decrease in size. The source of the amyloid deposits in prolactinomas is not clearly defined but may be due to abnormal processing of prolactin or its prohormone. These adenomas with spherical amyloid have a characteristic appearance on magnetic resonance imaging with low or heterogeneous intensity on T1 and low intensity on T2-weighted images. Following infusion of gadolinium, there is enhancement of the periphery but not most of the tumor mass. These magnetic resonance imaging characteristics are different than those of typical pituitary adenomas. These differences should alert clinicians to the possibility of extensive spherical amyloid deposits in a prolactin-secreting pituitary adenoma, which may have important clinical implications. In this report, we correlate the radiologic finds with the pathology and compared them with other sellar and parasellar lesions.

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[606]

**TÍTULO / TITLE:** - Anterior callosal section is useful for the removal of large tumors invading the dorsal part of the anterior third ventricle: operative technique and results.

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

**REVISTA / JOURNAL:** - Neurosurg Rev. 2013 Apr 9.

●●Enlace al texto completo (gratis o de pago) [1007/s10143-013-0455-0](#)

**AUTORES / AUTHORS:** - Shiramizu H; Hori T; Matsuo S; Niimura K; Yoshimoto H; Ishida A; Asakuno K; Yuzawa M; Moriyama T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Moriyama Memorial Hospital, 7-12-7 Nishikasai, Edogawa-ku, Tokyo, 134-8608, Japan, [h.shiramizu@gmail.com](mailto:h.shiramizu@gmail.com).

**RESUMEN / SUMMARY:** - Large tumors invading the dorsal part of the anterior third ventricle are difficult to manage. The anterior transcallosal approach is

usually used to manage these tumors. In our clinic, anterior callosal section was combined with the anterior interhemispheric (AIH) translamina terminalis approach for these tumors with excellent results. The AIH approach is useful for removing tumors in and around the anterior part of the third ventricle. However, AIH alone is insufficient for large tumors invading the dorsal part of the anterior third ventricle. In such situations, simple anterior callosal section enables the neurosurgeon to extirpate the caudal part of the tumors deeply hidden from operative field, sparing the foramen of Monro, fornix, etc. We treated four large tumors (malignant teratoma, recurrent chordoid glioma, recurrent papillary tumor of pineal region occupying the third ventricle, and paraventricular meningioma) without major complications. The malignant teratoma case exhibited no recurrence with >10 years follow-up. The chordoid glioma and papillary tumor of pineal region were totally removed. The meningioma was subtotally removed except only a small tumor around the bilateral anterior cerebral artery. This simple technique is a new way to manage difficult large lesions in and around the third ventricle.

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[607]

**TÍTULO / TITLE:** - Microvascular morphometrics of the hypophysis and pituitary tumors: From bench to operating theatre.

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

**REVISTA / JOURNAL:** - Microvasc Res. 2013 May 4. pii: S0026-2862(13)00069-1. doi: 10.1016/j.mvr.2013.04.009.

●●Enlace al texto completo (gratis o de pago) [1016/j.mvr.2013.04.009](#)

**AUTORES / AUTHORS:** - Di Ieva A; Weckman A; Di Michele J; Rotondo F; Grizzi F; Kovacs K; Cusimano MD

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, St. Michael's Hospital, University of Toronto, Toronto, Ontario, Canada. Electronic address: [diieva@hotmail.com](mailto:diieva@hotmail.com).

**RESUMEN / SUMMARY:** - The idea that microvasculature might be a histopathological biomarker in the prognosis and treatment of tumors is garnering even more attention in the scientific community. The roles of neovascularity in tumor progression and metastasis, have become a hot-topic of investigation in cancer research. A number of methods of quantitatively analyzing pituitary adenoma microvasculature have been applied, and fractal analysis is emerging as a potential effective model for this aim. Additionally, new and more specific immunological techniques have been developed for the detection of microvessels. CD105 (Endoglin) has been proposed as a valuable antigen that marks only newly formed vessels, rather than the entire tumor microvascular system. The combination of different types of immunostaining techniques for the detection of microvessels in pituitary adenomas with fractal analysis as an objective and computer-aided technique to quantify and describe

morphological aspects of microvessels has potential implications in future clinical and surgical applications. Tumor treatments, such as anti-angiogenic therapy, as well as intraoperative tools, stand to be enhanced by increasing advances in microvascular research. We here review the methods used for the quantitative analysis of microvessels of the pituitary in its physiopathological states, with the aim to show the pituitary adenoma as a model for the study of neoplastic angioarchitecture and the importance of the introduction of new techniques for the study of angiogenesis, with the relative scientific, medical and surgical implications.

[608]

**TÍTULO / TITLE:** - Unilateral, multilevel, interlaminar fenestration in the removal of a multisegment cervical intramedullary ependymoma.

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

**REVISTA / JOURNAL:** - Spine J. 2013 Mar 27. pii: S1529-9430(13)00248-9. doi: 10.1016/j.spinee.2013.02.048.

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

[1016/j.spinee.2013.02.048](#)

**AUTORES / AUTHORS:** - Xie T; Qian J; Wu X; Lu Y; Hu G; Luo C

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Changzheng Hospital, Second Military Medical University, No. 415, Fengyang Rd, Shanghai 200003, China.

**RESUMEN / SUMMARY:** - BACKGROUND CONTEXT: Laminectomy is the traditional approach to intramedullary ependymomas and may lead to spinal instability and spinal deformities. Hemilaminectomy and laminoplasty have been developed to preserve the spinal stability and have been found to be effective. Unilateral, multilevel, interlaminar fenestration is another approach that may have more advantages in preserving the spinal stability; however, it has rarely been used by now. PURPOSE: Unilateral, multilevel, interlaminar fenestration was often used in the surgical treatment of degenerative lumbar stenosis; however, it was rarely used for tumors. The aim of this study was to discuss the characteristics and advantages of its use for a multisegment intramedullary ependymoma. STUDY DESIGN: Case report and literature review. METHODS: The 22-year-old man suffered from muscular atrophy of the left hand and the right hand for a period of 1.5 years and 3 months, respectively, and the cervical magnetic resonance imaging revealed an intramedullary mass of C4-C7. A right, unilateral, multilevel, interlaminar fenestration of the C3-C7 was performed with the help of high-speed air drills, and a midline myelotomy was made under microscope. The tumor was removed totally using piecemeal resection. RESULTS: The magnetic resonance imaging, obtained 1 year after the operation, revealed that there were no residual mass lesion and no spinal instability, and the patient acquired an excellent functional outcome. So, this

technique proved to be safe and easy in this case. CONCLUSIONS: Unilateral, multilevel, interlaminar fenestration allows good access to a long intraspinal segment, protects the structures essential to spinal stability as much as possible, preserves the spinal stability, and results in no additional injury to the spinal cord. It may be applicable to many other kinds of intraspinal tumors.

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[609]

**TÍTULO / TITLE:** - Spinal extradural solitary fibrous tumor with retiform and papillary features.

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

**REVISTA / JOURNAL:** - Ann Diagn Pathol. 2013 Jun;17(3):281-7. doi: 10.1016/j.anndiagpath.2013.01.002. Epub 2013 Feb 8.

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

[1016/j.anndiagpath.2013.01.002](#)

**AUTORES / AUTHORS:** - Tomek M; Bravi I; Mendoza N; Alsafi A; Mehta A; Molinaro L; Singh P; Radotra B; Dei Tos AP; Roncaroli F

**INSTITUCIÓN / INSTITUTION:** - Departments of Medicine, Imperial College Healthcare Trust, London, UK.

**RESUMEN / SUMMARY:** - We report a 66-year-old man with a spinal, extradural solitary fibrous tumor showing unique retiform and papillary architecture. The patient presented in May 2008 with worsening right-sided lower back pain and urinary frequency. Magnetic resonance imaging of the spine documented a heterogeneously enhancing dumbbell-shaped extradural lesion causing cord compression at T11/12 level. The tumor extended to the paravertebral soft tissue and invaded the right adjacent vertebral pedicles and laminae. An angiogram showed prominent vascular supply mainly from the right T11 radicular artery. The patient underwent surgery to relieve cord compression in May 2008 and a second operation following embolization with coils in October 2009. No recurrence was observed at the last neuroimaging follow-up in June 2012. The tumor was composed of vimentin, CD34, Bcl-2, and CD99-positive rounded or slightly elongated cells with scant cytoplasm and oval to spindle nuclei. Several pseudovascular spaces reminiscent of the rete testis were present, and several of them contained papillary projections. Cytologic atypia was minimal, and mitotic activity was low. Focal infiltration of the paraspinal adipose tissue was seen at microscopic level. To our knowledge, retiform and papillary features have never been reported in a solitary fibrous tumor.

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[610]

**TÍTULO / TITLE:** - Primary paraganglioma in the facial nerve canal.

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

**REVISTA / JOURNAL:** - Auris Nasus Larynx. 2013 May 18. pii: S0385-8146(13)00114-4. doi: 10.1016/j.anl.2013.04.007.

●●Enlace al texto completo (gratis o de pago) [1016/j.anl.2013.04.007](http://1016/j.anl.2013.04.007)

**AUTORES / AUTHORS:** - Takahashi K; Yamamoto Y; Ohshima S; Morita Y; Takahashi S

**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology, Niigata University, Faculty of Medicine, Japan. Electronic address: [kuniyuki@med.niigata-u.ac.jp](mailto:kuniyuki@med.niigata-u.ac.jp).

**RESUMEN / SUMMARY:** - OBJECTIVE: To describe primary paraganglioma in the facial nerve canal and discuss the characteristics of facial nerve paraganglioma in contrast with other tumors. CASE REPORT: A 23-year-old man developed gradually progressive right facial palsy as the initial symptom. One year later, he exhibited hearing loss without tinnitus in his right ear. CT demonstrated an enlarged facial nerve canal with irregular bony erosion of the circumference. MRI showed a well-enhanced heterogeneous mass with hypo-intensity spots inside it. During surgery, a blood-rich tumor was observed along the facial nerve: however, extensive bleeding interfered with tumor removal. The surgical specimen demonstrated paraganglioma. The tumor was completely removed in the second surgery in combination with arterial embolization. Facial nerve function was reconstructed with a free muscle flap more than one year following resection. CONCLUSION: Because paraganglioma is a blood-rich tumor, it is important to perform angiography and embolization. If preoperative facial nerve palsy is demonstrated, careful management of facial nerve function is needed. Paraganglioma must be considered in the differential diagnosis of a facial nerve tumor.

[611]

**TÍTULO / TITLE:** - Histologic Evaluation of Intermetatarsal Morton's Neuroma.

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

**REVISTA / JOURNAL:** - J Am Podiatr Med Assoc. 2013 May-Jun;103(3):218-22.

**AUTORES / AUTHORS:** - Giakoumis M; Ryan JD; Jani J

**INSTITUCIÓN / INSTITUTION:** - Department of Podiatry, DeKalb Medical Center, Decatur, GA.

**RESUMEN / SUMMARY:** - Background: The present study was conducted in an attempt to obtain consistent similarities among histologic findings of surgically excised neuromas. Secondly, we looked for a correlation between the presence of a neuroma with certain comorbidities. Methods: A total of 22 specimens with a preoperative diagnosis of Morton's neuroma were sent to the pathology laboratory, and evaluation was performed by a single pathologist. Results: Degenerative changes were seen in 59% of the specimens. Patient age showed trends toward affecting nerve fibrosis, nerve diameter, vessel obstruction, and degenerative changes. The most frequent comorbidity was hypertension, seen in 44% of the participants. Conclusions: Significant

histologic similarities among results were not seen; however, certain trends were discovered. Degenerative changes were appreciated in most specimens. Definite histologic findings of neuroma recur, but difficulty in consistent reproducibility may be related to factors such as age, sex, and comorbidities.

[612]

**TÍTULO / TITLE:** - Visual and semi-quantitative assessment of brain tumors using (201)TI-SPECT.

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

**REVISTA / JOURNAL:** - J Med Invest. 2013;60(1-2):121-6.

**AUTORES / AUTHORS:** - Nose A; Otsuka H; Nose H; Otomi Y; Terazawa K; Harada M

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Tokushima University Hospital.

**RESUMEN / SUMMARY:** - Objective: To evaluate the usefulness of (201)TI-SPECT in differentiating benign from malignant brain tumors. Methods and Materials: Eighty-eight patients (44 males and 44 females) with 58 high-grade (WHO grade III-IV) and 30 low-grade (WHO grade I-II) tumors were evaluated with (201)TI-SPECT. (1) Visual assessment was performed by board-certificated radiologists using (201)TI-SPECT. Tumors were classified in two groups (TI-positive and TI-negative) and scored using the five grade evaluation system. Receiver operating characteristic (ROC) analysis was performed in the TI-positive group. (2) Semi-quantitative assessment involved measurement of early and delayed (201)TI uptake, and the retention index (RI) was applied as follows:  $RI = \text{delayed uptake ratio} / \text{early uptake ratio}$ . Three combinations of RI using mean and maximum values of the region of interest were calculated. Results: (1) Seventy-four TI-positive and 14 TI-negative tumors. The area under the ROC curve (AUC) estimated by three radiologists exceeded a value of 0.7. The value was greater when estimated by the more experienced radiologist. (2) In all RIs, the difference of RI between high-grade tumors and low-grade tumors was statistically significant. Conclusion: A visual and semi-quantitative assessment using (201)TI-SPECT was found to be useful for differentiating benign from malignant brain tumors. J. Med. Invest. 60: 121-126, February, 2013.

[613]

**TÍTULO / TITLE:** - Wnt signalling in pituitary development and tumorigenesis.

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

**REVISTA / JOURNAL:** - Endocr Relat Cancer. 2013 May 20;20(3):R101-11. doi: 10.1530/ERC-13-0005. Print 2013.

●●Enlace al texto completo (gratis o de pago) [1530/ERC-13-0005](#)

**AUTORES / AUTHORS:** - Chambers TJ; Giles A; Brabant G; Davis JR

**INSTITUCIÓN / INSTITUTION:** - Endocrinology and Diabetes Group, Faculty of Medical and Human Sciences, Centre for Endocrinology and Diabetes, Institute of Human Development, University of Manchester, AV Hill Building, Oxford Road, Manchester M13 9PT, UK Experimental and Clinical Endocrinology, Med Clinic I, University of Lubeck, Lubeck, Germany.

**RESUMEN / SUMMARY:** - Wnt signalling is activated in both pituitary organogenesis and its mature function. Wnt ligands and Wnt signalling pathways are critical for the regulation of the formation of the pituitary. In the mature pituitary, Wnt signalling pathways control cell activity and may stimulate cell proliferation in both physiological and pathological processes. This review compares Wnt signalling pathways active in the developing and mature pituitary and explores how this gives us further insight into the development of pituitary adenomas.

[614]

**TÍTULO / TITLE:** - (18)F]FET-PET Imaging for Treatment and Response Monitoring of Radiation Therapy in Malignant Glioma Patients - A Review.

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

**REVISTA / JOURNAL:** - Front Oncol. 2013 Apr 25;3:104. doi: 10.3389/fonc.2013.00104. Print 2013.

●●Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00104](https://doi.org/10.3389/fonc.2013.00104)

**AUTORES / AUTHORS:** - Gotz I; Grosu AL

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Medical Center, University Freiburg Freiburg, Germany.

**RESUMEN / SUMMARY:** - In the treatment of patients suffering from malignant glioma, it is a paramount importance to deliver a high radiation dose to the tumor on the one hand and to spare organs at risk at one the other in order to achieve a sufficient tumor control and to avoid severe side effects. New radiation therapy techniques have emerged like intensity modulated radiotherapy and image guided radiotherapy that help facilitate this aim. In addition, there are advanced imaging techniques like Positron emission tomography (PET) and PET/CT which can help localize the tumor with higher sensitivity, and thus contribute to therapy planning, tumor control, and follow-up. During follow-up care, it is crucial to differentiate between recurrence and treatment-associated, unspecific lesions, like radiation necrosis. Here, too, PET/CT can facilitate in differentiating tumor relapse from unspecific changes. This review article will discuss therapy response criteria according to the current imaging methods like Magnet resonance imaging, CT, and PET/CT. It will focus on the significance of PET in the clinical management for treatment and follow-up.

[615]

**- CASTELLANO -**

**TÍTULO / TITLE:** Skuteczność skojarzonego i wspomagającego leczenia temozolomidem u chorych z glejakiem wielopostaciowym. Wieloosrodkowe badanie z randomizacją

**TÍTULO / TITLE:** - Efficacy of concomitant and adjuvant temozolomide in glioblastoma treatment. A multicentre randomized study.

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

**REVISTA / JOURNAL:** - Neurol Neurochir Pol. 2013;47(2):101-108.

**AUTORES / AUTHORS:** - Szczepanek D; Marchel A; Moskala M; Krupa M; Kunert P; Trojanowski T

**INSTITUCIÓN / INSTITUTION:** - Dariusz Szczepanek, Katedra i Klinika Neurochirurgii i Neurochirurgii Dzieciecej, ul. Jaczewskiego 8, 20-954 Lublin, e-mail: [dariusz.szczepanek@am.lublin.pl](mailto:dariusz.szczepanek@am.lublin.pl).

**RESUMEN / SUMMARY:** - Background and purpose: The common treatment in patients with newly diagnosed glioblastoma multiforme is the ultimate radical surgical removal of the tumour combined with radiotherapy. This study compared safety and efficacy of radiotherapy alone with radiotherapy combined with temozolomide (TMZ) given before, during, and after radiotherapy. Material and methods: The patients operated on for glioblastoma multiforme during the first 21 postoperative days were randomly assigned to the group treated with radiotherapy alone (involved-field radiotherapy in 2 Gy fractions daily five times a week up to the total of 60 Gy over 6 weeks of treatment) or to the group treated with radiotherapy and TMZ, initially in the dose of 200 mg/m<sup>2</sup> during 5 postoperative days and after 23 days followed by 75 mg/m<sup>2</sup> of body surface area daily, 7 days a week (from the first to the last day of radiotherapy). On completion of radiotherapy, five complementary courses of TMZ were introduced (150-200 mg/m<sup>2</sup> for 5 days, repeated every 28 days). The primary outcome measure was overall survival. Results: Fifty-eight patients from 3 centres were included in the study. The mean age of patients was 55 years and all the patients underwent a surgical procedure of glioblastoma removal. The mean overall survival in the group treated with TMZ was 16.0 months, whereas in the group with radiotherapy alone the overall survival reached 12.5 months. 24-month survival reached 23% in patients treated with TMZ and 6.7% in those who received radiotherapy only. Haematological complications of third or fourth degree were present in 10% of patients treated with radiotherapy and TMZ. Conclusions: The introduction of TMZ before, during and after radiotherapy for newly diagnosed glioblastoma multiforme gives clinically and statistically significant improvement of survival with unremarkably increased toxicity of the treatment.

[616]

**TÍTULO / TITLE:** - A retrospective two-center study of antiepileptic prophylaxis in patients with surgically treated high-grade gliomas.

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

**REVISTA / JOURNAL:** - Neurol India. 2013 Mar-Apr;61(2):131-7. doi: 10.4103/0028-3886.111118.

●●Enlace al texto completo (gratis o de pago) [4103/0028-3886.111118](#)

**AUTORES / AUTHORS:** - Garbossa D; Panciani PP; Angeleri R; Battaglia L; Tartara F; Ajello M; Agnoletti A; Versari P; Ducati A; Fontanella M; Spina G

**INSTITUCIÓN / INSTITUTION:** - Department of Neuroscience, University of Brescia, Brescia, Italy.

**RESUMEN / SUMMARY:** - BACKGROUND: The effectiveness of antiepileptic prophylaxis in patients with newly diagnosed high-grade glioma is debated. Craniotomy, surgical manipulation and bleeding are believed to favor the onset of seizures and, therefore, perioperative antiepileptic drugs (AEDs) are generally used. Nevertheless, evidence to initiate preoperative AED prophylaxis are weak. AIM: Aim of this paper was to evaluate the need for AED prophylaxis in surgically-treated malignant glioma patients without history of seizures. MATERIALS AND METHODS: We conducted a retrospective, two-center cohort study to assess the effectiveness of preoperative AED prophylaxis. Patients were divided in two groups: one with AED preoperative administration and the other without. Because of its non-hepatic metabolism, levetiracetam (LEV) was chosen. Logistic regression models were used to investigate the odds ratio for each group. The explanatory variables included the treatment received, sex, age, and site of lesion. The outcome measure of successful LEV prophylaxis was seizure vs. no seizure post-operatively, at three and six months after surgery. RESULTS: Our results showed that LEV prophylaxis was not a significant predictor of seizure occurrence, although the regression coefficient indicated a slight reduction in seizure risk following LEV administration. Patient's age was a significant predictor of seizure occurrence. Younger patients had a higher risk of seizure in the six months post-surgery. CONCLUSIONS: We conclude that AEDs prophylaxis does not provide a substantial benefit to surgically treated high-grade glioma patients and should not be administered routinely. Further investigations are required to detect subgroups of patients at higher risk of developing seizures in order to selectively administer AED.

[617]

**TÍTULO / TITLE:** - Expression and functional heterogeneity of chemokine receptors CXCR4 and CXCR7 in primary patient-derived glioblastoma cells.

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

**REVISTA / JOURNAL:** - PLoS One. 2013;8(3):e59750. doi: 10.1371/journal.pone.0059750. Epub 2013 Mar 21.

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

[1371/journal.pone.0059750](https://doi.org/10.1371/journal.pone.0059750)

**AUTORES / AUTHORS:** - Liu C; Pham K; Luo D; Reynolds BA; Hothi P; Foltz G; Harrison JK

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmacology & Therapeutics, College of Medicine, University of Florida, Gainesville, Florida, United States of America.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most common primary brain tumor in adults. The poor prognosis and minimally successful treatments of these tumors indicates a need to identify new therapeutic targets. Therapy resistance of GBMs is attributed to heterogeneity of the glioblastoma due to genetic alterations and functional subpopulations. Chemokine receptors CXCR4 and CXCR7 play important roles in progression of various cancers although the specific functions of the CXCL12-CXCR4-CXCR7 axis in GBM are less characterized. In this study we examined the expression and function of CXCR4 and CXCR7 in four primary patient-derived GBM cell lines of the proliferative subclass, investigating their roles in in vitro growth, migration, sphere and tube formation. CXCR4 and CXCR7 cell surface expression was heterogeneous both between and within each cell line examined, which was not reflected by RT-PCR analysis. Variable percentages of CXCR4+CXCR7- (CXCR4 single positive), CXCR4-CXCR7+ (CXCR7 single positive), CXCR4+CXCR7+ (double positive), and CXCR4-CXCR7- (double negative) subpopulations were evident across the lines examined. A subpopulation of slow cell cycling cells was enriched in CXCR4 and CXCR7. CXCR4+, CXCR7+, and CXCR4+/CXCR7+ subpopulations were able to initiate intracranial tumors in vivo. CXCL12 stimulated in vitro cell growth, migration, sphere formation and tube formation in some lines and, depending on the response, the effects were mediated by either CXCR4 or CXCR7. Collectively, our results indicate a high level of heterogeneity in both the surface expression and functions of CXCR4 and CXCR7 in primary human GBM cells of the proliferative subclass. Should targeting of CXCR4 and CXCR7 provide clinical benefits to GBM patients, a personalized treatment approach should be considered given the differential expression and functions of these receptors in GBM.

[618]

**TÍTULO / TITLE:** - Molecular characteristics of meningiomas in a cohort of Indian patients: loss of heterozygosity analysis of chromosomes 22, 17, 14 and 10.

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

**REVISTA / JOURNAL:** - Neurol India. 2013 Mar-Apr;61(2):138-43. doi: 10.4103/0028-3886.111119.

●●Enlace al texto completo (gratis o de pago) [4103/0028-3886.111119](https://doi.org/10.4103/0028-3886.111119)

**AUTORES / AUTHORS:** - Asirvatham JR; Pai R; Chacko G; Nehru AG; John J; Chacko AG; Muliyl J

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology and Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

**RESUMEN / SUMMARY:** - BACKGROUND: Though, loss of heterozygosity (LOH) at chromosome 22q is considered to be the most likely initiating event in the formation of meningiomas, LOH at other chromosomes (1, 3, 6, 9, 10, 11, 14, 17, and 18) have been implicated in its progression. The aim of this study was to analyze microsatellite markers on a select set of chromosomes including, 22q, 10q, 14q, and 17p for LOH in patients with meningiomas. Materials and METHODS: Tumor tissue and its corresponding blood sample were collected from 27 patients with meningioma. Four polymorphic microsatellite markers (D10S520, D17S1289, D14S555, and D22S417) were characterized for LOH analysis. RESULTS: There were 14 World Health Organization (WHO) grade I, 12 WHO grade II and 1 WHO grade III meningiomas. LOH was seen most often at D22S417 with an equal distribution between the grades (33% of informative samples in each grade). Though, LOH at D14S555 was seen in 50% of informative WHO grade II tumors, compared to 11.1% of informative WHO grade I tumors it did not reach statistical significance. However, allelic imbalance (AI) at D14S555 was significantly associated with atypia ( $P = 0.05$ ). LOH at D17S1289 was seen only in one tumor sample, and none of the informative samples displayed LOH at D10S520. CONCLUSION: The frequency and equal distribution of LOH at chromosome 22 supports the hypothesis that it is an early event in the tumorigenesis of meningiomas. The association of AI at D14S555 in WHO grade II meningiomas needs to be investigated on a larger set of samples.

[619]

**TÍTULO / TITLE:** - Clinical trials in cellular immunotherapy for brain/CNS tumors.

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

**REVISTA / JOURNAL:** - Expert Rev Neurother. 2013 Apr;13(4):405-24. doi: 10.1586/ern.13.23.

●●Enlace al texto completo (gratis o de pago) [1586/ern.13.23](#)

**AUTORES / AUTHORS:** - Badhiwala J; Decker WK; Berens ME; Bhardwaj RD

**INSTITUCIÓN / INSTITUTION:** - Michael G DeGroot School of Medicine, McMaster University, 1280 Main Street W, Hamilton, ON, L8S 4K1, Canada.

**RESUMEN / SUMMARY:** - High-grade gliomas are the most common type of primary malignant brain/CNS tumor. There have been only modest advances in surgical techniques, radiotherapy and chemotherapy for high-grade gliomas over the past several decades. None of these have provided a major improvement in survival for patients. Recently, immunotherapy has been explored for the treatment of high-grade gliomas. Immunotherapy capitalizes on the specificity of the host immune system to selectively target tumor cells for destruction, while sparing normal brain parenchyma, thus making it a

particularly attractive option. This article provides a comprehensive review of published clinical trials evaluating cellular immunotherapy in primary brain/CNS tumors.

[620]

**TÍTULO / TITLE:** - Overexpression of CD97 Confers an Invasive Phenotype in Glioblastoma Cells and Is Associated with Decreased Survival of Glioblastoma Patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 26;8(4):e62765. doi: 10.1371/journal.pone.0062765. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062765](#)

**AUTORES / AUTHORS:** - Safae M; Clark AJ; Oh MC; Ivan ME; Bloch O; Kaur G; Sun MZ; Kim JM; Oh T; Berger MS; Parsa AT

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, University of California San Francisco, San Francisco, California, United States of America.

**RESUMEN / SUMMARY:** - Mechanisms of invasion in glioblastoma (GBM) relate to differential expression of proteins conferring increased motility and penetration of the extracellular matrix. CD97 is a member of the epidermal growth factor seven-span transmembrane family of adhesion G-protein coupled receptors. These proteins facilitate mobility of leukocytes into tissue. In this study we show that CD97 is expressed in glioma, has functional effects on invasion, and is associated with poor overall survival. Glioma cell lines and low passage primary cultures were analyzed. Functional significance was assessed by transient knockdown using siRNA targeting CD97 or a non-target control sequence. Invasion was assessed 48 hours after siRNA-mediated knockdown using a Matrigel-coated invasion chamber. Migration was quantified using a scratch assay over 12 hours. Proliferation was measured 24 and 48 hours after confirmed protein knockdown. GBM cell lines and primary cultures were found to express CD97. Knockdown of CD97 decreased invasion and migration in GBM cell lines, with no difference in proliferation. Gene-expression based Kaplan-Meier analysis was performed using The Cancer Genome Atlas, demonstrating an inverse relationship between CD97 expression and survival. GBMs expressing high levels of CD97 were associated with decreased survival compared to those with low CD97 ( $p = 0.007$ ). CD97 promotes invasion and migration in GBM, but has no effect on tumor proliferation. This phenotype may explain the discrepancy in survival between high and low CD97-expressing tumors. This data provides impetus for further studies to determine its viability as a therapeutic target in the treatment of GBM.

[621]

**TÍTULO / TITLE:** - Development of an in-home standardized end-of-life treatment program for pediatric patients dying of brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Spec Pediatr Nurs. 2013 Apr;18(2):144-57. doi: 10.1111/jspn.12024. Epub 2013 Mar 24.

●●Enlace al texto completo (gratis o de pago) [1111/jspn.12024](#)

**AUTORES / AUTHORS:** - Arland LC; Hendricks-Ferguson VL; Pearson J; Foreman NK; Madden JR

**INSTITUCIÓN / INSTITUTION:** - Center for Cancer and Blood Disorders, Children's Hospital Colorado, University of Colorado School of Medicine, Aurora, CO, USA.

**RESUMEN / SUMMARY:** - PURPOSE: To evaluate an end-of-life (EOL) program related to specific outcomes (i.e., number of hospitalizations and place of death) for children with brain tumors. DESIGN AND METHODS: From 1990 to 2005, a retrospective chart review was performed related to specified outcomes for 166 children with admission for pediatric brain tumors. RESULTS: Patients who received the EOL program were hospitalized less often (n = 114; chi-square = 5.001 with df = 1, p <.05) than patients who did not receive the program. PRACTICE IMPLICATIONS: An EOL program may improve symptom management and decrease required hospital admissions for children with brain tumors.

[622]

**TÍTULO / TITLE:** - Cervical intramedullary ependymoma masquerading as cervical spondylotic myelopathy on MRI analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Orthop Sci. 2013 Mar;18(2):355-8.

**AUTORES / AUTHORS:** - Tsuji O; Nakamura M; Fujiyoshi K; Ishii K; Watanabe K; Hosogane N; Tsuji T; Momoshima S; Toyama Y; Chiba K; Matsumoto M

**INSTITUCIÓN / INSTITUTION:** - Department of Orthopaedic Surgery, School of Medicine, Keio University, 35 Shinanomachi, Shinjuku, Tokyo 160-8582, Japan.

[623]

**TÍTULO / TITLE:** - Meningioma mimicking Parkinson's disease: a case report and analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - S D Med. 2013 Mar;66(3):101-3.

**AUTORES / AUTHORS:** - Freeman JW; Westerhuis B; Asfora W; Free T; Salem B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, Sanford School of Medicine, University of South Dakota, Sanford Clinic Neurology, USA.

**RESUMEN / SUMMARY:** - An unusual case of apparent Parkinson's disease caused by a brain tumor (meningioma) is presented. The role of brain imaging in the evaluation of a patient with Parkinson's symptoms is discussed.

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[624]

**TÍTULO / TITLE:** - Low grade gliomas of childhood: the actual management.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Minerva Pediatr. 2013 Apr;65(2):149-65.

**AUTORES / AUTHORS:** - Lober RM

**INSTITUCIÓN / INSTITUTION:** - Stanford Hospitals and Clinics, Department of Neurosurgery, Stanford, CA, USA - [roblober@stanford.edu](mailto:roblober@stanford.edu).

**RESUMEN / SUMMARY:** - Low grade gliomas (LGG) are the most common brain tumors of childhood and adolescence, consisting of a mixed group of grade I and grade II neoplasms. In general, their location and resectability are the most important predictors of outcome. Surgery is curative, usually for superficial tumors of the cerebral or cerebellar hemispheres, but has a more controversial role for deep-seated midline tumors. Where gross total resection is not feasible, LGG becomes a chronic disease of childhood, and adjuvant therapies must be tailored for each individual based on age and tumor location. Radiotherapy (RT) is effective but associated with neurological, cognitive, and endocrinological morbidity, prompting the use of chemotherapy regimens aimed at delaying RT, especially in younger children. Long-term surveillance imaging for up to five years after treatment is warranted even after gross total resection, and lifelong surveillance is warranted after RT because of iatrogenic effects. Despite a favorable prognosis for survival, LGG are associated with disability, decreased quality of life, and late effects of treatment, all requiring long-term specialty care through a multidisciplinary approach.

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[625]

**TÍTULO / TITLE:** - Bevacizumab rescue therapy extends the survival in patients with recurrent malignant glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin J Cancer Res. 2013 Apr;25(2):206-11. doi: 10.3978/j.issn.1000-9604.2013.03.10.

●●Enlace al texto completo (gratis o de pago) [3978/j.issn.1000-9604.2013.03.10](http://3978/j.issn.1000-9604.2013.03.10)

**AUTORES / AUTHORS:** - Cai LB; Li J; Lai MY; Shan CG; Lian ZD; Hong WP; Zhen JJ; Zhou Q; Wang LC

**INSTITUCIÓN / INSTITUTION:** - Department of Oncology, Guangdong 999 Brain Hospital, Guangzhou 510510, China.

**RESUMEN / SUMMARY:** - OBJECTIVE: We retrospectively studied the efficacy of bevacizumab as salvage therapy for recurrent malignant glioma with a focus on

the overall survival (OS). METHODS: Patients who received a therapy other than surgery for recurrent malignant glioma were included. Efficacy was evaluated using MRI. Neurological function was evaluated using the Response Assessment in Neuro-Oncology (RANO). The survival rate was calculated using the Kaplan-Meier method. RESULTS: Fifty-one patients with recurrent glioma (31 grade III, 20 grade IV) were included. Among them, 22 subjects (43.1%) received bevacizumab. The median OS was 10.2 months (range, 1 to 27 months). Patients receiving bevacizumab had comparable OS (a median of 9.9 vs. 10.0 months) and similar 6-month survival rate (43% vs. 34%) to those who did not receive bevacizumab. A subgroup analysis failed to notice any significant difference in grade III glioma patients receiving bevacizumab vs. those who did not. The median survival was significantly longer at 8.9 months (range, 4 to 13 months) in grade IV glioma patients receiving bevacizumab than in those who did not (5.6 months, range, 2 to 7 months, P=0.042). The 6-month survival rate was higher (83%) in those who received bevacizumab than in those who did not (47%, P=0.046). No grade 3/4 adverse events were observed in any patient. CONCLUSIONS: Bevacizumab, as a rescue therapy, provides a survival benefit for recurrent grade IV glioma.

[626]

**TÍTULO / TITLE:** - INTEROCC case-control study: lack of association between glioma tumors and occupational exposure to selected combustion products, dusts and other chemical agents.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Public Health. 2013 Apr 12;13(1):340. doi: 10.1186/1471-2458-13-340.

●●Enlace al texto completo (gratis o de pago) [1186/1471-2458-13-340](#)

**AUTORES / AUTHORS:** - Lacourt A; Cardis E; Pintos J; Richardson L; Kincl L; Benke G; Fleming S; Hours M; Krewski D; McLean D; Parent ME; Sadetzki S; Schlaefer K; Schlehofer B; Lavoue J; van Tongeren M; Siemiatycki J

**INSTITUCIÓN / INSTITUTION:** - University of Montreal Hospital Research Centre (CRCHUM), Montreal, Canada. [j.siemiatycki@umontreal.ca](mailto:j.siemiatycki@umontreal.ca).

**RESUMEN / SUMMARY:** - BACKGROUND: The aim was to investigate possible associations between glioma (an aggressive type of brain cancer) and occupational exposure to selected agents: combustion products (diesel and gasoline exhaust emissions, benzo(a)pyrene), dusts (animal dust, asbestos, crystalline silica, wood dust) and some other chemical agents (formaldehyde, oil mist, sulphur dioxide). METHODS: The INTEROCC study included cases diagnosed with glioma during 2000-2004 in sub-regions of seven countries. Population controls, selected from various sampling frames in different centers, were frequency or individually matched to cases by sex, age and center. Face-to-face interviews with the subject or a proxy respondent were conducted by trained interviewers. Detailed information was collected on socio-economic and

lifestyle characteristics, medical history and work history. Occupational exposure to the 10 selected agents was assessed by a job exposure matrix (JEM) which provides estimates of the probability and level of exposure for different occupations. Using a 25% probability of exposure in a given occupation in the JEM as the threshold for considering a worker exposed, the lifetime prevalence of exposure varied from about 1% to about 15% for the different agents. Associations between glioma and each of the 10 agents were estimated by conditional logistic regression, and using three separate exposure indices: i) ever vs. never; ii) lifetime cumulative exposure; iii) total duration of exposure. RESULTS: The study sample consisted of 1,800 glioma cases and 5,160 controls. Most odds ratio estimates were close to the null value. None of the ten agents displayed a significantly increased odds ratio nor any indication of dose-response relationships with cumulative exposure or with duration of exposure. CONCLUSION: Thus, there was no evidence that these exposures influence risk of glioma.

[627]

**TÍTULO / TITLE:** - The Vitamin D Receptor (VDR) Gene Polymorphisms in Turkish Brain Cancer Patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomed Res Int. 2013;2013:295791. doi: 10.1155/2013/295791. Epub 2013 Apr 17.

●●Enlace al texto completo (gratis o de pago) [1155/2013/295791](#)

**AUTORES / AUTHORS:** - Toptas B; Kafadar AM; Caccina C; Turan S; Yurdum LM; Yigitbasi N; Gokce MO; Zeybek U; Yaylim I

**INSTITUCIÓN / INSTITUTION:** - Department of Molecular Medicine, The Institute of Experimental Medicine, Istanbul University, Vakif Gureba Caddesi, Capa, 34390 Istanbul, Turkey.

**RESUMEN / SUMMARY:** - Objective. It has been stated that brain cancers are an increasingly serious issue in many parts of the world. The aim of our study was to determine a possible relationship between Vitamin D receptor (VDR) gene polymorphisms and the risk of glioma and meningioma. Methods. We investigated the VDR Taq-I and VDR Fok-I gene polymorphisms in 100 brain cancer patients (including 44 meningioma cases and 56 glioma cases) and 122 age-matched healthy control subjects. This study was performed by polymerase chain reaction-based restriction fragment length polymorphism (RFLP). Results. VDR Fok-I ff genotype was significantly increased in meningioma patients (15.9%) compared with controls (2.5%), and carriers of Fok-I ff genotype had a 6.47-fold increased risk for meningioma cases. There was no significant difference between patients and controls for VDR Taq-I genotypes and alleles. Conclusions. We suggest that VDR Fok-I genotypes might affect the development of meningioma.

[628]

**TÍTULO / TITLE:** - Drug review: safety and efficacy of bevacizumab for glioblastoma and other brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Jpn J Clin Oncol. 2013 Jun;43(6):587-95. doi: 10.1093/jjco/hyt051. Epub 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1093/jjco/hyt051](#)

**AUTORES / AUTHORS:** - Narita Y

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**RESUMEN / SUMMARY:** - Glioblastoma is a highly vascular tumor that expresses vascular endothelial growth factor, a key regulator of angiogenesis and tumor blood vessel permeability. Bevacizumab is a monoclonal antibody that inhibits vascular endothelial growth factor and the growth of gliomas. Bevacizumab monotherapy has proven effective for recurrent glioblastoma, and it extended progression-free survival and improved patient quality of life in various clinical trials. Some patients who receive bevacizumab experience improvements in neurological symptoms and steroid dose reductions. Bevacizumab induces a dramatic and rapid radiological response, but non-enhancing lesions are often detected on magnetic resonance imaging without enhancing lesions. Rebound phenomena such as rapid tumor regrowth are occasionally observed after the discontinuation of bevacizumab therapy. Therefore, Response Assessment in Neuro-Oncology criteria were recently devised to evaluate the efficacy and radiological response of bevacizumab treatment. Hypertension and proteinuria are characteristic adverse events associated with bevacizumab therapy. In addition, many fatal adverse events such as intracranial hemorrhage and venous thromboembolism are reported in patients treated with bevacizumab. However, these events are also associated with glioma itself, and careful attention needs to be paid to these events. Bevacizumab is used to treat various diseases including radiation necrosis and recurrent brain tumors such as brain metastases, schwannoma and meningioma, but additional clinical trials are necessary. The efficacy and current problems associated with bevacizumab in the treatment of glioblastoma and other brain tumors are reviewed.

[629]

**TÍTULO / TITLE:** - Nonviral gene therapy in vivo with PAM-RG4/apoptin as a potential brain tumor therapeutic.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Nanomedicine. 2013;8:821-34. doi: 10.2147/IJN.S39072. Epub 2013 Feb 25.

●●Enlace al texto completo (gratis o de pago) [2147/IJN.S39072](http://2147/IJN.S39072)

**AUTORES / AUTHORS:** - An S; Nam K; Choi S; Bai CZ; Lee Y; Park JS

**INSTITUCIÓN / INSTITUTION:** - Department of Chemistry, Seoul National University, Seoul, Republic of Korea.

**RESUMEN / SUMMARY:** - BACKGROUND: Glioma is still one of the most complicated forms of brain tumor to remove completely due to its location and the lack of an efficient means to specifically eliminate tumor cells. For these reasons, this study has examined the effectiveness of a nonviral gene therapy approach utilizing a tumor-selective killer gene on a brain tumor xenograft model. METHODS AND RESULTS: The therapeutic aptotin gene was recombined into the JDK plasmid and delivered into human brain tumor cells (U87MG) by using a polyamidoamine dendrimer with an arginine surface (PAM-RG4). Studies in vitro showed that the PAM-RG4/apoptin plasmid polyplex exhibited a particularly high transfection activity of .40%. Terminal deoxynucleotidyl transferase dUTP nick end labeling (TUNEL) assay, 4',6-Diamidino-2-phenylindole (DAPI) TUNEL assay, DAPI staining, and caspase-3 activity assay verified that the tumor cells had undergone apoptosis induced by aptotin. For in vivo studies, the polyplex was injected into tumors, which were induced by injecting U87MG cells intradermally into nude mice. Based on hematoxylin and eosin staining, epidermal growth factor receptor immunohistochemistry results and tumor volume measurement results, tumor growth was effectively inhibited and no specific edema, irritation, or other harm to the skin was observed after polyplex injection. The in vivo expression of aptotin and the induction of apoptosis were verified by reverse-transcription polymerase chain reaction analysis, TUNEL assay, and DAPI staining. CONCLUSION: The PAM-RG4/apoptin gene polyplex is a strong candidate for brain tumor therapeutics because of the synergistic effect of the carrier's high transfection efficiency (35%-40%) in glioma cells and the selective apoptosis-inducing activity of aptotin in tumor cells.

[630]

**TÍTULO / TITLE:** - Phase II trial of upfront bevacizumab and temozolomide for unresectable or multifocal glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Med. 2013 Apr;2(2):185-95. doi: 10.1002/cam4.58. Epub 2013 Jan 24.

●●Enlace al texto completo (gratis o de pago) [1002/cam4.58](http://1002/cam4.58)

**AUTORES / AUTHORS:** - Lou E; Peters KB; Sumrall AL; Desjardins A; Reardon DA; Lipp ES; Herndon JE 2nd; Coan A; Bailey L; Turner S; Friedman HS; Vredenburgh JJ

**INSTITUCIÓN / INSTITUTION:** - The Preston Robert Tisch Brain Tumor Center at Duke, Department of Surgery, Duke University Medical Center Durham North Carolina.

**RESUMEN / SUMMARY:** - Patients with unresectable glioblastomas have a poor prognosis, with median survival of 6-10 months. We conducted a phase II trial of upfront 5-day temozolomide (TMZ) and bevacizumab (BV) in patients with newly diagnosed unresectable or multifocal glioblastoma. Patients received up to four cycles of TMZ at 200 mg/m<sup>2</sup> on days 1-5, and BV at 10 mg/kg on days 1 and 15 of a 28-day cycle. Brain magnetic resonance imaging (MRI) was performed monthly. Therapy was continued as long as there was no tumor progression, grade 4 nonhematologic toxicity, or recurrent grade 4 hematologic toxicity after dose reduction. The primary end point was best tumor response as measured on MRI. Forty-one patients were accrued over 12 months; 39 had a full set of MRI scans available for evaluation. Assessment for best radiographic responses was as follows: partial responses in 24.4%, stable disease in 68.3%, and progressive disease in 2.4%. Treatment-related toxicities included seven grade 4 toxicities and one grade 5 toxicity (myocardial infarction). From this study, it was concluded that an upfront regimen of TMZ and BV for unresectable glioblastoma was well tolerated and provided a significant level of disease stabilization. Therapeutic toxicities were consistent with those seen in the adjuvant setting using these agents. The upfront approach to treatment of glioblastoma in the unresectable population warrants further investigation in randomized controlled phase III trials.

[631]

**TÍTULO / TITLE:** - BMP4, a strong better prognosis predictor, has a subtype preference and cell development association in gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Transl Med. 2013 Apr 16;11:100. doi: 10.1186/1479-5876-11-100.

●●Enlace al texto completo (gratis o de pago) [1186/1479-5876-11-100](#)

**AUTORES / AUTHORS:** - Bao Z; Zhang C; Yan W; Liu Y; Li M; Zhang W; Jiang T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, 100050, China.

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**RESUMEN / SUMMARY:** - BACKGROUND: The bone morphogenetic family proteins (BMP) are phylogenetically conserved proteins, which are essential for embryonic development. The key regulatory subunit, the bone morphogenetic protein 4 (BMP4), is overexpressed and associated with tumor metastasis in a variety of cancers. However, the prognostic and molecular features of gliomas with BMP4 expression is still unclear. METHODS: We obtained whole genome mRNA expression microarray data of 220 glioma samples of all grades from Chinese Glioma Genome Atlas (CGGA) database (<http://www.cgga.org.cn>) as

discovery set. Of the 123 high-grade gliomas in this set, 33 Grade III tumors and 88 GBMs were analyzed by Kaplan-Meier method. Immunohistochemistry was used for validating the expression of BMP4 in another 77 glioma samples. Three additional datasets were obtained as validation sets. Gene ontology (GO) analysis and gene set variation analysis (GSVA) were used for functional annotation of BMP4. RESULTS: In the discovery set, BMP4 overexpression was significantly associated with low grade as well as the lower mortality of high-grade gliomas in survival analysis (log-rank,  $p < 0.05$  in GBM patients and  $p < 0.01$  in anaplastic gliomas, respectively). BMP4 also showed a Proneural subtype, G1 subtype and Isocitrate Dehydrogenase 1 (IDH1) mutation preference and cell development association. The results of validation 4 datasets showed similar findings. The overexpression of BMP4 was also detected in low grade gliomas compared to the high grade ones by immunohistochemistry ( $p < 0.05$ , chi-square test). CONCLUSION: BMP4 expression was independently associated with grade and good prognosis in grade III and grade IV gliomas, suggesting BMP4 as a novel biomarker with potential important therapeutic implications.

[632]

**TÍTULO / TITLE:** - Outcomes in treatment for primary spinal anaplastic ependymomas: a retrospective series of 20 patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Spine. 2013 May 10.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.3.SPINE12183](#)

**AUTORES / AUTHORS:** - Liu X; Sun B; Xu Q; Che X; Hu J; Gu S; Shou J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai, China.

**RESUMEN / SUMMARY:** - Object Little is known regarding the anaplastic variant of primary ependymomas that involve the spinal cord. The aim of this study was to evaluate the clinical characteristics and treatment outcomes of primary spinal anaplastic ependymomas (PSAEs). Methods Medical records were reviewed in 20 patients with pathologically proven PSAEs who underwent surgical treatment at the Department of Neurosurgery in Huashan Hospital between 1999 and 2008. Results This series included 7 women and 13 men between the ages of 2 and 67 years (mean 31.9 years). The mean preoperative course was 9.3 months (range 20 days to 48 months). The most common PSAE locations were the cervical and thoracic spinal cords. The most common presenting symptom was weakness, followed by numbness, bowel or bladder dysfunction, and pain. Gross-total resection (GTR) was achieved in 17 patients, and a subtotal removal was performed in 3 patients. Nine patients received radiation therapy and/or chemotherapy. The mean follow-up duration was 83.5 months.

Functional assessment of the 10 patients available at the latest follow-up evaluation showed that 2 had worsened and 8 remained unchanged from their preoperative status. There were 2 local recurrences and 1 lung metastasis. Conclusions Patients with PSAEs presented with a much shorter preoperative course than patients with Grade II ependymomas in previous studies. Patients with tumors that involved the cervical spinal cord experienced a worse outcome. Surgical removal of PSAEs, with the goal of GTR, is beneficial to patients. The role of radiation therapy and chemotherapy in PSAEs remains to be determined in further studies.

[633]

**TÍTULO / TITLE:** - Bevacizumab treatment for meningiomas in NF2: a retrospective analysis of 15 patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013;8(3):e59941. doi: 10.1371/journal.pone.0059941. Epub 2013 Mar 21.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0059941](https://doi.org/10.1371/journal.pone.0059941)

**AUTORES / AUTHORS:** - Nunes FP; Merker VL; Jennings D; Caruso PA; di Tomaso E; Muzikansky A; Barker FG 2nd; Stemmer-Rachamimov A; Plotkin SR

**INSTITUCIÓN / INSTITUTION:** - Neurology Department, Massachusetts General Hospital, Boston, Massachusetts, United States of America.

**RESUMEN / SUMMARY:** - Bevacizumab treatment can result in tumor shrinkage of progressive vestibular schwannomas in some neurofibromatosis 2 (NF2) patients but its effect on meningiomas has not been defined. To determine the clinical activity of bevacizumab against NF2-related meningiomas, we measured changes in volume of meningiomas in NF2 patients who received bevacizumab for treatment of progressive vestibular schwannomas. A radiographic response was defined as a 20% decrease in tumor size by volumetric MRI analysis. In addition, we determined the expression pattern of growth factors associated with tumor angiogenesis in paraffin-embedded tissues from 26 unrelated meningiomas. A total of 48 meningiomas in 15 NF2 patients were included in this study with a median follow up time of 18 months. A volumetric radiographic response was seen in 29% of the meningiomas (14/48). Tumor shrinkage was not durable: the median duration of response was 3.7 months and the median time to progression was 15 months. There was no significant correlation between pre-treatment growth rate and meningioma response in regression models. Tissue analysis showed no correlation between tumor microvascular density and expression of VEGF pathway components. This data suggests that, in contrast to schwannomas, activation of VEGF pathway is not the primary driver of angiogenesis in meningiomas. Our results suggest that a minority of NF2-associated meningiomas shrink during bevacizumab therapy and that these responses were of short duration. These

results are comparable to previous studies of bevacizumab in sporadic meningiomas.

[634]

**TÍTULO / TITLE:** - Activation of executioner caspases is a predictor of progression-free survival in glioblastoma patients: a systems medicine approach.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Dis. 2013 May 16;4:e629. doi: 10.1038/cddis.2013.157.

●●Enlace al texto completo (gratis o de pago) [1038/cddis.2013.157](http://1038/cddis.2013.157)

**AUTORES / AUTHORS:** - Murphy AC; Weyhenmeyer B; Schmid J; Kilbride SM; Rehm M; Huber HJ; Senft C; Weissenberger J; Seifert V; Dunst M; Mittelbronn M; Kogel D; Prehn JH; Murphy BM

**INSTITUCIÓN / INSTITUTION:** - Centre for Systems Medicine, Department of Physiology and Medical Physics, St. Stephen's Green, Dublin, Ireland.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most common and aggressive primary brain tumor in adults. GBM cells are highly resistant to apoptosis induced by antitumor drugs and radiotherapy resulting in cancer progression. We assessed whether a systems medicine approach, analysing the ability of tumor cells to execute apoptosis could be utilized to predict the response of GBM patients to treatment. Concentrations of the key proapoptotic proteins procaspase-3, procaspase-9, Smac and Apaf-1 and the antiapoptotic protein XIAP were determined in a panel of GBM cell lines and GBM patient tumor resections. These values were used as input for APOPTO-CELL, a systems biological based mathematical model built to predict cellular susceptibility to undergo caspase activation. The modeling was capable of accurately distinguishing between GBM cells that die or survive in response to treatment with temozolomide in 10 of the 11 lines analysed. Importantly the results obtained using GBM patient samples show that APOPTO-CELL was capable of stratifying patients according to their progression-free survival times and predicted the ability of tumor cells to support caspase activation in 16 of the 21 GBM patients analysed. Calculating the susceptibility to apoptosis execution may be a potent tool in predicting GBM patient therapy responsiveness and may allow for the use of APOPTO-CELL in a clinical setting.

[635]

**TÍTULO / TITLE:** - Five-year follow-up results for patients diagnosed with anaplastic astrocytoma and effectiveness of concomitant therapy with temozolomide for recurrent anaplastic astrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian J Neurosurg. 2012 Oct;7(4):181-90. doi: 10.4103/1793-5482.106650.

●●Enlace al texto completo (gratis o de pago) [4103/1793-5482.106650](http://4103/1793-5482.106650)

**AUTORES / AUTHORS:** - Sarica FB; Cekinmez M; Tufan K; Sen O; Onal HC; Mertsoylu H; Topkan E; Pehlivan B; Erdogan B; Altinors MN

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Baskent University Faculty of Medicine, Ankara, Turkey.

**RESUMEN / SUMMARY:** - BACKGROUND: Anaplastic astrocytoma (AA; WHO grade-III) patients determination of prognostic factors helps generating multimodal therapy protocols. For this purpose, in the Baskent University, Adana Medical Research Center, specific characteristics of AA patients who have surgery were retrospectively investigated and factors which affect prognosis has been determined. PATIENTS AND METHODS: Between January 2005 and 2009, 20 patients who have AA have been evaluated retrospectively. Totally, 20 patients had 31 operations. Sixteen patients had only adjuvant radiation therapy (RT). In the postoperative period, 8 patients received adjuvant RT. Nine of 10 patients with tumor recurrence received concomitant therapy with temozolomide (ConcT with TMZ) protocol. No adjuvant therapy protocol could be applied in three patients with poor general condition in the postoperative period. RESULTS: Median survival for patients died was 16+/-17 months; one year survival was 75% and five year survival 25%. After univariate analysis, preoperative Karnofsky performance score (KPS) was  $\geq 80$  ( $P=0.005577^*$ ), postoperative KPS was  $\geq 80$  ( $P=0.003825^*$ ), type of tumor resection ( $P=0.001751^*$ ), multiple operations ( $P=0.006233^*$ ), and ConcT with TMZ protocol ( $P=0,005766^*$ ) were all positive prognostic factors which extend the survival. CONCLUSIONS: The results of the multivariate analysis did not put forward an independent prognostic factor acting on the survival period ( $P>0.05$ ).

[636]

**TÍTULO / TITLE:** - Clinically Occult Pituitary Adenoma Can Appear as a Hypermetabolic Lesion on Whole Body FDG PET Imaging in a Patient with Lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Imaging Radionucl Ther. 2013 Apr;22(1):18-20. doi: 10.4274/Mirt.258. Epub 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago) [4274/Mirt.258](http://4274/Mirt.258)

**AUTORES / AUTHORS:** - Karapolat I; Oncel G; Kumanlioglu K

**INSTITUCIÓN / INSTITUTION:** - Sifa University, Nuclear Medicine, Izmir, Turkey.

**RESUMEN / SUMMARY:** - We report a case with Non-Hodgkin Lymphoma with a focus of intense hypermetabolism in the sellar region in the primary staging and posttreatment whole body F-18 FDG PET. Further evaluation with magnetic resonance imaging after posttreatment FDG PET revealed a pituitary adenoma. Endocrinologic workup was normal consistent with nonfunctioning pituitary adenoma and endocrinologists decided to follow up the patient by yearly

magnetic resonance imaging. This case demonstrates a nonfunctioning pituitary adenoma by whole body FDG PET and emphasizes the importance of pursuing incidental findings detected in the sella on PET imaging. Conflict of interest:None declared.

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[637]

**TÍTULO / TITLE:** - MRI manifestations correlate with survival of glioblastoma multiforme patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Biol Med. 2012 Jun;9(2):120-3. doi: 10.3969/j.issn.2095-3941.2012.02.007.

●●Enlace al texto completo (gratis o de pago) [3969/j.issn.2095-3941.2012.02.007](#)

**AUTORES / AUTHORS:** - Li WB; Tang K; Chen Q; Li S; Qiu XG; Li SW; Jiang T  
**INSTITUCIÓN / INSTITUTION:** - Cancer Center, Beijing Shijitan Hospital, Capital Medical University, Beijing 100038, China.

**RESUMEN / SUMMARY:** - OBJECTIVE: To identify the correlation between magnetic resonance manifestation and survival of patients with glioblastoma multiforme (GBM). METHODS: The magnetic resonance imaging (MRI) images of 30 glioblastoma patients were collected. Imaging features including degrees of contrasted area, edema surrounding the tumor, and intensity in T2-weighted imaging were selected to determine their correlation with patient survival. The relationship between imaging and survival time was studied using SPSS 19.0 software. Kaplan-Meier survival analysis and log-rank test were used to compare the survival curves. RESULTS: Patients with  $\leq 5\%$  contrasted enhancement area of tumor had longer overall survival (OS) than those with  $> 5\%$  contrasted enhancement area of tumor. Patients without edema surrounding the tumor had longer OS than those with edema. Patients with tumor of hyperintensity and/or isointensity in T2-weighted imaging had longer OS than those with hyperintensity and/or isointensity and hypointensity. CONCLUSIONS: Some MR imaging features including degrees of contrasted area, edema surrounding the tumor, and intensity in T2-weighted imaging are correlated with the survival of patients with GBM. These features can serve as prognostic indicators for GBM patients.

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[638]

**TÍTULO / TITLE:** - Epilepsy in glioblastoma patients: basic mechanisms and current problems in treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Clin Pharmacol. 2013 May;6(3):333-44. doi: 10.1586/ecp.13.12.

●●Enlace al texto completo (gratis o de pago) [1586/ecp.13.12](#)

**AUTORES / AUTHORS:** - Bruna J; Miro J; Velasco R

**INSTITUCIÓN / INSTITUTION:** - Unit of Neuro-Oncology, Hospital Universitari de Bellvitge - ICO Duran i Reynals, Barcelona, España.

**RESUMEN / SUMMARY:** - Glioblastoma-related epilepsy requires paying careful attention to a combination of factors with an integrated approach. Major interrelated issues must be considered in the seizure care of glioblastoma patients. Seizure control frequently requires the administration of antiepileptic drugs simultaneously with other treatments, including surgery, radiotherapy and chemotherapy, with complete seizure relief often being difficult to achieve. The pharmacological interactions between antiepileptic drugs and antineoplastic agents can modify the activity of both treatments, compromising their efficacy and increasing the probability of developing adverse events related to both therapies. This review summarizes the new pathophysiological pathways involved in the epileptogenesis of glioblastoma-related seizures and the interactions between antiepileptic drugs and oncological treatment, paying special attention to its impact on survival and the current evidence of the antiepileptic treatment efficacy, including the potential usefulness of new third-generation compounds.

[639]

**TÍTULO / TITLE:** - Depletion of Regulatory T Cells in a Mouse Experimental Glioma Model through Anti-CD25 Treatment Results in the Infiltration of Non-Immunosuppressive Myeloid Cells in the Brain.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Dev Immunol. 2013;2013:952469. doi: 10.1155/2013/952469. Epub 2013 Apr 23.

●●Enlace al texto completo (gratis o de pago) [1155/2013/952469](#)

**AUTORES / AUTHORS:** - Maes W; Verschuere T; Van Hoylandt A; Boon L; Van Gool S

**INSTITUCIÓN / INSTITUTION:** - Laboratory for Thrombosis Research, Interdisciplinary Research Facility Life Sciences Kulak, E. Sabbelaan 53, 8500 Kortrijk, Belgium.

**RESUMEN / SUMMARY:** - The recruitment and activation of regulatory T cells (Tregs) in the micro-environment of malignant brain tumors has detrimental effects on antitumoral immune responses. Hence, local elimination of Tregs within the tumor micro-environment represents a highly valuable tool from both a fundamental and clinical perspective. In the syngeneic experimental GL261 murine glioma model, Tregs were prophylactically eliminated through treatment with PC61, an anti-CD25 mAb. This resulted in specific elimination of CD4+CD25hiFoxp3+ Treg within brain-infiltrating lymphocytes and complete protection against subsequent orthotopic GL261 tumor challenge. Interestingly, PC61-treated mice also showed a pronounced infiltration of CD11b+ myeloid cells in the brain. Phenotypically, these cells could not be considered as Gr-1+

myeloid-derived suppressor cells (MDSC) but were identified as F4/80+ macrophages and granulocytes.

[640]

**TÍTULO / TITLE:** - Utility of resting fMRI and connectivity in patients with brain tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol India. 2013 Mar-Apr;61(2):144-51. doi: 10.4103/0028-3886.111120.

●●Enlace al texto completo (gratis o de pago) [4103/0028-3886.111120](https://doi.org/10.4103/0028-3886.111120)

**AUTORES / AUTHORS:** - Manglore S; Bharath RD; Panda R; George L; Thamodharan A; Gupta AK

**INSTITUCIÓN / INSTITUTION:** - Department of Neuroimaging and Interventional Radiology, National Institute of Mental Health and Neuroscience, Bangalore, India.

**RESUMEN / SUMMARY:** - BACKGROUND: Resting state (task independent) Functional Magnetic Resonance Imaging (fMRI) has opened a new avenue in cognitive studies and has found practical clinical applications. MATERIALS AND METHODS: Resting fMRI analysis was performed in six patients with brain tumor in the motor cortex. For comparison, task-related mapping of the motor cortex was done. Connectivity analysis to study the connections and strength of the connections between the primary motor cortex, premotor cortex, and primary somatosensory cortex on the affected side was also performed and compared with the contralateral normal side and the controls. RESULTS: Resting fMRI in patients with brain tumor in the motor cortex mapped the motor cortex in a task-free state and the results were comparable to the motor task paradigm. Decreased connectivity on the tumor-affected side was observed, as compared to the unaffected side. CONCLUSION: Resting fMRI and connectivity analysis are useful in the presurgical evaluation of patients with brain tumors and may help in uncooperative or pediatric patients. They can also prognosticate the postoperative outcome. This method also has significant applications due to the ease of image acquisition.

[641]

**TÍTULO / TITLE:** - Hippocampal gene expression dysregulation of Klotho, nuclear factor kappa B and tumor necrosis factor in temporal lobe epilepsy patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neuroinflammation. 2013 May 1;10(1):53. doi: 10.1186/1742-2094-10-53.

●●Enlace al texto completo (gratis o de pago) [1186/1742-2094-10-53](https://doi.org/10.1186/1742-2094-10-53)

**AUTORES / AUTHORS:** - Teocchi MA; Ferreira AE; da Luz de Oliveira EP; Tedeschi H; D'Souza-Li L

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Pediatric Endocrinology, Center for Investigation in Pediatrics, University of Campinas, PO Box 6111, Campinas, SP, 13083-970, Brazil. [ldesouza@fcm.unicamp.br](mailto:ldesouza@fcm.unicamp.br).

**RESUMEN / SUMMARY:** - BACKGROUND: Previous research in animal seizure models indicates that the pleiotropic cytokine TNF is an important effector/mediator of neuroinflammation and cell death. Recently, it has been demonstrated that TNF downregulates Klotho (KL) through the nuclear factor kappa B (NFkB) system in animal models of chronic kidney disease and colitis. KL function in the brain is unclear, although Klotho knockout (KI-/-) mice exhibit neural degeneration and a reduction of hippocampal synapses. Our aim was to verify if the triad KL-NFKB1-TNF is also dysregulated in temporal lobe epilepsy associated with hippocampal sclerosis (TLE(HS)) patients. FINDINGS: We evaluated TNF, NFKB1 and KL relative mRNA expression levels by reverse transcription quantitative PCR (RT-qPCR) in resected hippocampal tissue samples from 14 TLE(HS) patients and compared them to five post mortem controls. Four reference genes were used: GAPDH, HPRT1, ENO2 and TBP. We found that TNF expression was dramatically upregulated in TLE(HS) patients (P <0.005). NFKB1 expression was also increased (P <0.03) while KL was significantly downregulated (P <0.03) in TLE(HS) patients. Hippocampal KL expression had an inverse correlation with NFKB1 and TNF. CONCLUSIONS: Our data suggest that, similar to other inflammatory diseases, TNF downregulates KL through NFkB in TLE(HS) patients. The remarkable TNF upregulation in patients is a strong indication of hippocampal chronic inflammation. Our finding of hippocampal KL downregulation has wide implications not only for TLE(HS) but also for other neuronal disorders related to neurodegeneration associated with inflammation.

[642]

**TÍTULO / TITLE:** - Acute brainstem compression by intratumoral hemorrhages in an intracranial hypoglossal schwannoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Leg Med (Tokyo). 2013 Mar 28. pii: S1344-6223(13)00022-9. doi: 10.1016/j.legalmed.2013.02.001.

●●Enlace al texto completo (gratis o de pago)

[1016/j.legalmed.2013.02.001](http://1016/j.legalmed.2013.02.001)

**AUTORES / AUTHORS:** - Inoue H; Nakagawa Y; Ikemura M; Usugi E; Kiyofuji Y; Nata M

**INSTITUCIÓN / INSTITUTION:** - Department of Forensic Medicine and Sciences, Mie University Graduate School of Medicine, Edobashi 2-174, Tsu, Mie 514-8507, Japan. Electronic address: [inoueh@doc.medic.mie-u.ac.jp](mailto:inoueh@doc.medic.mie-u.ac.jp).

**RESUMEN / SUMMARY:** - A 77-year-old female in the hospital was found tachycardic and hypothermic by a nurse, and the patient's respiration subsequently ceased. Forensic autopsy revealed an intracranial cystic tumor

that would have compressed the brainstem. On microscopic examination, the tumor was diagnosed as an Antoni A schwannoma growth, and recent multiple intratumoral hemorrhages in the intracranial schwannoma were observed, suggesting the sudden enlargement of the intracranial schwannoma due to intratumoral hemorrhaging. Accordingly, we diagnosed the cause of death as brainstem compression induced by the intratumoral hemorrhaging in the intracranial schwannoma. Meanwhile, a rhinopharyngeal tumor was also detected by the autopsy, which was compatible with an antemortem diagnosis of a dumbbell-shaped hypoglossal schwannoma.

[643]

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**- CASTELLANO -**

**TÍTULO / TITLE:** Ponowne operacje chorych z glejakami wysoko zroznicowanymi polozonymi w okolicach elokwentnych mozgu lub w poblizu okolic elokwentnych mozgu.

**TÍTULO / TITLE:** - Reoperations of patients with low-grade gliomas in eloquent or near eloquent brain areas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Neurochir Pol. 2013;47(2):116-125.

**AUTORES / AUTHORS:** - Kaspera W; Majchrzak K; Bobek-Billewicz B; Hebda A; Stasik-Pres G; Majchrzak H; Ladzinski P; Machowska-Majchrzak A

**INSTITUCIÓN / INSTITUTION:** - Wojciech Kaspera, Katedra i Oddzial Kliniczny Neurochirurgii, Plac Medykow 1, 41-200 Sosnowiec, tel. +48 32 368 25 51, e-mail: [wkaspera@wp.pl](mailto:wkaspera@wp.pl).

**RESUMEN / SUMMARY:** - Background and purpose: Reoperations of patients with recurrent low-grade gliomas (LGG) are not always recommended due to a higher risk of neurological deficits when compared to initial surgery. The purpose of the present study was to evaluate surgical outcomes of patients operated on for recurrent LGG. Material and methods: Sixteen patients who had surgery for recurrent LGG out of 68 LGG patients who underwent surgery at the Department of Neurosurgery in Sosnowiec, Poland between 2005 and 2011 were enrolled in the study. Results: A large tumour volume prior to the initial surgery was the most significant parameter influencing LGG progression (96.6 cm<sup>3</sup> vs. 47.9 cm<sup>3</sup>, p = 0.01). Increased incidence of epileptic seizures and decreased mental ability according to Karnofsky score were the most common symptoms associated with tumour recurrence. In the group of patients with malignant transformation, the relative cerebral blood volume (rCBV) was considerably increased (1.21 vs. 2.41, p < 0.01). No statistically significant difference was found in terms of the extent of resection between initial surgery and reoperation. Similarly, no significant difference was found in the number of patients with a permanent neurological deficit after initial surgery and reoperation. Conclusions: Reoperations of the patients with recurrent LGG are

not burdened with a higher risk of neurological sequelae when compared to initial surgery. The extent of resection during the surgery for LGG recurrence is comparable to initial surgery. The increase of rCBV seems to be a significant biomarker that indicates malignant transformation.

[644]

**TÍTULO / TITLE:** - Mesenchymal stem cells deliver synthetic microRNA mimics to glioma cells and glioma stem cells and inhibit their cell migration and self-renewal.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Feb;4(2):346-61.

**AUTORES / AUTHORS:** - Lee HK; Finniss S; Cazacu S; Bucris E; Ziv-Av A; Xiang C; Bobbitt K; Rempel SA; Hasselbach L; Mikkelsen T; Slavin S; Brodie C

**INSTITUCIÓN / INSTITUTION:** - Davidson Laboratory of Cell Signaling and Tumorigenesis, Hermelin Brain Tumor Center, Department of Neurosurgery, Henry Ford Hospital, Detroit, MI, USA.

**RESUMEN / SUMMARY:** - MicroRNAs (miRNAs) have emerged as potential cancer therapeutics; however, their clinical use is hindered by lack of effective delivery mechanisms to tumor sites. Mesenchymal stem cells (MSCs) have been shown to migrate to experimental glioma and to exert anti-tumor effects by delivering cytotoxic compounds. Here, we examined the ability of MSCs derived from bone marrow, adipose tissue, placenta and umbilical cord to deliver synthetic miRNA mimics to glioma cells and glioma stem cells (GSCs). We examined the delivery of miR-124 and miR-145 mimics as glioma cells and GSCs express very low levels of these miRNAs. Using fluorescently labeled miRNA mimics and in situ hybridization, we demonstrated that all the MSCs examined delivered miR-124 and miR-145 mimics to co-cultured glioma cells and GSCs via gap junction-dependent and independent processes. The delivered miR-124 and miR-145 mimics significantly decreased the luciferase activity of their respected reporter target genes, SCP-1 and Sox2, and decreased the migration of glioma cells and the self-renewal of GSCs. Moreover, MSCs delivered Cy3-miR-124 mimic to glioma xenografts when administered intracranially. These results suggest that MSCs can deliver synthetic exogenous miRNA mimics to glioma cells and GSCs and may provide an efficient route of therapeutic miRNA delivery in vivo.

[645]

**TÍTULO / TITLE:** - Understanding glioma stem cells: rationale, clinical relevance and therapeutic strategies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Neurother. 2013 May;13(5):545-55. doi: 10.1586/ern.13.42.

●●Enlace al texto completo (gratis o de pago) [1586/ern.13.42](#)

**AUTORES / AUTHORS:** - Ahmed AU; Auffinger B; Lesniak MS

**INSTITUCIÓN / INSTITUTION:** - The Brain Tumor Center, The University of Chicago, Chicago, IL 60637, USA.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme is one of the most aggressive brain tumors in adults. Despite the use of the best available multimodal therapeutic approaches, the prognosis remains dismal. The identification of glioma stem cells (GSCs) has offered new hope to affected patients, since it could explain, in part, the highly heterogeneous nature of this tumor and its chemo- and radio-resistance. Although still in its infancy, GSC research has unveiled many of its complexities and the theory itself remains controversial. GSC phenotype can significantly vary between patients and a single tumor may present several distinct GSCs. New therapeutic solutions that effectively target this population are of utmost importance, since they may be able to decrease neoplastic recurrence and improve patient survival. Here, we discuss the mechanisms by which GSCs lead to glioma relapse, the main controversies in this field and the most recent treatments that could successfully target this population.

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[646]

**TÍTULO / TITLE:** - Quality of life measures as a preliminary clinical indicator in patients with primary brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Surg Neurol Int. 2013 Apr 5;4:48. doi: 10.4103/2152-7806.110143. Print 2013.

●●Enlace al texto completo (gratis o de pago) [4103/2152-7806.110143](#)

**AUTORES / AUTHORS:** - Shields LB; Choucair A; Choucair AK

**INSTITUCIÓN / INSTITUTION:** - Norton Neuroscience Institute and Norton Cancer Institute, Norton Healthcare, Louisville, KY 40202, USA.

**RESUMEN / SUMMARY:** - BACKGROUND: The health-related quality of life (HRQOL) measures serve as valuable indicators of survival in patients with newly diagnosed primary brain tumors (PBTs). HRQOL outcomes may benefit clinical decision-making by individualizing patient treatment and improving communications between the doctor, patient, and families. Exploring the individual items of the European Organization and Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QOL) measures may be predictive of prognosis. METHODS: We prospectively collected the validated HRQOL and standard clinical and radiological measures from 48 patients with newly diagnosed PBT. The patients were followed every 3 months over 2 years. No proxies were allowed. Questionnaire responses were compared between two groups: Patients with recurrence and/or death (n = 26) and patients without a recurrence (n = 22). A total of 17 patients succumbed to a tumor-related death. Statistical analysis utilizing nonparametric t-tests and Wilcoxon sign tests

assessed QOL responses. RESULTS: Significant group differences were noted in the QOL measures with more negative responses in the recurrence group. EORTC QLQ-C30 questions revealed a poor global HRQOL scale ( $P < 0.005$ ) and pain interfering with daily activities ( $P < 0.05$ ). EORTC QLQ-BN20 questions revealed weakness of the legs ( $P < 0.05$ ), coordination difficulties ( $P < 0.005$ ), and unsteady gait ( $P < 0.05$ ). Hospital Anxiety and Depression Scale (HADS) questions reflected a patient who is slowed down ( $P < 0.01$ ) and “frightened” ( $P < 0.05$ ). CONCLUSION: Our analysis of longitudinal HRQOL measures may shed light on the prognostic significance of HRQOL measures in patients with newly diagnosed PBT. Further research is warranted to determine which selected individual measures of the EORTC QOL measures may be predictive of a patient’s progression-free and overall survival and to test their validity and reliability in clinical trials.

[647]

**TÍTULO / TITLE:** - Better Prognosis of Patients with Glioma Expressing FGF2-Dependent PDGFRA Irrespective of Morphological Diagnosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 22;8(4):e61556. doi: 10.1371/journal.pone.0061556. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0061556](http://1371/journal.pone.0061556)

**AUTORES / AUTHORS:** - Chen D; Persson A; Sun Y; Salford LG; Nord DG; Englund E; Jiang T; Fan X

**INSTITUCIÓN / INSTITUTION:** - The Rausing Laboratory, Department of Neurosurgery, Lund University, Lund, Sweden.

**RESUMEN / SUMMARY:** - Signaling of platelet derived growth factor receptor alpha (PDGFRA) is critically involved in the development of gliomas. However, the clinical relevance of PDGFRA expression in glioma subtypes and the mechanisms of PDGFRA expression in gliomas have been controversial. Under the supervision of morphological diagnosis, analysis of the GSE16011 and the Repository of Molecular Brain Neoplasia Data (Rembrandt) set revealed enriched PDGFRA expression in low-grade gliomas. However, gliomas with the top 25% of PDGFRA expression levels contained nearly all morphological subtypes, which was associated with frequent IDH1 mutation, 1p LOH, 19q LOH, less EGFR amplification, younger age at disease onset and better survival compared to those gliomas with lower levels of PDGFRA expression. SNP analysis in Rembrandt data set and FISH analysis in eleven low passage glioma cell lines showed infrequent amplification of PDGFRA. Using in vitro culture of these low passage glioma cells, we tested the hypothesis of gliogenic factor dependent expression of PDGFRA in glioma cells. Fibroblast growth factor 2 (FGF2) was able to maintain PDGFRA expression in glioma cells. FGF2 also induced PDGFRA expression in glioma cells with low

or non-detectable PDGFRA expression. FGF2-dependent maintenance of PDGFRA expression was concordant with the maintenance of a subset of gliogenic genes and higher rates of cell proliferation. Further, concordant expression patterns of FGF2 and PDGFRA were detected in glioma samples by immunohistochemical staining. Our findings suggest a role of FGF2 in regulating PDGFRA expression in the subset of gliomas with younger age at disease onset and longer patient survival regardless of their morphological diagnosis.

[648]

**TÍTULO / TITLE:** - A case of glioblastoma in infarcted brain.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J La State Med Soc. 2013 Jan-Feb;165(1):30-2.

**AUTORES / AUTHORS:** - Ojemakinde O; Gonzalez Toledo E; Wilson J

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Louisiana State University Health Sciences Center, Shreveport, USA.

**RESUMEN / SUMMARY:** - Patients with occult cancer of systemic or intracranial origin may clinically present with stroke as an initial manifestation due to tumor-associated hemorrhage and/or infarction. Such cases are usually clearly temporally related. We present a case with separate instances of hemorrhagic infarction and subsequent glioblastoma that were temporally separated by several years. This case may be an illustration of recent findings in mechanisms of brain repair and tumor biology.

[649]

**TÍTULO / TITLE:** - A Variant Form of the Human Deleted in Malignant Brain Tumor 1 (DMBT1) Gene Shows Increased Expression in Inflammatory Bowel Diseases and Interacts with Dimeric Trefoil Factor 3 (TFF3).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 15;8(5):e64441. doi: 10.1371/journal.pone.0064441. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0064441](http://1371/journal.pone.0064441)

**AUTORES / AUTHORS:** - Madsen J; Sorensen GL; Nielsen O; Tornoe I; Thim L; Fenger C; Mollenhauer J; Holmskov U

**INSTITUCIÓN / INSTITUTION:** - Sir Henry Wellcome Laboratories, Department of Child Health, Clinical and Experimental Sciences, Faculty of Medicine, Southampton General Hospital, University of Southampton, Southampton, United Kingdom ; Institute for Life Sciences, University of Southampton, Southampton, United Kingdom.

**RESUMEN / SUMMARY:** - The protein deleted in malignant brain tumors (DMBT1) and the trefoil factor (TFF) proteins have all been proposed to have roles in

epithelial cell growth and cell differentiation and shown to be up regulated in inflammatory bowel diseases. A panel of monoclonal antibodies was raised against human DMBT1(gp340). Analysis of lung washings and colon tissue extracts by Western blotting in the unreduced state, two antibodies (Hyb213-1 and Hyb213-6) reacted with a double band of 290 kDa in lung lavage. Hyb213-6, in addition, reacted against a double band of 270 kDa in colon extract while Hyb213-1 showed no reaction. Hyb213-6 showed strong cytoplasmic staining in epithelial cells of both the small and large intestine whereas no staining was seen with Hyb213-1. The number of DMBT1(gp340) positive epithelial cells, stained with Hyb213-6, was significantly up regulated in inflammatory colon tissue sections from patients with ulcerative colitis ( $p < 0.0001$ ) and Crohn's disease ( $p = 0.006$ ) compared to normal colon tissue. Immunohistochemical analysis of trefoil factor TFF1, 2 and 3 showed that TFF1 and 3 localized to goblet cells in both normal colon tissue and in tissue from patients with ulcerative colitis or Crohn's disease. No staining for TFF2 was seen in goblet cells in normal colon tissue whereas the majority of tissue sections in ulcerative colitis and Crohn's disease showed sparse and scattered TFF2 positive goblet cells. DMBT1 and TFF proteins did therefore not co-localize in the same cells but localized in adjacent cells in the colon. The interaction between DMBT1(gp340) and trefoil TFFs proteins was investigated using an ELISA assay. DMBT1(gp340) bound to solid-phase bound recombinant dimeric TFF3 in a calcium dependent manner ( $p < 0.0001$ ) but did not bind to recombinant forms of monomeric TFF3, TFF2 or glycosylated TFF2. This implies a role for DMBT1 and TFF3 together in inflammatory bowel disease.

[650]

**TÍTULO / TITLE:** - Transplantation of neural stem cells overexpressing glial cell line-derived neurotrophic factor enhances Akt and Erk1/2 signaling and neurogenesis in rats after stroke.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin Med J (Engl). 2013 Apr;126(7):1302-9.

**AUTORES / AUTHORS:** - Yuan M; Wen SJ; Yang CX; Pang YG; Gao XQ; Liu XQ; Huang L; Yuan QL

**INSTITUCIÓN / INSTITUTION:** - Department of Anatomy and Neurobiology, Tongji University School of Medicine, Shanghai 200092, China.

**RESUMEN / SUMMARY:** - BACKGROUND: Our previous studies have indicated that the beneficial effects of grafting neural stem cells (NSCs) overexpressing glial cell line-derived neurotrophic factor (GDNF) in rats after stroke. However, the underlying mechanisms are highly debatable. In this study, we investigated whether neurogenesis, Akt, and extracellular signal-regulated kinase  $\frac{1}{2}$  (Erk1/2) signaling were involved in this process. METHODS: Transient ischemic stroke were induced by occluding middle cerebral artery for 2 hours and reperfusion. At 3 days after reperfusion, GDNF/NSCs, NSCs, and vehicle were

administered. Immunohistochemical staining was used to evaluate neurogenesis by nestin antibody; phosphorylation of Akt and Erk1/2 was investigated by Western blotting analysis. RESULTS: Transplantation of GDNF/NSCs and NSCs significantly increased nestin-positive cells compared to control group (vehicle) from 1 to 7 weeks after reperfusion, and GDNF/NSCs showed stronger effect than NSCs at 2 and 3 weeks after reperfusion. Meanwhile, enhanced phosphorylation level of Erk1/2 was observed in the GDNF/NSCs and NSCs groups compared with control group, and phosphorylation level of Erk1/2 in GDNF/NSCs group was remarkably higher than that of NSCs group at any given time. In contrast, expression of mitogen-activated protein kinase phosphatase-1 (MKP-1), known as inhibitor of Erk1/2 signaling, was significantly decreased in the GDNF/NSCs and NSCs groups compared with the control group. Moreover, much enhanced and prolonged phosphorylation level of Akt of GDNF/NSCs group was detected compared with control and NSCs group. CONCLUSION: Grafting GDNF/NSCs enhances neurogenesis and activates Akt and Erk1/2 signaling, that may provide the potential for GDNF/NSCs in stroke treatment.

[651]

**TÍTULO / TITLE:** - High resolution proton nuclear magnetic resonance (<sup>1</sup>H NMR) spectroscopy of surviving C6 glioma cells after X-ray irradiation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Folia Neuropathol. 2013;51(1):33-43.

**AUTORES / AUTHORS:** - Matulewicz L; Cichon A; Sokol M; Przybyszewski W; Glowala-Kosinska M; Gibas M

**INSTITUCIÓN / INSTITUTION:** - Department of Radiotherapy and Brachytherapy Planning, Maria Skłodowska-Curie Memorial Cancer Center and Institute of Oncology, Gliwice Branch, Gliwice, Poland. [lukasz.matulewicz@io.gliwice.pl](mailto:lukasz.matulewicz@io.gliwice.pl)

**RESUMEN / SUMMARY:** - PURPOSE: To study biochemical response of living model of glioma to X-rays irradiation using high resolution proton nuclear magnetic resonance (<sup>1</sup>H NMR) spectroscopy. MATERIAL AND METHODS: Rat glioma C6 cells were irradiated with 3.8 Gy (D<sub>0</sub>, the 37% clonogenic survival dose) of X-rays from a teletherapy unit at the dose rate 8.8 Gy/min. After irradiation the cells were incubated at 37 degrees C/5%CO<sub>2</sub>/95%O<sub>2</sub> for various period of incubation (24, 48, 72 and 96 hours) in the fresh medium. The high resolution <sup>1</sup>H NMR spectra of the agarose-cell mixtures (2 x 10<sup>7</sup>) cells/ml were acquired using a Varian Inova-300 multinuclear pulsed NMR spectrometer operating at the <sup>1</sup>H resonance frequency of 300 MHz. The mean spectra were obtained as the averages of six independent measurements. RESULTS: The statistically significant increase in the CH<sub>2</sub>/CH<sub>3</sub> lipid signals ratio in the C6 cells after irradiation with 3.8 Gy dose and incubation for 24-96 h was observed. CONCLUSIONS: Our method of the sample preparation enables the metabolic

effects of irradiation to be observed in viable cells, which can effectively support the identification of the spectroscopic changes in vivo. Application of the gel suspensions in the NMR studies has advantages over the usual liquid suspensions in terms of improved reproducibility of the data and cell viability, with no net loss of the spectral quality.

[652]

**TÍTULO / TITLE:** - The effect of weight in the outcomes of meningioma patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Surg Neurol Int. 2013 Apr 3;4:45. doi: 10.4103/2152-7806.110023. Print 2013.

●●Enlace al texto completo (gratis o de pago) [4103/2152-7806.110023](#)

**AUTORES / AUTHORS:** - Dickinson H; Carico C; Nuno M; Nosova K; Elramsisy A; Patil CG

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Center for Neurosurgical Outcomes Research, Maxine Dunitz Neurosurgical Institute, Cedars-Sinai Medical Center 8631 W. Third Street, Suite 800E, Los Angeles, CA 90048, USA.

**RESUMEN / SUMMARY:** - BACKGROUND: Meningiomas are more prevalent in women and mostly benign in nature. Our aim was to evaluate the association of weight and outcomes of meningioma patients undergoing craniotomy. METHODS: A retrospective analysis of meningioma patients discharged postcraniotomy between 1998 and 2007 was conducted. Univariate and multivariate analysis evaluated in-hospital mortality, complications, length of stay (LOS), and cost. RESULTS: According to the nationwide inpatient sample (NIS) database, an estimated 72,257 adult meningioma patients underwent a craniotomy in US hospitals during the study period. Female and male weight loss rates were 0.7% and 1.2%, respectively; obesity rates were 5.2% and 3.7%. Males had higher rates of malignant tumors than females (6.2% vs. 3.5%,  $P < 0.0001$ ), and malignant tumors were more common in patients with weight loss (6.4% vs. 4.3%,  $P = 0.03$ ). Weight loss was associated with higher mortality in men (OR 6.66,  $P < 0.0001$ ) and women (OR 3.92,  $P = 0.04$ ) as well as higher rates of postoperative complications in both men (OR 6.13,  $P < 0.0001$ ) and women (OR 8.37,  $P < 0.0001$ ). Furthermore, patients suffering weight loss had longer LOS and higher overall hospital cost when compared with all patients. In contrast, obesity seemed to reduce mortality (OR 0.47,  $P = 0.0006$ ) and complications (OR 0.8,  $P = 0.0007$ ) among women. CONCLUSIONS: In summary, weight loss seems to be the single most critical factor present in patients experiencing higher mortality, complications, hospital charges, and longer LOS. However, further studies aimed to assess the interrelation of potential preexisting comorbidities and weight loss are needed to establish causation.

[653]

**TÍTULO / TITLE:** - Mood disorder in a patient with a benign thalamic cystic lesion: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Med Case Rep. 2013 Apr 17;7(1):107. doi: 10.1186/1752-1947-7-107.

●●Enlace al texto completo (gratis o de pago) [1186/1752-1947-7-107](#)

**AUTORES / AUTHORS:** - Dham P; Alexander J

**INSTITUCIÓN / INSTITUTION:** - Rural and Remote Mental Health Service, Glenside, South Australia, Australia. [p\\_dham77@yahoo.com](mailto:p_dham77@yahoo.com).

**RESUMEN / SUMMARY:** - INTRODUCTION: The thalamus is increasingly gaining importance in psychiatric disorders. There are case reports in the literature of neuropsychiatric symptoms associated with thalamic infarcts. The present report elucidates the complexities of linking neuropsychiatric symptoms to a benign thalamic brain lesion, and its impact on management. CASE PRESENTATION: We present the case of a Caucasian man in his early 30s, who presented with a difficult to treat bipolar illness and coexisting thalamic lesion. CONCLUSIONS: In this report we explore the possible links between our patient's symptoms and his brain lesion. We discuss the possible neuronal mechanisms that may be involved and debate the most appropriate management strategies. We hope this report will assist further insights into the role of the thalamus in psychiatric disorders.

[654]

**TÍTULO / TITLE:** - Whole-Genome mRNA Expression Profiling Identifies Functional and Prognostic Signatures in Patients with Mesenchymal Glioblastoma Multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - CNS Neurosci Ther. 2013 May 11. doi: 10.1111/cns.12118.

●●Enlace al texto completo (gratis o de pago) [1111/cns.12118](#)

**AUTORES / AUTHORS:** - Bao ZS; Zhang CB; Wang HJ; Yan W; Liu YW; Li MY; Zhang W

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, China.

**RESUMEN / SUMMARY:** - BACKGROUND: The Cancer Genome Atlas (TCGA) has divided patients with glioblastoma multiforme (GBM) into four subtypes based on mRNA expression microarray. The mesenchymal subtype, with a larger proportion, is considered a more lethal one. Clinical outcome prediction is required to better guide more personalized treatment for these patients. AIMS: The objective of this study was to identify a mRNA expression signature to improve outcome prediction for patients with mesenchymal GBM. RESULTS:

For signature identification and validation, we downloaded mRNA expression microarray data from TCGA as training set and data from Rembrandt and GSE16011 as validation set. Cox regression and risk-score analysis were used to develop the 4 signatures, which were function and prognosis associated as revealed by Gene Ontology (GO) analysis and Gene Set Variation Analysis (GSVA). Patients who had high-risk scores according to the signatures had poor overall survival compared with patients who had low-risk scores. CONCLUSIONS: The signatures were identified as risk predictors that patients who had a high-risk score tended to have unfavorable outcome, demonstrating their potential for personalizing cancer management.

[655]

**TÍTULO / TITLE:** - The expression of cytoglobin as a prognostic factor in gliomas: a retrospective analysis of 88 patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Cancer. 2013 May 20;13:247. doi: 10.1186/1471-2407-13-247.

●●Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-247](#)

**AUTORES / AUTHORS:** - Xu HW; Huang YJ; Xie ZY; Lin L; Guo YC; Zhuang ZR; Lin XP; Zhou W; Li M; Huang HH; Wei XL; Man K; Zhang GJ

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Second Affiliated Hospital of Shantou University Medical College, North Dongxia Rd, Shantou, Guangdong, 515041, China. [xzy3175@yahoo.com.cn](mailto:xzy3175@yahoo.com.cn).

**RESUMEN / SUMMARY:** - BACKGROUND: Evidence suggests that cytoglobin (Cygb) may function as a tumor suppressor gene. METHODS: We immunohistochemically evaluated the expression of Cygb, phosphatidylinositol-3 kinase (PI-3K), phosphorylated (p)-Akt, Interleukin-6 (IL-6), tumor necrosis factor-alpha (TNFalpha) and vascular endothelial growth factor (VEGF) in 88 patients with 41 high-grade gliomas and 47 low-grade gliomas. Intratumoral microvessel density (IMD) was also determined and associated with clinicopathological factors. RESULTS: Low expression of Cygb was significantly associated with the higher histological grading and tumor recurrence. A significant negative correlation emerged between Cygb expression and PI3K, p-Akt, IL-6, TNFalpha or VEGF expression. Cygb expression was negatively correlated with IMD. There was a positive correlation between PI3K, p-Akt, IL-6, TNFalpha and VEGF expression with IMD. High histologic grade, tumor recurrence, decreased Cygb expression, increased PI3K expression, increased p-Akt expression and increased VEGF expression correlated with patients' overall survival in univariate analysis. However, only histological grading and Cygb expression exhibited a relationship with survival of patients as independent prognostic factors of glioma by multivariate analysis. CONCLUSIONS: Cygb loss may contribute to tumor recurrence and a worse

prognosis in gliomas. Cygb may serve as an independent predictive factor for prognosis of glioma patients.

[656]

**TÍTULO / TITLE:** - Viability reduction and Rac1 gene downregulation of heterogeneous ex-vivo glioma acute slice infected by the oncolytic Newcastle disease virus strain V4UPM.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomed Res Int. 2013;2013:248507. doi: 10.1155/2013/248507. Epub 2013 Mar 25.

●●Enlace al texto completo (gratis o de pago) [1155/2013/248507](#)

**AUTORES / AUTHORS:** - Mustafa Z; Shamsuddin HS; Ideris A; Ibrahim R; Jaafar H; Ali AM; Abdullah JM

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

**RESUMEN / SUMMARY:** - Oncolytic viruses have been extensively evaluated for anticancer therapy because this virus preferentially infects cancer cells without interfering with normal cells. Newcastle Disease Virus (NDV) is an avian virus and one of the intensively studied oncolytic viruses affecting many types of cancer including glioma. Nevertheless, the capability of NDV infection on heterogeneous glioma tissue in a cerebrospinal fluid atmosphere has never been reported. Recently, Rac1 is reported to be required for efficient NDV replication in human cancer cells and established a link between tumorigenesis and sensitivity to NDV. Rac1 is a member of the Rho GTPases involved in the regulation of the cell migration and cell-cycle progression. Rac1 knockdown leads to significant inhibition of viral replication. In this work, we demonstrated that NDV treatment led to significant reduction of tumour tissue viability of freshly isolated heterogeneous human brain tumour slice, known as an ex vivo glioma acute slice (EGAS). Analysis of gene expression indicated that reduced tissue viability was associated with downregulation of Rac1. However, the viability reduction was not persistent. We conclude that NDV treatment induced EGAS viability suppression, but subsequent downregulation of Rac1 gene may reduce the NDV replication and lead to regrowth of EGAS tissue.

[657]

**TÍTULO / TITLE:** - Deconstruction of medulloblastoma cellular heterogeneity reveals differences between the most highly invasive and self-renewing phenotypes.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neoplasia. 2013 Apr;15(4):384-98.

**AUTORES / AUTHORS:** - Morrison LC; McClelland R; Aiken C; Bridges M; Liang L; Wang X; Di Curzio D; Del Bigio MR; Taylor MD; Werbowetski-Ogilvie TE

**INSTITUCIÓN / INSTITUTION:** - Regenerative Medicine Program, Department of Biochemistry and Medical Genetics, University of Manitoba, Winnipeg, Manitoba, Canada.

**RESUMEN / SUMMARY:** - Medulloblastoma (MB) is the most common malignant primary pediatric brain tumor. Major research efforts have focused on characterizing and targeting putative brain tumor stem or propagating cell populations from the tumor mass. However, less is known about the relationship between these cells and highly invasive MB cells that evade current therapies. Here, we dissected MB cellular heterogeneity and directly compared invasion and self-renewal. Analysis of higher versus lower self-renewing tumor spheres and stationary versus migrating adherent MB cells revealed differential expression of the cell surface markers CD271 [p75 neurotrophin receptor (p75NTR)] and CD133. Cell sorting demonstrated that CD271 selects for subpopulations with a higher capacity for self-renewal, whereas CD133 selects for cells exhibiting increased invasion in vitro. CD271 expression is higher in human fetal cerebellum and primary samples of the Shh MB molecular variant and lower in the more aggressive, invasive group 3 and 4 subgroups. Global gene expression analysis of higher versus lower self-renewing MB tumor spheres revealed down-regulation of a cell movement transcription program in the higher self-renewing state and a novel potential role for axon guidance signaling in MB-propagating cells. We have identified a cell surface signature based on CD133/CD271 expression that selects for MB cells with a higher self-renewal potential or invasive capacity in vitro. Our study underscores a previously unappreciated role for CD271 in selecting for MB cell phenotypes and suggests that successful treatment of pediatric brain tumors requires concomitant targeting of a spectrum of transitioning self-renewing and highly infiltrative cell subpopulations.

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[658]

**TÍTULO / TITLE:** - What brain tumor patients and their families have taught me.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Nurs. 2013 Jun;45(3):171-5. doi: 10.1097/JNN.0b013e31828a40f6.

●●Enlace al texto completo (gratis o de pago)

[1097/JNN.0b013e31828a40f6](#)

**AUTORES / AUTHORS:** - Lucas MR

**RESUMEN / SUMMARY:** - The purpose of this article is to identify the experience of the patient with a World Health Organization grade III/IV and IV/IV brain tumor, and that of their family, to best understand how to treat them. It is the cumulative input of hundreds of patients and family members seen over a 20-year career of specialization at two teaching hospitals. No patient who has been diagnosed with a brain tumor, whether low grade, high grade, or benign,

escapes totally unharmed because tumor existence, surgical removal, and/or toxicity of treatment combine to cause varying degrees of brain injury. Additional considerations are the variables of tumor location within the brain, the age of the patient, their premorbid intellectual capacity, and their fear and anxiety, for full understanding of the impact and the complexity of the tumor and treatment on the individual patient. The mental health provider's mandate in caring for this population is threefold: first, provide hope in what patients feel is a hopeless situation; second, serve as witness to their experience and acknowledge and validate the changes and losses that occur; and third, create empowerment in what seems a helpless situation. For the purposes of this article, further reference to brain tumors will be World Health Organization grade III/IV and IV/IV.

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[659]

**TÍTULO / TITLE:** - Intracranial hydatid cyst. Clinical features and outcomes of surgical treatment of a series of 8 Iraqi cases.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurosciences (Riyadh). 2013 Apr;18(2):187-9.

**AUTORES / AUTHORS:** - Hasan ZN; Sagban WJ; Hatim AK; Assad MA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Alkindy College of Medicine, Baghdad University, Al-Nahdha Square, PO Box 47188, Jadiriya, Baghdad, Iraq. Tel. +964 7706067660. E-mail: [zaki\\_nooh@yahoo.com](mailto:zaki_nooh@yahoo.com).

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[660]

**TÍTULO / TITLE:** - Pseudotumor cerebri in a child treated with acitretin: a rare occurrence.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Pharmacol. 2013 Jan-Feb;45(1):89-90. doi: 10.4103/0253-7613.106444.

●●Enlace al texto completo (gratis o de pago) [4103/0253-7613.106444](https://doi.org/10.4103/0253-7613.106444)

**AUTORES / AUTHORS:** - Sarkar S; Das K; Roychoudhury S; Shrimal A

**INSTITUCIÓN / INSTITUTION:** - Department of Dermatology, School of Tropical Medicine, Kolkata, West Bengal, India.

**RESUMEN / SUMMARY:** - Pseudotumor cerebri (PTC) is a rare neurological disorder characterized by increased intracranial pressure in absence of any intra-cranial space-occupying lesion. It is mostly due to impairment of drainage of CSF from arachnoid villi. Clinically pseudotumor cerebri presents with headache, diplopia, nausea, vomiting, papilloedema and if treatment is delayed, may lead to blindness. Females of childbearing age group, endocrinal abnormalities and ingestion of certain drugs have been reported to be associated with pseudotumor cerebri. However, its occurrence in relation to acitretin ingestion has not been reported on pubmed database. Here we present

a case where significant temporal association of acitretin intake with PTC was found in a child who was being treated with this medication for recalcitrant pustular psoriasis. The case is reported for its rarity in occurrence and associated significant morbidity including visual loss if not diagnosed and treated immediately. According to Naranjo ADR Causality scale of adverse drug reaction, the association of PTC due to acitretin in our case was probable.

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[661]

**TÍTULO / TITLE:** - Clinical characteristics and treatment of angiomatous meningiomas: a report of 27 cases.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Exp Pathol. 2013;6(4):695-702. Epub 2013 Mar 15.

**AUTORES / AUTHORS:** - Liu Z; Wang C; Wang H; Wang Y; Li JY; Liu Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Qilu Hospital of Shandong University, Brain Science Research Institute of Shandong University, Jinan, Shandong Province, PR China.

**RESUMEN / SUMMARY:** - Angiomatous meningioma (AM) is a rare histological variant of meningioma. Twenty seven patients (14 male and 13 female) with angiomatous meningioma were treated in our institution. Their clinical presentation, neuroimaging studies, treatment and follow-up were investigated. The age of patients ranged from 24 to 72 years with a mean of 51.8 years. The clinical presentation was non-specific and depended on the location of the tumor and was mainly due to the mass effect. On computed tomography (CT) scanning, AMs showed slightly hyperintensity. On magnetic resonance imaging (MRI), AMs demonstrated hypointensity on T1-weighted images (T1WI), hyperintensity on T2-weighted images (T2WI), slight hypointensity on diffusion-weighted images (DWI), enhancement on postcontrast T1WI, peritumoral edema, and rich signal voids of vessels in the tumor. On histology, all tumors exhibited abundant blood vessels with at least focal classic meningothelial differentiation. Thirteen, eight, and six cases were achieved Simpson grade I, II and III-IV resection respectively. Nineteen cases were followed for 8 to 125 months with a mean of 47.9 months. Four patients with residual tumor were treated with postoperative radiation therapy and all of them had stable disease. One patient with Simpson grade II resection was not treated with radiation therapy and developed recurrent tumor in 5 years. In conclusion, angiomatous meningiomas have relative high male to female ratio, more frequent peritumoral edema, and rich blood vessels. Gross total resection is still the treatment of choice. These patients with residual tumor after surgery can benefit from radiation therapy. Overall, the prognosis of AMs are as good as other benign meningiomas.

[662]

**TÍTULO / TITLE:** - Drug-loaded nanoparticle systems and adult stem cells: a potential marriage for the treatment of malignant glioma?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Mar;4(3):378-96.

**AUTORES / AUTHORS:** - Auffinger B; Morshed R; Tobias A; Cheng Y; Ahmed AU; Lesniak MS

**INSTITUCIÓN / INSTITUTION:** - Brain Tumor Center, The University of Chicago, Chicago, Illinois, USA.

**RESUMEN / SUMMARY:** - Despite all recent advances in malignant glioma research, only modest progress has been achieved in improving patient prognosis and quality of life. Such a clinical scenario underscores the importance of investing in new therapeutic approaches that, when combined with conventional therapies, are able to effectively eradicate glioma infiltration and target distant tumor foci. Nanoparticle-loaded delivery systems have recently arisen as an exciting alternative to improve targeted anti-glioma drug delivery. As drug carriers, they are able to efficiently protect the therapeutic agent and allow for sustained drug release. In addition, their surface can be easily manipulated with the addition of special ligands, which are responsible for enhancing tumor-specific nanoparticle permeability. However, their inefficient intratumoral distribution and failure to target disseminated tumor burden still pose a big challenge for their implementation as a therapeutic option in the clinical setting. Stem cell-based delivery of drug-loaded nanoparticles offers an interesting option to overcome such issues. Their ability to incorporate nanoparticles and migrate throughout interstitial barriers, together with their inherent tumor-tropic properties and synergistic anti-tumor effects make these stem cell carriers a good fit for such combined therapy. In this review, we will describe the main nanoparticle delivery systems that are presently available in preclinical and clinical studies. We will discuss their mechanisms of targeting, current delivery methods, attractive features and pitfalls. We will also debate the potential applications of stem cell carriers loaded with therapeutic nanoparticles in anticancer therapy and why such an attractive combined approach has not yet reached clinical trials.

[663]

**TÍTULO / TITLE:** - How to use molecular markers when caring for a patient with brain cancer.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am Soc Clin Oncol Educ Book. 2013;2013:114-6. doi: E10.1200/EdBook\_AM.2013.33.114.

●●Enlace al texto completo (gratis o de pago)

[1200/EdBook\\_AM.2013.33.114](#)

**AUTORES / AUTHORS:** - van den Bent MJ

**INSTITUCIÓN / INSTITUTION:** - From the Department of Neuro-oncology, ErasmusMC-Cancer Institute, Rotterdam, Netherlands.

**RESUMEN / SUMMARY:** - Although the central role of 1p/19q codeletion in oligodendroglioma was established almost two decades ago, apart from clear prognostic significance the implications for clinical care have been less clear. This has changed with the long-term follow-up analysis of the EORTC and RTOG trials on procarbazine, lomustine, and vincristine (PCV) chemotherapy in anaplastic oligodendroglioma. These have shown that 1p/19q loss in these tumors is predictive of overall survival benefit of the addition of PCV chemotherapy to radiotherapy.

[664]

**TÍTULO / TITLE:** - In vivo intracellular oxygen dynamics in murine brain glioma and immunotherapeutic response of cytotoxic T cells observed by fluorine-19 magnetic resonance imaging.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 8;8(5):e59479. doi: 10.1371/journal.pone.0059479. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0059479](http://1371/journal.pone.0059479)

**AUTORES / AUTHORS:** - Zhong J; Sakaki M; Okada H; Ahrens ET

**INSTITUCIÓN / INSTITUTION:** - Department of Biological Sciences and Pittsburgh NMR Center for Biomedical Research, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States of America.

**RESUMEN / SUMMARY:** - Noninvasive biomarkers of anti-tumoral efficacy are of great importance to the development of therapeutic agents. Tumor oxygenation has been shown to be an important indicator of therapeutic response. We report the use of intracellular labeling of tumor cells with perfluorocarbon (PFC) molecules, combined with quantitative  $(^{19}\text{F})$  spin-lattice relaxation rate ( $R_1$ ) measurements, to assay tumor cell oxygen dynamics in situ. In a murine central nervous system (CNS) GL261 glioma model, we visualized the impact of Pmel-1 cytotoxic T cell immunotherapy, delivered intravenously, on intracellular tumor oxygen levels. GL261 glioma cells were labeled ex vivo with PFC and inoculated into the mouse striatum. The  $R_1$  of  $(^{19}\text{F})$  labeled cells was measured using localized single-voxel magnetic resonance spectroscopy, and the absolute intracellular partial pressure of oxygen ( $p\text{O}_2$ ) was ascertained. Three days after tumor implantation, mice were treated with  $2 \times 10^7$  cytotoxic T cells intravenously. At day five, a transient spike in  $p\text{O}_2$  was observed indicating an influx of T cells into the CNS and putative tumor cell apoptosis. Immunohistochemistry and quantitative flow cytometry analysis confirmed that the  $p\text{O}_2$  was causally related to the T cells infiltration. Surprisingly, the  $p\text{O}_2$  spike was detected even though few (approximately  $4 \times 10^4$ ) T cells actually ingress into the CNS and with minimal tumor shrinkage. These results indicate

the high sensitivity of this approach and its utility as a non-invasive surrogate biomarker of anti-cancer immunotherapeutic response in preclinical models.

[665]

**TÍTULO / TITLE:** - Simultaneous Moyamoya disease and cervical spinal cord low-grade astrocytoma in a child with neurofibromatosis type 1.

**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 May 8;2013. pii: bcr2013009812. doi: 10.1136/bcr-2013-009812.

●●Enlace al texto completo (gratis o de pago) [1136/bcr-2013-009812](http://1136/bcr-2013-009812)

**AUTORES / AUTHORS:** - Gold JJ; Dory CE; Levy ML; Crawford JR

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, University of California San Diego, San Diego, California, USA.

[666]

**- CASTELLANO -**

**TÍTULO / TITLE:** Subependymalny obrovskobunkovy astrocytom s atypickými klinickými a patologickými črtami: diagnostická pasca.

**TÍTULO / TITLE:** - Subependymal giant cell astrocytoma with atypical clinical and pathological features: a diagnostic pitfall.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cesk Patol. 2013 Spring;49(2):76-79.

**AUTORES / AUTHORS:** - Svajdler Jr M; Deak L; Rychly B; Talarcik P; Frohlichova L

**RESUMEN / SUMMARY:** - Subependymal giant cell astrocytoma (SEGA) is benign, slowly growing tumor linked to the tuberous sclerosis complex. It almost always occurs near the foramen of Monro. Parenchymal extension and worrisome histological features, such as necrosis, mitoses, microvascular proliferation and pleomorphism are unusual in these tumors, but can occur rarely. A case of SEGA is presented, in a patient with no signs of tuberous sclerosis so far, with atypical imaging findings and areas of necrosis found microscopically. These worrisome features initially led to the false diagnosis of glioblastoma. The differential diagnosis of SEGA is discussed. Keywords: subependymal giant cell astrocytoma - atypical - necrosis.

[667]

**TÍTULO / TITLE:** - Cerebral aspergillus infection in pediatric acute lymphoblastic leukemia induction therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Med Paediatr Oncol. 2012 Oct;33(4):236-8. doi: 10.4103/0971-5851.107104.

●●Enlace al texto completo (gratis o de pago) [4103/0971-5851.107104](https://doi.org/10.4103/0971-5851.107104)

**AUTORES / AUTHORS:** - Prakash G; Thulkar S; Arava SK; Bakhshi S

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, Dr. B. R. A. Institute Rotary Cancer Hospital, All India Institute of Medical Sciences, New Delhi, India.

**RESUMEN / SUMMARY:** - Angioinvasive pulmonary infection from filamentous fungi is not an uncommon occurrence in immunocompromised patients like acute lymphoblastic leukemia (ALL). Rarely, these lesions can spread via the hematogenous route and involve multiple visceral organs. We report a case of a 14-year-old boy with ALL who developed angioinvasive pulmonary aspergillosis early in the course of induction therapy, which was followed by hematogenous dissemination and formation of multiple brain abscesses. The patient was treated with intravenous amphotericin B. There was no response to the therapy and the patient succumbed to disseminated infection. Postmortem lung biopsy confirmed angioinvasive pulmonary aspergillosis. Poor penetration of amphotericin B across the blood-brain barrier could be one of the contributory factors for poor response to antifungal therapy. We discuss the various antifungal agents with respect to their penetration in brain.

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[668]

**TÍTULO / TITLE:** - Modulation of HJURP (Holliday Junction-Recognizing Protein) Levels Is Correlated with Glioblastoma Cells Survival.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 25;8(4):e62200. doi: 10.1371/journal.pone.0062200. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062200](https://doi.org/10.1371/journal.pone.0062200)

**AUTORES / AUTHORS:** - Valente V; Serafim RB; de Oliveira LC; Adorni FS; Torrieri R; da Cunha Tirapelli DP; Espreafico EM; Oba-Shinjo SM; Marie SK; Paco-Larson ML; Carlotti CG Jr

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Analysis, Faculty of Pharmaceutical Sciences of Araraquara, University of Sao Paulo State (UNESP), Araraquara, Brazil ; Center for Integrative Systems Biology (CISBi), NAP-USP, Ribeirao Preto, Brazil.

**RESUMEN / SUMMARY:** - BACKGROUND: Diffuse astrocytomas are the most common type of primary brain cancer in adults. They present a wide variation in differentiation and aggressiveness, being classified into three grades: low-grade diffuse astrocytoma (grade II), anaplastic astrocytoma (grade III) and glioblastoma multiforme (grade IV), the most frequent and the major lethal type. Recent studies have highlighted the molecular heterogeneity of astrocytomas and demonstrated that large-scale analysis of gene expression could help in

their classification and treatment. In this context, we previously demonstrated that HJURP, a novel protein involved in the repair of DNA double-strand breaks, is highly overexpressed in glioblastoma. **METHODOLOGY/PRINCIPAL FINDINGS:** Here we show that HJURP is remarkably overexpressed in a cohort composed of 40 patients with different grade astrocytomas. We also observed that tumors presenting the higher expression levels of HJURP are associated with poor survival prognosis, indicating HJURP overexpression as an independent prognostic factor of death risk for astrocytoma patients. More importantly, we found that HJURP knockdown strongly affects the maintenance of glioblastoma cells in a selective manner. Glioblastoma cells showed remarkable cell cycle arrest and premature senescence that culminated in elevated levels of cell death, differently from non-tumoral cells that were minimally affected. **CONCLUSIONS:** These data suggest that HJURP has an important role in the maintenance of extremely proliferative cells of high-grade gliomas and point to HJURP as a potential therapeutic target for the development of novel treatments for glioma patients.

[669]

**TÍTULO / TITLE:** - The Relationship between Cerebrospinal Fluid Osteopontin Level and Central Nervous System Involvement in Childhood Acute Leukemia.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk J Pediatr. 2013 Jan-Feb;55(1):42-9.

**AUTORES / AUTHORS:** - Incesoy-Ozdemir S; Sahin G; Bozkurt C; Oren AC; Balkaya E; Ertem U

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Oncology, Dr. Sami Ulus Obstetrics and Pediatrics Training and Research Hospital, Ankara, Turkey. [sincesoy@yahoo.co.uk](mailto:sincesoy@yahoo.co.uk).

**RESUMEN / SUMMARY:** - The aim of this study was to evaluate the relationship between cerebrospinal fluid (CSF) osteopontin (OPN) levels and central nervous system (CNS) involvement in children with a diagnosis of acute leukemia. The study sample consisted of 62 patients who had been diagnosed with acute leukemia. The control group consisted of 16 patients that had presented and had no malignant disease, CNS infection or chronic disease. CSF OPN levels were studied with enzyme-linked immunosorbent assay (ELISA) method. The mean CSF OPN level was 32.76±49.22 ng/ml in the patients at the time of diagnosis and 14.93±6.84 ng/ml in the control group ( $p>0.05$ ). The mean CSF OPN level was 27.68±32.73 ng/ml at the time of diagnosis in the group without CNS involvement and 53.48±89.21 ng/ml in the group with CNS involvement ( $p>0.05$ ). However, the CSF OPN level at the time of CNS relapse in patients who developed CNS involvement during follow-up (127.4±52 ng/ml) was significantly higher than in the group without CNS involvement at diagnosis and follow-up (mean CSF OPN level: 27.68±32.73 ng/ml) ( $p<0.001$ ). The analysis of CSF OPN levels at the time of diagnosis-

before relapse and at the periods of relapse and remission in patients who had CNS involvement at diagnosis and/or follow-up revealed statistically significant differences between the time points ( $p < 0.001$ ). High CSF OPN levels in childhood acute leukemia patients may be used as evidence for CNS involvement, and any increases found in CSF OPN levels may be a preliminary predictor for CNS involvement.

[670]

**TÍTULO / TITLE:** - Differential expression of the RNA-binding motif protein 3 in human astrocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin Med J (Engl). 2013 May;126(10):1948-52.

**AUTORES / AUTHORS:** - Zhang HT; Zhang ZW; Xue JH; Kong HB; Liu AJ; Li SC; Liu YX; Xu DG

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, First Affiliated Hospital of People's Liberation Army General Hospital; Therapeutic Center for Malignant Nervous Tumor of Chinese People's Liberation Army, Beijing 100048, China.

**RESUMEN / SUMMARY:** - BACKGROUND: The RNA-binding motif protein 3 (RBM3), which is transcriptionally induced by low temperature and hypoxia, has recently been found to be upregulated in human tumors. However, its expression status in human astrocytoma is not well defined. This article focuses on the differential expression of RBM3 in human astrocytomas of different grades and normal brain tissues. METHODS: RBM3 was detected in astrocytomas and normal brain tissues by quantitative real-time PCR, immunohistochemistry, and Western blotting. Analysis of variance was performed on the data from quantitative real-time PCR. The Fisher's exact test was used to analyze the immunohistochemistry results. A P-value of less than 0.05 indicates a statistically significant difference. RESULTS: On one hand, the mRNA expression levels of three X-chromosome-related RBM genes (RBMX, RBM3, and RBM10) were detected by quantitative real-time PCR. The results showed that there were no significant differences in RBMX and RBM10 mRNA expression levels in human astrocytomas of different grades and normal brain tissues. However, RBM3 mRNA expression levels were elevated in high-grade (World Health Organization (WHO) Grade III-IV) astrocytomas versus low-grade (WHO Grade I-II) astrocytomas ( $5.06 \pm 0.66$  vs.  $1.60 \pm 0.58$ ;  $P < 0.05$ ) or normal controls ( $5.06 \pm 0.66$  vs.  $1.03 \pm 0.22$ ;  $P < 0.05$ ) as determined by quantitative real-time PCR analysis. On the other hand, immunohistochemistry showed an increased RBM3 labeling index in astrocytomas of different grades and normal brain tissues (positive staining rate: astrocytoma Grade IV, 92.9%; astrocytoma Grade III, 81.8%; astrocytoma Grade I-II, 50%; normal brain tissues, 37.5%; high-grade astrocytoma versus normal brain tissues,  $P < 0.05$ ;

high-grade astrocytoma versus low-grade astrocytoma,  $P < 0.05$ ). The higher protein levels of RBM3 were also validated in high-grade astrocytomas and low-grade astrocytomas compared with normal brain tissues by Western blotting. CONCLUSIONS: These data suggest that the overexpression of RBM3 may serve as an important molecular mechanism underlying astrocytic carcinogenesis. Moreover, RBM3 may have proliferative and/or proto-oncogenic functions in human astrocytomas.

[671]

**TÍTULO / TITLE:** - Chimeric antigen receptor containing ICOS signaling domain mediates specific and efficient antitumor effect of T cells against EGFRvIII expressing glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Hematol Oncol. 2013 May 9;6:33. doi: 10.1186/1756-8722-6-33.

●●Enlace al texto completo (gratis o de pago) [1186/1756-8722-6-33](#)

**AUTORES / AUTHORS:** - Shen CJ; Yang YX; Han EQ; Cao N; Wang YF; Wang Y; Zhao YY; Zhao LM; Cui J; Gupta P; Wong AJ; Han SY

**INSTITUCIÓN / INSTITUTION:** - Translational Research Center, Zhengzhou University People's Hospital, #7 Weiwu Road, Zhengzhou, Henan 450003, China. [shuangyinhan@zzu.edu.cn](mailto:shuangyinhan@zzu.edu.cn).

**RESUMEN / SUMMARY:** - BACKGROUND: Adoptive transfer of chimeric antigen receptor (CAR)-modified T cells appears to be a promising immunotherapeutic strategy. CAR combines the specificity of antibody and cytotoxicity of cytotoxic T lymphocytes, enhancing T cells' ability to specifically target antigens and to effectively kill cancer cells. Recent efforts have been made to integrate the costimulatory signals in the CAR to improve the antitumor efficacy. Epidermal growth factor receptor variant III (EGFRvIII) is an attractive therapeutic target as it frequently expresses in glioma and many other types of cancers. Our current study aimed to investigate the specific and efficient antitumor effect of T cells modified with CAR containing inducible costimulator (ICOS) signaling domain. METHODS: A second generation of EGFRvIII/CAR was generated and it contained the EGFRvIII single chain variable fragment, ICOS signaling domain and CD3zeta chain. Lentiviral EGFRvIII/CAR was prepared and human CD3+ T cells were infected by lentivirus encoding EGFRvIII/CAR. The expression of EGFRvIII/CAR on CD3+ T cells was confirmed by flow cytometry and Western blot. The functions of EGFRvIII/CAR+ T cells were evaluated using in vitro and in vivo methods including cytotoxicity assay, cytokine release assay and xenograft tumor mouse model. RESULTS: Chimeric EGFRvIIIscFv-ICOS-CD3zeta (EGFRvIII/CAR) was constructed and lentiviral EGFRvIII/CAR were made to titer of 106 TU/ml. The transduction efficiency of lentiviral EGFRvIII/CAR on T cells reached around 70% and expression of

EGFRvIII/CAR protein was verified by immunoblotting as a band of about 57 kDa. Four hour <sup>51</sup>Cr release assays demonstrated specific and efficient cytotoxicity of EGFRvIII/CAR+ T cells against EGFRvIII expressing U87 cells. A robust increase in the IFN-gamma secretion was detected in the co-culture supernatant of the EGFRvIII/CAR+ T cells and the EGFRvIII expressing U87 cells. Intravenous and intratumor injection of EGFRvIII/CAR+ T cells inhibited the in vivo growth of the EGFRvIII expressing glioma cells. CONCLUSIONS: Our study demonstrates that the EGFRvIII/CAR-modified T cells can destroy glioma cells efficiently in an EGFRvIII specific manner and release IFN-gamma in an antigen dependent manner. The specific recognition and effective killing activity of the EGFRvIII-directed T cells with ICOS signaling domain lays a foundation for us to employ such approach in future cancer treatment.

[672]

**TÍTULO / TITLE:** - Homologous Desensitization of Histamine-Mediated Signal Transduction System in C6 Glioma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin J Physiol. 2013 Apr 30;56(2). pii: CJP.2013.BAB094. doi: 10.4077/CJP.2013.BAB094.

●●Enlace al texto completo (gratis o de pago) [4077/CJP.2013.BAB094](#)

**AUTORES / AUTHORS:** - Tseng CL; Wei JW

**INSTITUCIÓN / INSTITUTION:** - Institute of Neuroscience, National Yang-Ming University, Shih-Pai, Beitou, Taipei 112 Taiwan, Republic of China.

**RESUMEN / SUMMARY:** - Molecular events involved in the homologous desensitization of histamine-mediated signal transduction system in glioma cells are not well understood. The aim of this study was designed to gain further insight into possible events in the process using the C6 glioma cells. Incubation of histamine caused increases in inositol phosphate (IP1) formation and intracellular free-calcium concentration  $[Ca^{2+}]_i$  in C6 glioma cells via the activation of a G-protein-coupled phospholipase C (PI-PLC). Histamine also caused an increase in extracellular release of arachidonic acid (AA) and formation of glycerophosphoinositol (GPI). These effects are likely to be mediated through the activation of receptor-coupled phospholipase A2 (PLA2). Pretreatment of C6 cells with histamine, from 0.1  $\mu$ M to 1 mM concentrations, for 10 to 60 min significantly reduced the histamine-induced IP1 production,  $[Ca^{2+}]_i$  accumulation, AA release and GPI formation, despite repeated wash of the cells with buffer solution. Staurosporine (10 nM), a protein kinase C inhibitor, reversed almost completely IP1 production, or partially for  $[Ca^{2+}]_i$ , GPI formation and AA release of this homologous desensitization effect of histamine. Pretreatment of C6 cells with phorbol 12-myristate 13-acetate (PMA), a protein kinase C activator, at 0.1 nM to 0.1  $\mu$ M for 2 to 15 min caused a reduction of histamine-induced IP1 formation and  $[Ca^{2+}]_i$  accumulation, but enhanced histamine-induced AA release and GPI formation. 10 nM

staurosporine completely reversed the effect of PMA on histamine-induced IP1 formation and partially on  $[Ca^{2+}]_i$  accumulation. However, staurosporine potentiated the effect of PMA on histamine-induced AA release and GPI formation, but the effect could be blocked by H7, a calcium-dependent protein kinase C inhibitor. Our results indicate that activation of protein kinase C by histamine in the signal transduction system is involved in the histamine-induced homologous desensitization event. Since PMA pretreatment could not mimic histamine-induced homologous desensitization event in AA release and GPI formation, it is likely due to the dual actions of this protein kinase activator: on calcium independently, and also on calcium dependent via influx of calcium ion through the plasma membrane. The calcium flux effect of PMA is related to the difference between PMA and histamine on the effects of AA release and GPI formation via activation on phospholipase A2. The results of this study provided strong evidence that protein kinase C is involved in this homologous desensitization caused by continuous histamine receptor activation.

[673]

**TÍTULO / TITLE:** - Primary central nervous system lymphoma: a clinicopathological and cytomorphological study from a tertiary care centre in Chennai, India.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian Pac J Cancer Prev. 2013;14(2):727-31.

**AUTORES / AUTHORS:** - Ambrose MM; Ghosh M; Mallikarjuna V; Annapurneswari S; Kurian A; Chakravarthy R

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, PIMS, Puducherry, India  
E-mail : [drmosesa@yahoo.com](mailto:drmosesa@yahoo.com).

**RESUMEN / SUMMARY:** - Background: The aim of this study was to analyze the clinicopathological and immunohistochemical features of primary central nervous system lymphoma (PCNSL) cases occurring in Indian patients and also study the utility of the crush smear preparation in intraoperative diagnosis. Materials and Methods: The immune status, clinical, radiological details, immunohistochemical profile, histopathological findings and cytological features in smear preparation of 32 cases of PCNSL were analyzed. Patients with systemic NHL and skull-base lymphomas were excluded. Results: The mean age of our patients was 52 years with a male: female ratio 1:1. A periventricular location was found in 62.5% of patients. None of our PCNSL cases were associated with AIDS. All cases except one were diffuse large B-cell lymphomas. Intraoperative diagnosis using crush smears allowed correct prediction in 93% of cases. Conclusions: Our study shows that PCNSL is seen predominantly in immunocompetent patients in India. The age of presentation is relatively young as compared to the West. Our study also stresses the utility of crush smear preparation in establishing an intraoperative diagnosis.

[674]

**TÍTULO / TITLE:** - Influence of serum and albumin on the in vitro anandamide cytotoxicity toward C6 glioma cells assessed by the MTT cell viability assay: implications for the methodology of the MTT tests.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Folia Neuropathol. 2013;51(1):44-50.

**AUTORES / AUTHORS:** - Bilmin K; Kopczynska B; Grieb P

**INSTITUCIÓN / INSTITUTION:** - Department of Experimental Pharmacology, Mossakowski Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland.

**RESUMEN / SUMMARY:** - Anandamide (AEA), an endogenous ligand of cannabinoid CB1 and CB2 receptors, which also binds transient receptor potential vanilloid type 1 receptor (TRPV1), has been shown to display substantial selective cytotoxicity toward some cancer cell lines in vitro, although the relevant data are not consistent. In the present study, we employed the MTT test to assess short-term cytotoxicity of AEA on C6 rat glioma cell culture. When anandamide was administered to the culture medium with foetal bovine serum (FBS), no cytotoxic effect was observed following 24 h exposure of the glioma cells to micromolar concentrations of AEA. However, if no serum was present in the medium, micro-to-submicromolar concentrations of AEA induced dose-dependent cytotoxicity clearly detectable after 24 h. Control experiments made it possible to exclude significant interference of serum with the MTT test per se. Bovine serum albumin mimicked the effect of FBS. We conclude that the apparent inhibition of short-term cytotoxicity of AEA toward C6 rat glioma cells in vitro is caused by binding AEA to serum proteins such as albumin. Taking into account that blood serum or albumin is practically always present in cell culture media, we discuss implications of binding substances to serum proteins for methodology and interpretation of in vitro cytotoxicity testing.

[675]

**TÍTULO / TITLE:** - Recurrent hyponatremia in an elderly patient with a cystic pituitary gland.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nephrourol Mon. 2012 Summer;4(3):582-4. doi: 10.5812/numonthly.3931. Epub 2012 Jun 20.

●●Enlace al texto completo (gratis o de pago) [5812/numonthly.3931](#)

**AUTORES / AUTHORS:** - Malleshappa P; Ranganath R; Chaudhari AP; Singhai P; Shah BV

**INSTITUCIÓN / INSTITUTION:** - Nephrology Department, Vaatsalya Hospital, Bharathi Healthcare Complex, R C Road, Hassan, Karnataka State, India.

**RESUMEN / SUMMARY:** - A 71-year-old male with a long history of diabetes and hypertension was admitted with mild azotemia and recurrent hyponatremia. He was diagnosed with a pituitary gland cystic tumor. On careful evaluation, his hyponatremia was found to be due to cerebral salt wasting. The patient made a full recovery following treatment for cerebral salt wasting.

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[676]

**TÍTULO / TITLE:** - Quantitative susceptibility mapping differentiates between blood depositions and calcifications in patients with glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013;8(3):e57924. doi: 10.1371/journal.pone.0057924. Epub 2013 Mar 21.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0057924](#)

**AUTORES / AUTHORS:** - Deistung A; Schweser F; Wiestler B; Abello M; Roethke M; Sahm F; Wick W; Nagel AM; Heiland S; Schlemmer HP; Bendszus M; Reichenbach JR; Radbruch A

**INSTITUCIÓN / INSTITUTION:** - Medical Physics Group, Institute of Diagnostic and Interventional Radiology I, Jena University Hospital - Friedrich Schiller University Jena, Philosophenweg 3, Jena, Germany.

**RESUMEN / SUMMARY:** - **OBJECTIVES:** The application of susceptibility weighted imaging (SWI) in brain tumor imaging is mainly used to assess tumor-related “susceptibility based signals” (SBS). The origin of SBS in glioblastoma is still unknown, potentially representing calcifications or blood depositions. Reliable differentiation between both entities may be important to evaluate treatment response and to identify glioblastoma with oligodendroglial components that are supposed to present calcifications. Since calcifications and blood deposits are difficult to differentiate using conventional MRI, we investigated whether a new post-processing approach, quantitative susceptibility mapping (QSM), is able to distinguish between both entities reliably. **MATERIALS AND METHODS:** SWI, FLAIR, and T1-w images were acquired from 46 patients with glioblastoma (14 newly diagnosed, 24 treated with radiochemotherapy, 8 treated with radiochemotherapy and additional anti-angiogenic medication). Susceptibility maps were calculated from SWI data. All glioblastoma were evaluated for the appearance of hypointense or hyperintense correlates of SBS on the susceptibility maps. **RESULTS:** 43 of 46 glioblastoma presented only hyperintense intratumoral SBS on susceptibility maps, indicating blood deposits. Additional hypointense correlates of tumor-related SBS on susceptibility maps, indicating calcification, were identified in 2 patients being treated with radiochemotherapy and in one patient being treated with additional anti-angiogenic medication. Histopathologic reports revealed an oligodendroglial component in one patient that presented calcifications on susceptibility maps. **CONCLUSIONS:** QSM provides a quantitative, local MRI

contrast, which reliably differentiates between blood deposits and calcifications. Thus, quantitative susceptibility mapping appears promising to identify rare variants of glioblastoma with oligodendroglial components non-invasively and may allow monitoring the role of calcification in the context of different therapy regimes.

[677]

**TÍTULO / TITLE:** - Expression and clinical significance of the proliferation marker minichromosome maintenance protein 2 (Mcm2) in diffuse astrocytomas WHO grade II.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Diagn Pathol. 2013 Apr 24;8(1):67. doi: 10.1186/1746-1596-8-67.

●●Enlace al texto completo (gratis o de pago) [1186/1746-1596-8-67](#)

**AUTORES / AUTHORS:** - Lind-Landstrom T; Varughese RK; Sundstrom S; Torp SH

**INSTITUCIÓN / INSTITUTION:** - Department of Laboratory Medicine, Children's and Women's Health, Faculty of Medicine, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. [sverre.torp@ntnu.no](mailto:sverre.torp@ntnu.no).

**RESUMEN / SUMMARY:** - BACKGROUND: The WHO classification system for astrocytomas is not considered optimal, mainly because of the subjective assessment of the histopathological features. Few prognostic variables have been found that stratify the risk of clinical progression in patients with grade II astrocytoma. For that reason there is a continuous search for biomarkers that can improve the histopathological diagnosis and prognostication of these tumours. AIM: This study was designed to investigate the prognostic significance of the proliferative marker Mcm2 (minichromosome maintenance protein 2) in diffuse astrocytomas WHO grade II and correlate the findings with histopathology, mitoses, and Ki67/MIB-1 immunostaining. METHOD: 61 patients with histologically verified grade II astrocytoma (WHO 2007) were investigated. Paraffin sections were immunostained with anti-Mcm2, and the Mcm2 proliferative index (PI) was determined as the percentage of immunoreactive tumour cell nuclei. RESULTS: Mcm2 PI was not associated with any histopathological features but correlated significantly with mitotic count and Ki67/MIB-1 PI ( $p < 0.05$ ). In the survival analyses Mcm2 showed trends to poorer survival, however, statistical significance was not achieved in the univariate analyses ( $p > 0.05$ ). CONCLUSIONS: In our hands Mcm2 immunostaining has no advantage over Ki67/MIB-1 in the evaluation of grade II astrocytomas. Larger studies are needed to fully clarify the prognostic role of this biomarker. VIRTUAL SLIDES: The virtual slide(s) for this article can be found here:

<http://www.diagnosticpathology.diagnomx.eu/vs/1715002791944037>.

[678]

**TÍTULO / TITLE:** - Cisplatin downregulates BCL2L12, a novel apoptosis-related gene, in glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - In Vitro Cell Dev Biol Anim. 2013 May 25.

●●Enlace al texto completo (gratis o de pago) [1007/s11626-013-9622-](#)

[4](#)

**AUTORES / AUTHORS:** - Taghavi MS; Akbarzadeh A; Mahdian R; Azadmanesh K; Javadi G

**INSTITUCIÓN / INSTITUTION:** - Department of Biology, Science and Research Branch, Islamic Azad University, Tehran, Iran, [ms.taghavi@srbiau.ac.ir](mailto:ms.taghavi@srbiau.ac.ir).

**RESUMEN / SUMMARY:** - Glioblastoma progression is mainly characterized by intense apoptosis resistance and marked necrosis. Over-expression of BCL2L12, a novel member of Bcl-2 family has been shown in primary glioblastoma. BCL2L12 blocks effective caspase-3/7 maturation and inhibits p53 tumor suppressor, deriving resistance toward apoptosis and inducing extensive cell necrosis. Cisplatin is a major chemotherapeutic agent which has a broad range of anti-neoplastic activities including apoptosis induction. To investigate the effect of cisplatin on the expression of BCL2L12 in glioblastoma cells, two glioblastoma cell lines were treated with different concentrations of cisplatin for 48 h. The cell viability and IC50 was determined using MTT assay. Then, the two glioblastoma cell lines were treated with 48 h IC50 concentration of cisplatin for 24, 48, and 72 h. Apoptosis induction was analyzed by fluorescence microscopy and flow cytometry. Gene expression study was performed on BCL2L12 and TBP as target and internal control genes, respectively. The quantitative real-time polymerase chain reaction results showed that BCL2L12 gene expression was significantly ( $p = 0.001$ ) downregulated in the presence of cisplatin. In conclusion, cisplatin treatment induced a time-dependent apoptosis in glioblastoma cells, at least partially via downregulation of BCL2L12 gene expression.

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[679]

**TÍTULO / TITLE:** - Synergy between CD8 T Cells and Th1 or Th2 Polarised CD4 T Cells for Adoptive Immunotherapy of Brain Tumours.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 23;8(5):e63933. doi: 10.1371/journal.pone.0063933. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0063933](#)

**AUTORES / AUTHORS:** - Hoepner S; Loh JM; Riccadonna C; Derouazi M; Maroun CY; Dietrich PY; Walker PR

**INSTITUCIÓN / INSTITUTION:** - Centre of Oncology, Geneva University Hospitals and University of Geneva, Geneva, Switzerland.

**RESUMEN / SUMMARY:** - The feasibility of cancer immunotherapy mediated by T lymphocytes is now a clinical reality. Indeed, many tumour associated antigens have been identified for cytotoxic CD8 T cells, which are believed to be key mediators of tumour rejection. However, for aggressive malignancies in specialised anatomic sites such as the brain, a limiting factor is suboptimal tumour infiltration by CD8 T cells. Here we take advantage of recent advances in T cell biology to differentially polarise CD4 T cells in order to explore their capacity to enhance immunotherapy. We used an adoptive cell therapy approach to work with clonal T cell populations of defined specificity. Th1 CD4 T cells preferentially homed to and accumulated within intracranial tumours compared with Th2 CD4 T cells. Moreover, tumour-antigen specific Th1 CD4 T cells enhanced CD8 T cell recruitment and function within the brain tumour bed. Survival of mice bearing intracranial tumours was significantly prolonged when CD4 and CD8 T cells were co-transferred. These results should encourage further definition of tumour antigens recognised by CD4 T cells, and exploitation of both CD4 and CD8 T cell subsets to optimise T cell therapy of cancer.

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[680]

**TÍTULO / TITLE:** - Transmigration of Neural Stem Cells across the Blood Brain Barrier Induced by Glioma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 5;8(4):e60655. doi: 10.1371/journal.pone.0060655. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0060655](http://1371/journal.pone.0060655)

**AUTORES / AUTHORS:** - Diaz-Coranguez M; Segovia J; Lopez-Ornelas A; Puerta-Guardo H; Ludert J; Chavez B; Meraz-Cruz N; Gonzalez-Mariscal L

**INSTITUCIÓN / INSTITUTION:** - Department of Physiology, Biophysics and Neuroscience, Cinvestav, Mexico City, Mexico ; Faculty of Medicine, UNAM, Mexico City, Mexico.

**RESUMEN / SUMMARY:** - Transit of human neural stem cells, ReNcell CX, through the blood brain barrier (BBB) was evaluated in an in vitro model of BBB and in nude mice. The BBB model was based on rat brain microvascular endothelial cells (RBMECs) cultured on Millicell inserts bathed from the basolateral side with conditioned media (CM) from astrocytes or glioma C6 cells. Glioma C6 CM induced a significant transendothelial migration of ReNcells CX in comparison to astrocyte CM. The presence in glioma C6 CM of high amounts of HGF, VEGF, zonulin and PGE2, together with the low abundance of EGF, promoted ReNcells CX transmigration. In contrast cytokines IFN-alpha, TNF-alpha, IL-12p70, IL-1beta, IL-6, IL-8 and IL-10, as well as metalloproteinases -2 and -9 were present in equal amounts in glioma C6 and

astrocyte CMs. ReNcells expressed the tight junction proteins occludin and claudins 1, 3 and 4, and the cell adhesion molecule CRTAM, while RBMECs expressed occludin, claudins 1 and 5 and CRTAM. Competing CRTAM mediated adhesion with soluble CRTAM, inhibited ReNcells CX transmigration, and at the sites of transmigration, the expression of occludin and claudin-5 diminished in RBMECs. In nude mice we found that ReNcells CX injected into systemic circulation passed the BBB and reached intracranial gliomas, which overexpressed HGF, VEGF and zonulin/prehaptoglobin 2.

[681]

**TÍTULO / TITLE:** - The SOX2-Interactome in Brain Cancer Cells Identifies the Requirement of MSI2 and USP9X for the Growth of Brain Tumor Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 7;8(5):e62857. doi: 10.1371/journal.pone.0062857. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062857](#)

**AUTORES / AUTHORS:** - Cox JL; Wilder PJ; Gilmore JM; Wuebben EL; Washburn MP; Rizzino A

**INSTITUCIÓN / INSTITUTION:** - Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha, Nebraska, United States of America.

**RESUMEN / SUMMARY:** - Medulloblastomas and glioblastomas, the most common primary brain tumors in children and adults, respectively, are extremely difficult to treat. Efforts to identify novel proteins essential for the growth of these tumors may help to further our understanding of the biology of these tumors, as well as, identify targets for future therapies. The recent identification of multiple transcription factor-centric protein interaction landscapes in embryonic stem cells has identified numerous understudied proteins that are essential for the self-renewal of these stem cells. To identify novel proteins essential for the fate of brain tumor cells, we examined the protein interaction network of the transcription factor, SOX2, in medulloblastoma cells. For this purpose, Multidimensional Protein Identification Technology (MudPIT) identified >280 SOX2-associated proteins in the medulloblastoma cell line DAOY. To begin to understand the roles of SOX2-associated proteins in brain cancer, we focused on two SOX2-associated proteins, Musashi 2 (MSI2) and Ubiquitin Specific Protease 9x (USP9X). Recent studies have implicated MSI2, a putative RNA binding protein, and USP9X, a deubiquitinating enzyme, in several cancers, but not brain tumors. We demonstrate that knockdown of MSI2 significantly reduces the growth of DAOY cells as well as U87 and U118 glioblastoma cells. We also demonstrate that the knockdown of USP9X in DAOY, U87 and U118 brain tumor cells strongly reduces their growth. Together, our studies identify a large set of SOX2-associated proteins in DAOY

medulloblastoma cells and identify two proteins, MSI2 and USP9X, that warrant further investigation to determine whether they are potential therapeutic targets for brain cancer.

[682]

**TÍTULO / TITLE:** - Transfer of ultrasmall iron oxide nanoparticles from human brain-derived endothelial cells to human glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - ACS Appl Mater Interfaces. 2013 May 8;5(9):3581-6. doi: 10.1021/am401310s. Epub 2013 Apr 24.

●●Enlace al texto completo (gratis o de pago) [1021/am401310s](#)

**AUTORES / AUTHORS:** - Halamoda Kenzaoui B; Angeloni S; Overstolz T; Niedermann P; Chapuis Bernasconi C; Liley M; Juillerat-Jeanneret L

**INSTITUCIÓN / INSTITUTION:** - Centre Hospitalier Universitaire Vaudois (CHUV) and University of Lausanne (UNIL) , Lausanne, Switzerland.

**RESUMEN / SUMMARY:** - Nanoparticles (NPs) are being used or explored for the development of biomedical applications in diagnosis and therapy, including imaging and drug delivery. Therefore, reliable tools are needed to study the behavior of NPs in biological environment, in particular the transport of NPs across biological barriers, including the blood-brain tumor barrier (BBTB), a challenging question. Previous studies have addressed the translocation of NPs of various compositions across cell layers, mostly using only one type of cells. Using a coculture model of the human BBTB, consisting in human cerebral endothelial cells preloaded with ultrasmall superparamagnetic iron oxide nanoparticles (USPIO NPs) and unloaded human glioblastoma cells grown on each side of newly developed ultrathin permeable silicon nitride supports as a model of the human BBTB, we demonstrate for the first time the transfer of USPIO NPs from human brain-derived endothelial cells to glioblastoma cells. The reduced thickness of the permeable mechanical support compares better than commercially available polymeric supports to the thickness of the basement membrane of the cerebral vascular system. These results are the first report supporting the possibility that USPIO NPs could be directly transferred from endothelial cells to glioblastoma cells across a BBTB. Thus, the use of such ultrathin porous supports provides a new in vitro approach to study the delivery of nanotherapeutics to brain cancers. Our results also suggest a novel possibility for nanoparticles to deliver therapeutics to the brain using endothelial to neural cells transfer.

[683]

**TÍTULO / TITLE:** - Quantitative proteomics comparison of arachnoid cyst fluid and cerebrospinal fluid collected perioperatively from arachnoid cyst patients.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Fluids Barriers CNS. 2013 Apr 29;10(1):17. doi: 10.1186/2045-8118-10-17.

●●Enlace al texto completo (gratis o de pago) [1186/2045-8118-10-17](https://doi.org/10.1186/2045-8118-10-17)

**AUTORES / AUTHORS:** - Berle M; Kroksveen AC; Garberg H; Aarhus M; Haaland OA; Wester K; Ulvik RJ; Helland C; Berven F

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Science, University of Bergen, Bergen, Norway. [magnus.berle@gmail.com](mailto:magnus.berle@gmail.com).

**RESUMEN / SUMMARY:** - BACKGROUND: There is little knowledge concerning the content and the mechanisms of filling of arachnoid cysts. The aim of this study was to compare the protein content of arachnoid cysts and cerebrospinal fluid by quantitative proteomics to increase the understanding of arachnoid cysts. METHODS: Arachnoid cyst fluid and cerebrospinal fluid from five patients were analyzed by quantitative proteomics in two separate experiments. In a label-free experiment arachnoid cyst fluid and cerebrospinal fluid samples from individual patients were trypsin digested and analyzed by Orbitrap mass spectrometry in a label-free manner followed by data analysis using the Progenesis software. In the second proteomics experiment, a patient sample pooling strategy was followed by MARS-14 immunodepletion of high abundant proteins, trypsin digestion, iTRAQ labelling, and peptide separation by mix-phase chromatography followed by Orbitrap mass spectrometry analysis. The results from these analyzes were compared to previously published mRNA microarray data obtained from arachnoid membranes. RESULTS: We quantified 348 proteins by the label-free individual patient approach and 1425 proteins in the iTRAQ experiment using a pool from five patients of arachnoid cyst fluid and cerebrospinal fluid. This is by far the largest number of arachnoid cyst fluid proteins ever identified, and the first large-scale quantitative comparison between the protein content of arachnoid cyst fluid and cerebrospinal fluid from the same patients at the same time. Consistently in both experiment, we found 22 proteins with significantly increased abundance in arachnoid cysts compared to cerebrospinal fluid and 24 proteins with significantly decreased abundance. We did not observe any molecular weight gradient over the arachnoid cyst membrane. Of the 46 proteins we identified as differentially abundant in our study, 45 were also detected from the mRNA expression level study. None of them were previously reported as differentially expressed. We did not quantify any of the proteins corresponding to gene products from the ten genes previously reported as differentially abundant between arachnoid cysts and control arachnoid membranes. CONCLUSIONS: From our experiments, the protein content of arachnoid cyst fluid and cerebrospinal fluid appears to be similar. There were, however, proteins that were significantly differentially abundant between arachnoid cyst fluid and cerebrospinal fluid. This could reflect the possibility that these proteins are affected by the filling mechanism of arachnoid cysts or are shed from the membranes into arachnoid cyst fluid. Our

results do not support the proposed filling mechanisms of oncotic pressure or valves.

[684]

**TÍTULO / TITLE:** - Primary isolated lymphoma of the fourth ventricle in an immunocompetent patient.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Oncol Med. 2013;2013:614658. doi: 10.1155/2013/614658. Epub 2013 Mar 28.

●●Enlace al texto completo (gratis o de pago) [1155/2013/614658](#)

**AUTORES / AUTHORS:** - Bokhari R; Ghanem A; Alahwal M; Baeesa S

**INSTITUCIÓN / INSTITUTION:** - Division of Neurological Surgery, Faculty of Medicine, King Abdulaziz University, P.O. Box 80215, Jeddah 21589, Saudi Arabia.

**RESUMEN / SUMMARY:** - Primary central nervous lymphoma (PCNSL) is a rare variant of extranodal non-Hodgkin's lymphoma with a especially poor prognosis. The diagnosis is usually encountered in immunodeficient patients but is also encountered, albeit uncommonly, in the immunocompetent. We present a 50-year-old male who developed signs and symptoms of increased intracranial pressure. Imaging revealed the presence of a fourth ventricle mass with obstructive hydrocephalus. First, the patient underwent emergency endoscopic third ventriculostomy followed, few days later, by complete tumor resection via a posterior fossa craniotomy. Postoperative histopathology revealed the lesion to be a PCNSL. He received adjuvant chemotherapy and radiation and remained with no recurrence on regular imaging studies for 18-month followup. We report herein the fourth case of isolated PCNSL lesion to the fourth ventricle in the literature and provide the rationale for our belief that craniotomy and tumor resection, if feasible, should be the initial line of management in similar cases to relieve hydrocephalus and achieve the diagnosis.

[685]

**TÍTULO / TITLE:** - Resting-state magnetoencephalography study of "small world" characteristics and cognitive dysfunction in patients with glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Onco Targets Ther. 2013 Apr 3;6:311-3. doi: 10.2147/OTT.S42471. Print 2013.

●●Enlace al texto completo (gratis o de pago) [2147/OTT.S42471](#)

**AUTORES / AUTHORS:** - Hu XH; Lei T; Xu HZ; Zou YJ; Liu HY

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Brain Hospital Affiliated to Nanjing Medical University, Nanjing, People's Republic of China.

**RESUMEN / SUMMARY:** - BACKGROUND: The purpose of this study was to analyze "small world" characteristics in glioma patients in order to understand the relationship between cognitive dysfunction and brain functional connectivity

network in the resting state. METHODS: Resting-state magnetoencephalography was performed in 20 patients with glioma and 20 healthy subjects. The clustering coefficient of the resting functional connectivity network in the brain, average path length, and “small world” index (SWI) were calculated. Cognitive function was estimated by testing of attention, verbal fluency, memory, athletic ability, visual-spatial ability, and intelligence. RESULTS: Compared with healthy controls, patients with glioma showed decreased cognitive function, and diminished low and high gamma band “small world” characteristics in the resting functional connectivity network. CONCLUSION: The SWI is associated with cognitive function and is diminished in patients with glioma, and is therefore correlated with cognition dysfunction.

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[686]

**TÍTULO / TITLE:** - Cerebral syphilitic gumma mimicking a brain tumor in the relapse of secondary syphilis in a human immunodeficiency virus-negative patient.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Mar;53(3):197-200. doi: 10.3340/jkns.2013.53.3.197. Epub 2013 Mar 31.

●●Enlace al texto completo (gratis o de pago) [3340/jkns.2013.53.3.197](#)

**AUTORES / AUTHORS:** - Yoon YK; Kim MJ; Chae YS; Kang SH

**INSTITUCIÓN / INSTITUTION:** - Division of Infectious Diseases, Department of Internal Medicine, Korea University College of Medicine, Seoul, Korea.

**RESUMEN / SUMMARY:** - Diagnosis of cerebral syphilitic gumma is frequently determined at the time of surgery, because imaging and laboratory findings demonstrate the elusive results. A 59-year-old woman presenting dysarthria showed a mass on her brain computed tomography. She was first suspected of brain tumor, but histological results from surgical resection revealed cerebral gumma due to neurosyphilis. After operation, she presented fever and rash with an infiltration on a chest X-ray. Histological assessment of skin was consistent with syphilis. Fluorescent treponemal antibody absorbed test IgG in cerebrospinal fluid was positive. She was successfully treated with ceftriaxone for 14 days.

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[687]

**TÍTULO / TITLE:** - Intracranial granuloma mimicking a brain tumor in a patient with scleroderma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Surg Neurol Int. 2013 Apr 18;4:54. doi: 10.4103/2152-7806.110651. Print 2013.

●●Enlace al texto completo (gratis o de pago) [4103/2152-7806.110651](#)

**AUTORES / AUTHORS:** - Patel A; Rathi N; Lee MK; Baborie A; Jenkinson MD

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Walton Centre for Neurology and Neurosurgery, Lower Lane, L9 7LJ, UK.

**RESUMEN / SUMMARY:** - **BACKGROUND:** Intracranial granulomatous masses presenting as space occupying lesions, although rare, have been described in the literature. Causes include infections, systemic granulomatous disorders, and iatrogenic from previous surgery. We present a case demonstrating that spontaneous intracranial granuloma can exist, often mimicking a brain tumor. **CASE DESCRIPTION:** A 62-year-old female presented with a short history of left sided partial seizures and a left hemiparesis. Magnetic resonance imaging revealed a right sided parafalcine lesion. Histopathology demonstrated chronic inflammation of granulomatous type. She responded to steroid treatment. **CONCLUSION:** She responded to steroid treatment. Our case demonstrated that spontaneous intracranial granuloma exists. Although rare, it should be considered in patients presenting with space occupying lesions. They can successfully be managed with steroid treatment.

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[688]

**TÍTULO / TITLE:** - AntagomiR-27<sup>a</sup> Targets FOXO3a in Glioblastoma and Suppresses U87 Cell Growth in Vitro and in Vivo.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian Pac J Cancer Prev. 2013;14(2):963-8.

**AUTORES / AUTHORS:** - Ge YF; Sun J; Jin CJ; Cao BQ; Jiang ZF; Shao JF

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Wuxi People's Hospital of Nanjing Medical University, Wuxi, China E-mail : [wxbrain@163.com](mailto:wxbrain@163.com).

**RESUMEN / SUMMARY:** - Objective: To study the effect of the antagomiR-27<sup>a</sup> inhibitor on glioblastoma cells. Methods: The miR-27<sup>a</sup> expression level in specimens of human glioblastoma and normal human brain tissues excised during decompression for traumatic brain injury was assessed using qRT-PCR; The predicted target gene of miR-27<sup>a</sup> was screened out through bioinformatics databases, and the predicted gene was verified using genetic report assays; the effect of antagomiR-27<sup>a</sup> on the invasion and proliferation of glioma cells was analyzed using MTT assays and 5-ethynyl-2'-deoxyuridine (EdU) labeling. A xenograft glioblastoma model in BALB-c nude mice was established to detect the effect of antagomiR-27<sup>a</sup> on tumour growth. Results: qRT-PCR results showed that miR-27<sup>a</sup> significantly increased in specimens from glioblastoma comparing with normal human brain tissues. Th miR-27<sup>a</sup> inhibitor significantly suppressed invasion and proliferation of glioblastoma cells. FOXO3a was verified as a new target of miR-27<sup>a</sup> by Western blotting and reporter analyzes. Tumor growth in vivo was suppressed by administration of the miR-27<sup>a</sup> inhibitor. Conclusion: MiR-27<sup>a</sup> may be up-regulated in human glioblastoma, and antagomiR-27<sup>a</sup> could inhibit the proliferation and invasion ability of glioblastoma cells.

[689]

**TÍTULO / TITLE:** - In Vivo c-Met Pathway Inhibition Depletes Human Glioma Xenografts of Tumor-Propagating Stem-Like Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Transl Oncol. 2013 Apr;6(2):104-11. Epub 2013 Apr 1.

**AUTORES / AUTHORS:** - Rath P; Lal B; Ajala O; Li Y; Xia S; Kim J; Laterra J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, The Hugo W. Moser Research Institute at Kennedy Krieger Inc and The Johns Hopkins University School of Medicine, Baltimore, MD.

**RESUMEN / SUMMARY:** - Solid malignancies contain sphere-forming stem-like cells that are particularly efficient in propagating tumors. Identifying agents that target these cells will advance the development of more effective therapies. Recent converging evidence shows that c-Met expression marks tumor-initiating stem-like cells and that c-Met signaling drives human glioblastoma multiforme (GBM) cell stemness in vitro. However, the degree to which tumor-propagating stem-like cells depend on c-Met signaling in histologically complex cancers remains unknown. We examined the effects of in vivo c-Met pathway inhibitor therapy on tumor-propagating stem-like cells in human GBM xenografts. Animals bearing pre-established tumor xenografts expressing activated c-Met were treated with either neutralizing anti-hepatocyte growth factor (HGF) monoclonal antibody L2G7 or with the c-Met kinase inhibitor PF2341066 (Crizotinib). c-Met pathway inhibition inhibited tumor growth, depleted tumors of sphere-forming cells, and inhibited tumor expression of stem cell markers CD133, Sox2, Nanog, and Musashi. Withdrawing c-Met pathway inhibitor therapy resulted in a substantial rebound in stem cell marker expression concurrent with tumor recurrence. Cells derived from xenografts treated with anti-HGF in vivo were depleted of tumor-propagating potential as determined by in vivo serial dilution tumor-propagating assay. Furthermore, daughter xenografts that did form were 12-fold smaller than controls. These findings show that stem-like tumor-initiating cells are dynamically regulated by c-Met signaling in vivo and that c-Met pathway inhibitors can deplete tumors of their tumor-propagating stem-like cells.

[690]

**TÍTULO / TITLE:** - Alpha internexin expression related with molecular characteristics in adult glioblastoma and oligodendroglioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Med Sci. 2013 Apr;28(4):593-601. doi: 10.3346/jkms.2013.28.4.593. Epub 2013 Mar 27.

●●Enlace al texto completo (gratis o de pago)

[3346/jkms.2013.28.4.593](#)

**AUTORES / AUTHORS:** - Suh JH; Park CK; Park SH

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Seoul National University Hospital, Seoul, Korea.

**RESUMEN / SUMMARY:** - Alpha-internexin (INA) is a proneuronal gene-encoding neurofilament interacting protein. INA is overexpressed mostly in oligodendroglial phenotype gliomas, is related to 1p/19q codeletion, and is a favorable prognostic marker. We studied INA expression in oligodendrogliomas (ODGs) and glioblastomas (GBMs) to verify its association with several molecular phenotypes, 1p/19q codeletion, and epidermal growth-factor-receptor (EGFR) amplification. A total of 230 low- and high-grade ODG and GBM cases was analyzed for INA expression by immunohistochemical staining; and 1p/19q and EGFR gene status was examined by fluorescence in-situ hybridization. INA was positive in 80.3% of ODGs and in 34.3% of GBMs. 1p/19q codeletion was detected in 77.0% of ODGs and 5.5% of GBMs. INA and 1p/19q codeletion were strongly correlated ( $P < 0.001$ ). The specificity of INA expression for 1p/19q codeletion was 70.8%, while sensitivity was 100%; positive predictive value was 72.5%, and negative predictive value was 29.2% in all 228 tumors. INA expression was correlated with better progression-free survival (PFS) and overall survival (OS) ( $P = 0.001$ ). In conclusion, INA expression has high specificity and sensitivity to predict 1p/19q codeletion, and it is well correlated with PFS of both ODGs and GBMs. Therefore, INA expression could be a simple, reliable, and favorable prognostic and surrogate marker for 1p/19q codeletion and long term survival.

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[691]

**TÍTULO / TITLE:** - Therapeutic Strategies Targeting Glioblastoma Stem Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Recent Pat Anticancer Drug Discov. 2013 Apr 18.

**AUTORES / AUTHORS:** - Carrasco-Garcia E; Sampron N; Aldaz P; Arrizabalaga O; Villanua J; Barrera C; Ruiz I; Arrazola M; Lawrie C; Matheu A

**INSTITUCIÓN / INSTITUTION:** - Biodonostia Institute, Paseo Dr. Beguiristain s/n, E-20014 San Sebastian, España. [ander.matheu@biodonostia.org](mailto:ander.matheu@biodonostia.org).

**RESUMEN / SUMMARY:** - Glioblastoma is the most common, aggressive and lethal brain tumor in adults. However, current therapeutic protocols have low success rates, and average overall survival is less than 15 months. The resistance to therapy is largely a result of the remarkable cellular and phenotypical heterogeneity that characterizes this type of tumor. The discovery of a subpopulation of cells exhibiting stem cell properties within the tumor bulk has profound implications for therapy as increasing evidence indicates that these cells, glioblastoma stem cells (GSCs), are responsible for the origin, maintenance and recurrence of the glioblastomas. These findings highlight the need to characterize GSCs in order to find novel treatments directly targeted

specifically against them. In this review we summarize the current knowledge regarding this issue, including some recent and relevant patents.

[692]

**TÍTULO / TITLE:** - Resveratrol-loaded lipid-core nanocapsules treatment reduces in vitro and in vivo glioma growth.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Biomed Nanotechnol. 2013 Mar;9(3):516-26.

**AUTORES / AUTHORS:** - Figueiro F; Bernardi A; Frozza RL; Terroso T; Zanotto-Filho A; Jandrey EH; Moreira JC; Salbego CG; Edelweiss MI; Pohlmann AR; Guterres SS; Battastini AM

**INSTITUCIÓN / INSTITUTION:** - Departamento de Bioquímica, Institute de Ciências Básicas da Saúde, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, 90035-003, Brasil.

**RESUMEN / SUMMARY:** - The development of novel therapeutic strategies to treat gliomas remains critical as a result of the poor prognoses, inefficient therapies and recurrence associated with these tumors. In this context, biodegradable nanoparticles are emerging as efficient drug delivery systems for the treatment of difficult-to-treat diseases such as brain tumors. In the current study, we evaluated the antiglioma effect of trans-resveratrol-loaded lipid-core nanocapsules (RSV-LNC) based on in vitro (C6 glioma cell line) and in vivo (brain-implanted C6 cells) models of the disease. In vitro, RSV-LNC decreased the viability of C6 glioma cells to a higher extent than resveratrol in solution. Interestingly, RSV-LNC treatment was not cytotoxic to hippocampal organotypic cultures, a model of healthy neural cells, suggesting selectivity for cancer cells. RSV-LNC induced losses in glioma cell viability through induction of apoptotic cell death, as assessed by Annexin-FITC/PI assay, which was preceded by an early arrest in the S and G1 phases of the cell cycle. In brain-implanted C6 tumors, treatment with RSV-LNC (5 mg/kg/day, i.p.) for 10 days promoted a marked decrease in tumor size and also reduced the incidence of some malignant tumor-associated characteristics, such as intratumoral hemorrhaging, intratumoral edema and pseudopalisading, compared to resveratrol in solution. Taken together, the results presented herein suggest that nanoencapsulation of resveratrol improves its antiglioma activity, thus providing a provocative foundation for testing the clinical usefulness of nanoformulations of this natural compound as a new chemotherapeutic strategy for the treatment of gliomas.

[693]

**TÍTULO / TITLE:** - A conceptually new treatment approach for relapsed glioblastoma: Coordinated undermining of survival paths with nine repurposed drugs (CUSP9) by the International Initiative for Accelerated Improvement of Glioblastoma Care.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Apr;4(4):502-30.

**AUTORES / AUTHORS:** - Kast RE; Boockvar JA; Bruning A; Cappello F; Chang WW; Cvek B; Dou QP; Duenas-Gonzalez A; Efferth T; Focosi D; Ghaffari SH; Karpel-Massler G; Ketola K; Khoshnevisan A; Keizman D; Magne N; Marosi C; McDonald K; Munoz M; Paranjpe A; Pourgholami MH; Sardi I; Sella A; Srivenugopal KS; Tuccori M; Wang W; Wirtz CR; Halatsch ME

**INSTITUCIÓN / INSTITUTION:** - IIAIGC Headquarters, Dean of Studies, Burlington, VT, USA.

**RESUMEN / SUMMARY:** - To improve prognosis in recurrent glioblastoma we developed a treatment protocol based on a combination of drugs not traditionally thought of as cytotoxic chemotherapy agents but that have a robust history of being well-tolerated and are already marketed and used for other non-cancer indications. Focus was on adding drugs which met these criteria: a) were pharmacologically well characterized, b) had low likelihood of adding to patient side effect burden, c) had evidence for interfering with a recognized, well-characterized growth promoting element of glioblastoma, and d) were coordinated, as an ensemble had reasonable likelihood of concerted activity against key biological features of glioblastoma growth. We found nine drugs meeting these criteria and propose adding them to continuous low dose temozolomide, a currently accepted treatment for relapsed glioblastoma, in patients with recurrent disease after primary treatment with the Stupp Protocol. The nine adjuvant drug regimen, Coordinated Undermining of Survival Paths, CUSP9, then are aprepitant, artesunate, auranofin, captopril, copper gluconate, disulfiram, ketoconazole, nelfinavir, sertraline, to be added to continuous low dose temozolomide. We discuss each drug in turn and the specific rationale for use- how each drug is expected to retard glioblastoma growth and undermine glioblastoma's compensatory mechanisms engaged during temozolomide treatment. The risks of pharmacological interactions and why we believe this drug mix will increase both quality of life and overall survival are reviewed.

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[694]

**TÍTULO / TITLE:** - BNIP3 acts as transcriptional repressor of death receptor-5 expression and prevents TRAIL-induced cell death in gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Dis. 2013 Apr 11;4:e587. doi: 10.1038/cddis.2013.100.

●●Enlace al texto completo (gratis o de pago) [1038/cddis.2013.100](#)

**AUTORES / AUTHORS:** - Burton TR; Henson ES; Azad MB; Brown M; Eisenstat DD; Gibson SB

**INSTITUCIÓN / INSTITUTION:** - Department of Biochemistry, University of Manitoba, Winnipeg, Manitoba, Canada.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common and malignant brain tumor, and current treatment modalities such as surgical

resection, adjuvant radiotherapy and temozolomide (TMZ) chemotherapy are ineffective. Tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) is a novel cancer therapeutic agent for GBM because of its capability of inducing apoptosis in glioma cells. Unfortunately, the majority of glioma cells are resistant to TRAIL-induced apoptosis. The Bcl-2 nineteen kilodalton interacting protein (BNIP3) is a pro-cell death BH3-only member of the Bcl-2 family that is one of the highest expressed genes in hypoxic regions of GBM tumors. We previously found that BNIP3 is localized to the nucleus in GBM tumors and suppresses cell death in glioma cells. Herein, we have discovered when BNIP3 nuclear expression is knockdown in glioma cell lines and in normal mouse astrocytes, TRAIL and its death receptor, death receptor-5 (DR5) expression is increased. In addition, when nuclear BNIP3 expression is increased, the amount of TRAIL-induced apoptosis is reduced. Using a streptavidin pull-down assay, we found that BNIP3 binds to the DR5 promoter and nuclear BNIP3 binds to the DR5 promoter. Furthermore, nuclear BNIP3 expression in GBM tumors correlates with decreased DR5 expression. Taken together, we have discovered a novel transcriptional repression function for BNIP3 conferring a TRAIL resistance in glioma cells.

[695]

**TÍTULO / TITLE:** - A Rare Case of MRI Negative Pituitary Germinoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Pediatr. 2013 May 17.

●●Enlace al texto completo (gratis o de pago) [1007/s12098-013-1065-0](#)

**AUTORES / AUTHORS:** - Garla VV; Kanooz S; Yaqub A

**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine, Joan C Edward School of Medicine, 1249 15th street, Huntington, WV, 25701, USA, [vishnu.garla@gmail.com](mailto:vishnu.garla@gmail.com).

[696]

**TÍTULO / TITLE:** - The combination of novel targeted molecular agents and radiation in the treatment of pediatric gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Oncol. 2013 May 10;3:110. doi: 10.3389/fonc.2013.00110. Print 2013.

●●Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00110](#)

**AUTORES / AUTHORS:** - Dasgupta T; Haas-Kogan DA

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, University of California San Francisco San Francisco, CA, USA.

**RESUMEN / SUMMARY:** - Brain tumors are the most common solid pediatric malignancy. For high-grade, recurrent, or refractory pediatric brain tumors,

radiation therapy (XRT) is an integral treatment modality. In the era of personalized cancer therapy, molecularly targeted agents have been designed to inhibit pathways critical to tumorigenesis. Our evolving knowledge of genetic aberrations in pediatric gliomas is being exploited with the use of specific targeted inhibitors. These agents are additionally being combined with XRT to increase the efficacy and duration of local control. In this review, we discuss novel agents targeting three different pathways in gliomas, and their potential combination with XRT. BRAF is a serine/threonine kinase in the RAS/RAF/MAPK kinase pathway, which is integral to cellular division, survival, and metabolism. Two-thirds of pilocytic astrocytomas, a low-grade pediatric glioma, contain a translocation within the BRAF gene called KIAA1549:BRAF that causes an overactivation of the MEK/MAPK signaling cascade. In vitro and in vivo data support the use of MEK or mammalian target of rapamycin (mTOR) inhibitors in low-grade gliomas expressing this translocation. Additionally, 15-20% of high-grade pediatric gliomas express BRAF V600E, an activating mutation of the BRAF gene. Pre-clinical in vivo and in vitro data in BRAF V600E gliomas demonstrate dramatic cooperation between XRT and small molecule inhibitors of BRAF V600E. Another major signaling cascade that plays a role in pediatric glioma pathogenesis is the PI3-kinase (PI3K)/mTOR pathway, known to be upregulated in the majority of high- and low-grade pediatric gliomas. Dual PI3K/mTOR inhibitors are in clinical trials for adult high-grade gliomas and are poised to enter studies of pediatric tumors. Finally, many brain tumors express potent stimulators of angiogenesis that render them refractory to treatment. An analog of thalidomide, CC-5103 increases the secretion of critical cytokines of the tumor microenvironment, including IL-2, IFN-gamma, TNF-alpha, and IL-10, and is currently being evaluated in clinical trials for the treatment of recurrent or refractory pediatric central nervous system tumors. In summary, several targeted inhibitors with radiation are currently under investigation in both translational bench research and early clinical trials. This review article summarizes the molecular rationale for, and the pre-clinical data supporting the combinations of these targeted agents with other anti-cancer agents and XRT in pediatric gliomas. In many cases, parallels are drawn to molecular mechanisms and targeted inhibitors of adult gliomas. We additionally discuss the potential mechanisms underlying the efficacy of these agents.

[697]

**TÍTULO / TITLE:** - Mannose-binding lectin 2 gene and risk of adult glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 18;8(4):e61117. doi: 10.1371/journal.pone.0061117. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0061117](#)

**AUTORES / AUTHORS:** - Michaud DS; Siddiq A; Cox DG; Backes DM; Calboli FC; Sughrue ME; Gaziano JM; Ma J; Stampfer M; Tworoger SS; Hunter DJ; Camargo CA Jr; Parsa AT

**INSTITUCIÓN / INSTITUTION:** - Department of Epidemiology, Brown Public Health, Brown University, Providence, Rhode Island, United States of America ; School of Public Health, Faculty of Medicine, Imperial College London, London, United Kingdom.

**RESUMEN / SUMMARY:** - **BACKGROUND AND AIMS:** The immune system is likely to play a key role in the etiology of gliomas. Genetic polymorphisms in the mannose-binding lectin gene, a key activator in the lectin complement pathway, have been associated with risk of several cancers. **METHODS:** To examine the role of the lectin complement pathway, we combined data from prospectively collected cohorts with available DNA specimens. Using a nested case-control design, we genotyped 85 single nucleotide polymorphisms (SNPs) in 9 genes in the lectin complement pathway and 3 additional SNPs in MBL2 were tested post hoc). Initial SNPs were selected using tagging SNPs for haplotypes; the second group of SNPs for MBL2 was selected based on functional SNPs related to phenotype. Associations were examined using logistic regression analysis. All statistical tests were two-sided. Nominal p-values are presented and are not corrected for multiple comparisons. **RESULTS:** A total of 143 glioma cases and 419 controls were available for this analysis. Statistically significant associations were observed for two SNPs in the mannose-binding lectin 2 (ML2) gene and risk of glioma (rs1982266 and rs1800450, test for trend  $p = 0.003$  and  $p = 0.04$ , respectively, using the additive model). One of these SNPs, rs1800450, was associated with a 58% increase in glioma risk among those carrying one or two mutated alleles (odds ratio = 1.58, 95% confidence interval = 0.99-2.54), compared to those homozygous for the wild type allele. **CONCLUSIONS:** Overall, our findings suggest that MBL may play a role in the etiology of glioma. Future studies are needed to confirm these findings which may be due to chance, and if reproduced, to determine mechanisms that link glioma pathogenesis with the MBL complement pathway.

[698]

**TÍTULO / TITLE:** - A retrospective audit of 200 cases of CNS tumours and their surgical management in a tertiary care centre.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ir J Med Sci. 2013 May 4.

●●Enlace al texto completo (gratis o de pago) [1007/s11845-013-0959-](#)

[1](#)

**AUTORES / AUTHORS:** - Muhamat Nor FE; Chandrasekaran K; Marks JC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Cork University Hospital, Wilton, Cork, Republic of Ireland, [faimee.erwan@yahoo.com](mailto:faimee.erwan@yahoo.com).

**RESUMEN / SUMMARY:** - AIMS: To study the nature of the tumours managed in the Irish population. METHODS: This audit research was completed via a retrospective medical review on 200 patients with CNS tumours managed in a tertiary care centre between 2008 and 2009. RESULTS: The mean age was 53 years. The male:female ratio was 2:1. The majority were glioblastomas and astrocytomas. Grade IV tumours were predominant (65.5 %). Headaches (37 %), motor weakness (32 %) and seizures (25.5 %) were the highest presentations. The commonest sites affected were the left parietal and left temporal lobes. There were 17.5 % operative morbidities with motor weakness (22.9 %), seizure (14.3 %) and thrombo-embolism (14.3 %) dominating and significant association to surgical radicality ( $p = 0.041$ ). 3.5 % operative mortalities were reported. 52.5 and 62.5 % of patients received adjuvant chemotherapy and radiotherapy, respectively. CONCLUSIONS: Patients with CNS tumours typically had multiple presentations. More extensive surgical resection was associated with higher postoperative morbidities ( $p = 0.041$ ). The 30-day postoperative morbidity (17.5 %) and mortality (3.5 %) were concordant with the currently available literature.

[699]

**TÍTULO / TITLE:** - Advances and challenges in the treatment of glioblastoma: a clinician's perspective.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Discov Med. 2013 Apr;15(83):221-30.

**AUTORES / AUTHORS:** - Mrugala MM

**INSTITUCIÓN / INSTITUTION:** - University of Washington and Fred Hutchinson Cancer Research Center, 1959 NE Pacific St., Seattle, Washington 98195, USA.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most deadly form of human cancer. Most patients diagnosed with this WHO grade IV malignant glioma survive about 12 months. Despite international efforts, treatment of GBM remains one of the most challenging tasks in clinical oncology. While new molecular pathways active in the biology and invasiveness of glioma are being constantly discovered, translation of basic science achievements into clinical practice is rather slow. Advances in surgical approaches, radiotherapy, and chemotherapy are contributing to incremental improvements in survival of the patients with GBM and improved quality of life. Yet much more significant strides need to be made before we can witness positive outcomes, similar to those seen in certain other cancers that can now be treated successfully. This review will discuss standard of care approach to GBM therapy in a newly diagnosed and recurrent setting. It will summarize the recent developments in management of this disease as well as future directions, keeping a practicing clinician in mind.

[700]

**TÍTULO / TITLE:** - Loss of genetic material within 1p and 19q chromosomal arms in low grade gliomas of central nervous system.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Folia Neuropathol. 2013;51(1):26-32.

**AUTORES / AUTHORS:** - Reclawowicz D; Stempniewicz M; Biernat W; Limon J; Sloniewski P

**INSTITUCIÓN / INSTITUTION:** - Neurosurgery Department, Medical University of Gdansk, Gdansk, Poland. [daniel.r@gumed.edu.pl](mailto:daniel.r@gumed.edu.pl)

**RESUMEN / SUMMARY:** - Diffuse gliomas can constitute up to one third of all gliomas diagnosed in neurosurgical centers. Their invasive growth, progression to more malignant lesions, and the lack of standardized management guidelines render a significant clinical problem. The discovery of 1p and 19q chromosomal arms deletion in neoplastic cells will probably influence both more objective diagnosis and more accurate prediction of chemotherapy response. Defining the above mentioned deletion is becoming a standard procedure in Western European countries and in the USA when LGG is diagnosed. As a result an attempt has been made to detect deletion using fluorescence in situ hybridization and to determine its prognostic value. Genetic material from 34 grade II gliomas was examined. Separate 1p and 19q deletions were discovered in 14 and 16 cases respectively. Simultaneous occurrence of both was observed in 12. The frequency of occurrence of simultaneous deletions 1p and 19q varied based on histopathological diagnosis. This disorder was not observed in astrocytomas, in oligoastrocytomas it appeared in 50% cases. The highest incidence of deletion was noted in oligodendrogliomas and amounted to 66.7%,  $p < 0.005$ . Median survival in patients with diagnosed 1p and 19q deletion in their neoplastic cells is twice longer in comparison with patients in whom no such deletion was observed (80 months vs. 41 months,  $p < 0.05$ ). Frontal location of a tumor occurred to be a statistically significant factor unfavorable for prognosis,  $p < 0.05$ . In the work presented the fluorescence in situ hybridization was successfully applied to identify deletion 1p/19q. Its incidence depends on the type of diagnosed glioma. Deletions also have prognostic significance in the test group what constitutes the basis for inclusion of determining deletion 1p/19q into diagnostic and treatment algorithm in LGGs.

[701]

**TÍTULO / TITLE:** - Genetic polymorphisms of DNA double-strand break repair pathway genes and glioma susceptibility.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Cancer. 2013 May 10;13:234. doi: 10.1186/1471-2407-13-234.

●●Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-234](https://doi.org/10.1186/1471-2407-13-234)

**AUTORES / AUTHORS:** - Zhao P; Zou P; Zhao L; Yan W; Kang C; Jiang T; You Y

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**RESUMEN / SUMMARY:** - BACKGROUND: Genetic variations in DNA double-strand break repair genes can influence the ability of a cell to repair damaged DNA and alter an individual's susceptibility to cancer. We studied whether polymorphisms in DNA double-strand break repair genes are associated with an increased risk of glioma development. METHODS: We genotyped 10 potentially functional single nucleotide polymorphisms (SNPs) in 7 DNA double-strand break repair pathway genes (XRCC3, BRCA2, RAG1, XRCC5, LIG4, XRCC4 and ATM) in a case-control study including 384 glioma patients and 384 cancer-free controls in a Chinese Han population. Genotypes were determined using the OpenArray platform. RESULTS: In the single-locus analysis there was a significant association between gliomas and the LIG4 rs1805388 (Ex2 +54C>T, Thr9Ile) TT genotype (adjusted OR, 3.27; 95% CI, 1.87-5.71), as well as the TC genotype (adjusted OR, 1.62; 95% CI, 1.20-2.18). We also found that the homozygous variant genotype (GG) of XRCC4 rs1805377 (IVS7-1<sup>a</sup>>G, splice-site) was associated with a significantly increased risk of gliomas (OR, 1.77; 95% CI, 1.12-2.80). Interestingly, we detected a significant additive and multiplicative interaction effect between the LIG4 rs1805388 and XRCC4 rs1805377 polymorphisms with an increasing risk of gliomas. When we stratified our analysis by smoking status, LIG4 rs1805388 was associated with an increased glioma risk among smokers. CONCLUSIONS: These results indicate for the first time that LIG4 rs1805388 and XRCC4 rs1805377, alone or in combination, are associated with a risk of gliomas.

[702]

**TÍTULO / TITLE:** - Genome-wide RNAi screening identifies genes inhibiting the migration of glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 12;8(4):e61915. doi: 10.1371/journal.pone.0061915. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0061915](https://doi.org/10.1371/journal.pone.0061915)

**AUTORES / AUTHORS:** - Yang J; Fan J; Li Y; Li F; Chen P; Fan Y; Xia X; Wong ST

**INSTITUCIÓN / INSTITUTION:** - Department of Systems Medicine and Bioengineering, The Methodist Hospital Research Institute, Weill Cornell Medical College, Houston, Texas, USA.

**RESUMEN / SUMMARY:** - Glioblastoma Multiforme (GBM) cells are highly invasive, infiltrating into the surrounding normal brain tissue, making it impossible to completely eradicate GBM tumors by surgery or radiation. Increasing evidence also shows that these migratory cells are highly resistant to cytotoxic reagents, but decreasing their migratory capability can re-sensitize them to chemotherapy. These evidences suggest that the migratory cell population may serve as a better therapeutic target for more effective treatment of GBM. In order to understand the regulatory mechanism underlying the motile phenotype, we carried out a genome-wide RNAi screen for genes inhibiting the migration of GBM cells. The screening identified a total of twenty-five primary hits; seven of them were confirmed by secondary screening. Further study showed that three of the genes, FLNA, KHSRP and HCFC1, also functioned in vivo, and knocking them down caused multifocal tumor in a mouse model. Interestingly, two genes, KHSRP and HCFC1, were also found to be correlated with the clinical outcome of GBM patients. These two genes have not been previously associated with cell migration.

[703]

**TÍTULO / TITLE:** - Genetic association between selected cytokine genes and glioblastoma in the Han Chinese population.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Cancer. 2013 May 12;13:236. doi: 10.1186/1471-2407-13-236.

●●Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-236](https://doi.org/10.1186/1471-2407-13-236)

**AUTORES / AUTHORS:** - Jin T; Li X; Zhang J; Wang H; Geng T; Li G; Gao G; Chen C

**INSTITUCIÓN / INSTITUTION:** - School of Life Sciences, Northwest University, Xi'an 710069, China. [cchen898@nwu.edu.cn](mailto:cchen898@nwu.edu.cn).

**RESUMEN / SUMMARY:** - BACKGROUND: Glioblastoma (GBM) is the most malignant brain tumor. Many abnormal secretion and expression of cytokines have been found in GBM, initially speculated that the occurrence of GBM may be involved in these abnormal secretion of cytokines. This study aims to detect the association of cytokine genes with GBM. METHODS: We selected seven tag single nucleotide polymorphisms (tSNPs) in six cytokine genes, which previously reported to be associated with brain tumors, and analyzed their association with GBM in a Han Chinese population using chi2 test and genetic model analysis. RESULTS: We found two risk tSNPs and one protective tSNP. By chi2 test, the rs1801275 in IL-4R showed an increased risk of GBM. In the genetic model analysis, the genotype "TC" of rs20541 in IL-13 gene showed an increased risk of GBM in over-dominant model (OR = 2.00; 95% CI, 1.13-3.54, p = 0.015); the genotype "CT" of rs1800871 in the IL-10 gene showed a decrease risk in the over-dominant model (OR = 0.57; 95% CI, 0.33 - 0.97; p = 0.037). The genotype "AG" of rs1801275 in the IL-4R gene showed an increase

risk in over-dominant model (OR = 2.29; 95% CI, 1.20 - 4.35; p = 0.0081) We further analyzed whether the six cytokine genes have a different effect on the disease in gender specific population, and found that the allele "G" of rs2243248 in the IL-4 gene showed a decrease risk of GBM in female (OR = 0.35, 95% CI, 0.13 - 0.94, p = 0.0032), but the allele "T" showed a decrease risk in male (OR = 0.30, 95% CI, 0.17 - 0.53, p = 0.0032). CONCLUSIONS: Our findings, combined with previously reported results, suggest that cytokine genes have potential role in GBM development, which may be useful to early prognostics for GBM in the Han Chinese population.

[704]

**TÍTULO / TITLE:** - Tumor derived mutations of protein tyrosine phosphatase receptor type k affect its function and alter sensitivity to chemotherapeutics in glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 16;8(5):e62852. doi: 10.1371/journal.pone.0062852. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062852](#)

**AUTORES / AUTHORS:** - Agarwal S; Al-Keilani MS; Alqudah MA; Sibenaller ZA; Ryken TC; Assem M

**INSTITUCIÓN / INSTITUTION:** - Pharmaceuticals and Translational Therapeutics, College of Pharmacy, University of Iowa, Iowa City, Iowa, United States of America.

**RESUMEN / SUMMARY:** - Poor prognosis and resistance to therapy in malignant gliomas is mainly due to the highly dispersive nature of glioma cells. This dispersive characteristic results from genetic alterations in key regulators of cell migration and diffusion. A better understanding of these regulatory signals holds promise to improve overall survival and response to therapy. Using mapping arrays to screen for genomic alterations in gliomas, we recently identified alterations of the protein tyrosine phosphatase receptor type kappa gene (PTPRK) that correlate to patient outcomes. These PTPRK alterations are very relevant to glioma biology as PTPRK can directly sense cell-cell contact and is a dephosphorylation regulator of tyrosine phosphorylation signaling, which is a major driving force behind tumor development and progression. Subsequent sequencing of the full length PTPRK transcripts revealed novel PTPRK gene deletion and missense mutations in numerous glioma biopsies. PTPRK mutations were cloned and expressed in PTPRK-null malignant glioma cells. The effect of these mutations on PTPRK anti-oncogenic function and their association with response to anti-glioma therapeutics, such as temozolomide and tyrosine kinase inhibitors, was subsequently analyzed using in vitro cell-based assays. These genetic variations altered PTPRK activity and its post-translational processing. Reconstitution of wild-type PTPRK in malignant glioma

cell lines suppressed cell growth and migration by inhibiting EGFR and beta-catenin signaling and improved the effect of conventional therapies for glioma. However, PTPRK mutations abrogated tumor suppressive effects of wild-type PTPRK and altered sensitivity of glioma cells to chemotherapy.

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[705]

**TÍTULO / TITLE:** - TROY (TNFRSF19) promotes glioblastoma cell survival signaling and therapeutic resistance.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cancer Res. 2013 May 22.

●●Enlace al texto completo (gratis o de pago) [1158/1541-7786.MCR-13-0008](#)

**AUTORES / AUTHORS:** - Loftus JC; Dhruv H; Tuncali S; Kloss J; Yang Z; Schumacher CA; Cao B; Williams BO; Eschbacher JM; Ross JT; Tran NL

**INSTITUCIÓN / INSTITUTION:** - Mayo Clinic Arizona.

**RESUMEN / SUMMARY:** - Of the features that characterize glioblastoma, arguably none is more clinically significant than the propensity of malignant glioma cells to aggressively invade into the surrounding normal brain tissue. These invasive cells render complete resection impossible, confer significant resistance to chemo- and radiation-therapy, and virtually assure tumor recurrence.

Expression of TROY (TNFRSF19), a member of the tumor necrosis factor receptor superfamily, inversely correlates with patient survival and stimulates glioblastoma cell migration and invasion in vitro. In this study, we report that TROY is overexpressed in glioblastoma tumor specimens and TROY mRNA expression is increased in the invasive cell population in vivo. In addition, inappropriate expression of TROY in mouse astrocytes in vivo using glial-specific gene transfer in transgenic mice induces astrocyte migration within the brain validating the importance of the TROY signaling cascade in glioblastoma cell migration and invasion. Moreover, knockdown of TROY expression in a primary glioblastoma xenograft significantly prolonged survival in vivo. We also report that TROY expression significantly increases resistance of glioblastoma cells to both IR- and TMZ- induced apoptosis in vitro via activation of Akt and NF-kappaB. Inhibition of either Akt or NF-kappaB activity suppressed the survival benefits of TROY signaling in response to TMZ treatment. These findings position aberrant expression and/or signaling by TROY as a contributor to the dispersion of glioblastoma cells and therapeutic resistance.

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[706]

**TÍTULO / TITLE:** - The FOXM1 transcription factor interacts with Sp1 to mediate EGF-dependent COX-2 expression in human glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Cancer Res. 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1158/1541-7786.MCR-12-0706](http://1158/1541-7786.MCR-12-0706)

**AUTORES / AUTHORS:** - Xu K; Shu HK

**INSTITUCIÓN / INSTITUTION:** - Emory University.

**RESUMEN / SUMMARY:** - Cyclooxygenase-2 (COX-2) is linked to worse prognosis in patients with malignant gliomas and other tumor types.

Amplification/overexpression of epidermal growth factor receptor (EGFR) is commonly seen in these tumors. We have previously shown that EGFR signaling, through activation of p38-mitogen activated protein kinase (MAPK), protein kinase C-delta (PKC-delta), and Sp1, plays an important role in the regulation of COX-2 expression in glioma cells. Here, we report that the Src kinase also has a role in this signaling cascade upstream of p38-MAPK/PKC-delta. In addition, more detailed analysis revealed the involvement of FOXM1, a member of the forkhead box family of transcriptional activators, in EGF-dependent COX-2 induction. FOXM1 protein levels increase after stimulation with EGF although its role in modulating COX-2 expression does not depend on this increase. While a conventional FOXM1 responsive element resides in a distal region (-2872/-2539 relative to the transcriptional start site) of the COX-2 promoter, this is not required for EGF-dependent induction of COX-2. Instead, FOXM1 is capable of interacting with Sp1 at the Sp1 binding site (-245/-240 relative to the start site) of the COX-2 promoter and appears to act in cooperation with Sp1 to mediate EGF-induced COX-2 expression. Definition of this novel interaction provides us with a clearer understanding of the mechanistic basis for the induction of COX-2 with EGF and guides our evaluation of potential newer therapeutic targets that have relevance in this disease.

[707]

**TÍTULO / TITLE:** - (18)F-fluorothymidine-pet imaging of glioblastoma multiforme: effects of radiation therapy on radiotracer uptake and molecular biomarker patterns.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - ScientificWorldJournal. 2013 Apr 4;2013:796029. doi: 10.1155/2013/796029. Print 2013.

●●Enlace al texto completo (gratis o de pago) [1155/2013/796029](http://1155/2013/796029)

**AUTORES / AUTHORS:** - Chandrasekaran S; Hollander A; Xu X; Benci JL; Davis JJ; Dorsey JF; Kao G

**INSTITUCIÓN / INSTITUTION:** - University of Washington School of Medicine, A-300 Health Sciences Center, Box 356340, Seattle, WA 98195, USA.

**RESUMEN / SUMMARY:** - Introduction. PET imaging is a useful clinical tool for studying tumor progression and treatment effects. Conventional (18)F-FDG-PET imaging is of limited usefulness for imaging Glioblastoma Multiforme (GBM) due to high levels of glucose uptake by normal brain and the resultant

signal-to-noise intensity. (18)F-Fluorothymidine (FLT) in contrast has shown promise for imaging GBM, as thymidine is taken up preferentially by proliferating cells. These studies were undertaken to investigate the effectiveness of (18)F-FLT-PET in a GBM mouse model, especially after radiation therapy (RT), and its correlation with useful biomarkers, including proliferation and DNA damage. Methods. Nude/athymic mice with human GBM orthografts were assessed by microPET imaging with (18)F-FDG and (18)F-FLT. Patterns of tumor PET imaging were then compared to immunohistochemistry and immunofluorescence for markers of proliferation (Ki-67), DNA damage and repair (gammaH2AX), hypoxia (HIF-1alpha), and angiogenesis (VEGF). Results. We confirmed that (18)F-FLT-PET uptake is limited in healthy mice but enhanced in the intracranial tumors. Our data further demonstrate that (18)F-FLT-PET imaging usefully reflects the inhibition of tumor by RT and correlates with changes in biomarker expression. Conclusions. (18)F-FLT-PET imaging is a promising tumor imaging modality for GBM, including assessing RT effects and biologically relevant biomarkers.

[708]

**TÍTULO / TITLE:** - Primary central nervous system ALK positive anaplastic large cell lymphoma with predominantly leptomeningeal involvement in an adult.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Yonsei Med J. 2013 May 1;54(3):791-6. doi: 10.3349/ymj.2013.54.3.791.

●●Enlace al texto completo (gratis o de pago) [3349/ymj.2013.54.3.791](#)

**AUTORES / AUTHORS:** - Park JS; Park H; Park S; Kim SJ; Seol HJ; Ko YH

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, 50 Irwon-dong, Gangnam-gu, Seoul 135-710, Korea.

**RESUMEN / SUMMARY:** - A 31-year-old Korean male presented with altered consciousness and severe headache. Brain MRI delineated focal leptomeningeal enhancement without any intracerebral lesions. Diagnosis was made based on a brain biopsy showing anaplastic large cell lymphoma (ALCL), immunohistochemical stains revealing positivity for anaplastic lymphoma kinase (ALK) and an absence of involvement in any other organs; specifically, the primary central nervous system ALK+ALCL. Complete remission was achieved following 5 cycles of systemic chemotherapy with a high dose of Methotrexate and a simultaneous 7 cycles of intrathecal triple chemotherapy. Diagnosis of primary leptomeningeal ALK+ALCL is challenging given its rarity and non-specific symptoms along with non-pathognomonic radiologic findings. We present the first case of primary leptomeningeal ALK-positive ALCL where the clinical course, pathologic characteristics and treatment modality are described as well as a review of literature.

[709]

**TÍTULO / TITLE:** - Glioma Grading Capability: Comparisons among Parameters from Dynamic Contrast-Enhanced MRI and ADC Value on DWI.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Korean J Radiol. 2013 May;14(3):487-92. doi: 10.3348/kjr.2013.14.3.487. Epub 2013 May 2.

●●Enlace al texto completo (gratis o de pago) [3348/kjr.2013.14.3.487](#)

**AUTORES / AUTHORS:** - Choi HS; Kim AH; Ahn SS; Shin NY; Kim J; Lee SK

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Severance Hospital, Yonsei University College of Medicine, Seoul 120-752, Korea. ; Department of Radiology, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul 137-701, Korea.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** Permeability parameters from dynamic contrast-enhanced MRI (DCE-MRI) and apparent diffusion coefficient (ADC) value on diffusion-weighted imaging (DWI) can be quantitative physiologic metrics for gliomas. The transfer constant (K(trans)) has shown efficacy in grading gliomas. Volume fraction of extravascular extracellular space (ve) has been underutilized to grade gliomas. The purpose of this study was to evaluate ve in its ability to grade gliomas and to assess the correlation with other permeability parameters and ADC values. **MATERIALS AND METHODS:** A total of 33 patients diagnosed with pathologically-confirmed gliomas were examined by 3 T MRI including DCE-MRI and ADC map. A region of interest analyses for permeability parameters from DCE-MRI and ADC were performed on the enhancing solid portion of the tumors. Permeability parameters from DCE-MRI and ADC between low- and high-grade gliomas; the diagnostic performances of presumptive metrics and correlation among those metrics were statistically analyzed. **RESULTS:** High-grade gliomas showed higher K(trans) (0.050 vs. 0.010 in median value,  $p = 0.002$ ) and higher ve (0.170 vs. 0.015 in median value,  $p = 0.001$ ) than low-grade gliomas. Receiver operating characteristic curve analysis showed significance in both K(trans) and ve for glioma grading. However, there was no significant difference in diagnostic performance between K(trans) and ve. ADC value did not correlate with any of the permeability parameters from DCE-MRI. **CONCLUSION:** Extravascular extracellular space (ve) appears to be comparable with transfer constant (K(trans)) in differentiating high-grade gliomas from low-grade gliomas. ADC value does not show correlation with any permeability parameters from DCE-MRI.

[710]

**TÍTULO / TITLE:** - Application of (31)P MR Spectroscopy to the Brain Tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Korean J Radiol. 2013 May;14(3):477-86. doi: 10.3348/kjr.2013.14.3.477. Epub 2013 May 2.

●●Enlace al texto completo (gratis o de pago) [3348/kjr.2013.14.3.477](http://3348/kjr.2013.14.3.477)

**AUTORES / AUTHORS:** - Ha DH; Choi S; Oh JY; Yoon SK; Kang MJ; Kim KU

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, College of Medicine, Dong-A University, Busan 602-715, Korea.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** To evaluate the clinical feasibility and obtain useful parameters of  $(^{31}\text{P})$  magnetic resonance spectroscopy (MRS) study for making the differential diagnosis of brain tumors. **MATERIALS AND METHODS:** Twenty-eight patients with brain tumorous lesions (22 cases of brain tumor and 6 cases of abscess) and 11 normal volunteers were included. The patients were classified into the astrocytoma group, lymphoma group, metastasis group and the abscess group. We obtained the intracellular pH and the metabolite ratios of phosphomonoesters/phosphodiesteres (PME/PDE), PME/inorganic phosphate (Pi), PDE/Pi, PME/adenosine triphosphate (ATP), PDE/ATP, PME/phosphocreatine (PCr), PDE/PCr, PCr/ATP, PCr/Pi, and ATP/Pi, and evaluated the statistical significances. **RESULTS:** The brain tumors had a tendency of alkalization (pH = 7.28 +/- 0.27, p = 0.090), especially the pH of the lymphoma was significantly increased (pH = 7.45 +/- 0.32, p = 0.013). The brain tumor group showed increased PME/PDE ratio compared with that in the normal control group (p = 0.012). The ratios of PME/PDE, PDE/Pi, PME/PCr and PDE/PCr showed statistically significant differences between each brain lesion groups (p < 0.05). The astrocytoma showed an increased PME/PDE and PME/PCr ratio. The ratios of PDE/Pi, PME/PCr, and PDE/PCr in lymphoma group were lower than those in the control group and astrocytoma group. The metastasis group showed an increased PME/PDE ratio, compared with that in the normal control group. **CONCLUSION:** We have obtained the clinically applicable  $(^{31}\text{P})$  MRS, and the pH, PME/PDE, PDE/Pi, PME/PCr, and PDE/PCr ratios are helpful for differentiating among the different types of brain tumors.

[711]

**TÍTULO / TITLE:** - Ependymoma in children: molecular considerations and therapeutic insights.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Transl Oncol. 2013 Apr 25.

●●Enlace al texto completo (gratis o de pago) [1007/s12094-013-1041-](http://1007/s12094-013-1041-1)

[1](#)

**AUTORES / AUTHORS:** - Kim JH; Huang Y; Griffin AS; Rajappa P; Greenfield JP

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Weill Cornell Medical College, 525 East 68th Street, Box 99, New York, NY, 10065, USA, [jhkim17@gmail.com](mailto:jhkim17@gmail.com).

**RESUMEN / SUMMARY:** - A multi-modality approach that encompasses maximal surgical resection in combination with adjuvant therapy is critical for achieving optimal disease control in children with ependymoma. In view of its complex biology and variable response to therapy, ependymoma remains a challenge for clinicians involved in the care of these patients. Meanwhile, translation of molecular findings can characterize unique features of childhood ependymoma and their natural history. Furthermore, understanding the biology of pediatric ependymoma serves as a platform for development of future targeted therapies. In line with these goals, we review the molecular basis of pediatric ependymoma and its prognostic implications, as well as novel therapeutic advances in the management of ependymoma in children.

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[712]

**TÍTULO / TITLE:** - A new reality: long-term survivorship with a malignant brain tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Nurs Forum. 2013 May 1;40(3):267-74. doi: 10.1188/13.ONF.267-274.

●●Enlace al texto completo (gratis o de pago) [1188/13.ONF.267-274](#)

**AUTORES / AUTHORS:** - Lovely MP; Stewart-Amidei C; Page M; Mogensen K; Arzbaeher J; Lupica K; Maher ME

**INSTITUCIÓN / INSTITUTION:** - College of Nursing, University of California, San Francisco.

**RESUMEN / SUMMARY:** - Purpose/Objectives: To explore the survivor experience of adults who have been diagnosed three years or longer with a primary malignant brain tumor (PMBT). Research Approach: Qualitative using a biographical narrative approach. Setting: Six sites across the United States. Participants: Survivors of PMBTs (N = 35) and their family caregivers (N = 35). Methodologic Approach: Using a semistructured interview guide, survivors and caregivers were interviewed individually about their lives before and since the PMBT diagnosis. Thematic analysis was performed to identify themes. Findings: Stability in survivor lives disintegrated as a result of the changes experienced related to the tumor and its treatment. Those changes were profound and ultimately contributed to multiple losses in key areas of their lives. Over time, living with the diagnosis and its consequences required survivors and their caregivers to adapt to the new reality of their lives. Through the process of becoming a survivor, individuals were able to take back control of their lives. Adaptation required survivors to use internal and external resources as ways of coping with their new reality. Conclusions: People with PMBTs require support as they adapt to losses and changes that impact their lives. Assessment of specific changes that impact survivors' lives may be useful in guiding type of support given. Symptom management and mobilization of internal and external resources may lessen the life-changing

impact. Interpretation: Nurses should capture symptom meaning during assessments and expand assessments to include social support systems. Instituting measures that facilitate survivor independence may lessen the impact of disability. The significance of symptom worsening over time requires additional research. Knowledge Translation: Restoring self-worth and taking control of their lives are critical concerns for survivors of PMBTs.

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[713]

**TÍTULO / TITLE:** - Identification of a novel antagonist of the ErbB1 receptor capable of inhibiting migration of human glioblastoma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Oncol (Dordr). 2013 Jun;36(3):201-11. doi: 10.1007/s13402-013-0128-6. Epub 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1007/s13402-013-0128-](#)

[6](#)

**AUTORES / AUTHORS:** - Staberg M; Riemer C; Xu R; Dmytriyeva O; Bock E; Berezin V

**INSTITUCIÓN / INSTITUTION:** - Department of Neuroscience and Pharmacology, Protein Laboratory, University of Copenhagen, Blegdamsvej 3, 2200, Copenhagen, Denmark, [mikkel.staberg@cpr.ku.dk](mailto:mikkel.staberg@cpr.ku.dk).

**RESUMEN / SUMMARY:** - BACKGROUND: Receptors of the ErbB family are involved in the development of various cancers, and the inhibition of these receptors represents an attractive therapeutic concept. Upon ligand binding, ErbB receptors become activated as homo- or heterodimers, leading to the activation of downstream signaling cascades that result in the facilitation of cell proliferation and migration. A region of the extracellular part of the receptor, termed the 'dimerization arm', is important for the formation of receptor dimers and represents an attractive target for the design of ErbB inhibitors. METHODS: An ErbB1 targeting peptide, termed Herfin-1, was designed based on a model of the tertiary structure of the EGF-EGFR ternary complex. The binding kinetics of this peptide were determined employing surface plasmon resonance analyses. ErbB1-4 expression and phosphorylation in human glioblastoma cell lines U87 and U118 were determined by Western blotting using specific antibodies. Cell proliferation was determined by MTS staining. Cell migration was examined using a Chemotaxis Migration Kit. Neurite outgrowth from primary cerebellar granule neurons was evaluated by fluorescence microscopy and image processing. RESULTS: The present study shows that Herfin-1 functions as an ErbB1 antagonist. It binds to the extracellular domain of ErbB1 with a KD value of 361 nM. In U87 and U118 cells, both expressing high levels of ErbB1, Herfin-1 inhibits EGF-induced ErbB1 phosphorylation and cell migration. Additionally, Herfin-1 was found to increase neurite outgrowth in cerebellar granule neurons, likely through the inhibition of a sustained weak

ErbB1 activation. CONCLUSIONS: Targeting the ErbB1 receptor dimerization interface is a promising strategy to inhibit receptor activation in ErbB1-expressing glioma cells.

[714]

**TÍTULO / TITLE:** - Microvascular permeability of brain astrocytoma with contrast-enhanced magnetic resonance imaging: correlation analysis with histopathologic grade.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin Med J (Engl). 2013 May;126(10):1953-6.

**AUTORES / AUTHORS:** - Jia ZZ; Geng DY; Liu Y; Chen XR; Zhang J

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Affiliated Hospital of Nantong University, Nantong 226001, China.

**RESUMEN / SUMMARY:** - BACKGROUND: The degree of pathological microvascular proliferation is an important element in evaluation of the astrocytoma grade. This study was aimed to quantitatively assess the microvascular permeability of brain astrocytoma with the volume transfer constant (K(trans)) and volume of extravascular extracellular space per unit volume of tissue (Ve) from dynamic contrast-enhanced magnetic resonance imaging (DCE-MRI) and to evaluate the effectiveness of the K(trans) and Ve in the grading of astrocytoma. METHODS: The highest values of the K(trans) and Ve of 67 patients with astrocytoma (27 with grade II, 12 with grade III, and 28 with grade IV) were obtained. The comparisons of the differences of the K(trans) and Ve between the different grades were conducted using the Mann-Whitney rank-sum tests. Spearman's rank correlation coefficients were determined between K(trans) values, Ve values and astrocytoma grades. Receiver operating characteristic (ROC) curve analyses were performed to determine the cut-off values for the K(trans) and Ve to distinguish between the different grades of astrocytoma. RESULTS: There were significant differences (P < 0.001) between the different grades in the K(trans) values and Ve values, except for grades III and IV. The K(trans) values and Ve values were both correlated with astrocytoma grades (both P < 0.001). The ROC curve analyses showed that the cut-off values for the K(trans) and Ve provided the best combination of sensitivity and specificity in distinguishing between grade II and grade III or IV astrocytomas. CONCLUSIONS: DCE-MRI can play an important role in assessing the microvascular permeability and the grading of brain astrocytoma.

[715]

**TÍTULO / TITLE:** - All-trans retinoic acid upregulates VEGF expression in glioma cells in vitro.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Biomed Res. 2013 Jan;27(1):51-5. doi: 10.7555/JBR.27.20120048. Epub 2012 Dec 19.

●●Enlace al texto completo (gratis o de pago) [7555/JBR.27.20120048](https://doi.org/10.7555/JBR.27.20120048)

**AUTORES / AUTHORS:** - Liang C; Guo S; Yang L

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, the First Affiliated Hospital of Medical College of Xi'an Jiaotong University, Xi'an, Shaanxi 710061, China;

**RESUMEN / SUMMARY:** - All-trans retinoid acid (ATRA) is one of the most potent and most thoroughly studied differentiation inducers that induce the differentiation and apoptosis of glioma cells. However, the effect of ATRA on angiogenesis of glioma remains poorly understood. We examined the effect of ATRA on the expression of vascular endothelial growth factor (VEGF) in different glioma cell lines and investigated the underlying mechanism, intending to partially reveal the effects of ATRA on angiogenesis of glioma. Glioma cells were treated by ATRA at 5 and 10 micromol/L. The VEGF mRNA transcript levels were determined by real-time RT-PCR and the protein levels of VEGF in glioma cells were evaluated by Western blotting assays. Moreover, hypoxia-inducible factor-1alpha (HIF-1alpha) mRNA expression was analyzed by using real-time RT-PCR. After treatment with 5 and 10 micromol/L ATRA, the VEGF mRNA transcript levels in glioma cells increased remarkably, compared with that in the control group, and the relative protein expression of VEGF was also up-regulated. Meanwhile, the HIF-1alpha mRNA expression also increased. ATRA increases the expression of VEGF in glioma cells at both transcriptional and translational levels.

[716]

**TÍTULO / TITLE:** - Treatment of children with high grade glioma with nimotuzumab: A 5-y institutional experience.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - MAbs. 2013 Mar 1;5(2):202-7. doi: 10.4161/mabs.22970.

●●Enlace al texto completo (gratis o de pago) [4161/mabs.22970](https://doi.org/10.4161/mabs.22970)

**AUTORES / AUTHORS:** - Cabanas R; Saurez G; Rios M; Alert J; Reyes A; Valdes J; Gonzalez MC; Pedrayes JL; Avila M; Herrera R; Infante M; Echevarria E; Moreno M; Luaces PL; Ramos TC

**INSTITUCIÓN / INSTITUTION:** - Oncohematology; Juan Manuel Marquez Pediatric Hospital; Havana, Cuba.

**RESUMEN / SUMMARY:** - Brain tumors are a major cause of cancer-related mortality in children. Overexpression of epidermal growth factor receptor (EGFR) is detected in pediatric brain tumors and receptor density appears to increase with tumor grading. Nimotuzumab is an IgG1 antibody that targets EGFR. Twenty-three children with high-grade glioma (HGG) were enrolled in an expanded access program in which nimotuzumab was administered alone or with radio-chemotherapy. The mean number of doses was 39. Nimotuzumab

was well-tolerated and treatment with the antibody yielded a survival benefit: median survival time was 32.66 mo and the 2-y survival rate was 54.2%. This study demonstrated the feasibility of prolonged administration of nimotuzumab and showed preliminary evidence of clinical benefit in HGG patients with poor prognosis.

[717]

**TÍTULO / TITLE:** - Non-Invasive Synergistic Treatment of Brain Tumors by Targeted Chemotherapeutic Delivery and Amplified Focused Ultrasound-Hyperthermia Using Magnetic Nanographene Oxide.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Adv Mater. 2013 May 27. doi: 10.1002/adma.201301046.

●●Enlace al texto completo (gratis o de pago) [1002/adma.201301046](http://1002/adma.201301046)

**AUTORES / AUTHORS:** - Yang HW; Hua MY; Hwang TL; Lin KJ; Huang CY; Tsai RY; Ma CC; Hsu PH; Wey SP; Hsu PW; Chen PY; Huang YC; Lu YJ; Yen TC; Feng LY; Lin CW; Liu HL; Wei KC

**INSTITUCIÓN / INSTITUTION:** - Department of Chemical and Materials Engineering, Chang Gung University, Kuei-Shan, Tao-Yuan 33302, Taiwan, ROC; Department of Chemical Engineering, National Tsing Hua University, Hsin-chu 30013, Taiwan, ROC.

**RESUMEN / SUMMARY:** - The combination of chemo-thermal therapy is the best strategy to ablate tumors, but how to effectively heat deep tumor tissues without side-damage is a challenge. Here, a systemically delivered nanocarrier is designed with multiple advantages, including superior heat absorption, highly efficient hyperthermia, high drug capacity, specific targeting ability, and molecular imaging, to achieve both high antitumor efficacy and effective amplification of hyperthermia with minimal side effects.

[718]

**TÍTULO / TITLE:** - Fusicoccin a, a phytotoxic carbocyclic diterpene glucoside of fungal origin, reduces proliferation and invasion of glioblastoma cells by targeting multiple tyrosine kinases.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Transl Oncol. 2013 Apr;6(2):112-23. Epub 2013 Apr 1.

**AUTORES / AUTHORS:** - Bury M; Andolfi A; Rogister B; Cimmino A; Megalizzi V; Mathieu V; Feron O; Evidente A; Kiss R

**INSTITUCIÓN / INSTITUTION:** - Laboratoire de Toxicologie, Faculte de Pharmacie, Universite Libre de Bruxelles, Brussels, Belgium.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is a deadly cancer that possesses an intrinsic resistance to pro-apoptotic insults, such as conventional chemotherapy and radiotherapy, and diffusely invades the brain parenchyma, which renders it elusive to total surgical resection. We found that fusicoccin A, a fungal metabolite from *Fusicoccum amygdali*, decreased the proliferation and

migration of human GBM cell lines in vitro, including several cell lines that exhibit varying degrees of resistance to pro-apoptotic stimuli. The data demonstrate that fusicoccin A inhibits GBM cell proliferation by decreasing growth rates and increasing the duration of cell division and also decreases two-dimensional (measured by quantitative video microscopy) and three-dimensional (measured by Boyden chamber assays) migration. These effects of fusicoccin A treatment translated into structural changes in actin cytoskeletal organization and a loss of GBM cell adhesion. Therefore, fusicoccin A exerts cytostatic effects but low cytotoxic effects (as demonstrated by flow cytometry). These cytostatic effects can partly be explained by the fact that fusicoccin inhibits the activities of a dozen kinases, including focal adhesion kinase (FAK), that have been implicated in cell proliferation and migration. Overexpression of FAK, a nonreceptor protein tyrosine kinase, directly correlates with the invasive phenotype of aggressive human gliomas because FAK promotes cell proliferation and migration. Fusicoccin A led to the down-regulation of FAK tyrosine phosphorylation, which occurred in both normoxic and hypoxic GBM cell culture conditions. In conclusion, the current study identifies a novel compound that could be used as a chemical template for generating cytostatic compounds designed to combat GBM.

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[719]

**TÍTULO / TITLE:** - Primary diffuse intraosseous meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin Med J (Engl). 2013 Apr;126(7):1390-1.

**AUTORES / AUTHORS:** - Zhu MW; Wang XD; Shi C; Shen H; Lin ZG

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, First Affiliated Hospital of Harbin Medical University, Harbin, Heilongjiang 150001, China.

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[720]

**TÍTULO / TITLE:** - Clinical update: recognising brain tumours early in children.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Community Pract. 2013 Apr;86(4):42-5.

**AUTORES / AUTHORS:** - Paul SP; Debono R; Walker D

**INSTITUCIÓN / INSTITUTION:** - Bristol Royal Hospital for Children, Bristol.

**RESUMEN / SUMMARY:** - Brain tumour accounts for a quarter of all childhood cancers and is the leading cause of cancer related deaths in children. Initial symptoms can be misleading and is often misinterpreted as being caused by a less serious childhood illness. Available statistics show that it takes almost three times longer for the brain tumour in children to get diagnosed in the United Kingdom in comparison to other developed countries. Head Smart campaign was launched in the UK in 2011 with an aim to decrease the time from the onset of symptoms to diagnosis; initial results have been highly encouraging.

Community practitioners play an important role in not only identifying symptoms (by following Head Smart symptom card) and selecting patients for reassurance, review or early referral but also by providing valuable support to the family post diagnosis in the community.

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[721]

**TÍTULO / TITLE:** - Meningiomas among intracranial neoplasms in Johannesburg, South.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Afr Health Sci. 2013 Mar;13(1):118-21. doi: 10.4314/ahs.v13i1.16.

●●Enlace al texto completo (gratis o de pago) [4314/ahs.v13i1.16](#)

**AUTORES / AUTHORS:** - Ibebuike K; Ouma J; Gopal R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Charlotte Maxeke Johannesburg Academic Hospital, Johannesburg, South Africa.

**RESUMEN / SUMMARY:** - BACKGROUND: Worldwide there are varying reports on the prevalence of meningiomas among intracranial neoplasms. Different reports state intracranial meningiomas, gliomas or metastatic tumours as the most common tumour among intracranial neoplasms. We present our institutions' experience of patients with intracranial neoplasms and a comparison of our findings with those from the literature. OBJECTIVE: To determine the relative frequency of intracranial meningiomas among intracranial neoplasms in our environment. METHODS: Consecutive patients (151) seen at the CMJAH and CHBAH, Johannesburg, with histologically proven intracranial neoplasms over a 12 month period were analyzed. RESULTS: The commonest histological types were meningiomas, gliomas and pituitary tumours. Forty eight (31.8%) patients had histologically confirmed intracranial meningiomas during the study period, 35 (23.2%) had pituitary adenomas and 32 (21.2%) had gliomas. The mean age of the patients was 43 years with a female-to-male ratio of 1.3:1. The peak age range at presentation was in the fifth (27.1%) and sixth (26.5%) decades. CONCLUSION: The study showed that meningioma is the most common tumour among intracranial neoplasms in our environment.

[722]

**TÍTULO / TITLE:** - Cytologic appearance of retinal cells included in a fine-needle aspirate of a meningioma around the optic nerve of a dog.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Vet Clin Pathol. 2013 Jun;42(2):234-7. doi: 10.1111/vcp.12046. Epub 2013 May 8.

●●Enlace al texto completo (gratis o de pago) [1111/vcp.12046](#)

**AUTORES / AUTHORS:** - Tvedten H; Hillstrom A

**INSTITUCIÓN / INSTITUTION:** - Department of Clinical Sciences, Faculty of Veterinary Medicine and Animal Science, Swedish University of the Agricultural Sciences, Uppsala, Sweden.

**RESUMEN / SUMMARY:** - A 6-year-old Wirehair Dachshund had a meningioma around the optic nerve that caused exophthalmos. A benign mesenchymal tumor was suspected based on the cytologic pattern of a fine-needle aspirate, and a meningioma was diagnosed by histopathologic examination. In addition to the meningioma cells, the cytologic smears included groups of cells from apparently 4 layers of normal retina. In particular, uniform rod-shaped structures in the cytologic sample could suggest rod-shaped bacteria, but these structures were identified as cylindrical outer segments of photoreceptor rod cells. Other retinal structures recognized included pigmented epithelial layer cells with their uniquely formed pigment granules, the characteristic bi-lobed, cleaved nuclei from the outer nuclear layer, and nerve tissue likely from the outer plexiform layer of the retina.

[723]

**TÍTULO / TITLE:** - MicroRNA-495 inhibits proliferation of glioblastoma multiforme cells by downregulating cyclin-dependent kinase 6.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World J Surg Oncol. 2013 Apr 17;11:87. doi: 10.1186/1477-7819-11-87.

●●Enlace al texto completo (gratis o de pago) [1186/1477-7819-11-87](#)

**AUTORES / AUTHORS:** - Chen SM; Chen HC; Chen SJ; Huang CY; Chen PY; Wu TW; Feng LY; Tsai HC; Lui TN; Hsueh C; Wei KC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Chang Gung Memorial Hospital at Linkou, Chang Gung University, No,5 Fu-Shin Street, Kweishan, Taoyuan 333, Taiwan. [anray5319@cgmh.org.tw](mailto:anray5319@cgmh.org.tw).

**RESUMEN / SUMMARY:** - BACKGROUND: Glioblastoma multiforme (GBM) is the most aggressive type of glioma and carries the poorest chances of survival. There is therefore an urgent need to understand the mechanisms of glioma tumorigenesis and develop or improve therapeutics. The aim of this study was to assess the possible prognostic value of cyclin-dependent kinase 6 (CDK6) and the effects of microRNA-495 (miR-495) manipulation on CDK6 expression and cell survival in glioma cells. METHODS: Analyses of clinical specimens from GBM patients were used. Expression of CDK6 was analyzed by real-time polymerase chain reaction (RT-PCR), Western blotting, and immunohistochemistry. Expression of CDK6 was also analyzed after over-expression of miR-495 in T98 cells; both cell proliferation and RB phosphorylation were examined. Cell proliferation, cell cycle distribution, and RB phosphorylation were also examined after knockdown of CDK6 in U87-MG and T98 cells. RESULTS: Analyses of clinical specimens from GBM patients

identified that CDK6 is significantly expressed in gliomas. CDK6 antigen expression was higher in tumor cores and margins than in adjacent normal brain tissues, and higher levels of CDK6 expression in the tumor margin correlated with decreased survival. Over-expression of miR-495 in T98 cells downregulated the expression of CDK6 and inhibited retinoblastoma phosphorylation, and knockdown of CDK6 in U87-MG and T98 cells by siRNAs resulted in cell cycle arrest at the G1/S transition and inhibition of cell proliferation. CONCLUSIONS: This study revealed miR-495 is down-regulated in glioma tissues. Furthermore, miR-495 regulated CDK6 expression and involved in glioma cell growth inhibition, which indicated the possible role of miR-495 in tumor progression.

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[724]

**TÍTULO / TITLE:** - miRNA interactions as a novel molecular panel for clinical outcome of glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomark Med. 2013 Apr;7(2):201. doi: 10.2217/bmm.13.7.

●●Enlace al texto completo (gratis o de pago) [2217/bmm.13.7](#)

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**INSTITUCIÓN / INSTITUTION:** - Victor Babes National Institute of Pathology, 99-101 Splaiul Independentei, Bucharest 050096, Romania.  
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[725]

**TÍTULO / TITLE:** - Diacylglycerol kinase alpha is a critical signaling node and novel therapeutic target in glioblastoma and other cancers.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Discov. 2013 Apr 10.

●●Enlace al texto completo (gratis o de pago) [1158/2159-8290.CD-12-0215](#)

**AUTORES / AUTHORS:** - Dominguez CL; Floyd DH; Xiao A; Mullins GR; Kefas BA; Xin W; Yacur MN; Abounader R; Lee JK; Mustata Wilson G; Harris TE; Purow BW

**INSTITUCIÓN / INSTITUTION:** - 1Neurology, University of Virginia.

**RESUMEN / SUMMARY:** - While Diacylglycerol kinase alpha (DGKalpha) has been linked to several signaling pathways related to cancer cell biology, it has been neglected as a target for cancer therapy. The attenuation of DGKalpha activity via DGKalpha-targeting siRNA and small-molecule inhibitors, R59022 and R59949, induced caspase-mediated apoptosis in glioblastoma cells and in other cancers, but lacked toxicity in non-cancerous cells. We determined that mTOR and HIF-1alpha are key targets of DGKalpha inhibition, in addition to its regulation of other oncogenes. DGKalpha regulates mTOR transcription via a unique pathway involving cyclic AMP. Lastly, we showed efficacy of DGKalpha

inhibition with shRNA or a small-molecule agent in glioblastoma and melanoma xenograft treatment models, with growth delay and decreased vascularity. This study establishes DGKalpha as a central signaling hub and a promising therapeutic target in the treatment of cancer.

[726]

**TÍTULO / TITLE:** - Ionizing radiation in glioblastoma initiating cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Oncol. 2013 Apr 8;3:74. doi: 10.3389/fonc.2013.00074. Print 2013.

●●Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00074](#)

**AUTORES / AUTHORS:** - Rivera M; Sukhdeo K; Yu J

**INSTITUCIÓN / INSTITUTION:** - Department of Stem Cell Biology and Regenerative Medicine, Lerner Research Institute, Cleveland Clinic Cleveland, OH, USA ; Department of Molecular Medicine, Lerner College of Medicine of Case Western Reserve University Cleveland Clinic, Cleveland, OH, USA.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most common primary malignant brain tumor in adults with a median survival of 12-15 months with treatment consisting of surgical resection followed by ionizing radiation (IR) and chemotherapy. Even aggressive treatment is often palliative due to near universal recurrence. Therapeutic resistance has been linked to a subpopulation of GBM cells with stem cell-like properties termed GBM initiating cells (GICs). Recent efforts have focused on elucidating resistance mechanisms activated in GICs in response to IR. Among these, GICs preferentially activate the DNA damage response (DDR) to result in a faster rate of double-strand break (DSB) repair induced by IR as compared to the bulk tumor cells. IR also activates NOTCH and the hepatic growth factor (HGF) receptor, c-MET, signaling cascades that play critical roles in promoting proliferation, invasion, and resistance to apoptosis. These pathways are preferentially activated in GICs and represent targets for pharmacologic intervention. While IR provides the benefit of improved survival, it paradoxically promotes selection of more malignant cellular phenotypes of GBM. As reviewed here, finding effective combinations of radiation and molecular inhibitors to target GICs and non-GICs is essential for the development of more effective therapies.

[727]

**TÍTULO / TITLE:** - Surgical management of intracranial arachnoid cysts: clinical and radiological outcome.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(2):138-43. doi: 10.5137/1019-5149.JTN.5592-11.1.

●●Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.5592-11.1](#)

**AUTORES / AUTHORS:** - Khan IS; Sonig A; Thakur JD; Nanda A

**INSTITUCIÓN / INSTITUTION:** - Louisiana State University, Health Sciences Center, Department of Neurosurgery, Shreveport, LA, USA.

**RESUMEN / SUMMARY:** - AIM: Intracranial arachnoid cysts account for 1% of all intracranial mass lesions and may require drainage if symptomatic. MATERIAL AND METHODS: We retrospectively reviewed the medical records of 45 consecutive patients who underwent surgical drainage for symptomatic intracranial cysts at our institution from January 2000 to January 2010. The average age of our patients was 36.2 years; 26 were female and 19 were males. The most common symptoms included headaches (73.3%) and dizziness (35.6%). RESULTS: Cyst wall fenestration was carried out in 29 (64.4%), Cystoperitoneal shunting in 6 (13.3%) and endoscopic fenestration and stealth guided craniotomy in 5 patients each (11.1%). Seven patients had perioperative complications, and on discharge 79.1% of all patients had partial or complete clinical relief and 85.7% showed radiological decompression. A maximum cyst dimension of more than 5.0 cm was significantly associated with worse outcome at discharge ( $p=0.02$ ). There was no association between post-operative size cyst decompression and resolution of clinical symptoms. The clinical and radiological outcomes were comparable between different surgical methods. CONCLUSION: There was no difference in the outcomes between different modalities. The extent of post-operative radiological reduction had no correlation with clinical outcomes, and should be assessed in relation to the patient's clinical status.

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[728]

**TÍTULO / TITLE:** - DNA Damage Induced in Glioblastoma Cells by I-131: A Comparison between Experimental Data and Monte Carlo Simulation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell J. 2012 Spring;14(1):25-30. Epub 2012 Jun 13.

**AUTORES / AUTHORS:** - Neshasteh-Riz A; Koosha F; Mohsenifar A; Mahdavi SR  
**INSTITUCIÓN / INSTITUTION:** - 1. Department of Radiology Technology, Faculty of Allied Health, Tehran University of Medical Sciences, Tehran, Iran.

**RESUMEN / SUMMARY:** - OBJECTIVE: The passage of ionizing radiation in living cells creates clusters of damaged nucleotides in DNA. In this study, DNA strand breaks induced by the beta particle of iodine-131 (I-131), have been determined experimentally and compared to Monte Carlo simulation results as a theoretical method of determining (131)I damage. MATERIALS AND METHODS: In this experimental study, in order to create single strand breaks (SSB) and double strand breaks (DSB) in the DNA, glioblastoma (GBM) cells were exposed to 10 mCi I-131, at a dose of 2 Gy. Damage of irradiated cells were evaluated quantitatively by the Fast Micromethod assay. The energy spectrum of electrons released in cells were obtained by the macroscopic Monte Carlo code (MCNP4c) and used as an input of the micro Monte Carlo

code (MCDS). The percent of damage induced in cells was analyzed by Mann-Whitney test. RESULTS: A significant reduction ( $p < 0.05$ ) in fluorescence intensity in irradiated cells compared to control cells as determined by the Fast Micromethod assay represented induced SSB and DSB damages in the DNA of irradiated cells. Comparison of experimental and theoretical results showed that the difference between the percentages of SSB per Gy was about 7.4% and DSB was about 1% per Gy. CONCLUSION: The differences in experimental and theoretical results may be due to the algorithm of applied codes. Since the Fast Micromethod and other experimental techniques do not provide information about the amount of detailed and complex damages of DNA-like base damages, the applied Monte Carlo codes, due to their capability to predict the amount of detailed damages that occur in the DNA of irradiated cells, can be used in in vitro experiments and radiation protection areas.

[729]

**TÍTULO / TITLE:** - Clinical significance of FOXP3 expression in human gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Transl Oncol. 2013 Apr 12.

●●Enlace al texto completo (gratis o de pago) [1007/s12094-013-1037-](#)

[X](#)

**AUTORES / AUTHORS:** - Wang L; Zhang B; Xu X; Zhang S; Yan X; Kong F; Feng X; Wang J

**INSTITUCIÓN / INSTITUTION:** - Graduate School, Tianjin Medical University, No. 22 Qixiangtai Road, Tianjin, 300070, China.

**RESUMEN / SUMMARY:** - OBJECTIVE: Studies have demonstrated that the transcription factor forkhead box P3 (FOXP3) is expressed not only in regulatory T cells, but also in some cancer cells. This study aims to clarify whether or not FOXP3 expression occurs in human gliomas and investigate the clinical significance of this expression in gliomas. METHODS: We detected FOXP3 protein expression in 40 glioma samples, 3 normal brain tissue samples, and 4 normal tonsil tissue samples using immunohistochemical staining and western blot. The expression of FOXP3 protein was also detected in five glioma cell lines by western blot. We also evaluated the association of FOXP3 expression with clinical pathological grades, prognosis, and recurrence. RESULTS: Western blot analysis showed that the expression of FOXP3 protein was upregulated in high-grade glioma (HGGS) samples compared with low-grade samples. The cell line U87 showed the highest FOXP3 expression, while U373 had the lowest expression. Immunohistochemical analysis detected FOXP3 protein in 35 out of the 40 (87.5 %) glioma samples and high levels of FOXP3 were observed in 26 out of the 27 (96.3 %) high-grade gliomas samples. Statistical analysis suggested that the upregulation of FOXP3 is significantly correlated with the histologic grade of gliomas ( $P < 0.05$ ) and that patients with high expression of FOXP3 protein exhibit a poorer prognosis than

those with low FOXP3 expression. CONCLUSIONS: Our findings suggest that FOXP3 expression in glioma cells has a crucial function in the development of HGGs and is associated with the malignant biological behavior of HGGs.

[730]

**TÍTULO / TITLE:** - Neuronavigation-Assisted Endoscopic Unilateral Cyst Fenestration for Treatment of Symptomatic Septum Pellucidum Cysts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg A Cent Eur Neurosurg. 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1055/s-0032-1331385](#)

**AUTORES / AUTHORS:** - Wang L; Ling SY; Fu XM; Niu CS; Qian RB

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Anhui Provincial Hospital, Affiliated to Anhui Medical University, and Anhui Provincial Stereotactic Neurosurgical Institute, and Anhui Province Key Laboratory of Brain Function and Brain Disease, Hefei City, Anhui Province, China.

**RESUMEN / SUMMARY:** - Background Traditional surgical treatments for this rare disease include open surgical procedures and ventriculoperitoneal shunting. In 1995, endoscopic fenestration was first applied to treatment of cysts of the septum pellucidum (CSP). However, cyst fenestration generally takes a bilateral approach by making two burr holes leading to two fenestrations in the lateral walls of the cyst. Some disadvantages are related to bilateral fenestration. So far, there is no consensus on the surgical indications, the endoscopic approaches, and techniques for CSPs. Based on our experience with 14 cases of symptomatic CSP treated with neuronavigation-assisted endoscopic unilateral cyst fenestration via a single burr hole, we discuss the operative indications and the utility of endoscope-assisted techniques in combination with neuronavigation. Methods 14 patients underwent endoscopic CSP fenestration via a right frontal approach using a rigid endoscope and neuronavigation. Neuronavigation helped locating optimal skin incision, puncture point, optimal operation trajectory, and real-time operation monitoring. Postoperatively, a follow-up study on the 14 patients was performed. Results The follow-up period ranged from 6 months to 2 years. Postoperatively, the mass effect of the cysts and the self-reported symptoms disappeared immediately. In 7 patients with papilledema, the optic fundus examinations showed that papilledema improved. The computerized tomography (CT) or magnetic resonance imaging (MRI) scans showed significant decrease in the cyst size and no recurrence during the follow-up. In 2 patients with accompanying hydrocephalus, the hydrocephalus disappeared. Conclusion The results after uni- and bilateral CSP fenestration show no significant difference. Avoiding damage of contralateral tissue, the surgical trauma in unilateral fenestration is less than in bilateral fenestration. Furthermore, the unilateral approach shortens the operation time. We believe that unilateral cyst fenestration is a better therapeutic option in symptomatic CSP.

[731]

**TÍTULO / TITLE:** - A Multi-Parametric Imaging Investigation of the Response of C6 Glioma Xenografts to MLN0518 (Tandutinib) Treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 26;8(4):e63024. doi: 10.1371/journal.pone.0063024. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0063024](#)

**AUTORES / AUTHORS:** - Boulton JK; Terkelsen J; Walker-Samuel S; Bradley DP; Robinson SP

**INSTITUCIÓN / INSTITUTION:** - Division of Radiotherapy and Imaging, The Institute of Cancer Research and Royal Marsden NHS Trust, Sutton, Surrey, United Kingdom.

**RESUMEN / SUMMARY:** - Angiogenesis, the development of new blood vessels, is essential for tumour growth; this process is stimulated by the secretion of numerous growth factors including platelet derived growth factor (PDGF). PDGF signalling, through its receptor platelet derived growth factor receptor (PDGFR), is involved in vessel maturation, stimulation of angiogenesis and upregulation of other angiogenic factors, including vascular endothelial growth factor (VEGF). PDGFR is a promising target for anti-cancer therapy because it is expressed on both tumour cells and stromal cells associated with the vasculature. MLN0518 (tandutinib) is a potent inhibitor of type III receptor tyrosine kinases that demonstrates activity against PDGFR $\alpha$ /beta, FLT3 and c-KIT. In this study a multi-parametric MRI and histopathological approach was used to interrogate changes in vascular haemodynamics, structural response and hypoxia in C6 glioma xenografts in response to treatment with MLN0518. The doubling time of tumours in mice treated with MLN0518 was significantly longer than tumours in vehicle treated mice. The perfused vessel area, number of alpha smooth muscle actin positive vessels and hypoxic area in MLN0518 treated tumours were also significantly lower after 10 days treatment. These changes were not accompanied by alterations in vessel calibre or fractional blood volume as assessed using susceptibility contrast MRI. Histological assessment of vessel size and total perfused area did not demonstrate any change with treatment. Intrinsic susceptibility MRI did not reveal any difference in baseline R2\* or carbogen-induced change in R2\*. Dynamic contrast-enhanced MRI revealed anti-vascular effects of MLN0518 following 3 days treatment. Hypoxia confers chemo- and radio-resistance, and alongside PDGF, is implicated in evasive resistance to agents targeted against VEGF signalling. PDGFR antagonists may improve potency and efficacy of other therapeutics in combination. This study highlights the challenges of identifying appropriate quantitative imaging response biomarkers in heterogeneous models, particularly considering the multifaceted roles of angiogenic growth factors.

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[732]

**TÍTULO / TITLE:** - Treatment-related brain tumor imaging changes: So-called “pseudoprogression” vs. tumor progression: Review and future research opportunities.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Surg Neurol Int. 2013 Apr 17;4(Suppl 3):S129-35. doi: 10.4103/2152-7806.110661. Print 2013.

●●Enlace al texto completo (gratis o de pago) [4103/2152-7806.110661](#)

**AUTORES / AUTHORS:** - Tran DK; Jensen RL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University of Utah, Utah, USA.

**RESUMEN / SUMMARY:** - BACKGROUND: Glioblastoma multiforme (GBM) has a dismal prognosis despite aggressive therapy. Initial diagnosis and measurement of response to treatment is usually determined by measurement of gadolinium-enhanced tumor volume with magnetic resonance imaging (MRI). Unfortunately, many GBM treatment modalities can cause changes in tumor gadolinium enhancement patterns that mimic tumor progression. The lack of a definitive imaging modality to distinguish posttreatment radiographic imaging changes (PTRIC), including pseudoprogression and radiation necrosis, from true tumor progression presents a major unmet clinical need in the management of GBM patients. METHODS: The authors discuss current modalities available for differentiating PTRIC and tumor progression, describe development of an animal model of PTRIC, and consider potential molecular and cellular pathways involved in the development of PTRIC. RESULTS: An animal model using glioma cells transfected with a luciferase reporter has been developed, and after conventional GBM therapy, this animal model can be evaluated with posttreatment bioluminescence imaging and various MR tumor imaging modalities. CONCLUSIONS: Posttreatment radiographic changes that mimic tumor progression can influence clinicians to make treatment decisions that are inappropriate for the patient’s actual clinical condition. Several imaging modalities have been used to try to distinguish PTRIC and true progression, including conventional MRI, perfusion MRI, MR spectroscopy, and positron emission tomography (PET); however, none of these modalities has consistently and reliably distinguished PTRIC from tumor growth. An animal model using glioma cells transfected with a luciferase reporter may enable mechanistic studies to determine causes and potential treatments for PTRIC.

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[733]

**TÍTULO / TITLE:** - Spinal ependymomas: prognostic factors and treatment results.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cancer Res Ther. 2013 Jan-Mar;9(1):60-3. doi: 10.4103/0973-1482.110371.

●●Enlace al texto completo (gratis o de pago) [4103/0973-1482.110371](https://doi.org/10.4103/0973-1482.110371)

**AUTORES / AUTHORS:** - Voulgaris S; Alexiou GA; Zigouris A; Fotakopoulos G; Michos E; Katsiafas I; Savvanis G; Pachatouridis D

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospital of Ioannina, Ioannina, Greece.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** We retrospectively analyzed patients with spinal ependymomas who were treated in our institute. We correlated outcome and recurrence with clinical and pathological features. **MATERIALS AND METHODS:** Between January 2000 and January 2010, we treated 14 patients with spinal ependymoma (10 males, 4 females; mean age: 48.3 +/- 18 years, range: 18-79 years). All patients were operated and received standard postoperative care. The outcome was estimated based on Frankel scale. **RESULTS:** The most common presenting symptom was pain. All tumors were operated through a posterior approach and gross total resection was performed in 13/14 cases. Histopathological examination revealed the presence of one anaplastic ependymoma, nine grade II ependymomas, and four myxopapillary ependymomas. The mean Ki-67 index was 1.5%. All the patients were followed up postoperatively for an average of 5.1 years. One patient was reoperated because of recurrent disease and another received radiotherapy due to dissemination of disease. No association was found between extent of resection, tumor location, Ki-67 index, and recurrence of disease. There was a trend toward a higher risk of recurrence in myxopapillary ependymomas. Eight patients improved postoperatively. Interestingly, during the follow-up period, four patients developed a secondary neoplasia. **CONCLUSION:** Early intervention and gross total resection of spinal ependymomas are associated with a favorable outcome. Further studies are needed to clarify the incidence of the development of a second cancer in these patients.

[734]

**TÍTULO / TITLE:** - Extracellular superoxide dismutase, a potential extracellular biomarker candidate for prolactinoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - West Indian Med J. 2012 Oct;61(7):665-9.

**AUTORES / AUTHORS:** - Yang J; Zhang C; Zhang W; Shi R; Zhang Z

**INSTITUCIÓN / INSTITUTION:** - Section of Neurosurgery, First Affiliated Hospital of Baotou Medical College, Inner Mongolia, China. [jh\\_bt@163.com](mailto:jh_bt@163.com)

**RESUMEN / SUMMARY:** - **AIM:** To investigate whether the extracellular superoxide dismutase (EC-SOD) and manganese superoxide dismutase (Mn-SOD) level changes during prolactinoma (PRL) development. **METHODS:** Surgical tissues from 37 female patients with PRL were tested for Mn-SOD and serum samples from such PRL patients were tested for EC-SOD level changes

with Western Blot. The MnSOD level from blood cells was also investigated to show whether the Mn-SOD variation could locate tumorigenesis tissues. RESULTS: According to the patients' age analysis, age 20-40 years is high risk for getting PRL. There is a positive relationship between the PRL severity and EC-SOD. The Mn-SOD level from surgical tissues, but not blood cells, also shows a corresponding positive relationship to PRL severity, which indicates that elevated Mn-SOD might only happen in PRL tumorigenesis tissues. CONCLUSIONS: Extracellular superoxide dismutase is an extracellular protein and the serum EC-SOD could be a good candidate for the diagnoses of prolactinoma.

[735]

**TÍTULO / TITLE:** - Concurrent bevacizumab and temozolomide alter the patterns of failure in radiation treatment of glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Radiat Oncol. 2013 Apr 25;8(1):101.

●●Enlace al texto completo (gratis o de pago) [1186/1748-717X-8-101](#)

**AUTORES / AUTHORS:** - Shields LB; Kadner R; Vitaz TW; Spalding AC

**RESUMEN / SUMMARY:** - BACKGROUND: We investigated the pattern of failure in glioblastoma multiforme (GBM) patients treated with concurrent radiation, bevacizumab (BEV), and temozolomide (TMZ). Previous studies demonstrated a predominantly in-field pattern of failure for GBM patients not treated with concurrent BEV. METHODS: We reviewed the treatment of 23 patients with GBM who received 30 fractions of simultaneous integrated boost IMRT. PTV60 received 2 Gy daily to the tumor bed or residual tumor while PTV54 received 1.8 Gy daily to the surrounding edema. Concurrent TMZ (75 mg/m<sup>2</sup>) daily and BEV (10 mg/kg every 2 weeks) were given during radiation therapy. One month after RT completion, adjuvant TMZ (150 mg/m<sup>2</sup> x 5 days) and BEV were delivered monthly until progression or 12 months total. RESULTS: With a median follow-up of 12 months, the median disease-free and overall survival were not reached. Four patients discontinued therapy due to toxicity for the following reasons: bone marrow suppression (2), craniotomy wound infection (1), and pulmonary embolus (1). Five patients had grade 2 or 3 hypertension managed by oral medications. Of the 12 patients with tumor recurrence, 7 suffered distant failure with either subependymal (5/12; 41%) or deep white matter (2/12; 17%) spread detected on T2 FLAIR sequences. Five of 12 patients (41%) with a recurrence demonstrated evidence of GAD enhancement. The patterns of failure did not correlate with extent of resection or number of adjuvant cycles. CONCLUSIONS: Treatment of GBM patients with concurrent radiation, BEV, and TMZ was well tolerated in the current study. The majority of patients experienced an out-of-field pattern of failure with radiation, BEV, and TMZ which has not been previously reported. Further investigation is warranted

to determine whether BEV alters the underlying tumor biology to improve survival. These data may indicate that the currently used clinical target volume thought to represent microscopic disease for radiation may not be appropriate in combination with TMZ and BEV.

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[736]

**TÍTULO / TITLE:** - Artemether combined with shRNA interference of vascular cell adhesion molecule-1 significantly inhibited the malignant biological behavior of human glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 11;8(4):e60834. doi: 10.1371/journal.pone.0060834. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0060834](#)

**AUTORES / AUTHORS:** - Wang YB; Hu Y; Li Z; Wang P; Xue YX; Yao YL; Yu B; Liu YH

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Shengjing Hospital of China Medical University, Shenyang, Liaoning Province, People's Republic of China.

**RESUMEN / SUMMARY:** - Artemether is the derivative extracted from Chinese traditional herb and originally used for malaria. Artemether also has potential therapeutic effects against tumors. Vascular cell adhesion molecule-1 (VCAM-1) is an important cell surface adhesion molecule associated with malignancy of gliomas. In this work, we investigated the role and mechanism of artemether combined with shRNA interference of VCAM-1 (shRNA-VCAM-1) on the migration, invasion and apoptosis of glioma cells. U87 human glioma cells were treated with artemether at various concentrations and shRNA interfering technology was employed to silence the expression of VCAM-1. Cell viability, migration, invasiveness and apoptosis were assessed with MTT, wound healing, Transwell and Annexin V-FITC/PI staining. The expression of matrix metalloproteinase-2 (MMP-2), matrix metalloproteinase-9 (MMP-9) and phosphorylated Akt (p-Akt) was checked by Western blot assay. Results showed that artemether and shRNA-VCAM-1 not only significantly inhibited the migration, invasiveness and expression of MMP-2/9 and p-Akt, but also promoted the apoptosis of U87 cells. Combined treatment of both displayed the maximum inhibitory effects on the malignant biological behavior of glioma cells. Our work revealed the potential therapeutic effects of artemether and antiVCAM-1 in the treatments of gliomas.

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[737]

**TÍTULO / TITLE:** - Diagnosis and treatment of primary CNS lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nat Rev Neurol. 2013 May 14. doi: 10.1038/nrneurol.2013.83.

●●Enlace al texto completo (gratis o de pago) [1038/nrneurol.2013.83](https://doi.org/10.1038/nrneurol.2013.83)

**AUTORES / AUTHORS:** - Korfel A; Schlegel U

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**RESUMEN / SUMMARY:** - Primary CNS lymphoma (PCNSL) is a rare lymphoma that is confined to the CNS, with low tendency for systemic dissemination and a relatively aggressive course. Outcome in patients with PCNSL is often poor. Owing to its low incidence, current knowledge about optimal treatment of PCNSL is fragmentary. Chemotherapy regimens based on high-dose methotrexate are currently standard treatment for all patients with PCNSL who can tolerate such drugs. Whole-brain radiotherapy alone can lead to remission in up to 90% of patients, but often results in poor long-term disease control when given alone, and in delayed neurotoxicity when given after high-dose methotrexate. In this Review, we describe current approaches to diagnosis and treatment of PCNSL, and discuss novel therapeutic approaches that are currently in development, such as the use of rituximab and high-dose chemotherapy followed by autologous stem-cell transplantation. The possible use of intrathecal and intraventricular chemotherapy, optimal salvage treatment, and specific treatment approaches in elderly, paediatric and immunocompromised patients, are also considered.

[738]

**TÍTULO / TITLE:** - Updates on the diagnosis and treatment of intracranial nerve malignant peripheral nerve sheath tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Onco Targets Ther. 2013 Apr 26;6:459-70. doi: 10.2147/OTT.S41397. Print 2013.

●●Enlace al texto completo (gratis o de pago) [2147/OTT.S41397](https://doi.org/10.2147/OTT.S41397)

**AUTORES / AUTHORS:** - L'heureux-Lebeau B; Saliba I

**INSTITUCIÓN / INSTITUTION:** - University of Montreal, Montreal, Quebec, Canada.

**RESUMEN / SUMMARY:** - BACKGROUND: Malignant peripheral nerve sheath tumors (MPNSTs) are rare entities and MPNSTs of intracranial nerves are even more sporadic. MPNSTs present diagnosis and treatment challenges since there are no defined diagnosis criteria and no established therapeutic strategies. METHODS: We reviewed literature for MPNST-related articles. We found 45 relevant studies in which 60 cases were described. RESULTS: We identified 60 cases of intracranial nerve MPNSTs. The age ranged from 3 to 75 years old. Male to female ratio was 1.5:1. The most involved cranial nerves (CNs) were CN VIII (60%), CN V (27%), and CN VII (10%). Most of the MPNSTs reported (47%) arose sporadically, 40% arose from a schwannoma,

8% arose from a neurofibroma, and 6% arose from an unspecified nerve tumor. Twenty patients had a history of radiation exposure, four patients had neurofibromatosis type 1 (NF1), four patients had neurofibromatosis type 2 (NF2), and NF2 was suspected in two other patients. Twenty-two patients were treated with radiotherapy and presented a higher survival rate. Seventy-two percent of patients died of their disease while 28% of patients survived. One-year survival rate was 33%. Forty-five percent of tumors recurred and 19% of patients had metastases. CONCLUSION: MPNSTs involving CNs are very rare. Diagnosis is made in regards to the histological and pathological findings. Imaging may help orient the diagnosis. A preexisting knowledge of the clinical situation is more likely to lead to a correct diagnosis. The mainstay of treatment is radical surgical resection with adjuvant radiotherapy. Since these tumors are associated with a poor prognosis, a close follow-up is mandatory.

[739]

**TÍTULO / TITLE:** - Papillary meningioma: clinical and histopathological observations.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Exp Pathol. 2013 Apr 15;6(5):878-88. Print 2013.

**AUTORES / AUTHORS:** - Wang DJ; Zheng MZ; Gong Y; Xie Q; Wang Y; Cheng HX; Mao Y; Zhong P; Che XM; Jiang CC; Huang FP; Zheng K; Li SQ; Gu YX; Bao WM; Yang BJ; Wu JS; Xie LQ; Tang HL; Zhu HD; Chen XC; Zhou LF

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Huashan Hospital, Fudan University Shanghai 200040, China.

**RESUMEN / SUMMARY:** - Papillary meningioma is a rare subtype of malignant meningiomas, which is classified by the World Health Organization as Grade III. Because of lack of large sample size case studies, many of the specific characteristics of papillary meningioma are unclear. This study investigated by retrospective analysis the clinical, radiological and histopathological findings of 17 papillary meningioma patients who underwent surgical resection or biopsy, to assess the characteristics of papillary meningioma. Eight female and nine male patients were included, with a mean age of 40 (range: 6 to 55) years. Tumors were mostly located in the cerebral convexity and showed irregular margins, absence of a peritumoral rim, heterogeneous enhancement and severe peritumoral brain edema on preoperative images. Brain invasion was often confirmed during the operations, with abundant to exceedingly abundant blood supply. Intratumoral necrosis and mitosis was frequently observed on routinely stained sections. The average MIB-1 labeling index was 6.9%. Seven cases experienced tumor recurrence or progression, while seven patients died 6 to 29 months after operation. Radiation therapy was given in 52.9% of all cases. Univariate analysis showed that only the existence of intratumoral necrosis and incomplete resection correlated with tumor recurrence. The 3-year

progression free survival was 66.7% after gross total resection and 63.6% for other cases. The 3-year mortality rate was 50% after gross total resection and 63.6% for other cases. Papillary meningioma has specific clinical and histopathological characteristics. Tumor recurrence (or progression) and mortality are common. Gross total tumor resection resulted in less recurrence and mortality.

[740]

**TÍTULO / TITLE:** - The niche-derived glial cell line-derived neurotrophic factor (GDNF) induces migration of mouse spermatogonial stem/progenitor cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 22;8(4):e59431. doi: 10.1371/journal.pone.0059431. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0059431](#)

**AUTORES / AUTHORS:** - Dovere L; Fera S; Grasso M; Lamberti D; Gargioli C; Muciaccia B; Lustri AM; Stefanini M; Vicini E

**INSTITUCIÓN / INSTITUTION:** - Fondazione Pasteur Cenci Bolognetti, Department of Anatomical, Histological, Forensic and Orthopaedic Sciences - Section of Histology and Medical Embryology, Sapienza University of Rome, Rome, Italy.

**RESUMEN / SUMMARY:** - In mammals, the biological activity of the stem/progenitor compartment sustains production of mature gametes through spermatogenesis. Spermatogonial stem cells and their progeny belong to the class of undifferentiated spermatogonia, a germ cell population found on the basal membrane of the seminiferous tubules. A large body of evidence has demonstrated that glial cell line-derived neurotrophic factor (GDNF), a Sertoli-derived factor, is essential for in vivo and in vitro stem cell self-renewal. However, the mechanisms underlying this activity are not completely understood. In this study, we show that GDNF induces dose-dependent directional migration of freshly selected undifferentiated spermatogonia, as well as germline stem cells in culture, using a Boyden chamber assay. GDNF-induced migration is dependent on the expression of the GDNF co-receptor GFRA1, as shown by migration assays performed on parental and GFRA1-transduced GC-1 spermatogonial cell lines. We found that the actin regulatory protein vasodilator-stimulated phosphoprotein (VASP) is specifically expressed in undifferentiated spermatogonia. VASP belongs to the ENA/VASP family of proteins implicated in actin-dependent processes, such as fibroblast migration, axon guidance, and cell adhesion. In intact seminiferous tubules and germline stem cell cultures, GDNF treatment up-regulates VASP in a dose-dependent fashion. These data identify a novel role for the niche-derived factor GDNF, and they suggest that GDNF may impinge on the stem/progenitor compartment, affecting the actin cytoskeleton and cell migration.

[741]

**TÍTULO / TITLE:** - Resveratrol promotes proteasome-dependent degradation of Nanog via p53 activation and induces differentiation of glioma stem cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Stem Cell Res. 2013 Jul;11(1):601-10. doi: 10.1016/j.scr.2013.04.004. Epub 2013 Apr 11.

●●Enlace al texto completo (gratis o de pago) [1016/j.scr.2013.04.004](#)

**AUTORES / AUTHORS:** - Sato A; Okada M; Shibuya K; Watanabe E; Seino S; Suzuki K; Narita Y; Shibui S; Kayama T; Kitanaka C

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, School of Medicine, Yamagata University, Yamagata 990-9585, Japan; Department of Molecular Cancer Science, School of Medicine, Yamagata University, Yamagata 990-9585, Japan. Electronic address: [asato@med.id.yamagata-u.ac.jp](mailto:asato@med.id.yamagata-u.ac.jp).

**RESUMEN / SUMMARY:** - Glioblastoma is the most common and aggressive primary brain tumor. Glioma stem cells (GSCs) are relatively resistant to chemo-radiotherapy and are responsible for tumor progression and the recurrence of glioblastomas after conventional therapy. Thus, the control of the GSC population is considered key to realizing long-term survival of glioblastoma patients. Here, we identified that resveratrol significantly reduced the self-renewal and tumor-initiating capacity of patient-derived GSCs. Furthermore, resveratrol promoted Nanog suppression via proteasomal degradation, which was inhibited by MG132, a proteasome inhibitor. p53 activation is an important factor in Nanog suppression and treatment with resveratrol was also found to activate the p53/p21 pathway. Importantly, inhibition of Nanog by siRNA provoked inhibitory effects on both the self-renewal and tumor-forming capacity of GSCs. Our findings indicate that Nanog is an essential factor for the retention of stemness and may contribute to the resveratrol-induced differentiation of GSCs. Our results also suggest that targeting GSCs via the p53-Nanog axis, with resveratrol for instance, could be a therapeutic strategy against glioblastoma.

[742]

**TÍTULO / TITLE:** - Glioma Initiating Cells Form a Differentiation Niche Via the Induction of Extracellular Matrices and Integrin  $\alpha$ V.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 21;8(5):e59558. doi: 10.1371/journal.pone.0059558. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0059558](#)

**AUTORES / AUTHORS:** - Niibori-Nambu A; Midorikawa U; Mizuguchi S; Hide T; Nagai M; Komohara Y; Nagayama M; Hirayama M; Kobayashi D; Tsubota N; Takezaki T; Makino K; Nakamura H; Takeya M; Kuratsu J; Araki N

**INSTITUCIÓN / INSTITUTION:** - Department of Tumor Genetics and Biology, Graduate School of Medical Sciences, Kumamoto University, Kumamoto-city, Japan.

**RESUMEN / SUMMARY:** - Glioma initiating cells (GICs) are considered responsible for the therapeutic resistance and recurrence of malignant glioma. To clarify the molecular mechanism of GIC maintenance/differentiation, we established GIC clones having the potential to differentiate into malignant gliomas, and subjected to DNA microarray/iTRAQ based integrated proteomics. 21,857 mRNAs and 8,471 proteins were identified and integrated into a gene/protein expression analysis chart. Gene Ontology analysis revealed that the expression of cell adhesion molecules, including integrin subfamilies, such as alpha2 and alphaV, and extracellular matrices (ECMs), such as collagen IV (COL4), laminin alpha2 (LAMA2), and fibronectin 1 (FN), was significantly upregulated during serum-induced GIC differentiation. This differentiation process, accompanied by the upregulation of MAPK as well as glioma specific proteins in GICs, was dramatically accelerated in these ECM (especially FN)-coated dishes. Integrin alphaV blocking antibody and RGD peptide significantly suppressed early events in GIC differentiation, suggesting that the coupling of ECMs to integrin alphaV is necessary for GIC differentiation. In addition, the expression of integrin alphaV and its strong ligand FN was prominently increased in glioblastomas developed from mouse intracranial GIC xenografts. Interestingly, during the initial phase of GIC differentiation, the RGD treatment significantly inhibited GIC proliferation and raised their sensitivity against anti-cancer drug temozolomide (TMZ). We also found that combination treatments of TMZ and RGD inhibit glioma progression and lead the longer survival of mouse intracranial GIC xenograft model. These results indicate that GICs induce/secrete ECMs to develop microenvironments with serum factors, namely differentiation niches that further stimulate GIC differentiation and proliferation via the integrin recognition motif RGD. A combination of RGD treatment with TMZ could have the higher inhibitory potential against the glioma recurrence that may be regulated by the GICs in the differentiation niche. This study provides a new perspective for developing therapeutic strategies against the early onset of GIC-associated glioma.

[743]

**TÍTULO / TITLE:** - Clinical application of gamma knife dose verification method in multiple brain tumors : modified variable ellipsoid modeling technique.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Feb;53(2):102-7. doi: 10.3340/jkns.2013.53.2.102. Epub 2013 Feb 28.

●●Enlace al texto completo (gratis o de pago) [3340/jkns.2013.53.2.102](#)

**AUTORES / AUTHORS:** - Hur BI; Lee JM; Cho WH; Kang DW; Kim CR; Choi BK

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, School of Medicine, Pusan National University, Busan, Korea.

**RESUMEN / SUMMARY:** - **OBJECTIVE:** The Leksell Gamma Knife® (LGK) is based on a single-fraction high dose treatment strategy. Therefore, independent verification of the Leksell GammaPlan® (LGP) is important for ensuring patient safety and minimizing the risk of treatment errors. Although several verification techniques have been previously developed and reported, no method has ever been tested statistically on multiple LGK target treatments. The purpose of this study was to perform and to evaluate the accuracy of a verification method (modified variable ellipsoid modeling technique, MVEMT) for multiple target treatments. **METHODS:** A total of 500 locations in 10 consecutive patients with multiple brain tumor targets were included in this study. We compared the data from an LGP planning system and MVEMT in terms of dose at random points, maximal dose points, and target volumes. All data was analyzed by t-test and the Bland-Altman plot, which are statistical methods used to compare two different measurement techniques. **RESULTS:** No statistical difference in dose at the 500 random points was observed between LGP and MVEMT. Differences in maximal dose ranged from -2.4% to 6.1%. An average distance of 1.6 mm between the maximal dose points was observed when comparing the two methods. **CONCLUSION:** Statistical analyses demonstrated that MVEMT was in excellent agreement with LGP when planning for radiosurgery involving multiple target treatments. MVEMT is a useful, independent tool for planning multiple target treatment that provides statistically identical data to that produced by LGP. Findings from the present study indicate that MVEMT can be used as a reference dose verification system for multiple tumors.

[744]

**TÍTULO / TITLE:** - Surgical management of selected pituitary macroadenomas using extended endoscopic endonasal transsphenoidal approach: early experience.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol India. 2013 Mar-Apr;61(2):122-30. doi: 10.4103/0028-3886.111114.

●●Enlace al texto completo (gratis o de pago) [4103/0028-3886.111114](#)

**AUTORES / AUTHORS:** - Sankhla SK; Jayashankar N; Khan GM

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Dr. Balabhai Nanavati Hospital and Saifee Hospital, Mumbai, Maharashtra, India.  
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**RESUMEN / SUMMARY:** - **BACKGROUND AND OBJECTIVES:** The endoscopic transsphenoidal approach is commonly used surgical approach for pituitary adenomas. However, adenomas with dumbbell configuration, pure suprasellar location, and fibrous consistency are difficult to remove by this approach. Recently, the extended endoscopic endonasal approach (EEEA) has been

utilized to excise this subgroup of pituitary adenomas successfully. MATERIALS AND METHODS: Between January 2009 and December 2011, 13 patients with pituitary macroadenomas were treated with EEEA. The tumor subgroups included: Dumbbell tumor configuration (4), pure suprasellar tumor location (2), and large suprasellar tumors with subfrontal extension (2). Five patients had fibrous/recurrent tumors and required addition of transtubercular-transplanum extension to the standard endoscopic endonasal exposure for radical resection. RESULTS: The tumor removal was gross total in 8 (61.5%) patients, subtotal in 4 (30.7%), and partial in 1 (7.7%) patient. Clinical improvement was observed in almost all patients, immediate relief in headaches in 88% and normalization of vision in 90% of patients with pre-operative visual disturbances. Three patients with secreting adenomas, two with growth hormone-secreting adenomas and one with prolactin-secreting adenoma, had normalization of hormonal status. Three patients developed temporary diabetes insipidus two patients suffered transient ischemic attacks and one patient with a recurrent giant pituitary adenoma experienced a serious injury to the perforating artery. Four patients (30.7%) developed post-operative cerebrospinal rhinorrhea and two patients required surgical repair. CONCLUSIONS: Our early experience suggests that the EEEA offers a potentially viable treatment option in certain pituitary tumors which are difficult to remove by the standard endoscopic approaches. However, longer follow-up and larger series are needed to establish the efficacy of this approach.

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[745]

**TÍTULO / TITLE:** - Application of nanoparticles on diagnosis and therapy in gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomed Res Int. 2013;2013:351031. doi: 10.1155/2013/351031. Epub 2013 Apr 18.

●●Enlace al texto completo (gratis o de pago) [1155/2013/351031](#)

**AUTORES / AUTHORS:** - Hernandez-Pedro NY; Rangel-Lopez E; Magana-Maldonado R; de la Cruz VP; Santamaria Del Angel A; Pineda B; Sotelo J

**INSTITUCIÓN / INSTITUTION:** - Neuroimmunology and Neuro-Oncology Unit, National Institute of Neurology and Neurosurgery, 14269 Mexico City, DF, Mexico.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is one of the most deadly diseases that affect humans, and it is characterized by high resistance to chemotherapy and radiotherapy. Its median survival is only fourteen months, and this dramatic prognosis has stilled without changes during the last two decades; consequently GBM remains as an unsolved clinical problem. Therefore, alternative diagnostic and therapeutic approaches are needed for gliomas. Nanoparticles represent an innovative tool in research and therapies in

GBM due to their capacity of self-assembly, small size, increased stability, biocompatibility, tumor-specific targeting using antibodies or ligands, encapsulation and delivery of antineoplastic drugs, and increasing the contact surface between cells and nanomaterials. The active targeting of nanoparticles through conjugation with cell surface markers could enhance the efficacy of nanoparticles for delivering several agents into the tumoral area while significantly reducing toxicity in living systems. Nanoparticles can exploit some biological pathways to achieve specific delivery to cellular and intracellular targets, including transport across the blood-brain barrier, which many anticancer drugs cannot bypass. This review addresses the advancements of nanoparticles in drug delivery, imaging, diagnosis, and therapy in gliomas. The mechanisms of action, potential effects, and therapeutic results of these systems and their future applications in GBM are discussed.

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[746]

**TÍTULO / TITLE:** - Sleep Loss and Its Effects on Health of Family Caregivers of Individuals with Primary Malignant Brain Tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Res Nurs Health. 2013 Apr 30. doi: 10.1002/nur.21545.

●●Enlace al texto completo (gratis o de pago) [1002/nur.21545](#)

**AUTORES / AUTHORS:** - Pawl JD; Lee SY; Clark PC; Sherwood PR

**INSTITUCIÓN / INSTITUTION:** - Georgia Regents University, 987 St Sebastian Way, EC 4434, Augusta, GA, 30912.

**RESUMEN / SUMMARY:** - Sleep loss places caregivers at risk for poor health. Understanding correlates of sleep loss and relationships to health may enable improvement of health of caregivers of individuals with primary malignant brain tumors (PMBT). In this cross-sectional, descriptive study of 133 caregivers, relationships were examined between sleep loss and physical, mental, emotional, and social health at time of patient diagnosis. Sleep loss was not related to physical health. Shorter total sleep time was associated with greater fatigue and social support. Sleep quality was positively associated with quality of life. Further study is needed of the role of sleep loss in the PMBT caregiving trajectory and its long-term relationship with health outcomes. © 2013 Wiley Periodicals, Inc. Res Nurs Health 9999: XX-XX, 2013.

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[747]

**TÍTULO / TITLE:** - Mesenchymal stem cells derived from adipose tissue vs bone marrow: in vitro comparison of their tropism towards gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013;8(3):e58198. doi: 10.1371/journal.pone.0058198. Epub 2013 Mar 12.

- Enlace al texto completo (gratuito o de pago)

[1371/journal.pone.0058198](https://doi.org/10.1371/journal.pone.0058198)

**AUTORES / AUTHORS:** - Pendleton C; Li Q; Chesler DA; Yuan K; Guerrero-Cazares H; Quinones-Hinojosa A

**INSTITUCIÓN / INSTITUTION:** - The Johns Hopkins Medical Institutes, Departments of Neurosurgery and Oncology, Baltimore, Maryland, USA.

**RESUMEN / SUMMARY:** - INTRODUCTION: Glioblastoma is the most common primary malignant brain tumor, and is refractory to surgical resection, radiation, and chemotherapy. Human mesenchymal stem cells (hMSC) may be harvested from bone marrow (BMSC) and adipose (AMSC) tissue. These cells are a promising avenue of investigation for the delivery of adjuvant therapies. Despite extensive research into putative mechanisms for the tumor tropism of MSCs, there remains no direct comparison of the efficacy and specificity of AMSC and BMSC tropism towards glioma. METHODS: Under an IRB-approved protocol, intraoperative human Adipose MSCs (hAMSCs) were established and characterized for cell surface markers of mesenchymal stem cell origin in conjunction with the potential for tri-lineage differentiation (adipogenic, chondrogenic, and osteogenic). Validated experimental hAMSCs were compared to commercially derived hBMSCs (Lonza) and hAMSCs (Invitrogen) for growth responsiveness and glioma tropism in response to glioma conditioned media obtained from primary glioma neurosphere cultures. RESULTS: Commercial and primary culture AMSCs and commercial BMSCs demonstrated no statistically significant difference in their migration towards glioma conditioned media in vitro. There was statistically significant difference in the proliferation rate of both commercial AMSCs and BMSCs as compared to primary culture AMSCs, suggesting primary cultures have a slower growth rate than commercially available cell lines. CONCLUSIONS: Adipose- and bone marrow-derived mesenchymal stem cells have similar in vitro glioma tropism. Given the well-documented ability to harvest larger numbers of AMSCs under local anesthesia, adipose tissue may provide a more efficient source of MSCs for research and clinical applications, while minimizing patient morbidity during cell harvesting.

[748]

**TÍTULO / TITLE:** - Following sensory neuropathy, anti-Hu antibody-positive paraneoplastic neurological syndrome presenting with limbic encephalitis occurs after complete remission.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rinsho Shinkeigaku. 2013;53(4):287-92.

**AUTORES / AUTHORS:** - Fukami Y; Umemura T; Shimono T; Yokoi T; Kamijo M; Sakakibara T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Chubu Rosai Hospital.

**RESUMEN / SUMMARY:** - Paraneoplastic limbic encephalitis is a rare neurological disorder that frequently precedes the detection of malignancy. We report the case of a 68-year-old male with small-cell lung cancer who developed paraneoplastic limbic encephalitis associated with presence of the anti-Hu antibody, after achieving complete remission of the tumor by chemotherapy. The patient visited our hospital because of progressive sensory disturbance of the distal extremities at 65 years of age. Though paraneoplastic sensory neuropathy was suspected, we could not find any tumor and he did not improve with steroids or immunoglobulin therapy. Chest computed tomography (CT) revealed large mediastinal lymphadenopathy. He was subsequently diagnosed with small cell lung cancer at one year and three months after the neurological symptoms occurred. As his serum analysis was positive for the anti-Hu antibody, we diagnosed paraneoplastic sensory neuropathy. The lung cancer disappeared with chemotherapy, but he had developed short-term memory loss six months later. Brain fluid attenuated inversion recovery (FLAIR) imaging showed an abnormal high-intensity lesion in the left medial temporal lobe including the hippocampus. We therefore made the diagnosis of paraneoplastic limbic encephalitis following subacute sensory neuropathy associated with the anti-Hu antibody. To our knowledge, this is the first report of a patient presenting with paraneoplastic neurological syndrome in which limbic encephalitis developed after tumor disappearance. So we must recognize the possibility of neurological symptoms occurring during remission. As the mechanism of pathogenesis, delayed neuronal cell damage due to immune responses against the tumor is implicated.

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[749]

**TÍTULO / TITLE:** - New Molecular Targets for the Treatment of Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World Neurosurg. 2013 May 17. pii: S1878-8750(13)00694-3. doi: 10.1016/j.wneu.2013.05.006.

●●Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.05.006](#)

**AUTORES / AUTHORS:** - Ramey W; Kalani MY

**INSTITUCIÓN / INSTITUTION:** - Division of Neurological Surgery, Barrow Neurological Institute, Phoenix, Arizona, USA.

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[750]

**TÍTULO / TITLE:** - Age-specific signatures of glioblastoma at the genomic, genetic, and epigenetic levels.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 29;8(4):e62982. doi: 10.1371/journal.pone.0062982. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062982](https://doi.org/10.1371/journal.pone.0062982)

**AUTORES / AUTHORS:** - Bozdog S; Li A; Riddick G; Kotliarov Y; Baysan M; Iwamoto FM; Cam MC; Kotliarova S; Fine HA

**INSTITUCIÓN / INSTITUTION:** - Neuro-Oncology Branch, National Cancer Institute, National Institute of Neurological Disorders and Stroke, National Institutes of Health, Bethesda, Maryland, United States of America ; Department of Mathematics, Statistics, and Computer Science, Marquette University, Milwaukee, Wisconsin, United States of America.

**RESUMEN / SUMMARY:** - Age is a powerful predictor of survival in glioblastoma multiforme (GBM) yet the biological basis for the difference in clinical outcome is mostly unknown. Discovering genes and pathways that would explain age-specific survival difference could generate opportunities for novel therapeutics for GBM. Here we have integrated gene expression, exon expression, microRNA expression, copy number alteration, SNP, whole exome sequence, and DNA methylation data sets of a cohort of GBM patients in The Cancer Genome Atlas (TCGA) project to discover age-specific signatures at the transcriptional, genetic, and epigenetic levels and validated our findings on the REMBRANDT data set. We found major age-specific signatures at all levels including age-specific hypermethylation in polycomb group protein target genes and the upregulation of angiogenesis-related genes in older GBMs. These age-specific differences in GBM, which are independent of molecular subtypes, may in part explain the preferential effects of anti-angiogenic agents in older GBM and pave the way to a better understanding of the unique biology and clinical behavior of older versus younger GBMs.

[751]

**TÍTULO / TITLE:** - Combinatorial strategies for oncolytic herpes simplex virus therapy of brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - CNS Oncol. 2013 Mar;2(2):129-142.

●●Enlace al texto completo (gratis o de pago) [2217/cns.12.42](https://doi.org/10.1217/cns.12.42)

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**INSTITUCIÓN / INSTITUTION:** - Brain Tumor Research Center, Department of Neurosurgery, Massachusetts General Hospital & Harvard Medical School, Boston, MA, USA ; Department of Neurosurgery, Eiju General Hospital, Tokyo, Japan.

**RESUMEN / SUMMARY:** - Oncolytic viruses, such as the oncolytic herpes simplex virus (oHSV), are an exciting new therapeutic strategy for cancer as they are replication competent in tumor cells but not normal cells. In order to engender herpes simplex virus with oncolytic activity and make it safe for clinical application, mutations are engineered into the virus. Glioblastoma multiforme (GBM) is the most common and deadly primary brain tumor in adults. Despite

many advances in therapy, overall survival has not been substantially improved over the last several decades. A number of different oHSVs have been tested as monotherapy in early-phase clinical trials for GBM and have demonstrated safety and anecdotal evidence of efficacy. However, strategies to improve efficacy are likely to be necessary to successfully treat GBM. Cancer treatment usually involves multimodal approaches, so the standard of care for GBM includes surgery, radiotherapy and chemotherapy. In preclinical GBM models, combinations of oHSV with other types of therapy have exhibited markedly improved activity over individual treatments alone. In this review, we will discuss the various combination strategies that have been employed with oHSV, including chemotherapy, small-molecule inhibitors, antiangiogenic agents, radiotherapy and expression of therapeutic transgenes. Effective combinations, especially synergistic ones, are clinically important not just for improved efficacy but also to permit lower and less-toxic doses and potentially overcome resistance.

[752]

**TÍTULO / TITLE:** - Tumstatin transfected into human glioma cell line U251 represses tumor growth by inhibiting angiogenesis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chin Med J (Engl). 2013 May;126(9):1720-5.

**AUTORES / AUTHORS:** - Ye HX; Yao Y; Jiang XJ; Yuan XR

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai 200040, China.

**RESUMEN / SUMMARY:** - BACKGROUND: Angiogenesis is a prerequisite for tumor growth and plays an important role in rapidly growing tumors, such as malignant gliomas. A variety of factors controlling the angiogenic balance have been described, and among these, the endogenous inhibitor of angiogenesis, tumstatin, has drawn considerable attention. The current study investigated whether expression of tumstatin by glioma cells could alter this balance and prevent tumor formation. METHODS: We engineered stable transfectants from human glioma cell line U251 to constitutively secrete a human tumstatin protein with c-myc and polyhistidine tags. Production and secretion of the tumstatin-c-myc-His fusion protein by tumstatin-transfected cells were confirmed by Western blotting analysis. In the present study, we identify the anti-angiogenic capacity of tumstatin using several in vitro and in vivo assays. Student's t-test and one-way analysis of variance (ANOVA) test were used to determine the statistical significance in this study. RESULTS: The tumstatin transfectants and control transfectants (stably transfected with a control plasmid) had similar in vitro growth rates compared to their parental cell lines. However, the conditioned medium from the tumstatin transfected tumor cells significantly inhibits proliferation and causes apoptosis of endothelial cells. It also inhibits tube formation of endothelial cells on Matrigel. Examination of armpit tumors

arising from cells overexpressing tumstatin repress the growth of tumor, accompanying the decreased density of CD31 positive vessels in tumors ((5.62 +/- 1.32)/HP), compared to the control-transfectants group ((23.84 + 1.71)/HP) and wild type U251 glioma cells group ((29.33 + 4.45)/HP). CONCLUSION: Anti-angiogenic gene therapy using human tumstatin gene may be an effective strategy for the treatment of glioma.

[753]

**TÍTULO / TITLE:** - Plurihormone secreting pituitary macroadenoma masquerading as thyrotoxicosis: Clinical presentation and diagnostic challenges.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2012 Dec;16(Suppl 2):S315-7. doi: 10.4103/2230-8210.104073.

●●Enlace al texto completo (gratis o de pago) [4103/2230-8210.104073](http://4103/2230-8210.104073)

**AUTORES / AUTHORS:** - Maisnam I; Dutta D; Jain R; Ghosh S; Mukhopadhyay S; Chowdhury S

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology & Metabolism, IPGMER & SSKM Hospital, Kolkata, India.

**RESUMEN / SUMMARY:** - Thyroid stimulating hormone (TSH) secreting adenomas are the rarest type of pituitary adenomas (1:1000000 in the population; 0.2- 2.8% of adenomas). Plurihormonal thyrotropic adenomas are even rarer usually having cosecretion of growth hormone (GH) and prolactin. We report perhaps for the first time, TSH, GH, adrenocorticotrophic hormone (ACTH) and gonadotropins secreting pituitary macroadenoma diagnosed in a 40 year lady presenting with features of thyrotoxicosis for 5 months, amenorrhea for 3 months and newly diagnosed diabetes and hypertension for 2 months along with headache, nausea, and vomiting, who had acromegaloid habitus, grade-II goitre, increased uptake on Technitium-99 pertechnetate thyroid scan (4.1%; normal: 0.24-3.34%), with increased T3 (5.98 pg/ ml; 1.5-4.1), increased T4 (2.34 ng/dl; 0.9-1.8), inappropriately high TSH (2.32 mIU/ml; 0.4-4.2), insulin like growth factor-1 (711 ng/ ml; 109-264), non-suppressed post-glucose GH (15.9 ng/ml; <1 ng/ml), normal estradiol (52 pg/ml; 21-251), inappropriately high luteinizing hormone (53.5 mIU/ml; 1.1-11.6), inappropriately high follicle stimulating hormone (59 mIU/ml; 3-14.4), non-suppressed overnight dexamethasone cortisol (5.8 mcg/dl; <2), elevated ACTH (58 pg/ml 5-15), withdrawal bleed on progesterone challenge, bitemporal hemianopia on automated perimetry and pituitary macroadenoma on MRI imaging of sella. Thyroid hormone resistance was ruled out by documenting normal sex hormone binding globulin and ferritin levels. Her clinical and biochemical phenotype was not suggestive of multiple hormone resistance seen in pseudohypoparathyroidism. This report intends to highlight the challenges in the diagnosis of plurihormonal thyrotropic adenoma.

[754]

**TÍTULO / TITLE:** - Adalimumab (tumor necrosis factor-blocker) reduces the expression of glial fibrillary acidic protein immunoreactivity increased by exogenous tumor necrosis factor alpha in an organotypic culture of porcine neuroretina.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Vis. 2013 Apr 17;19:894-903. Print 2013.

**AUTORES / AUTHORS:** - Fernandez-Bueno I; Garcia-Gutierrez MT; Srivastava GK; Gayoso MJ; Gonzalo-Orden JM; Pastor JC

**INSTITUCIÓN / INSTITUTION:** - Instituto Universitario de Oftalmobiología Aplicada (IOBA), University of Valladolid, Valladolid, España ; CIBER de Bioingeniería, Biomateriales y Nanomedicina (CIBER-BBN), España ; Regenerative Medicine and Cell Therapy Networking Center of "Castilla y Leon", España.

**RESUMEN / SUMMARY:** - **PURPOSE:** To determine if exogenous addition of tumor necrosis factor alpha (TNFalpha) exacerbates retinal reactive gliosis in an organotypic culture of porcine neuroretina and to evaluate if concomitant adalimumab, a TNF-blocker, diminishes it. **METHODS:** Porcine retinal explants from 20 eyeballs were cultured. Cultures with 100 pg/ml TNFalpha, 10 microg/ml adalimumab, 100 pg/ml TNFalpha plus 10 microg/ml adalimumab, or controls without additives were maintained for 9 days. Freshly detached retinas were processed in parallel. TNFalpha levels in control culture supernatants were quantified with enzyme-linked immunosorbent assay. Cryostat sections were doubly immunostained for glial fibrillary acidic protein (GFAP), a marker for reactive gliosis, and cellular retinaldehyde-binding protein (CRALBP), a marker for Muller cells. Sections were also labeled with the isolectin IB4, a label for microglia/macrophages. **RESULTS:** TNFalpha in control culture supernatants was detected only at day 1. Compared to the fresh neuroretinal samples, upregulation of GFAP and downregulation of CRALBP occurred during the 9 days of culture. Exogenous TNFalpha stimulated glial cells to upregulate GFAP and downregulate CRALBP immunoreactivity. TNFalpha-treated cultures also initiated the growth of gliotic membranes and underwent retinal disorganization. Adalimumab inhibited the spontaneous increases in GFAP and maintained CRALBP. In combination with TNFalpha, adalimumab reduced GFAP expression and conserved CRALBP, with only slight retinal disorganization. No appreciable changes in IB4 labeling were observed under the different culture conditions. **CONCLUSIONS:** In cultured porcine neuroretina, spontaneous reactive gliosis and retinal disorganization were exacerbated by exogenous TNFalpha. Adalimumab reduced spontaneous changes and those induced by TNFalpha. Therefore, inhibiting TNFalpha may represent a novel approach to controlling retinal fibrosis observed in some human diseases.

[755]

**TÍTULO / TITLE:** - Intracranial Hydatid Cyst.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Pediatr. 2013 Apr 7.

●●Enlace al texto completo (gratis o de pago) [1007/s12098-013-1015-](#)

[X](#)

**AUTORES / AUTHORS:** - Dhingra D; Sethi GR; Mantan M

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Maulana Azad Medical College, New Delhi, India, [drdhulika@yahoo.co.in](mailto:drdhulika@yahoo.co.in).

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[756]

**TÍTULO / TITLE:** - Steroid responsive anti-Hu-associated paraneoplastic encephalitis with bilateral frontal lobe lesions.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Rinsho Shinkeigaku. 2013;53(4):273-7.

**AUTORES / AUTHORS:** - Yamamoto A; Tsuda K; Maeda R; Nakano K; Mori K; Arita N; Yoshikawa H

**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine, Division of Neurology, Hyogo College of Medicine.

**RESUMEN / SUMMARY:** - A 46-year-old woman was admitted to our hospital because of behavioral changes. Her mentality was fluctuating vigorously and neurological examination revealed disorientation and word finding difficulty. MRI demonstrated bilateral frontal and right temporal lesions. Cerebrospinal fluid examination showed predominantly lymphocytic pleocytosis. Brain biopsy disclosed inflammation but not neoplasm. Repeated steroid therapy gave her a recovery in neurological manifestations and MRI findings. As we got a positive result of anti-Hu antibody after her complete recovery, we did screening for tumors and found small cell lung cancer. She got a chemotherapy and remains free of relapse of any symptoms. There have been few reports in that anti-Hu associated paraneoplastic syndrome showed steroid responsive frontal lesions. We suggest that anti-Hu associated paraneoplastic encephalitis should be considered for steroid responsive encephalitis with brain lesions other than limbic system, because early detection of paraneoplastic encephalitis and timely antitumor treatment are important for patient's prognosis.

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[757]

**TÍTULO / TITLE:** - Extraventricular neurocytoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - JNMA J Nepal Med Assoc. 2012 Oct-Dec;52(188):181-7.

**AUTORES / AUTHORS:** - Karki B; Tamrakar K; Kai XY; Kui WY; Wei ZW

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Kathmandu Model Hospital, Exhibition Road, Kathmandu, Nepal.

**RESUMEN / SUMMARY:** - Extraventricular neurocytoma is a rare neuroepithelial tumor. Its propensity to occur in cerebral hemisphere is much higher. EVN has a histological resemblance to central neurocytoma but radiologically, it is more complex. Ganglionic differentiation is more common in EVN and tends to have more of a cystic component. Calcification is frequent but hemorrhage is only an occasional finding. Although it has been reported to occur in various regions, the propensity to occur in cerebral hemisphere is much higher. Herein, we report two cases which presented as a mass in the right frontal lobe and right parietal lobe. MRI showed hypointensity on T1, hyperintensity on T2-weighted images with moderate enhancement after contrast injection. In short extraventricular neurocytoma should be considered in differential diagnosis of complex intracranial masses. Keywords: central neurocytoma; computed tomography; extraventricular neurocytoma; Magnetic Resonance Imaging.

[758]

**TÍTULO / TITLE:** - Superoxide Mediates Direct Current Electric Field-Induced Directional Migration of Glioma Cells through the Activation of AKT and ERK.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 16;8(4):e61195. doi: 10.1371/journal.pone.0061195. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0061195](http://1371/journal.pone.0061195)

**AUTORES / AUTHORS:** - Li F; Chen T; Hu S; Lin J; Hu R; Feng H

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Southwest Hospital, Third Military Medical University, Chongqing, China.

**RESUMEN / SUMMARY:** - Direct current electric fields (DCEFs) can induce directional migration for many cell types through activation of intracellular signaling pathways. However, the mechanisms that bridge extracellular electrical stimulation with intracellular signaling remain largely unknown. In the current study, we found that a DCEF can induce the directional migration of U87, C6 and U251 glioma cells to the cathode and stimulate the production of hydrogen peroxide and superoxide. Subsequent studies demonstrated that the electrotaxis of glioma cells were abolished by the superoxide inhibitor N-acetyl-L-cysteine (NAC) or overexpression of mitochondrial superoxide dismutase (MnSOD), but was not affected by inhibition of hydrogen peroxide through the overexpression of catalase. Furthermore, we found that the presence of NAC, as well as the overexpression of MnSOD, could almost completely abolish the activation of Akt, extracellular-signal-regulated kinase (Erk)1/2, c-Jun N-terminal kinase (JNK), and p38, although only JNK and p38 were affected by overexpression of catalase. The presenting of specific inhibitors can decrease

the activation of Erk1/2 or Akt as well as the directional migration of glioma cells. Collectively, our data demonstrate that superoxide may play a critical role in DCEF-induced directional migration of glioma cells through the regulation of Akt and Erk1/2 activation. This study provides novel evidence that the superoxide is at least one of the “bridges” coupling the extracellular electric stimulation to the intracellular signals during DCEF-mediated cell directional migration.

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[759]

**TÍTULO / TITLE:** - Restoration of sensitivity in chemo - resistant glioma cells by cold atmospheric plasma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 21;8(5):e64498. doi: 10.1371/journal.pone.0064498. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0064498](http://1371/journal.pone.0064498)

**AUTORES / AUTHORS:** - Koritzer J; Boxhammer V; Schafer A; Shimizu T; Klampfl TG; Li YF; Welz C; Schwenk-Zieger S; Morfill GE; Zimmermann JL; Schlegel J

**INSTITUCIÓN / INSTITUTION:** - Max Planck Institute for Extraterrestrial Physics, Garching, Germany.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is the most common and aggressive brain tumor in adults. Despite multimodal treatments including surgery, chemotherapy and radiotherapy the prognosis remains poor and relapse occurs regularly. The alkylating agent temozolomide (TMZ) has been shown to improve the overall survival in patients with malignant gliomas, especially in tumors with methylated promoter of the O6-methylguanine-DNA-methyltransferase (MGMT) gene. However, intrinsic and acquired resistance towards TMZ makes it crucial to find new therapeutic strategies aimed at improving the prognosis of patients suffering from malignant gliomas. Cold atmospheric plasma is a new auspicious candidate in cancer treatment. In the present study we demonstrate the anti-cancer properties of different dosages of cold atmospheric plasma (CAP) both in TMZ-sensitive and TMZ-resistant cells by proliferation assay, immunoblotting, cell cycle analysis, and clonogenicity assay. Importantly, CAP treatment restored the responsiveness of resistant glioma cells towards TMZ therapy. Concomitant treatment with CAP and TMZ led to inhibition of cell growth and cell cycle arrest, thus CAP might be a promising candidate for combination therapy especially for patients suffering from GBMs showing an unfavorable MGMT status and TMZ resistance.

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[760]

**TÍTULO / TITLE:** - ATM-NFkappaB axis-driven TIGAR regulates sensitivity of glioma cells to radiomimetics in the presence of TNFalpha.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Death Dis. 2013 May 2;4:e615. doi: 10.1038/cddis.2013.128.

●●Enlace al texto completo (gratis o de pago) [1038/cddis.2013.128](https://doi.org/10.1038/cddis.2013.128)

**AUTORES / AUTHORS:** - Sinha S; Ghildiyal R; Mehta VS; Sen E

**INSTITUCIÓN / INSTITUTION:** - Cellular and Molecular Neuroscience Division, National Brain Research Centre, Manesar, Haryana, India.

**RESUMEN / SUMMARY:** - Gliomas are resistant to radiation therapy, as well as to TNF $\alpha$  induced killing. Radiation-induced TNF $\alpha$  triggers Nuclear factor kappaB (NF $\kappa$ B)-mediated radioresistance. As inhibition of NF $\kappa$ B activation sensitizes glioma cells to TNF $\alpha$ -induced apoptosis, we investigated whether TNF $\alpha$  modulates the responsiveness of glioma cells to ionizing radiation-mimetic Neocarzinostatin (NCS). TNF $\alpha$  enhanced the ability of NCS to induce glioma cell apoptosis. NCS-mediated death involved caspase-9 activation, reduction of mitochondrial copy number and lactate production. Death was concurrent with NF $\kappa$ B, Akt and Erk activation. Abrogation of Akt and NF $\kappa$ B activation further potentiated the death inducing ability of NCS in TNF $\alpha$  cotreated cells. NCS-induced p53 expression was accompanied by increase in TP53-induced glycolysis and apoptosis regulator (TIGAR) levels and ATM phosphorylation. siRNA-mediated knockdown of TIGAR abrogated NCS-induced apoptosis. While DN-I $\kappa$ B abrogated NCS-induced TIGAR both in the presence and absence of TNF $\alpha$ , TIGAR had no effect on NF $\kappa$ B activation. Transfection with TIGAR mutant (i) decreased apoptosis and gammaH2AX foci formation (ii) decreased p53 (iii) elevated ROS and (iv) increased Akt/Erk activation in cells cotreated with NCS and TNF $\alpha$ . Heightened TIGAR expression was observed in GBM tumors. While NCS induced ATM phosphorylation in a NF $\kappa$ B independent manner, ATM inhibition abrogated TIGAR and NF $\kappa$ B activation. Metabolic gene profiling indicated that TNF $\alpha$  affects NCS-mediated regulation of several genes associated with glycolysis. The existence of ATM-NF $\kappa$ B axis that regulate metabolic modulator TIGAR to overcome prosurvival response in NCS and TNF $\alpha$  cotreated cells, suggests mechanisms through which inflammation could affect resistance and adaptation to radiomimetics despite concurrent induction of death.

[761]

**TÍTULO / TITLE:** - A Preliminary Study of the Effect of DBD Plasma and Osmolytes on T98G Brain Cancer and HEK Non-Malignant Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Molecules. 2013 Apr 25;18(5):4917-28. doi: 10.3390/molecules18054917.

●●Enlace al texto completo (gratis o de pago)

[3390/molecules18054917](https://doi.org/10.3390/molecules18054917)

**AUTORES / AUTHORS:** - Kaushik NK; Attri P; Kaushik N; Choi EH

**INSTITUCIÓN / INSTITUTION:** - Plasma Bioscience Research Center, Kwangwoon University, Seoul 139701, Korea. [kaushik.nagendra@gmail.com](mailto:kaushik.nagendra@gmail.com).

**RESUMEN / SUMMARY:** - Non-thermal plasmas are emerging as a novel tool for the treatment of living tissues for biological and medical purpose. In this study, we described the effect of 4 min dielectric barrier discharge (DBD) plasma on both T98G cancer and HEK normal cell lines in the presence of different concentrations of osmolytes. This treatment strategy shows a specific inhibitory effect of a 240 s plasma exposure in the presence of osmolytes against T98G brain cancer cells only, but not on HEK normal cells. Based on these interesting properties of osmolytes, a non-thermal plasma appears to be a potential anticancer treatment strategy for different kinds of cancers in the presence of osmolytes.

[762]

**TÍTULO / TITLE:** - Chemical Induction of Hsp70 Reduces alpha-Synuclein Aggregation in Neuroglioma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - ACS Chem Biol. 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1021/cb400017h](#)

**AUTORES / AUTHORS:** - Kilpatrick K; Novoa JA; Hancock T; Guerriero CJ; Wipf P; Brodsky JL; Segatori L

**INSTITUCIÓN / INSTITUTION:** - Departments of daggerChemical and Biomolecular Engineering, parallelBioengineering, and perpendicularBiochemistry and Cell Biology, Rice University , Houston, Texas 77005, United States.

**RESUMEN / SUMMARY:** - Misfolding and aggregation of alpha-synuclein (alpha-syn) is associated with the development of a number of neurodegenerative diseases including Parkinson's disease (PD). Analyses of post mortem tissues revealed the presence of molecular chaperones within alpha-syn aggregates, suggesting that chaperones play a role in alpha-syn misfolding and aggregation. In fact, inhibition of chaperone activity aggravates alpha-syn toxicity, and the overexpression of chaperones, particularly 70-kDa heat shock protein (Hsp70), protects against alpha-syn-induced toxicity. In this study, we investigated the effect of carbenoxolone (CBX), a glycyrrhizic acid derivative previously reported to upregulate Hsp70, in human neuroglioma cells overexpressing alpha-syn. We report that CBX treatment lowers alpha-syn aggregation and prevents alpha-syn-induced cytotoxicity. We demonstrate further that Hsp70 induction by CBX arises from activation of heat shock factor 1 (HSF1). The Hsp70 inhibitor MAL3-101 and the Hsp70 enhancer 115-7c led to an increase or decrease in alpha-syn aggregation, respectively, in agreement with these findings. In summary, this study provides a proof-of-principle demonstration that chemical modulation of the Hsp70 machine is a promising strategy to prevent alpha-syn aggregation.

[763]

**TÍTULO / TITLE:** - Glioma stem cells remodel the perivascular tumor microenvironment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Discov. 2013 May;3(5):OF17. doi: 10.1158/2159-8290.CD-RW2013-073. Epub 2013 Apr 4.

●●Enlace al texto completo (gratis o de pago) [1158/2159-8290.CD-RW2013-073](#)

**RESUMEN / SUMMARY:** - Glioma stem cells (GSC) give rise to vascular pericytes to promote GBM growth and progression.

[764]

**TÍTULO / TITLE:** - MicroRNA-137 is downregulated in glioblastoma and inhibits the stemness of glioma stem cells by targeting RTVP-1.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Apr 9.

**AUTORES / AUTHORS:** - Bier A; Giladi N; Kronfeld N; Lee HK; Cazacu S; Finniss S; Xiang C; Poisson L; Decarvalho AC; Slavin S; Jacoby E; Yalon M; Toren A; Mikkelsen T; Brodie C

**INSTITUCIÓN / INSTITUTION:** - Everard and Mina Goodman Faculty of Life Sciences, Bar-Ilan University, Ramat-Gan, Israel.

**RESUMEN / SUMMARY:** - Glioblastomas (GBM), the most common and aggressive malignant astrocytic tumors, contain a small subpopulation of cancer stem cells (GSCs) that are implicated in therapeutic resistance and tumor recurrence. Here, we study the expression and function of miR-137, a putative suppressor miRNA, in GBM and GSCs. We found that the expression of miR-137 was significantly lower in GBM and GSCs compared to normal brains and neural stem cells (NSCs) and that the miR-137 promoter was hypermethylated in the GBM specimens. The expression of miR-137 was increased in differentiated NSCs and GSCs and overexpression of miR-137 promoted the neural differentiation of both cell types. Moreover, pre-miR-137 significantly decreased the self-renewal of GSCs and the stem cell markers Oct4, Nanog, Sox2 and Shh. We identified RTVP-1 as a novel target of miR-137 in GSCs; transfection of the cells with miR-137 decreased the expression of RTVP-1 and the luciferase activity of RTVP-1 3'-UTR reporter plasmid. Furthermore, overexpression of RTVP-1 plasmid lacking its 3'-UTR abrogated the inhibitory effect of miR-137 on the self-renewal of GSCs. Silencing of RTVP-1 decreased the self-renewal of GSCs and the expression of CXCR4 and overexpression of CXCR4 abrogated the inhibitory effect of RTVP-1 silencing on GSC self-renewal. These results demonstrate that miR-137 is downregulated in GBM probably due to promoter hypermethylation. miR-137 inhibits GSC self-renewal and promotes their differentiation by targeting RTVP-

1 which downregulates CXCR4. Thus, miR-137 and RTVP-1 are attractive therapeutic targets for the eradication of GSCs and for the treatment of GBM.

[765]

**TÍTULO / TITLE:** - Lycopene and Beta-Carotene Induce Growth Inhibition and Proapoptotic Effects on ACTH-Secreting Pituitary Adenoma Cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 7;8(5):e62773. doi: 10.1371/journal.pone.0062773. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062773](#)

**AUTORES / AUTHORS:** - Haddad NF; Teodoro AJ; Leite de Oliveira F; Soares N; de Mattos RM; Hecht F; Dezone RS; Vairo L; Goldenberg RC; Gomes FC; de Carvalho DP; Gadelha MR; Nasciutti LE; Miranda-Alves L

**INSTITUCIÓN / INSTITUTION:** - Instituto de Ciencias Biomedicas, Universidade Federal do Rio de Janeiro, Brazil ; Servicio de Endocrinologia, Hospital Universitario Clementino Fraga Filho, Universidade Federal do Rio de Janeiro, Brazil.

**RESUMEN / SUMMARY:** - Pituitary adenomas comprise approximately 10-15% of intracranial tumors and result in morbidity associated with altered hormonal patterns, therapy and compression of adjacent sella turcica structures. The use of functional foods containing carotenoids contributes to reduce the risk of chronic diseases such as cancer and vascular disorders. In this study, we evaluated the influence of different concentrations of beta-carotene and lycopene on cell viability, colony formation, cell cycle, apoptosis, hormone secretion, intercellular communication and expression of connexin 43, Skp2 and p27(kip1) in ACTH-secreting pituitary adenoma cells, the AtT20 cells, incubated for 48 and 96 h with these carotenoids. We observed a decrease in cell viability caused by the lycopene and beta-carotene treatments; in these conditions, the clonogenic ability of the cells was also significantly decreased. Cell cycle analysis revealed that beta-carotene induced an increase of the cells in S and G2/M phases; furthermore, lycopene increased the proportion of these cells in G0/G1 while decreasing the S and G2/M phases. Also, carotenoids induced apoptosis after 96 h. Lycopene and beta-carotene decreased the secretion of ACTH in AtT20 cells in a dose-dependent manner. Carotenoids blocked the gap junction intercellular communication. In addition, the treatments increased the expression of phosphorylated connexin43. Finally, we also demonstrate decreased expression of S-phase kinase-associated protein 2 (Skp2) and increased expression of p27(kip1) in carotenoid-treated cells. These results show that lycopene and beta-carotene were able to negatively modulate events related to the malignant phenotype of AtT-20 cells, through a mechanism that could involve changes in the expression of connexin 43, Skp2

and p27(kip1); and suggest that these compounds might provide a novel pharmacological approach to the treatment of Cushing's disease.

[766]

**TÍTULO / TITLE:** - Knocking down SMC1A inhibits growth and leads to G2/M arrest in human glioma cells.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Exp Pathol. 2013 Apr 15;6(5):862-9. Print 2013.

**AUTORES / AUTHORS:** - Ma Z; Lin M; Li K; Fu Y; Liu X; Yang D; Zhao Y; Zheng J; Sun B

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Shanghai Neurosurgical Center, Huashan Hospital, Fudan University Shanghai, China.

**RESUMEN / SUMMARY:** - Cohesin, a multiunit complex of SMC1A, SMC3 and Rad21, associates with chromatin after mitosis and holds sister chromatids together following DNA replication. It has been reported that SMC1A is mutated in some cancer types, leading to genomic instability and abnormal cell growth. In this study, we investigated the role of SMC1A in human glioma. We found that SMC1A was expressed at abnormally high levels in human glioma tissue and in cultured U251 glioma cells. Knocking down SMC1A expression in U251 cells with SMC1A-targeted interfering RNAs inhibited cell growth and induced G2/M cell cycle arrest. Furthermore, expression of the cell cycle associated gene CCNB1IP1 was dramatically increased, whereas expression of Cyclin B1 was decreased in SMC1A-deficient U251 cells. These results suggest that SMC1A upregulation is involved in the pathogenesis of glioma.

[767]

**TÍTULO / TITLE:** - Expression of Cancer/Testis Antigens is Correlated with Improved Survival in Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Apr;4(4):636-46.

**AUTORES / AUTHORS:** - Freitas M; Malheiros S; Stavale JN; Biassi TP; Zamuner FT; de Souza Begnami M; Soares FA; Vettore AL

**INSTITUCIÓN / INSTITUTION:** - Cancer Molecular Biology Laboratory, Department of Science Biology, Federal University of Sao Paulo, Rua Pedro de Toledo, Sao Paulo, SP, Brazil.

**RESUMEN / SUMMARY:** - Background: Glioblastoma (GBM) confers a dismal prognosis despite advances in current therapy. Cancer-testis antigens (CTA) comprise families of tumor-associated antigens that are immunogenic in different cancers. The aim of this study was to determine the expression profile of a large number of CTA genes in GBM. Methods: We selected, from 153 CTA genes, those genes potentially expressed in GBM. The expression pattern of 30 CTA was then evaluated by RT-PCR in a series of 48 GBM and 5 normal brain samples. The presence of CTCFL protein was also evaluated by

immunohistochemical staining. Results: Among the genes with no expression in normal brain, ACTL8 (57%), OIP5 (54%), XAGE3 (44%) and CTCFL (15%) were frequently expressed in GBM, while over 85% of the tumors expressed at least 1 of these four CTA. Coexpression of two or more CTA occurred in 49% of cases. CTCFL protein expression was detected in 13% of the GBM and was negative in normal brain samples. GBM expressing 3-4 CTA was associated with significantly better overall survival (OS) rates ( $P = 0.017$ ). By multivariate analysis, mRNA positivity for 3-4 CTA ( $P = 0.044$ ), radiotherapy ( $P = 0.010$ ) and chemotherapy ( $P = 0.001$ ) were independent prognostic factors for OS. Conclusions: GBM frequently express ACTL8, OIP5, XAGE3 and CTCFL. A relatively high percentage of tumors expressed at least one of these four CTA, opening the perspective for their utility in antigen-specific immunotherapy. Furthermore, mRNA positivity for 3-4 CTA is an independent predictor of better OS for GBM patients.

[768]

**TÍTULO / TITLE:** - Gene expression profiling of the anti-glioma effect of Cilengitide.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Springerplus. 2013 Apr 15;2(1):160. Print 2013 Dec.

●●Enlace al texto completo (gratis o de pago) [1186/2193-1801-2-160](#)

**AUTORES / AUTHORS:** - Onishi M; Kurozumi K; Ichikawa T; Michiue H; Fujii K; Ishida J; Shimazu Y; Chiocca EA; Kaur B; Date I

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, 2-5-1, Shikata-cho, Kita-ku, Okayama, 700-8558 Japan.

**RESUMEN / SUMMARY:** - Cilengitide (EMD121974), an inhibitor of the adhesive function of integrins, demonstrated preclinical efficacy against malignant glioma. It is speculated that cilengitide can inhibit tumor growth, invasion, and angiogenesis. However, the effects of cilengitide on these processes have not been sufficiently examined. In this study, we investigated the anti-glioma effect of cilengitide using DNA microarray analysis. U87DeltaEGFR cells (human malignant glioma cell line) were used for this experiment. The cells were harvested after 16 h of cilengitide treatment, and mRNA was extracted. Gene expression and pathway analyses were performed using a DNA microarray (CodeLinkHuman Whole Genome Bioarray). The expression of 265 genes was changed with cilengitide treatment. The expression of 214 genes was up-regulated by more than 4-fold and the expression of 51 genes was down-regulated by more than 4-fold compared to the controls. In pathway analysis, "apoptotic cleavage of cellular proteins" and "TNF receptor signaling pathway" were over-represented. Apoptotic-associated genes such as caspase 8 were up-regulated. Gene expression profiling revealed more detailed mechanism of

the anti-glioma effect of cilengitide. Genes associated with apoptosis were over-represented following cilengitide treatment.

[769]

**TÍTULO / TITLE:** - Globus pallidus high-signal lesions: A predominant MRI finding in children with neurofibromatosis type 1.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Ann Indian Acad Neurol. 2013 Jan;16(1):53-6. doi: 10.4103/0972-2327.107702.

●●Enlace al texto completo (gratis o de pago) [4103/0972-2327.107702](#)

**AUTORES / AUTHORS:** - Khan A; Beri S; Baheerathan A; Balki A; Hussain N; Gosalakal J

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Neurology, Leicester Royal Infirmary, University Hospitals of Leicester NHS Trust, Leicester, United Kingdom.

**RESUMEN / SUMMARY:** - INTRODUCTION: Lesions of the brain, recognized as unidentified bright objects (UBOs), are commonly observed as areas of increased T2-weighted signal intensity on magnetic resonance imaging (MRI) in children with neurofibromatosis type 1 (NF1). Identification of these lesions is not currently encompassed in the National Institute of Health (NIH) diagnostic criteria for NF1. OBJECTIVE: We aimed to determine the prevalence of UBOs in children with NF1 and identify areas of the brain that are commonly affected by these lesions, allowing us to evaluate whether UBOs should be included in the diagnostic criteria for the diagnosis of NF1. MATERIALS AND METHODS: We reviewed the cranial MRI scans of 22 children who had been diagnosed with sporadic or familial NF1 in accordance with the criteria established by NIH. UBOs were present in 81% of the children with NF1. RESULTS: These lesions have a predilection for specific areas of the brain, including the globus pallidus (72%), cerebellum (66%), brainstem (27%) and cerebral hemispheres (16%). The prevalence of UBOs identified varied significantly with age and sex; they were infrequent in children less than 4 years of age but were common in those aged between 4 and 12 years of age. UBOs were more commonly seen in males (66.6%) compared with females (33.3%). Repeat MRI scan on a subset of these patients with UBOs did not show any significant changes despite a worsening in clinical symptoms. CONCLUSION AND DISCUSSION: We have shown that UBOs are a common finding in children with NF1, and are most prevalent between the ages of 4 and 12 years. Many sites of the brain are affected by these lesions, most notably the globus pallidus and the cerebellum. Further research must be conducted to elucidate the significance of UBOs in patients with NF1 and whether these lesions have any utility in the clinical detection of NF1.

[770]

**TÍTULO / TITLE:** - In Vitro and In Vivo Analysis of RTK Inhibitor Efficacy and Identification of Its Novel Targets in Glioblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Transl Oncol. 2013 Apr;6(2):187-96. Epub 2013 Apr 1.

**AUTORES / AUTHORS:** - Martinho O; Silva-Oliveira R; Miranda-Goncalves V; Clara C; Almeida JR; Carvalho AL; Barata JT; Reis RM

**INSTITUCIÓN / INSTITUTION:** - Life and Health Sciences Research Institute (ICVS), Health Sciences School, University of Minho, Braga, Portugal ; ICVS/3B's, PT Government Associate Laboratory, Braga, Guimaraes, Portugal ; Molecular Oncology Research Center, Barretos Cancer Hospital, Barretos, Sao Paulo, Brazil.

**RESUMEN / SUMMARY:** - Treatment for glioblastoma consists of radiotherapy and temozolomide-based chemotherapy. However, virtually all patients recur, leading to a fatal outcome. Receptor tyrosine kinase (RTK)-targeted therapy has been the focus of attention in novel treatment options for these patients. Here, we compared the efficacy of imatinib, sunitinib, and cediranib in glioblastoma models. In the present work, the biologic effect of the drugs was screened by viability, cell cycle, apoptosis, migration, and invasion in vitro assays or in vivo by chick chorioallantoic membrane assay. Intracellular signaling was assessed by Western blot and the RTK targets were identified using phospho-RTK arrays. The amplified status of KIT, PDGFRA, and VEGFR2 genes was assessed by quantitative polymerase chain reaction. In a panel of 10 glioblastoma cell lines, we showed that cediranib was the most potent. In addition, cediranib and sunitinib synergistically sensitize the cells to temozolomide. Cediranib efficacy was shown to associate with higher cytostatic and unique cytotoxic effects in vitro and both antitumoral and antiangiogenic activity in vivo, which could associate with its great capacity to inhibit mitogen-activated protein kinase (MAPK) and AKT pathways. The molecular status of KIT, PDGFRA, and VEGFR2 did not predict glioblastoma cell responsiveness to any of the RTK inhibitors. Importantly, phospho-RTK arrays revealed novel targets for cediranib and sunitinib therapy. In conclusion, the novel targets found may be of value as future biomarkers for therapy response in glioblastoma and lead to the rational selection of patients for effective molecular targeted treatment.

[771]

**TÍTULO / TITLE:** - Erratum: Successful treatment of hyperphagia by resection of a hypothalamic hamartoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Jun;11(6):735. doi: 10.3171/2013.4.PEDS12552a. Epub 2013 Apr 26.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.4.PEDS12552a](#)

**AUTORES / AUTHORS:** - Sandberg DI

**INSTITUCIÓN / INSTITUTION:** - The University of Texas Health Science Center at Houston, Medical School, Houston, Texas.

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[772]

**TÍTULO / TITLE:** - Successful treatment of hyperphagia by resection of a hypothalamic hamartoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Jun;11(6):630-4. doi: 10.3171/2013.2.PEDS12552. Epub 2013 Apr 9.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.2.PEDS12552](#)

**AUTORES / AUTHORS:** - Esquenazi Y; Sandberg DI; Rekate HL

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurosurgery and Pediatric Surgery, The University of Texas Health Science Center at Houston Medical School, Children's Memorial Hermann Hospital, and Mischer Neuroscience Institute, Houston, Texas;

**RESUMEN / SUMMARY:** - Hypothalamic hamartomas (HHs) are benign lesions that are often associated with central precocious puberty and may present with gelastic seizures. Treatment modalities for HH include medical therapy with long-term gonadotropin-releasing hormone analogs or resection. The authors report the case of a 7-year-old girl who was diagnosed with an HH due to precocious puberty and was treated medically with a gonadotropin-releasing hormone analog for 3 years. Despite normalization of her plasma levels of luteinizing hormone, follicle-stimulating hormone, and estradiol and arrest of her precocious puberty, the patient developed progressive weight gain associated with extreme hyperphagia and morbid obesity by the age of 10 years. Her compulsive eating patterns were refractory to counseling and other interventions attempted by her parents and physicians. After resection of the HH, her hyperphagia resolved and her weight stabilized. To the authors' knowledge, this is the first report describing resection of an HH for the purpose of treating hyperphagia and obesity.

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[773]

**TÍTULO / TITLE:** - Medulloepithelioma in DICER1 syndrome treated with resection.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eye (Lond). 2013 May 3. doi: 10.1038/eye.2013.87.

●●Enlace al texto completo (gratis o de pago) [1038/eye.2013.87](#)

**AUTORES / AUTHORS:** - Ramasubramanian A; Correa ZM; Augsburger JJ; Sisk RA; Plager DA

**INSTITUCIÓN / INSTITUTION:** - Glick Eye Institute, Indiana University School of Medicine, Indianapolis, IN, USA.

[774]

**TÍTULO / TITLE:** - Comparison between poor and long-term survivors with glioblastoma: Review of an Australian dataset.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asia Pac J Clin Oncol. 2013 May 22. doi: 10.1111/ajco.12076.

●●Enlace al texto completo (gratis o de pago) [1111/ajco.12076](http://1111/ajco.12076)

**AUTORES / AUTHORS:** - Field KM; Rosenthal MA; Yilmaz M; Tacey M; Drummond K

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Oncology, Royal Melbourne Hospital, Melbourne, Victoria, Australia.

**RESUMEN / SUMMARY:** - AIMS: Despite the largely poor prognosis for patients with glioblastoma, 5-year survival approaches 10%. In many circumstances the reasons for discrepant outcomes remain unknown. This retrospective cohort study compared clinical and socio-demographic variables between long-term and poor survivors with glioblastoma. METHODS: Data from patients with glioblastoma diagnosed from 1998-2010 were accessed from two institutions. The cohort was divided into poor (<6 months), average (6-24 months) and long-term (>24 months) survivors. Clinical and socio-demographic variables were compared. RESULTS: In total 529 patients were included; 221 (42%) were poor, 260 (49%) average and 48 (9%) long-term survivors. Those surviving >24 months were younger and significantly more likely to be in a higher socioeconomic status group; be of a better performance status; have a frontal lobe tumor; have a craniotomy (rather than a biopsy); have a macroscopic resection; have two or more operations; and participate in a clinical trial. Country of birth, regional versus city residence and public versus private hospital treatment were not associated with differential survival outcomes. An ordered logistic regression analysis showed that age, performance status, extent of resection and clinical trial participation were independently associated with survival. CONCLUSION: Reassuringly, no statistically significant socio-demographic differences exist when comparing long-term and poor survivors with glioblastoma. Patients surviving more than 2 years were significantly more likely to have participated in a clinical trial. This research could contribute towards informing further research on prognostic variables for patients with glioblastoma.

[775]

**TÍTULO / TITLE:** - Reactive oxygen species responsive nanoprodruge to treat intracranial glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - ACS Nano. 2013 Apr 23;7(4):3061-77. doi: 10.1021/nn400347j. Epub 2013 Apr 4.

●●Enlace al texto completo (gratis o de pago) [1021/nn400347j](https://doi.org/10.1021/nn400347j)

**AUTORES / AUTHORS:** - Lee BS; Amano T; Wang HQ; Pantoja JL; Yoon CW; Hanson CJ; Amatya R; Yen A; Black KL; Yu JS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Cedars-Sinai Medical Center, 8631 West Third Street, Suite 800 East, Los Angeles, California 90048, United States.

**RESUMEN / SUMMARY:** - Chemotherapy for intracranial gliomas is hampered by limited delivery of therapeutic agents through the blood brain barrier (BBB). An optimal therapeutic agent for brain tumors would selectively cross the BBB, accumulates in the tumor tissue and be activated from an innocuous prodrug within the tumor. Here we show brain tumor-targeted delivery and therapeutic efficacy of a nanometer-sized prodrug (nanoprodrug) of camptothecin (CPT) to treat experimental glioblastoma multiforme (GBM). The CPT nanoprodrug was prepared using spontaneous nanoemulsification of a biodegradable, antioxidant CPT prodrug and alpha-tocopherol. The oxidized nanoprodrug was activated more efficiently than nonoxidized nanoprodrug, suggesting enhanced therapeutic efficacy in the oxidative tumor microenvironment. The in vitro imaging of U-87 MG glioma cells revealed an efficient intracellular uptake of the nanoprodrug via direct cell membrane penetration rather than via endocytosis. The in vivo study in mice demonstrated that the CPT nanoprodrug passed through the BBB and specifically accumulated in brain tumor tissue, but not in healthy brain tissue and other organs. The accumulation preferably occurred at the periphery of the tumor where cancer cells are most actively proliferating, suggesting optimal therapeutic efficacy of the nanoprodrug. The nanoprodrug was effective in treating subcutaneous and intracranial tumors. The nanoprodrug inhibited subcutaneous tumor growth more than 80% compared with control. The median survival time of mice implanted with an intracranial tumor increased from 40.5 days for control to 72.5 days for CPT nanoprodrug. This nanoprodrug approach is a versatile method for developing therapeutic nanoparticles enabling tumor-specific targeting and treatment. The nontoxic, tumor-specific targeting properties of the nanoprodrug system make it a safe, low cost, and versatile nanocarrier for pharmaceuticals, imaging agents, and diagnostic agents.

[776]

**TÍTULO / TITLE:** - Photoactivation of gold nanoparticles for glioma treatment.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](https://doi.org/10.1021/nn400347j)

**REVISTA / JOURNAL:** - Nanomedicine. 2013 May 1. pii: S1549-9634(13)00179-2. doi: 10.1016/j.nano.2013.04.007.

●●Enlace al texto completo (gratis o de pago) [1016/j.nano.2013.04.007](https://doi.org/10.1016/j.nano.2013.04.007)

**AUTORES / AUTHORS:** - Bobyk L; Edouard M; Deman P; Vautrin M; Pernet-Gallay K; Delaroche J; Adam JF; Esteve F; Ravanat JL; Elleaume H

**INSTITUCIÓN / INSTITUTION:** - INSERM U836 Grenoble Institut des Neurosciences, Equipe 6, Grenoble, France; Universite Joseph Fourier, Grenoble, France; European Synchrotron Radiation Facility, Medical Beamline ID17, Grenoble, France; Laboratoire Lesions des Acides Nucleiques, SCIB UMR E3 CEA-UJF, Institut Nanosciences et Cryogenie, CEA Grenoble, France Structure Federative de Recherche CEA-UJF (No: FED 4177), France.

**RESUMEN / SUMMARY:** - Radiosensitization efficacy of gold nanoparticles (AuNPs) with low energy radiations (88keV) was evaluated in vitro and in vivo on rats bearing glioma. In vitro, a significant dose-enhancement factor was measured by clonogenic assays after irradiation with synchrotron radiation of F98 glioma cells in presence of AuNPs (1.9 and 15nm in diameter). In vivo, 1.9nm nanoparticles were found to be toxic following intracerebral delivery in rats bearing glioma, whether no toxicity was observed using 15nm nanoparticles at the same concentration (50mg/mL). The therapeutic efficacy of gold photoactivation was determined by irradiating the animals after intracerebral infusion of AuNPs. Survival of rats that had received the combination of treatments (AuNPs: 50mg/mL, 15Gy) was significantly increased in comparison with the survival of rats that had received irradiation alone. In conclusion, this experimental approach is promising and further studies are foreseen for improving its therapeutic efficacy.

[777]

**TÍTULO / TITLE:** - Primary undifferentiated spindle-cell sarcoma of sella turcica: successful treatment with adjuvant temozolomide.

**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 May 27;2013. pii: bcr2013009934. doi: 10.1136/bcr-2013-009934.
- Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-009934](http://1136/bcr-2013-009934)

**AUTORES / AUTHORS:** - Sareen P; Chhabra L; Trivedi N

**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine, Saint Vincent Hospital, University of Massachusetts Medical School, Worcester, Massachusetts, USA.

**RESUMEN / SUMMARY:** - Sellar tumours in adults are most commonly pituitary adenomas. Primary spindle cell sarcoma of the sella turcica without a prior history of cranial radiation is extremely rare. We report a case of a large sellar mass with suprasellar and cavernous sinus extension in a geriatric male patient who presented with complete left oculomotor nerve palsy and panhypopituitarism. The patient underwent partial resection of the sellar mass through transcranial route. The pathology of the mass revealed a poorly differentiated spindle cell neoplasm most consistent with a sarcoma.

Postoperatively, the size of the residual sellar mass decreased significantly following six cycles of external beam radiation in conjunction with temozolomide.

[778]

**TÍTULO / TITLE:** - Expression of the glioma-associated oncogene homolog 1 (gli1) in advanced serous ovarian cancer is associated with unfavorable overall survival.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013;8(3):e60145. doi: 10.1371/journal.pone.0060145. Epub 2013 Mar 28.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0060145](#)

**AUTORES / AUTHORS:** - Ciucci A; De Stefano I; Vellone VG; Lisi L; Bottoni C; Scambia G; Zannoni GF; Gallo D

**INSTITUCIÓN / INSTITUTION:** - Department of Obstetrics and Gynecology, Catholic University of the Sacred Heart, Rome, Italy.

**RESUMEN / SUMMARY:** - Recent evidence links aberrant activation of Hedgehog (Hh) signaling with the pathogenesis of several cancers including medulloblastoma, glioblastoma, melanoma as well as pancreas, colorectal, and prostate carcinomas. Here we investigated the role of the transcription factor Gli1 in ovarian cancer. To this end, the expression profile of Gli1 was examined in normal ovaries, ovarian tumors, and ovarian cancer cell lines, and the in vitro effects of a specific Hh-pathway blocker, KAAD-cyclopamine, or a specific Gli1 inhibitor (GANT58) on cell proliferation and on Hh target gene expression were also assessed. Results obtained showed that epithelial cells in ovarian cancer tissue express significantly higher levels of nuclear Gli1 than in normal ovarian tissue, where the protein was almost undetectable. In addition, multivariate analysis showed that nuclear Gli1 was independently associated to poor survival in advanced serous ovarian cancer patients (HR = 2.2, 95%CI 1.0-5.1, p = 0.04). In vitro experiments demonstrated Gli1 expression in the three ovarian carcinoma cell lines tested, A2780, SKOV-3 and OVCAR-3. Remarkably, although KAAD-cyclopamine led to decreased cell proliferation, this treatment did not inhibit hedgehog target gene expression in any of the three ovarian cancer cell lines, suggesting that the inhibition of cell proliferation was a nonspecific or toxic effect. In line with these data, no differences on cell proliferation were observed when cell lines were treated with GANT58. Overall, our clinical data support the role of Gli1 as a prognostic marker in advanced serous ovarian cancer and as a possible therapeutic target in this disease. However, our in vitro findings draw attention to the need for selection of appropriate experimental models that accurately represent human tumor for testing future therapies involving Hh pathway inhibitors.

[779]

**TÍTULO / TITLE:** - Expression of B-cell activating factor, a proliferating inducing ligand and its receptors in primary central nervous system lymphoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neurol Int. 2013 Mar 21;5(1):e4. doi: 10.4081/ni.2013.e4. Print 2013 Feb 11.

●●Enlace al texto completo (gratis o de pago) [4081/ni.2013.e4](#)

**AUTORES / AUTHORS:** - Birnbaum T; Langer S; Roeber S; von Baumgarten L; Straube A

**INSTITUCIÓN / INSTITUTION:** - Departments of Neurology, Ludwig-Maximilians University, Munich, Germany.

**RESUMEN / SUMMARY:** - B-cell activating factor belonging to the tumor necrosis factor family (BAFF) and a proliferating inducing ligand (APRIL) might play an important role in the pathogenesis of systemic B-cell malignancies. However, the BAFF/APRIL system has not been systematically evaluated in primary central nervous system lymphoma (PCNSL) to date. We assessed the expression of BAFF, APRIL and its receptors BAFF-R (BAFF receptor), BCMA (B-cell maturation antigen) and TACI (transmembrane activator and calcium modulator cyclophilin ligand interactor) in five PCNSL specimens by immunohistochemical staining. We found extensive expression of BAFF and weak to moderate expression of APRIL, BAFF-R, BCMA, and TACI in all specimens. CD20 positive cells showed expression of both ligands and receptors at the same time. Our results indicate that autocrine stimulation of the BAFF/APRIL system might be involved in the pathogenesis of PCNSL.

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[780]

**TÍTULO / TITLE:** - Antiangiogenic therapy for glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am Soc Clin Oncol Educ Book. 2013;2013:71-8. doi: E10.1200/EdBook\_AM.2013.33.e71.

●●Enlace al texto completo (gratis o de pago)

[1200/EdBook\\_AM.2013.33.e71](#)

**AUTORES / AUTHORS:** - de Groot J; Reardon DA; Batchelor TT

**INSTITUCIÓN / INSTITUTION:** - From the Department of Neuro-Oncology, University of Texas MD Anderson Cancer Center, Houston, TX; Center for Neuro-Oncology, Dana-Farber Cancer Institute, Boston, MA; Stephen E. and Catherine Pappas Center for Neuro-Oncology, Massachusetts General Hospital Cancer Center, Boston, MA.

**RESUMEN / SUMMARY:** - Glioblastoma are one of the mostly vascularized tumors and are histologically characterized by abundant endothelial cell proliferation. Vascular endothelial growth factor (VEGF) is responsible for a degree of vascular proliferation and vessel permeability leading to symptomatic cerebral edema. Initial excitement generated from the impressive radiographic response

rates has waned due to concerns of limited long-term efficacy and the promotion of a treatment-resistant phenotype. Reasons for the discrepancy between high radiographic response rates and lack of survival benefit have led to a focus on identifying potential mechanisms of resistance to antiangiogenic therapy. However, equally important is the need to focus on identification of basic mechanisms of action of this class of drugs, determining the optimal biologic dose for each agent and identify the effect of antiangiogenic therapy on oxygen and drug delivery to tumor to optimize drug combinations. Finally, alternatives to overall survival (OS) need to be pursued using the application of validated parameters to reliably assess neurologic function and quality of life.

[781]

**TÍTULO / TITLE:** - Neural stem cell-mediated enzyme/prodrug therapy for glioma: preclinical studies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Sci Transl Med. 2013 May 8;5(184):184ra59. doi: 10.1126/scitranslmed.3005365.

●●Enlace al texto completo (gratis o de pago)

[1126/scitranslmed.3005365](#)

**AUTORES / AUTHORS:** - Aboody KS; Najbauer J; Metz MZ; D'Apuzzo M; Gutova M; Annala AJ; Synold TW; Couture LA; Blanchard S; Moats RA; Garcia E; Aramburo S; Valenzuela VV; Frank RT; Barish ME; Brown CE; Kim SU; Badie B; Portnow J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, City of Hope National Medical Center and Beckman Research Institute, Duarte, CA 91010, USA.

**RESUMEN / SUMMARY:** - High-grade gliomas are extremely difficult to treat because they are invasive and therefore not curable by surgical resection; the toxicity of current chemo- and radiation therapies limits the doses that can be used. Neural stem cells (NSCs) have inherent tumor-tropic properties that enable their use as delivery vehicles to target enzyme/prodrug therapy selectively to tumors. We used a cytosine deaminase (CD)-expressing clonal human NSC line, HB1.F3.CD, to home to gliomas in mice and locally convert the prodrug 5-fluorocytosine to the active chemotherapeutic 5-fluorouracil. In vitro studies confirmed that the NSCs have normal karyotype, tumor tropism, and CD expression, and are genetically and functionally stable. In vivo biodistribution studies demonstrated NSC retention of tumor tropism, even in mice pretreated with radiation or dexamethasone to mimic clinically relevant adjuvant therapies. We evaluated safety and toxicity after intracerebral administration of the NSCs in non-tumor-bearing and orthotopic glioma-bearing immunocompetent and immunodeficient mice. We detected no difference in toxicity associated with conversion of 5-fluorocytosine to 5-fluorouracil, no NSCs outside the brain, and no histological evidence of pathology or

tumorigenesis attributable to the NSCs. The average tumor volume in mice that received HB1.F3.CD NSCs and 5-fluorocytosine was about one-third that of the average volume in control mice. On the basis of these results, we conclude that combination therapy with HB1.F3.CD NSCs and 5-fluorocytosine is safe, nontoxic, and effective in mice. These data have led to approval of a first-in-human study of an allogeneic NSC-mediated enzyme/prodrug-targeted cancer therapy in patients with recurrent high-grade glioma.

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[782]

**TÍTULO / TITLE:** - Translation of the ecological trap concept to glioma therapy: the cancer cell trap concept.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Future Oncol. 2013 Jun;9(6):817-24. doi: 10.2217/fon.13.30.

●●Enlace al texto completo (gratis o de pago) [2217/fon.13.30](#)

**AUTORES / AUTHORS:** - van der Sanden B; Appaix F; Berger F; Selek L; Issartel JP; Wion D

**INSTITUCIÓN / INSTITUTION:** - INSERM U836, Grenoble Institut des Neurosciences, Université Joseph Fourier, CHU Michallon, Grenoble, France.

**RESUMEN / SUMMARY:** - Viewing tumors as ecosystems offers the opportunity to consider how ecological concepts can be translated to novel therapeutic perspectives. The ecological trap concept emerged approximately half a century ago when it was observed that animals can prefer an environment of low quality for survival over other available environments of higher quality. The presence of such a trap can drive a local population to extinction. The cancer cell trap concept is the translation of the ecological trap into glioma therapy. It exploits and diverts the invasive potential of glioma cells by guiding their migration towards specific locations where a local therapy can be delivered efficiently. This illustrates how an ecological concept can change therapeutic obstacles into therapeutic tools.

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[783]

**TÍTULO / TITLE:** - Modeling Tumor-Associated Edema in Gliomas during Anti-Angiogenic Therapy and Its Impact on Imageable Tumor.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Oncol. 2013;3:66. doi: 10.3389/fonc.2013.00066. Epub 2013 Apr 4.

●●Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00066](#)

**AUTORES / AUTHORS:** - Hawkins-Daarud A; Rockne RC; Anderson AR; Swanson KR

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Northwestern University Chicago, IL, USA.

**RESUMEN / SUMMARY:** - Glioblastoma, the most aggressive form of primary brain tumor, is predominantly assessed with gadolinium-enhanced T1-weighted (T1Gd) and T2-weighted magnetic resonance imaging (MRI). Pixel intensity enhancement on the T1Gd image is understood to correspond to the gadolinium contrast agent leaking from the tumor-induced neovasculature, while hyperintensity on the T2/FLAIR images corresponds with edema and infiltrated tumor cells. None of these modalities directly show tumor cells; rather, they capture abnormalities in the microenvironment caused by the presence of tumor cells. Thus, assessing disease response after treatments impacting the microenvironment remains challenging through the obscuring lens of MR imaging. Anti-angiogenic therapies have been used in the treatment of gliomas with spurious results ranging from no apparent response to significant imaging improvement with the potential for extremely diffuse patterns of tumor recurrence on imaging and autopsy. Anti-angiogenic treatment normalizes the vasculature, effectively decreasing vessel permeability and thus reducing tumor-induced edema, drastically altering T2-weighted MRI. We extend a previously developed mathematical model of glioma growth to explicitly incorporate edema formation allowing us to directly characterize and potentially predict the effects of anti-angiogenics on imageable tumor growth. A comparison of simulated glioma growth and imaging enhancement with and without bevacizumab supports the current understanding that anti-angiogenic treatment can serve as a surrogate for steroids and the clinically driven hypothesis that anti-angiogenic treatment may not have any significant effect on the growth dynamics of the overall tumor cell populations. However, the simulations do illustrate a potentially large impact on the level of edematous extracellular fluid, and thus on what would be imageable on T2/FLAIR MR. Additionally, by evaluating virtual tumors with varying growth kinetics, we see tumors with lower proliferation rates will have the most reduction in swelling from such treatments.

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[784]

**TÍTULO / TITLE:** - Arsenic reverses glioblastoma resistance to mTOR-targeted therapies.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Cycle. 2013 May 15;12(10):1473-4. doi: 10.4161/cc.24747. Epub 2013 Apr 22.

●●Enlace al texto completo (gratis o de pago) [4161/cc.24747](#)

**AUTORES / AUTHORS:** - Iwanami A; Cloughesy TF; Cavenee WK; Mischel PS

**INSTITUCIÓN / INSTITUTION:** - Department of Orthopaedic Surgery; Keio University School of Medicine; Tokyo, Japan.

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[785]

**TÍTULO / TITLE:** - Malignant pheochromocytoma and paraganglioma: future considerations for therapy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Q J Nucl Med Mol Imaging. 2013 Apr 18.

**AUTORES / AUTHORS:** - Buzzoni R; Pusceddu S; Damato A; Meroni E; Cumali A; Milione M; Mazzaferro V; De Braud F; Spreafico C; Maccauro M; Zaffaroni N; Castellani MR

**INSTITUCIÓN / INSTITUTION:** - Day Hospital Unit, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy - [roberto.buzzoni@istitutotumori.mi.it](mailto:roberto.buzzoni@istitutotumori.mi.it).

**RESUMEN / SUMMARY:** - Pheochromocytoma and paraganglioma are rare neuroendocrine tumors. Knowledge about such neoplasms ameliorated in the last 10-15 years with the discovery of increasing number of germ line mutations even in apparently sporadic cases. Seemingly, genetic tests are going to be an integral part of diagnostic procedures. Standard therapies (advanced surgery, radiometabolic therapy, chemotherapy and radiotherapy) have revealed suboptimal results in tumor size reduction and survival. Currently, there is no standard therapeutic protocol and thus some patients end up with overtreatment while others are undertreated. An effective molecular target therapy aiming at permanent control of these highly complex neoplasms should be the aim of future efforts. In clinical setting investigatory trials with multiple drug therapies targeting a variety of different parallel pathways should be available. Successful management requires a multidisciplinary teamwork.

[786]

**TÍTULO / TITLE:** - Birth weight and other perinatal factors and childhood CNS tumors: A case-control study in California.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Epidemiol. 2013 Apr 3. pii: S1877-7821(13)00040-4. doi: 10.1016/j.canep.2013.03.007.

●●Enlace al texto completo (gratis o de pago)

[1016/j.canep.2013.03.007](http://1016/j.canep.2013.03.007)

**AUTORES / AUTHORS:** - Oksuzyan S; Crespi CM; Cockburn M; Mezei G; Kheifets L

**INSTITUCIÓN / INSTITUTION:** - Department of Epidemiology, UCLA Fielding School of Public Health, Los Angeles, CA, United States. Electronic address: [soksuzyan@ucla.edu](mailto:soksuzyan@ucla.edu).

**RESUMEN / SUMMARY:** - AIMS: We conducted a large registry-based study in California to investigate the association of perinatal factors and childhood CNS tumors, with analysis by tumor subtype. METHODS: We linked California cancer and birth registries to obtain information on 3308 cases and 3308 controls matched on age and sex. We examined the association of birth weight, gestational age, birth order, parental ages, maternal conditions during pregnancy, newborn abnormalities and the risk of childhood CNS tumors using

conditional logistic regression, with adjustment for potential confounders. RESULTS: The odds ratio (OR) per 1000g increase in birth weight was 1.11 (95% CI: 0.99-1.24) for total childhood CNS tumors, 1.17 (95% CI: 0.97-1.42) for astrocytoma and 1.28 (95% CI: 0.90-1.83) for medulloblastoma. Compared to average-for-gestational age, large-for-gestational age infants were at increased risk of glioma (OR=1.86, 95% CI: 0.99-3.48), while small-for-gestational age infants were at increased risk of ependimoma (OR=2.64, 95% CI: 1.10-6.30). Increased risk of childhood CNS tumors was observed for 5-year increase in maternal and paternal ages (OR=1.06, 95% CI: 1.00-1.12 and 1.05, 95% CI: 1.00-1.10 respectively). Increased risk of astrocytoma was detected for 5-year increase in paternal age (OR=1.08; 95% CI: 1.00-1.16) and increased risk of glioma for maternal age  $\geq$  35 years old (OR=1.87; 95% CI: 1.00-3.52). Maternal genital herpes during pregnancy was associated with a pronounced increase in risk of total CNS tumors (OR=2.74; 95% CI: 1.16-6.51). Other (non-sexually transmitted) infections during pregnancy were associated with decreased risk of total CNS tumors (OR=0.28, 95% CI: 0.09-0.85). Maternal blood/immune disorders during pregnancy were linked to increased risk of CNS tumors (OR=2.28, 95% CI: 1.08-4.83) and medulloblastoma (OR=7.13, 95% CI: 0.82-61.03). Newborn CNS abnormalities were also associated with high risk of childhood CNS tumors (OR=4.08, 95% CI: 1.13-14.76). CONCLUSIONS: Our results suggest that maternal genital herpes, blood and immunological disorders during pregnancy and newborn CNS abnormalities were associated with increased risk of CNS tumors. Maternal infections during pregnancy were associated with decreased risk of CNS tumors. Advanced maternal and paternal ages may be associated with a slightly increased risk of CNS tumors. Factors associated with CNS tumor subtypes varied by subtype, an indicator of different etiology for different subtypes.

[787]

**TÍTULO / TITLE:** - RNA interference-mediated USP22 gene silencing promotes human brain glioma apoptosis and induces cell cycle arrest.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncol Lett. 2013 Apr;5(4):1290-1294. Epub 2013 Feb 12.

●●Enlace al texto completo (gratis o de pago) [3892/ol.2013.1188](#)

**AUTORES / AUTHORS:** - Li ZH; Yu Y; DU C; Fu H; Wang J; Tian Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, China-Japan Union Hospital of Jilin University, Changchun 130033;

**RESUMEN / SUMMARY:** - Ubiquitin-specific protease 22 (USP22) is a novel tumor stem cell marker that plays a key role in tumorigenesis and cell cycle progression. However, the effect of silencing the USP22 gene on human brain glioma cell growth is not well understood. In the present study, high gene expression of USP22 was identified in human brain glioma cells. In addition, RNA interference technology was used to silence USP22 gene expression in

human brain glioma cells. Silencing the USP22 gene was found to effectively inhibit proliferation of human brain glioma cells, resulting in cell apoptosis and cell cycle arrest at the G2/M phase. USP22 silencing was also found to lead to reduced expression of cell cycle proteins, including CDK1, CDK2 and CyclinB1. In summary, in this study the USP22 gene was demonstrated to play a key regulatory role in the growth of human brain glioma cells by affecting progression of apoptosis and the cell cycle.

[788]

**TÍTULO / TITLE:** - Primary central nervous system lymphoma with ocular involvement.

**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 Apr;131(4):494. doi: 10.1001/jamaophthalmol.2013.594.

●●Enlace al texto completo (gratuito o de pago)

[1001/jamaophthalmol.2013.594](http://1001/jamaophthalmol.2013.594)

**AUTORES / AUTHORS:** - Thinda S; Agarwal A

[789]

**TÍTULO / TITLE:** - Choroid plexus tumours: classification, MR imaging findings and pathological correlation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Med Imaging Radiat Oncol. 2013 Apr;57(2):176-83. doi: 10.1111/1754-9485.12013. Epub 2012 Dec 28.

●●Enlace al texto completo (gratuito o de pago) [1111/1754-9485.12013](http://1111/1754-9485.12013)

**AUTORES / AUTHORS:** - Yan C; Xu Y; Feng J; Sun C; Zhang G; Shi J; Hao P; Wu Y; Lin B

**INSTITUCIÓN / INSTITUTION:** - Department of Medical Imaging Center, Nanfang Hospital, Southern Medical University, Guangdong, China.

**RESUMEN / SUMMARY:** - INTRODUCTION: Choroid plexus tumours (CPTs) are extremely rare intraventricular neoplasms and are prone to bleeding during surgery. The purpose of this study was to summarise the MR imaging characteristics of 13 CPT cases. METHODS: Magnetic resonance images of 13 patients (six men and seven women; mean age 21.1 years) with pathologically proved CPTs were retrospectively reviewed. MR findings of the tumours were evaluated, with emphasis on their location, size, shape, internal architecture, margin and pattern and degree of enhancement. Differences in signal intensity characteristics were also investigated on MR images and analysed according to histological subtypes. RESULTS: Lesions were in the lateral ventricles (n = 7), fourth ventricle (n = 5) and cisterna magna (n = 1), with a mean size of 5.0 cm (range 2.0-7.9 cm). The tumour parenchyma was a mixture of nodular or patchy

areas of inhomogeneous isointense to slightly hyperintense signal on T2-weighted images. On postcontrast MR images, all lesions, except for one, had moderate to marked contrast enhancement. Multiple tortuous areas of 'flow void' signal extended through all the tumours except for two. A thin capsule could be seen in six cases. CONCLUSION: Observation of large intraventricular tumours with inhomogeneity on T2-weighted images and flow void is suggestive of CPTs. Checking for signs of a thin capsule, extensive peritumoural oedema and necrosis may be useful when classifying CPTs.

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[790]

**TÍTULO / TITLE:** - The IARC Carcinogenicity Evaluation of Radio-Frequency Electromagnetic Field: With Special Reference to Epidemiology of Mobile Phone Use and Brain Tumor Risk.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nihon Eiseigaku Zasshi. 2013;68(2):78-82.

**AUTORES / AUTHORS:** - Yamaguchi N

**INSTITUCIÓN / INSTITUTION:** - Department of Public Health, School of Medicine, Tokyo Women's Medical University.

**RESUMEN / SUMMARY:** - The International Agency for Research on Cancer of World Health Organization announced in May 2011 the results of evaluation of carcinogenicity of radio-frequency electromagnetic field. In the overall evaluation, the radio-frequency electromagnetic field was classified as "possibly carcinogenic to humans", on the basis of the fact that the evidence provided by epidemiological studies and animal bioassays was limited. Regarding epidemiology, the results of the Interphone Study, an international collaborative case-control study, were of special importance, together with the results of a prospective cohort study in Denmark, case-control studies in several countries, and a case-case study in Japan. The evidence obtained was considered limited, because the increased risk observed in some studies was possibly spurious, caused by selection bias or recall bias as well as residual effects of confounding factors. Further research studies, such as large-scale multinational epidemiological studies, are crucially needed to establish a sound evidence base from which a more conclusive judgment can be made for the carcinogenicity of the radio-frequency electromagnetic field.

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[791]

**TÍTULO / TITLE:** - An unusual cervical spinal meningioma in a child.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Feb;53(2):129-31. doi: 10.3340/jkns.2013.53.2.129. Epub 2013 Feb 28.

●●Enlace al texto completo (gratis o de pago) [3340/jkns.2013.53.2.129](http://dx.doi.org/10.3340/jkns.2013.53.2.129)

**AUTORES / AUTHORS:** - Cho HR; Lee JK; Paik AL; Jang WY

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Pohang St. Mary's Hospital, Pohang, Korea.

**RESUMEN / SUMMARY:** - The incidence of spinal meningioma is very rare in children. A 14-year-old girl presented with right arm weakness, gait disturbance, and urinary incontinence. Cervical magnetic resonance imaging revealed an intradural extramedullary tumor dorsal to the spinal cord in the level of C1. The tumor was totally removed despite the severe cord compression. Meningotheliomatous meningioma was diagnosed after histological examination.

[792]

**TÍTULO / TITLE:** - Pharmacodynamic analysis of magnetic resonance imaging-monitored focused ultrasound-induced blood-brain barrier opening for drug delivery to brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomed Res Int. 2013;2013:627496. doi: 10.1155/2013/627496. Epub 2013 Mar 31.

●●Enlace al texto completo (gratis o de pago) [1155/2013/627496](#)

**AUTORES / AUTHORS:** - Chu PC; Chai WY; Hsieh HY; Wang JJ; Wey SP; Huang CY; Wei KC; Liu HL

**INSTITUCIÓN / INSTITUTION:** - Department of Electrical Engineering, Chang-Gung University, 259 Wen-Hwa 1st Road, Kwei-Shan, Tao-Yuan 333, Taiwan.

**RESUMEN / SUMMARY:** - Microbubble-enhanced focused ultrasound (FUS) can enhance the delivery of therapeutic agents into the brain for brain tumor treatment. The purpose of this study was to investigate the influence of brain tumor conditions on the distribution and dynamics of small molecule leakage into targeted regions of the brain after FUS-BBB opening. A total of 34 animals were used, and the process was monitored by 7T-MRI. Evans blue (EB) dye as well as Gd-DTPA served as small molecule substitutes for evaluation of drug behavior. EB was quantified spectrophotometrically. Spin-spin (R1) relaxometry and area under curve (AUC) were measured by MRI to quantify Gd-DTPA. We found that FUS-BBB opening provided a more significant increase in permeability with small tumors. In contrast, accumulation was much higher in large tumors, independent of FUS. The AUC values of Gd-DTPA were well correlated with EB delivery, suggesting that Gd-DTPA was a good indicator of total small-molecule accumulation in the target region. The peripheral regions of large tumors exhibited similar dynamics of small-molecule leakage after FUS-BBB opening as small tumors, suggesting that FUS-BBB opening may have the most significant permeability-enhancing effect on tumor peripheral. This study provides useful information toward designing an optimized FUS-BBB opening strategy to deliver small-molecule therapeutic agents into brain tumors.

[793]

**TÍTULO / TITLE:** - Cerebellar Anaplastic Astrocytoma in an Adult with Neurofibromatosis Type 1: Case Report and Review of Literature.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg A Cent Eur Neurosurg. 2013 May 13.

●●Enlace al texto completo (gratis o de pago) [1055/s-0033-1342938](#)

**AUTORES / AUTHORS:** - Brokinkel B; Schober O; Ewelt C; Heindel W; Hargus G; Stummer W; Holling M; Wolfer J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospital Muenster, Muenster, Germany.

**RESUMEN / SUMMARY:** - Background Low-grade gliomas (e.g., pilocytic astrocytomas) are frequently found in patients with neurofibromatosis type 1 (NF1). Whereas most of those lesions are located supratentorially, cerebellar manifestations are described in < 1%. Malignant variants like glioblastoma and anaplastic astrocytoma (AA) are only rarely observed in NF1 patients. Thus, cerebellar AA is very infrequent and has not yet been described in an adult NF1 patient. Clinical Presentation We present the case of a 54-year-old male patient with von Recklinghausen disease who had a diffuse contrast-enhancing cerebellar mass that was resected guided by aminolevulinic acid (ALA)-fluorescence. Histopathological analyses revealed an AA with lack of pilocytic features or O6-methylguanine-DNA methyltransferase (MGMT) promoter hypermethylation. Due to the proximity of the tumor to the brainstem, adjuvant temozolomide chemotherapy was administered rather than first-line radiotherapy. Although the patient recovered quickly after the operation and tumor progression was ruled out in follow-up magnetic resonance imaging (MRI), the patient strongly deteriorated during a 16-month follow-up, and MRI revealed severe leukoencephalopathy. Extensive electrophysiological and radiological examination revealed a neurodegenerative disease of unknown etiology. Finally, the patient's condition improved receiving levodopa. Conclusions A literature search yielded only one previously published case of an AA in a 9-year-old girl with NF1. Tumor control after resection was achieved in both patients; however, the patient in the mentioned report received radiation instead of temozolomide. In spite of different adjuvant therapies, tumor control for at least 16 months was achieved in both published cases. Thus, even though the role of adjuvant treatment options remains to be further elucidated, surgery is the appropriate therapy in these uncommon tumors providing mass reduction and histological diagnosis as well as tumor control.

[794]

**TÍTULO / TITLE:** - Adult medulloblastoma associated with syringomyelia: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Biol Med. 2012 Jun;9(2):137-40. doi: 10.3969/j.issn.2095-3941.2012.02.011.

●●Enlace al texto completo (gratis o de pago) [3969/j.issn.2095-3941.2012.02.011](https://doi.org/10.3969/j.issn.2095-3941.2012.02.011)

**AUTORES / AUTHORS:** - Wang CC

**INSTITUCIÓN / INSTITUTION:** - Nepean Hospital, Kingswood NSW 2747, Australia.

**RESUMEN / SUMMARY:** - The association between cerebellar medulloblastoma and syringomyelia is uncommon and only found in pediatric patients. To date, adult medulloblastoma associated with syringomyelia has not been reported in the literature. Paroxysmal bradycardia is an uncommon clinical manifestation in posterior fossa tumors and likely to be vagally mediated via brainstem preganglionic cardiac motor neurons. This report introduces the diagnosis and treatment of a case of adult medulloblastoma associated with syringomyelia, which presented with paroxysmal bradycardia.

[795]

**TÍTULO / TITLE:** - Magnetic Resonance Imaging Appearance of Primary Spinal Extradural Ewing's Sarcoma: Case Report and Literature Review.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Neuroradiol. 2013 May 9.

●●Enlace al texto completo (gratis o de pago) [1007/s00062-013-0222-1](https://doi.org/10.1007/s00062-013-0222-1)

**AUTORES / AUTHORS:** - Tsutsumi S; Yasumoto Y; Manabe A; Ogino I; Arai H; Ito M

**INSTITUCIÓN / INSTITUTION:** - Department of Neurological Surgery, Juntendo University Urayasu Hospital, 2-1-1 Tomioka, 279-0021, Urayasu, Chiba, Japan, [shotaro@juntendo-urayasu.jp](mailto:shotaro@juntendo-urayasu.jp).

**RESUMEN / SUMMARY:** - PURPOSE: Primary spinal extradural Ewing's sarcoma (PSEES) or primitive neuroectodermal tumor (PNET) is uncommon. The present study summarizes the magnetic resonance (MR) imaging appearance of PSEES. METHODS: Literature search from 1994 to 2012 with our representative case presentation. RESULTS: Twenty-one patients, 12 males and 9 females, aged 3 weeks to 44 years, were identified. The thoracic spine was most frequently affected, followed by the cervical, cervicothoracic, and thoracolumbar spine. Superior-inferior extension of lesions was three vertebral levels in 7, two in 7, five in 4, four in 1, one in 1 and unknown in 1. PSEESs appeared isointense in 9 cases, hypointense in 2, hyperintense in 1, and no description in 9 on T1-weighted imaging, while hyperintense in 6, hypointense in 3, heterogeneous in 1, and no description in 11 on T2-weighted imaging. Varying enhancement was noted in 13 cases (62%), with no description of contrast study in the other 8 cases. Dumbbell-shaped configuration of PSEES was found in 5 cases, foraminal widening in 4, and erosions or scalloping of the adjacent vertebral bodies in 4. CONCLUSION: The MR imaging appearance of PSEESs is indistinguishable from other tumors. PSEES should be assumed as

the differential diagnosis of spinal extradural tumors in pediatric, adolescent, and young adult patients, and prompt surgical exploration should be performed.

[796]

**TÍTULO / TITLE:** - miR-219-5p Inhibits Receptor Tyrosine Kinase Pathway by Targeting EGFR in Glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 17;8(5):e63164. doi: 10.1371/journal.pone.0063164. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0063164](#)

**AUTORES / AUTHORS:** - Rao SA; Arimappamagan A; Pandey P; Santosh V; Hegde AS; Chandramouli BA; Somasundaram K

**INSTITUCIÓN / INSTITUTION:** - Microbiology and Cell Biology, Indian Institute of Science, Bangalore, Karnataka, India.

**RESUMEN / SUMMARY:** - Glioblastoma is one of the common types of primary brain tumors with a median survival of 12-15 months. The receptor tyrosine kinase (RTK) pathway is known to be deregulated in 88% of the patients with glioblastoma. 45% of GBM patients show amplifications and activating mutations in EGFR gene leading to the upregulation of the pathway. In the present study, we demonstrate that a brain specific miRNA, miR-219-5p, repressed EGFR by directly binding to its 3'-UTR. The expression of miR-219-5p was downregulated in glioblastoma and the overexpression of miR-219-5p in glioma cell lines inhibited the proliferation, anchorage independent growth and migration. In addition, miR-219-5p inhibited MAPK and PI3K pathways in glioma cell lines in concordance with its ability to target EGFR. The inhibitory effect of miR-219-5p on MAPK and PI3K pathways and glioma cell migration could be rescued by the overexpression of wild type EGFR and vIII mutant of EGFR (both lacking 3'-UTR and thus being insensitive to miR-219-5p) suggesting that the inhibitory effects of miR-219-5p were indeed because of its ability to target EGFR. We also found significant negative correlation between miR-219-5p levels and total as well as phosphorylated forms of EGFR in glioblastoma patient samples. This indicated that the downregulation of miR-219-5p in glioblastoma patients contribute to the increased activity of the RTK pathway by the upregulation of EGFR. Thus, we have identified and characterized miR-219-5p as the RTK regulating novel tumor suppressor miRNA in glioblastoma.

[797]

**TÍTULO / TITLE:** - Glioma cell death induced by irradiation or alkylating agent chemotherapy is independent of the intrinsic ceramide pathway.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 7;8(5):e63527. doi: 10.1371/journal.pone.0063527. Print 2013.

- Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0063527](https://doi.org/10.1371/journal.pone.0063527)

**AUTORES / AUTHORS:** - Gramatzki D; Herrmann C; Happold C; Becker KA; Gulbins E; Weller M; Tabatabai G

**INSTITUCIÓN / INSTITUTION:** - Laboratory of Molecular Neuro-Oncology, Department of Neurology, University Hospital Zurich, Zurich, Switzerland.

**RESUMEN / SUMMARY:** - **BACKGROUND/AIMS:** Resistance to genotoxic therapy is a characteristic feature of glioma cells. Acid sphingomyelinase (ASM) hydrolyzes sphingomyelin to ceramide and glucosylceramide synthase (GCS) catalyzes ceramide metabolism. Increased ceramide levels have been suggested to enhance chemotherapy-induced death of cancer cells. **METHODS:** Microarray and clinical data for ASM and GCS in astrocytomas WHO grade II-IV were acquired from the Rembrandt database. Moreover, the glioblastoma database of the Cancer Genome Atlas network (TCGA) was used for survival data of glioblastoma patients. For in vitro studies, increases in ceramide levels were achieved either by ASM overexpression or by the GCS inhibitor DL-threo-1-phenyl-2-palmitoylamino-3-morpholino-1-propanol (PPMP) in human glioma cell lines. Combinations of alkylating chemotherapy or irradiation and ASM overexpression, PPMP or exogenous ceramide were applied in parental cells. The anti-glioma effects were investigated by assessing proliferation, metabolic activity, viability and clonogenicity. Finally, viability and clonogenicity were assessed in temozolomide (TMZ)-resistant cells upon treatment with PPMP, exogenous ceramide, alkylating chemotherapy, irradiation or their combinations. **RESULTS:** Interrogations from the Rembrandt and TCGA database showed a better survival of glioblastoma patients with low expression of ASM or GCS. ASM overexpression or PPMP treatment alone led to ceramide accumulation but did not enhance the anti-glioma activity of alkylating chemotherapy or irradiation. PPMP or exogenous ceramide induced acute cytotoxicity in glioblastoma cells. Combined treatments with chemotherapy or irradiation led to additive, but not synergistic effects. Finally, no synergy was found when TMZ-resistant cells were treated with exogenous ceramide or PPMP alone or in combination with TMZ or irradiation. **CONCLUSION:** Modulation of intrinsic glioma cell ceramide levels by ASM overexpression or GCS inhibition does not enhance the anti-glioma activity of alkylating chemotherapy or irradiation.

[798]

**TÍTULO / TITLE:** - A choline derivate-modified nanoprobe for glioma diagnosis using MRI.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Sci Rep. 2013;3:1623. doi: 10.1038/srep01623.

- Enlace al texto completo (gratis o de pago) [1038/srep01623](https://doi.org/10.1038/srep01623)

**AUTORES / AUTHORS:** - Li J; Huang S; Shao K; Liu Y; An S; Kuang Y; Guo Y; Ma H; Wang X; Jiang C

**INSTITUCIÓN / INSTITUTION:** - Department of Pharmaceutics, School of Pharmacy, Fudan University, Shanghai, China.

**RESUMEN / SUMMARY:** - Gadolinium (Gd) chelate contrast-enhanced magnetic resonance imaging (MRI) is a preferred method of glioma detection and preoperative localisation because it offers high spatial resolution and non-invasive deep tissue penetration. Gd-based contrast agents, such as Gd-diethyltriaminepentaacetic acid (DTPA-Gd, Magnevist), are widely used clinically for tumor diagnosis. However, the Gd-based MRI approach is limited for patients with glioma who have an uncompromised blood-brain barrier (BBB). Moreover, the rapid renal clearance and non-specificity of such contrast agents further hinders their prevalence. We present a choline derivate (CD)-modified nanoprobe with BBB permeability, glioma specificity and a long blood half-life. Specific accumulation of the nanoprobe in gliomas and subsequent MRI contrast enhancement are demonstrated in vitro in U87 MG cells and in vivo in a xenograft nude model. BBB and glioma dual targeting by this nanoprobe may facilitate precise detection of gliomas with an uncompromised BBB and may offer better preoperative and intraoperative tumor localization.

[799]

**TÍTULO / TITLE:** - Galectin-3: a novel protein in cerebellar hemangioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Exp Pathol. 2013 Apr 15;6(5):853-61. Print 2013.

**AUTORES / AUTHORS:** - Al-Salam S; Al-Salam M; Ashari MA

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Faculty of Medicine and Health Sciences, United Arab Emirates University Al Ain, PO box 17666, UAE.

**RESUMEN / SUMMARY:** - Hemangioblastoma (HB), a rare neoplasm of uncertain histogenesis, is characterized histologically by the presence of vacuolated; lipid-containing cells 'stromal cells' and a well developed, fine capillary network. Stromal cells are the neoplastic component of this tumor. Five-um sections were stained using streptavidin- biotin immunoperoxidase and immunofluorescent techniques. The stromal cells were uniformly "HIF-1alpha, Galectin-3, VEGF, VEGFR, WT-1, and bcl2," positive. Endothelial cells but not stromal cells were uniformly immunoreactive to CD31. Co-localization of HIF-1alpha with galectin-3 and VEGF as well as galectin-3 with VEGF in stromal cells is confirmed by immunofluorescent technique. In conclusion, the development of HB is multi-factorial and the expression of galectin-3 correlates with the expression of HIF-1alpha and VEGF. Galectin-3 can be used as a marker for the diagnosis of HB as well as it can be a valuable candidate for future targeting immunotherapy.

[800]

**TÍTULO / TITLE:** - Regarding "A Risperidone-induced Prolactinoma Resolved When A Woman with Schizoaffective Disorder Switched to Ziprasidone: A Case Report".

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Innov Clin Neurosci. 2013 Feb;10(2):12-6.

**AUTORES / AUTHORS:** - Coppola D; Thiagarajah S; Qiu H; Hough D

**INSTITUCIÓN / INSTITUTION:** - Drs. Coppola, Qiu, and Hough are with Janssen Research and Development, LLC, Raritan, New Jersey; Dr. Thiagarajah is with Janssen-Cilag, Ltd, High Wycombe, United Kingdom.

[801]

**TÍTULO / TITLE:** - Arachnoid cyst as the cause of bipolar affective disorder: case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Acta Clin Croat. 2012 Dec;51(4):655-9.

**AUTORES / AUTHORS:** - Vidrih B; Karlovic D; Pasic MB

**INSTITUCIÓN / INSTITUTION:** - University Department of Psychiatry, Sestre milosrdnice University Hospital Center, Zagreb, Croatia. [branka.vidrih@zg.t-com.hr](mailto:branka.vidrih@zg.t-com.hr)

**RESUMEN / SUMMARY:** - This report presents the course of diagnostic examinations and treatment of a 20-year-old man with bipolar affective disorder for which an organic basis was demonstrated. Computed tomography of the brain revealed an arachnoid cyst that was surgically treated. The patient underwent both psychiatric and neurosurgical treatment. After two-year follow-up and medicamentous treatment prescribed, the patient was symptom-free requiring no psychopharmacotherapy for the next 5.5 years. His overall life functioning is normal, with no signs of disease.

[802]

**TÍTULO / TITLE:** - Podocalyxin regulates astrocytoma cell invasion and survival against temozolomide.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Exp Ther Med. 2013 Apr;5(4):1025-1029. Epub 2013 Feb 15.

●●Enlace al texto completo (gratis o de pago) [3892/etm.2013.957](http://3892/etm.2013.957)

**AUTORES / AUTHORS:** - Wu H; Yang L; Liao D; Chen Y; Wang W; Fang J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Xiangya Hospital, Central South University, Changsha, Hunan 410008;

**RESUMEN / SUMMARY:** - Increased podocalyxin (PODXL) expression has been associated with a subset of aggressive types of cancer. To the best of our knowledge, the effect of PODXL on astrocytoma cell invasion and survival against chemotherapy agent was investigated for the first time in the present

study. Overexpression and knockdown of PODXL were respectively performed in SW1783 (grade III astrocytoma) and U-87 (grade IV astrocytoma; glioblastoma) cells. PODXL overexpression in SW1783 cells significantly increased cell invasion, matrix metalloproteinase-9 (MMP-9) expression, cell survival against temozolomide-induced apoptotic stress, and phosphorylation of Akt at serine 473 (ser473), which was abolished by the selective phosphatidylinositol 3-kinase (PI3K) inhibitor LY294002 (LY). Knockdown of PODXL in U-87 cells significantly decreased cell invasion, MMP-9 expression, cell survival against temozolomide, and phosphorylation of Akt at serine 473 (ser473), which was further decreased by LY treatment. In conclusion, in the present study it was demonstrated that PODXL promotes astrocytoma cell invasion, potentially through the upregulation of MMP-9 expression in a PI3K-dependent manner. Additionally, PODXL was shown to promote astrocytoma cell survival against temozolomide-induced apoptotic stress by enhancing the activation of the PI3K/Akt survival signaling pathway. This study provides novel insights into the molecular mechanisms underlying astrocytoma progression, cell survival and chemoresistance, and suggests that PODXL may be a potential target for overcoming chemoresistance in astrocytomas.

[803]

**TÍTULO / TITLE:** - Granular cell tumor of the intradural extramedullary spinal cord : report of two cases with respect to radiological differential diagnosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Korean Neurosurg Soc. 2013 Feb;53(2):121-4. doi: 10.3340/jkns.2013.53.2.121. Epub 2013 Feb 28.

●●Enlace al texto completo (gratis o de pago) [3340/jkns.2013.53.2.121](http://3340/jkns.2013.53.2.121)

**AUTORES / AUTHORS:** - Lee CH; Hyun SJ; Lee JW; Rhim SC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Spine Center, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, Korea.

**RESUMEN / SUMMARY:** - Granular cell tumors (GrCTs) of the spinal cord are rare benign tumors with a high rate of local recurrence. Only 6 cases of spinal GrCTs have been reported. GrCT is difficult to distinguish from other benign tumors such as schwannoma using imaging. A radiological “speckled dots” sign may be a useful differentiating feature of GrCT based upon experience with two cases and a review of the literature.

[804]

**TÍTULO / TITLE:** - MiR-139 Inhibits Mcl-1 Expression and Potentiates TMZ-Induced Apoptosis in Glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - CNS Neurosci Ther. 2013 Apr 2. doi: 10.1111/cns.12089.

●●Enlace al texto completo (gratis o de pago) [1111/cns.12089](http://1111/cns.12089)

**AUTORES / AUTHORS:** - Li RY; Chen LC; Zhang HY; Du WZ; Feng Y; Wang HB; Wen JQ; Liu X; Li XF; Sun Y; Yang DB; Jiang T; Li YL; Jiang CL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The Second Affiliated Hospital of Harbin Medical University, Harbin, China.

**RESUMEN / SUMMARY:** - AIMS: Mcl-1, an antiapoptotic member of the Bcl-2 family, is overexpressed in human glioblastoma, conferring a survival advantage to tumor cells. The mechanisms underlying its dysregulation have not been clarified. In this study, we explored the involvement of micro-RNAs that acted as endogenous sequence-specific suppressors of gene expression. METHODS AND RESULTS: Using computational and TCGA analysis, we identified miR-139 as being downregulated in glioblastoma in comparison with human brain tissue, as well as possessing a putative target site in Mcl-1 mRNA. Overexpression of miR-139 led to a clear decrease in Mcl-1 expression in gliomas. Reporter assays revealed direct post-transcriptional regulation involving miR-139 and the 3'-untranslated region of Mcl-1. Human glioma tissues with low expression of miR-139 displayed higher expression of Mcl-1 protein than those with high expression, suggesting that low miR-139 contributes to Mcl-1 overexpression. In addition, upregulation of miR-139 suppressed the proliferation and enhanced temozolomide (TMZ)-induced apoptosis. Finally, we observed that Mcl-1 knockdown resulted in similar effects compared with miR-139 transfection. CONCLUSION: Our results suggested that miR-139 negatively regulated Mcl-1 and induced apoptosis in cooperation with an anticancer drug TMZ in glioma.

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[805]

**TÍTULO / TITLE:** - Group independent component analysis and functional MRI examination of changes in language areas associated with brain tumors at different locations.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013;8(3):e59657. doi: 10.1371/journal.pone.0059657. Epub 2013 Mar 26.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0059657](http://1371/journal.pone.0059657)

**AUTORES / AUTHORS:** - Wang L; Chen D; Yang X; Olson JJ; Gopinath K; Fan T; Mao H

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology and Imaging Sciences, Emory University School of Medicine, Atlanta, Georgia, United States of America.

**RESUMEN / SUMMARY:** - OBJECT: This study investigates the effect of tumor location on alterations of language network by brain tumors at different locations using blood oxygenation level dependent (BOLD) fMRI and group independent component analysis (ICA). SUBJECTS AND METHODS: BOLD fMRI data were obtained from 43 right handed brain tumor patients. Presurgical mapping of

language areas was performed on all 43 patients with a picture naming task. All data were retrospectively analyzed using group ICA. Patients were divided into three groups based on tumor locations, i.e., left frontal region, left temporal region or right hemisphere. Laterality index (LI) was used to assess language lateralization in each group. RESULTS: The results from BOLD fMRI and ICA revealed the different language activation patterns in patients with brain tumors located in different brain regions. Language areas, such as Broca's and Wernicke's areas, were intact in patients with tumors in the right hemisphere. Significant functional changes were observed in patients with tumor in the left frontal and temporal areas. More specifically, the tumors in the left frontal region affect both Broca's and Wernicke's areas, while tumors in the left temporal lobe affect mainly Wernicke's area. The compensated activation increase was observed in the right frontal areas in patients with left hemisphere tumors. CONCLUSION: Group ICA provides a model free alternative approach for mapping functional networks in brain tumor patients. Altered language activation by different tumor locations suggested reorganization of language functions in brain tumor patients and may help better understanding of the language plasticity.

[806]

**TÍTULO / TITLE:** - Gliomas: application of cumulative histogram analysis of normalized cerebral blood volume on 3 T MRI to tumor grading.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 21;8(5):e63462. doi: 10.1371/journal.pone.0063462. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0063462](#)

**AUTORES / AUTHORS:** - Kim H; Choi SH; Kim JH; Ryoo I; Kim SC; Yeom JA; Shin H; Jung SC; Lee AL; Yun TJ; Park CK; Sohn CH; Park SH

**INSTITUCIÓN / INSTITUTION:** - Department of Radiology, Seoul National University College of Medicine, Seoul, Korea.

**RESUMEN / SUMMARY:** - BACKGROUND: Glioma grading assumes significant importance in that low- and high-grade gliomas display different prognoses and are treated with dissimilar therapeutic strategies. The objective of our study was to retrospectively assess the usefulness of a cumulative normalized cerebral blood volume (nCBV) histogram for glioma grading based on 3 T MRI.

METHODS: From February 2010 to April 2012, 63 patients with astrocytic tumors underwent 3 T MRI with dynamic susceptibility contrast perfusion-weighted imaging. Regions of interest containing the entire tumor volume were drawn on every section of the co-registered relative CBV (rCBV) maps and T2-weighted images. The percentile values from the cumulative nCBV histograms and the other histogram parameters were correlated with tumor grades.

Cochran's Q test and the McNemar test were used to compare the diagnostic

accuracies of the histogram parameters after the receiver operating characteristic curve analysis. Using the parameter offering the highest diagnostic accuracy, a validation process was performed with an independent test set of nine patients. RESULTS: The 99th percentile of the cumulative nCBV histogram (nCBV C99), mean and peak height differed significantly between low- and high-grade gliomas ( $P = <0.001$ , 0.014 and  $<0.001$ , respectively) and between grade III and IV gliomas ( $P = <0.001$ , 0.001 and  $<0.001$ , respectively). The diagnostic accuracy of nCBV C99 was significantly higher than that of the mean nCBV ( $P = 0.016$ ) in distinguishing high- from low-grade gliomas and was comparable to that of the peak height ( $P = 1.000$ ). Validation using the two cutoff values of nCBV C99 achieved a diagnostic accuracy of 66.7% (6/9) for the separation of all three glioma grades. CONCLUSION: Cumulative histogram analysis of nCBV using 3 T MRI can be a useful method for preoperative glioma grading. The nCBV C99 value is helpful in distinguishing high- from low-grade gliomas and grade IV from III gliomas.

[807]

**TÍTULO / TITLE:** - Outcome and toxicity using helical tomotherapy for craniospinal irradiation in pediatric medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Clin Transl Oncol. 2013 Apr 30.

●●Enlace al texto completo (gratis o de pago) [1007/s12094-013-1048-](#)

[7](#)

**AUTORES / AUTHORS:** - Lopez Guerra JL; Marrone I; Jaen J; Bruna M; Sole C; Sanchez-Reyes A; Rivin E; Ortiz MJ; Calvo F; Matute R

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Instituto Madrilenio de Oncología/Grupo IMO, Madrid, España, [chanodetriana@yahoo.es](mailto:chanodetriana@yahoo.es).

**RESUMEN / SUMMARY:** - PURPOSE: The objective of this study is to evaluate the tolerability and outcome of craniospinal irradiation (CSI) with helical tomotherapy (HT) in the treatment of medulloblastoma. METHODS: We evaluated 19 consecutive patients with primary medulloblastoma who were treated with HT from 2007 through 2010. HT regimens to the neuroaxis included: 23.4 Gy at 1.8 Gy/fraction (N = 10), 36 Gy at 1.8 Gy/fraction (N = 7), and 39 Gy bid at 1.3 Gy/fraction (N = 2). The tumor bed received 54-60 Gy. Potential associations between patient, treatment, and toxicity factors and overall survival (OS) were assessed in univariate analyses using the Cox proportional hazards model. Spearman's rank correlation coefficient was used to correlate potential risk factors with the grade of acute toxicity. RESULTS: The median age at diagnosis was 5 years (range 2-14) and the median follow-up for alive patients (N = 14) 40 months (range 10-62). Two- and three-year overall survival was 75 and 68 %, respectively. The most common acute toxicity was hematological (79 %), being grade 2 and grade 3 in 4 (21 %) and 11 (58 %)

cases, respectively. No grade  $\geq 2$  late toxicities were observed. Higher grades of acute body toxicity were found in older children ( $P = 0.004$ ). Longer time between diagnosis and radiation therapy was correlated with shorter OS ( $P = 0.03$ ). In addition, higher grades of acute thrombocytopenia were associated with shorter OS ( $P = 0.03$ ). CONCLUSIONS: CSI delivered with HT for medulloblastoma is well tolerated with low rates of severe acute toxicity. Further research is necessary to assess late toxicity with a longer follow-up.

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[808]

**TÍTULO / TITLE:** - Photons or protons for non-central nervous system solid malignancies in children.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Am Soc Clin Oncol Educ Book. 2013;2013:354-9. doi: E10.1200/EdBook\_AM.2013.33.e354.

●●Enlace al texto completo (gratis o de pago)

[1200/EdBook\\_AM.2013.33.e354](#)

**AUTORES / AUTHORS:** - Daw NC; Mahajan A

**INSTITUCIÓN / INSTITUTION:** - From Division of Pediatrics, The University of Texas MD Anderson Cancer Center, Houston, TX; Department of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX.

**RESUMEN / SUMMARY:** - Over the years, major advances have occurred in radiotherapy techniques, delivery, and treatment planning. Although radiotherapy is an integral treatment component of pediatric solid tumors, it is associated with potential acute and long-term untoward effects and risk of secondary malignancy particularly in growing children. Two major advances in external beam radiotherapy are intensity-modulated radiotherapy (IMRT) and proton beam radiotherapy. Their use in the treatment of children with cancer has been steadily increasing. IMRT uses multiple modulated radiation fields that enhance the conformality of the dose distribution to the target volume and avoid high doses to normal tissues. However, IMRT may be associated with increased volume of normal tissue that receives low doses and potential risk of secondary malignancy. Contrary to IMRT, proton beam radiotherapy uses a few beams and a fast dose fall-off distal to the target volume. Although both modalities require substantial personnel time and effort, the very high cost and limited availability of proton radiotherapy have constrained its widespread use. It is anticipated that both modalities may markedly improve tumor control and quality of life for long-term cancer survivors. Clinical trials with long-term follow-up are needed to confirm the premise that proton beam therapy will decrease late effects and secondary malignancies without compromising local control in pediatric patients with cancer.

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[809]

**TÍTULO / TITLE:** - Area-based socioeconomic position and adult glioma: a hierarchical analysis of surveillance epidemiology and end results data.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 9;8(4):e60910. doi: 10.1371/journal.pone.0060910. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0060910](#)

**AUTORES / AUTHORS:** - Plascak JJ; Fisher JL

**INSTITUCIÓN / INSTITUTION:** - Ohio State University Comprehensive Cancer Center, James Cancer Hospital and Solove Research Institute, Columbus, Ohio, United States of America.

**RESUMEN / SUMMARY:** - BACKGROUND: Glioma rates vary by demographic factors and geo-political boundaries and this variation suggests higher glioma rates in groups of higher socioeconomic position. The primary goal of this analysis is to investigate the relationship between glioma and county socioeconomic position using U.S. Surveillance Epidemiology and End Results (SEER) data. METHODS: Cases were individuals 25+ years diagnosed with glioma between 2000 and 2006 and residing within the SEER-17 catchment area. County-, sex-, race-, age-specific rates were created in order to investigate individual-level associations (population data from U.S. Census 2000). A Bayesian hierarchical Poisson spatial conditionally autoregressive (CAR) model was utilized to simultaneously estimate individual- and county-level associations while controlling for county spatial dependence. RESULTS: Those residing in counties of the second, third, and fourth highest quartiles of socioeconomic position have glioma incidence rates that are 1.10 (95% CI: 1.02,1.19), 1.11 (95% CI: 1.02,1.20), 1.14 (95% CI: 1.05,1.23) times that of the first quartile, respectively. A CAR model properly controlled for error spatial dependence. Investigated lag times suggest year 2000 census data yields superior model fit. CONCLUSION: Demographically adjusted rates of glioma are elevated in counties of higher socioeconomic position. More well-grounded theory concerning the glioma-socioeconomic position association along with socioeconomic data collected at multiple levels is recommended for future studies investigating this relationship.

[810]

**TÍTULO / TITLE:** - Fluorescence molecular tomography of brain tumors in mice.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cold Spring Harb Protoc. 2013 May 1;2013(5). pii: pdb.prot074245. doi: 10.1101/pdb.prot074245.

●●Enlace al texto completo (gratis o de pago) [1101/pdb.prot074245](#)

**AUTORES / AUTHORS:** - Deliolanis NC; Ntziachristos V

**RESUMEN / SUMMARY:** - Fluorescence molecular tomography of tissues is a method that three-dimensionally resolves fluorescence biodistribution in vivo,

with applications in small-animal research and pre-clinical diagnostics. There are many alternative imaging geometries in optical tomographic experimental systems, but in general, all imaging setups consist of four subsystems: illumination, animal mount, imaging, and automation and data acquisition (i.e., electronics and computer). Here we refer to charge-coupled device (CCD)-based systems that work in trans-illumination (i.e., illumination and detection occur on opposite sides of the subject), while a mouse or other small animal is rotated through 360 degrees to allow photon acquisition from multiple projections. We present a procedure to tomographically reconstruct the biodistribution of fluorescence in small animals. The imaging system and equipment are described, the step-by-step image acquisition and preliminary image-processing methods are presented, and the tomographic reconstruction procedure is outlined. Finally, the method is showcased by imaging the fluorescence activity of a brain tumor of a glioblastoma mouse model.

[811]

**TÍTULO / TITLE:** - Knockdown of FRAT1 Expression by RNA Interference Inhibits Human Glioblastoma Cell Growth, Migration and Invasion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 17;8(4):e61206. doi: 10.1371/journal.pone.0061206. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0061206](#)

**AUTORES / AUTHORS:** - Guo G; Kuai D; Cai S; Xue N; Liu Y; Hao J; Fan Y; Jin J; Mao X; Liu B; Zhong C; Zhang X; Yue Y; Liu X; Ma N; Guo Y

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The First Hospital, Shanxi Medical University, Taiyuan, Shanxi Province, People's Republic of China.

**RESUMEN / SUMMARY:** - BACKGROUND: FRAT1 positively regulates the Wnt/beta-catenin signaling pathway by inhibiting GSK-3-mediated phosphorylation of beta-catenin. It was originally characterized as a protein frequently rearranged in advanced T cell lymphoma, but has recently also been identified as a proto-oncogene involved in tumorigenesis. Our previous studies showed that FRAT1 was dramatically overexpressed in gliomas and its expression level was significantly increased along with clinicopathological grades. METHODS: In the current study, we used RT-PCR and Western blotting to assess the mRNA and protein levels of FRAT1 in three glioma cell lines. In addition, to evaluate its functional role in gliomas, we examined the effects of FRAT1 knockdown on proliferation, migration and invasion in vitro and tumor growth in vivo using glioblastoma U251 cells and RNAi. RESULTS: FRAT1 was highly expressed in all three glioma cell lines. RNAi-mediated down-regulation of endogenous FRAT1 in human glioblastoma U251 cells resulted in suppression of cell proliferation, arrest of cell cycle, inhibition of cell

migration and invasion in vitro. Moreover, FRAT1 depletion significantly impaired tumor xenograft growth in nude mice. CONCLUSIONS: Our results highlight the potential role of FRAT1 in tumorigenesis and progression of glioblastoma. These findings provide a biological basis for FRAT1 as a potential molecular marker for improved pathological grading and as a novel candidate therapeutic target for glioblastoma management.

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[812]

**TÍTULO / TITLE:** - Magnetic resonance imaging of pineal region tumours.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Insights Imaging. 2013 May 3.

●●Enlace al texto completo (gratis o de pago) [1007/s13244-013-0248-](#)

[6](#)

**AUTORES / AUTHORS:** - Fang AS; Meyers SP

**INSTITUCIÓN / INSTITUTION:** - Department of Imaging Sciences, University of Rochester Medical Center School of Medicine and Dentistry, 601 Elmwood Ave, Box 648, Rochester, NY, 14642, USA, [adam\\_fang@urmc.rochester.edu](mailto:adam_fang@urmc.rochester.edu).

**RESUMEN / SUMMARY:** - OBJECTIVES: Pineal lesions can present as a heterogeneous collection of benign and malignant disease conditions. Pineal lesions include germ cell tumours, neoplasms arising from the pineal parenchyma, as well as other pineal region masses. METHODS: A variety of cases of pineal lesions are presented. The important clinical features and typical imaging findings of each pineal lesion are described with emphasis on their morphological appearance and signal intensity characteristics on magnetic resonance imaging (MRI). CONCLUSION: Knowledge of the imaging characteristics and clinical features of varying pineal lesions can assist in narrowing the differential diagnosis for more accurate and rational therapeutic planning. TEACHING POINTS: \* Pineal parenchymal tumours show an “explosion” of normal pineal calcifications towards the periphery. \* Pineoblastomas often have restricted diffusion, with apparent diffusion coefficient (ADC) values lower than germinomas. \* Pineal teratomas and pineal lipomas display fat signal characteristics and fat saturation on MRI. \* Pineal lesions in patients with known malignancy should raise suspicion of metastatic involvement. \* Pineal cysts and arachnoid cysts show MRI signal characteristics similar to cerebrospinal fluid (CSF).

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[813]

**TÍTULO / TITLE:** - Central nervous system tumors: a single center pathology review of 34,140 cases over 60 years.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Clin Pathol. 2013 May 2;13(1):14. doi: 10.1186/1472-6890-13-14.

●●Enlace al texto completo (gratis o de pago) [1186/1472-6890-13-14](#)

**AUTORES / AUTHORS:** - Chen L; Zou X; Wang Y; Mao Y; Zhou L

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Huashan Hospital, Fudan University, 12 Wu Lu Mu Qi Zhong Road, Shanghai, Jing An District, 200040, China. [lfzhouc@126.com](mailto:lfzhouc@126.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Tumor epidemiology is a significant part of CNS (central nervous system) tumor studies. Reassessment of original sections can update our knowledge of tumor spectrum. Here, we discuss the features of CNS tumor pathology in a single center. METHODS: A total of 34140 cases from 1950 to 2009 were collected; sections from 1990 to 2009 were reassessed according to WHO 2007 classification, and cases from 1950 to 1989 were classified according to the previous pathological diagnosis. RESULTS: Seven CNS tumor categories during 1990 to 2009 were as follow: neuroepithelial tissue (38.0%), tumors of the meninges (36.5%), tumors of the sellar region (4.1%), germ cell tumors (1.3%), tumors of cranial and paraspinal nerves (13.3%), lymphomas and hematopoietic neoplasm (1.7%), metastatic tumors (5.1%), where histological types by age and sex were diverse. Overall, males exceeded females in distributions of most CNS tumor subtypes, while tumors of the meninges occurred more frequently in females. The case number of lymphomas and hematopoietic neoplasms grew the fastest during the past five years, and the distribution of neuroepithelial tumors remained stable over the past twenty years. CONCLUSIONS: Despite the possibilities of cross sample biases, the data in this series could suggest a similar CNS tumor spectrum as might occur in other developing countries.

[814]

**TÍTULO / TITLE:** - The expression and significance of neuropilin-1 (NRP-1) on glioma cell lines and glioma tissues.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Biomed Nanotechnol. 2013 Apr;9(4):559-63.

**AUTORES / AUTHORS:** - Chen L; Miao W; Tang X; Zhang H; Wang S; Luo F; Yan J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Zhongda Hospital Southeast University, Nanjing, 210009, China. [neuro\\_clk@hotmail.com](mailto:neuro_clk@hotmail.com)

**RESUMEN / SUMMARY:** - We detected the expressions of neuropilin-1 (NRP-1) on glioma cell lines and glioma tissues by neuropilin-1 monoclonal antibody (NRP-1 MAbs). The expressions of NRP-1 on glioma cell lines and glioma tissues were detected by Western blot, Immunofluorescence staining and Immunocytochemistry staining, which indicated that the NRP-1 was over-expressed on glioma cell lines (U251, U87 and C6) and glioma tissues. NRP-1 MAbs prepared successfully could combine specifically to membranes of glioma cell lines (U251, U87, and C6). It lays a foundation for further research on biological treatment of glioma.

[815]

**TÍTULO / TITLE:** - Transtentoidal meningocele: an unusual complication of intracranial neoplasm.

**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 Apr 10;2013. pii: bcr2013009200. doi: 10.1136/bcr-2013-009200.

●●Enlace al texto completo (gratis o de pago) [1136/bcr-2013-009200](http://1136/bcr-2013-009200)

**AUTORES / AUTHORS:** - Singh DK; Singh N; Singh R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Dr Ram Manohar Lohia Institute of Medical Sciences, Lucknow, Uttar Pradesh, India.

**RESUMEN / SUMMARY:** - Cranial meningoceles/encephalocelos are congenital malformations characterised by protrusion of the meninges and/or brain parenchyma because of a skull defect. Meningoceles secondary to an intracranial neoplasm have not been reported in the published literature. We report a unique case of a 42-year-old man who presented with a sudden onset of altered sensorium. Transtentoidal meningocele secondary to an intraventricular epidermoid cyst was detected on imaging.

[816]

**TÍTULO / TITLE:** - Pseudotumor cerebri in a case of ulcerative colitis with sagittal sinus thrombosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Iran J Pediatr. 2013 Feb;23(1):109-12.

**AUTORES / AUTHORS:** - Mahmoud Reza A; Firozeh H; Houman A; Mehri NS

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Tehran University of Medical Sciences, Tehran, Iran ; Growth & Development Research Center, Tehran University of Medical Sciences, Tehran, Iran ; Children's Medical Center, Pediatrics Center of Excellence, Tehran, Iran.

**RESUMEN / SUMMARY:** - BACKGROUND: Thromboembolic events are a known complication of Inflammatory Bowel Disease (IBD) especially during disease relapse, more commonly in deep veins of extremities and lung, and rarely as Cerebral Sinovenous Thrombosis (CSVT). CASE PRESENTATION: We describe an 11 year, old male patient with 3 months history of Ulcerative Colitis (UC) who presented as pseudotumor cerebri due to superior sagittal sinus thrombosis during an acute exacerbation of his colitis, that was successfully treated with heparin and then warfarin. CONCLUSION: In any known cases of UC presenting as acute severe headache, consider CSVT and request brain MRI and MRV to facilitate the diagnosis and early treatment.

[817]

**TÍTULO / TITLE:** - Locally advanced paraganglioma of the urinary bladder: a case report.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Res Notes. 2013 Apr 18;6:156. doi: 10.1186/1756-0500-6-156.

●●Enlace al texto completo (gratis o de pago) [1186/1756-0500-6-156](#)

**AUTORES / AUTHORS:** - Beilan J; Lawton A; Hajdenberg J; Rosser CJ

**INSTITUCIÓN / INSTITUTION:** - Section of Urologic Oncology, MD Anderson Cancer Center Orlando, Orlando, FL 32806, USA.

[charles.rosser@orlandohealth.com](mailto:charles.rosser@orlandohealth.com).

**RESUMEN / SUMMARY:** - BACKGROUND: Paraganglioma of the urinary bladder is a rare tumor. Herein we sought to describe a case of locally advanced paraganglioma of the urinary bladder managed by partial cystectomy and extended pelvic lymph node dissection. CASE PRESENTATION: The case of a 43-year old Haitian male with locally advanced paraganglioma of the urinary bladder is presented in detail. Through surgical extirpation, our patient was rendered disease-free. Eighteen months later the patient is doing well without symptoms but is noted to have subcentimeter bilateral pulmonary nodules and retroperitoneal lymph nodes. No further therapy has been initiated at this time. CONCLUSIONS: Patients with localized tumors have an extremely favorable prognosis and may be managed by less aggressive modalities, whereas patients with metastatic disease have a significant reduced survival rate despite aggressive treatment.

[818]

**TÍTULO / TITLE:** - Targeting VEGF-VEGFR Pathway by Sunitinib in Peripheral Primitive Neuroectodermal Tumor, Paraganglioma and Epithelioid Hemangioendothelioma: Three Case Reports.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Oncol. 2013 Feb 16;6(1):90-7. doi: 10.1159/000348429. Print 2013 Jan.

●●Enlace al texto completo (gratis o de pago) [1159/000348429](#)

**AUTORES / AUTHORS:** - Prochilo T; Savelli G; Bertocchi P; Abeni C; Rota L; Rizzi A; Zaniboni A

**INSTITUCIÓN / INSTITUTION:** - UO Oncologia, Fondazione Poliambulanza, Brescia, Mantua, Italy.

**RESUMEN / SUMMARY:** - Sunitinib malate (Sutent™; Pfizer Inc., New York, N.Y., USA) is a small molecule kinase inhibitor with activity against a number of tyrosine kinase receptors, including vascular endothelial growth factor receptors, stem-cell factor receptor, and platelet-derived growth factor receptors alpha and beta. Sunitinib, registered for the treatment of renal cell carcinoma and gastrointestinal stromal tumors, has recently been approved for the treatment of patients with advanced pancreatic neuroendocrine tumors.

Peripheral primitive neuroectodermal tumor (pPNET), paraganglioma (PGL) and epithelioid hemangioendothelioma (EHE) are rare tumors in which there is an overexpression of pro-angiogenic factors and in which a high intratumoral microvessel density is a significant poor prognostic factor. On the basis of this preclinical rationale and the lack of effective treatments in pre-treated advanced stages of these rare diseases, we report our interesting experience of pPNET, PGL and EHE treatment with sunitinib.

[819]

**TÍTULO / TITLE:** - Neurolymphomatosis as a late relapse of non-Hodgkin's lymphoma detected by F-FDG PET/CT: A case report.

**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 May 15. pii: S2253-654X(13)00043-7. doi: 10.1016/j.remn.2013.03.004.

●●Enlace al texto completo (gratis o de pago)

[1016/j.remn.2013.03.004](http://1016/j.remn.2013.03.004)

**AUTORES / AUTHORS:** - Kajary K; Molnar Z; Miko I; Barsi P; Lengyel Z; Szakall S Jr

**INSTITUCIÓN / INSTITUTION:** - Pozitron PET/CT Center, Budapest, Hungary. Electronic address: [kkajary@gmail.com](mailto:kkajary@gmail.com).

**RESUMEN / SUMMARY:** - Neurolymphomatosis is a rare condition defined as an infiltration of nerves, nerve roots or nervous plexuses by haematological malignancy. Its diagnosis may sometimes be difficult with conventional imaging techniques. This paper aims to emphasize the importance of this entity and the role of 18F-FDG PET/CT in this indication. We present the case of a 53-year-old male who complained of sharp pain in his right hip and right leg paresthesia after 2 years of complete remission from Non-Hodgkin's lymphoma. Physical examination and CT scan were negative and the lumbar MRI showed protrusion of L5-S1 disc. Physiotherapy, nonsteroid antiinflammatory drugs and steroids were inefficient. PET/CT was performed four months after the onset of the symptoms, revealing focal FDG uptake in the right S1 nerve root and linear FDG uptake along the right sacral plexus suggesting relapse. This was confirmed by histology.

[820]

**TÍTULO / TITLE:** - Mesenteric paraganglioma: Report of a case.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World J Gastrointest Surg. 2013 Mar 27;5(3):62-7. doi: 10.4240/wjgs.v5.i3.62.

●●Enlace al texto completo (gratis o de pago) [4240/wjgs.v5.i3.62](http://4240/wjgs.v5.i3.62)

**AUTORES / AUTHORS:** - Fujita T; Kamiya K; Takahashi Y; Miyazaki S; Iino I; Kikuchi H; Hiramatsu Y; Ohta M; Baba S; Konno H

**INSTITUCIÓN / INSTITUTION:** - Takeshi Fujita, Kinji Kamiya, Yoshiaki Takahashi, Shinichiro Miyazaki, Ichirota Iino, Hirotohi Kikuchi, Yoshihiro Hiramatsu, Manabu Ohta, Hiroyuki Konno, Second Department of Surgery, Hamamatsu University School of Medicine, Shizuoka 431-3192, Japan.

**RESUMEN / SUMMARY:** - We report a rare case of paraganglioma that developed in the mesentery of terminal ileum. A 78-year-old woman complained of right-sided abdominal pain. Abdominal computed tomography revealed a solid heterogeneously enhanced mass in the right lower abdomen. The tumor was laparoscopically excised. The mesenteric tumor was well circumscribed, ovoid, and encapsulated and measured 3 cm x 1.5 cm x 1.5 cm. Histological examination showed a cellular neoplasm comprised of nests and groups of tumor cells separated by fibrovascular connective tissue, giving a characteristic nested Zellballen pattern. Immunohistochemically, the tumor cells were positive for chromogranin, synaptophysin, CD56, and vimentin and negative for cytokeratins, SMA, CD34, CD117/c-kit and S100. On the basis of histologic and immunohistochemical features, a diagnosis of mesenteric paraganglioma was made. The operative and postoperative courses were unremarkable, and the patient was discharged on postoperative day 7. She was doing well 1 year after the surgery with no signs of recurrence. Extra-adrenal paragangliomas most commonly develop adjacent to the aorta, particularly the area corresponding to the organ of Zuckerkandl. Mesenteric paraganglioma, as in our case, is extremely rare; only 11 cases have been reported in the literature. We herein discuss the clinical findings of these cases.

[821]

**TÍTULO / TITLE:** - An aberrant transcription factor network essential for wnt signaling and stem cell maintenance in glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Rep. 2013 May 30;3(5):1567-79. doi: 10.1016/j.celrep.2013.04.021. Epub 2013 May 23.

●●Enlace al texto completo (gratis o de pago)

[1016/j.celrep.2013.04.021](http://dx.doi.org/10.1016/j.celrep.2013.04.021)

**AUTORES / AUTHORS:** - Rheinbay E; Suva ML; Gillespie SM; Wakimoto H; Patel AP; Shahid M; Oksuz O; Rabkin SD; Martuza RL; Rivera MN; Louis DN; Kasif S; Chi AS; Bernstein BE

**INSTITUCIÓN / INSTITUTION:** - Howard Hughes Medical Institute, Chevy Chase, MD 20815, USA; Department of Pathology and Center for Cancer Research, Massachusetts General Hospital and Harvard Medical School, Boston, MA 02114, USA; Broad Institute of Harvard and MIT, Cambridge, MA 02142, USA; Bioinformatics Program, Boston University, Boston, MA 02215, USA.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is thought to be driven by a subpopulation of cancer stem cells (CSCs) that self-renew and recapitulate tumor heterogeneity yet remain poorly understood. Here, we present a comparative analysis of chromatin state in GBM CSCs that reveals widespread activation of genes normally held in check by Polycomb repressors. These activated targets include a large set of developmental transcription factors (TFs) whose coordinated activation is unique to the CSCs. We demonstrate that a critical factor in the set, ASCL1, activates Wnt signaling by repressing the negative regulator DKK1. We show that ASCL1 is essential for the maintenance and in vivo tumorigenicity of GBM CSCs. Genome-wide binding profiles for ASCL1 and the Wnt effector LEF-1 provide mechanistic insight and suggest widespread interactions between the TF module and the signaling pathway. Our findings demonstrate regulatory connections among ASCL1, Wnt signaling, and collaborating TFs that are essential for the maintenance and tumorigenicity of GBM CSCs.

[822]

**TÍTULO / TITLE:** - Visualizing Neurotransmitters and Metabolites in the Central Nervous System by High Resolution and High Accuracy Mass Spectrometric Imaging.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - ACS Chem Neurosci. 2013 Apr 29.

●●Enlace al texto completo (gratis o de pago) [1021/cn400065k](#)

**AUTORES / AUTHORS:** - Ye H; Wang J; Greer T; Strupat K; Li L

**INSTITUCIÓN / INSTITUTION:** - School of Pharmacy, double daggerDepartment of Chemistry, University of Wisconsin-Madison, Madison, Wisconsin 53705, United States.

**RESUMEN / SUMMARY:** - The spatial localization and molecular distribution of metabolites and neurotransmitters within biological organisms is of tremendous interest to neuroscientists. In comparison to conventional imaging techniques such as immunohistochemistry, matrix-assisted laser desorption/ionization (MALDI) mass spectrometric imaging (MSI) has demonstrated its unique advantage by directly localizing the distribution of a wide range of biomolecules simultaneously from a tissue specimen. Although MALDI-MSI of metabolites and neurotransmitters is hindered by numerous matrix-derived peaks, high-resolution and high-accuracy mass spectrometers (HRMS) allow differentiation of endogenous analytes from matrix peaks, unambiguously obtaining biomolecular distributions. In this study, we present MSI of metabolites and neurotransmitters in rodent and crustacean central nervous systems acquired on HRMS. Results were compared with those obtained from a medium-resolution mass spectrometer (MRMS), tandem time-of-flight instrument, to demonstrate the power and unique advantages of HRMSI and reveal how this new tool would benefit molecular imaging applications in neuroscience.

[823]

**TÍTULO / TITLE:** - Nephrotic syndrome associated with meningioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Nephrol. 2013 Jan;23(1):63-6. doi: 10.4103/0971-4065.107214.

●●Enlace al texto completo (gratis o de pago) [4103/0971-4065.107214](#)

**AUTORES / AUTHORS:** - Zachariah PP; Mathew A; Rajesh R; Kurien G; Unni VN

**INSTITUCIÓN / INSTITUTION:** - Department of Nephrology, Amrita Institute of Medical Sciences, Amrita Vishwa Vidyapeetham, Kochi, India.

**RESUMEN / SUMMARY:** - A 58-year-old man presented with recurrent frontal meningioma and nephrotic syndrome. Renal biopsy could not be done in view of the rapid neurological deterioration. The patient underwent surgical resection of the tumor. Within 4 weeks, the edema decreased, serum albumin improved, and proteinuria decreased spontaneously. At three months of followup, the patient had attained complete remission of nephrotic state.

[824]

**TÍTULO / TITLE:** - Skull base secretory meningioma. Value of histological and immunohistochemical findings for peritumoral brain edema formation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neuro Endocrinol Lett. 2013;34(2):111-7.

**AUTORES / AUTHORS:** - Zielinski G; Grala B; Koziarski A; Kozłowski W

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**RESUMEN / SUMMARY:** - Meningiomas are very common neurosurgical problem. Their histological appearance, different size and localization, adherence to vital neural and vascular structures or extensive peritumoral brain edema (PTBE), especially in deep seated tumors, may lead to severe, life-threatening complications. We report a case of tuberculum sellae meningioma (TSM). A 48-year old female presented with 7-month history of blurred vision and progressive visual impairment. Intracranial tumor was confirmed by magnetic resonance imaging (MRI). After ophthalmological and endocrinological evaluation, the patient underwent surgical removal of the tumor. She immediately recovered from her visual disturbances and no tumor recurrences were seen during follow-up. Pathological diagnosis showed a meningioma of the secretory subtype (MS). We discuss the role of immunohistochemical staining in the diagnosis and the role of different factors in the PTBE formation. Selection of surgical route to the TSM is discussed, as well. Review of the literature is presented.

[825]

**TÍTULO / TITLE:** - Intracranial meningiomas, the VEGF-A pathway, and peritumoral brain oedema.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Dan Med J. 2013 Apr;60(4):B4626.

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**RESUMEN / SUMMARY:** - Meningiomas are the second-most common intracranial tumours in adults. They are derived from the arachnoid cells, and although approximately 90% of meningiomas are benign, more than half of all meningiomas develop peritumoral brain oedema (PTBE), which increases morbidity. The PTBE can be treated with steroid therapy, but this treatment is not specific, is not always effective, and involves long-term side-effects. Meningiomas are treated with radiation therapy, stereotactic radio-surgery or surgical resection. At the moment surgical resection is the only definite treatment, and the removal of the tumour also removes the PTBE. Based on the localization of the meningioma, surgery can be complicated. Although PTBE around meningiomas is frequent, the mechanisms behind its development are not clearly understood. It is believed that due to tumour growth and local tissue hypoxia, angiogenesis is increased and leads to the formation of PTBE. The angiogenic protein vascular endothelial growth factor A (VEGF-A) is believed to be involved in the formation of PTBE around meningiomas, as several studies have found that it is increased in meningiomas with PTBE. VEGF-A is also known as vascular permeability factor due to its ability to increase the permeability of capillaries. Paper I examines the VEGF-A protein and mRNA levels in 101 intracranial meningiomas. The PTBE is quantified on MRI, and capillary length and tumour water content are measured and compared to control brain tissue. Possible co-factors to PTBE like meningioma localization and subtypes are also examined. Forty-three of the patients have primary, solitary, supratentorial meningiomas with PTBE. The correlation between PTBE or edema index with the VEGF-A protein and mRNA, capillary length, and tumour water content is investigated in these patients. A novel method is used for mRNA quantification. It involves direct amplification of the mRNA with probes and branched DNA in order to produce a chemiluminescence signal that can be measured using a luminometer. The paper shows that the oedema index is correlated to the VEGF-A protein and mRNA, and that capillary length is correlated to the PTBE. It also finds that VEGF-A protein and mRNA, capillary length and water content is increased in meningiomas compared to control tissue, suggesting that VEGF-A is produced in, and possibly secreted from the meningiomas. In addition, supratentorial meningiomas are shown to have larger PTBE compared to infratentorial meningiomas, suggesting that infratentorial meningiomas are diagnosed and removed earlier, due to earlier symptom

development based on the anatomical features of the fossa posterior. Finally, a gender-specific difference in tumour water content and VEGF-A protein is revealed (higher and lower in females, respectively). Paper II is a method-comparison study pitting the chemiluminescence assay against the often used quantitative real-time reverse transcription polymerase chain reaction (RT-qPCR) assay. In RT-qPCR, RNA is isolated, measured, reverse transcribed, purified, amplified via real-time PCR, and analyzed. The method is robust and reliable, albeit laborious to some extent. The chemiluminescence assay detects RNA directly without the need for RNA purification, complement DNA synthesis or cyclic amplification. By comparing the output of the two protocols to a dilution series ranging from 1 to 128 times of the homogenized samples, the precision of the protocols is measured. Furthermore, VEGF-A/GAPDH ratios are quantified for 15 tissue samples and the results compared between the two protocols, showing significant correlation. The study finds that the chemiluminescence assay is competitive to RT-qPCR, and reflects a similar pattern in gene expression measurement with a similar precision. Whether one method or the other should be used depends on the variability of the samples, budget, and time. RT-qPCR has a much wider dynamic range, and is preferable in case of significant sample inter-variability. It is also less expensive, and gives the user more flexibility as homemade reagents can be used. On the other hand, the chemiluminescence assay is straight forward, requires less hands-on-time, and can be used on formalin-fixed and paraffin-embedded (FFPE) tissue. Paper III continues the investigations in paper I. The sample size is increased so that 22 angiomatous and secretory meningiomas are compared to 40 non-angiomatous meningiomas and 10 control brain tissue samples. Angiomatous and secretory meningiomas are chosen because they are known to have larger PTBE compared to other meningiomas. In addition to VEGF-A, capillary length, and PTBE, the VEGF-A tyrosine kinase receptor VEGFR-2 mRNA and protein levels are also examined. VEGFR-2 is a transmembrane receptor found on endothelial cells. It binds VEGF-A and thereby increases angiogenesis. VEGFR-2's co-receptor neuropilin-1 is also examined. Neuropilin-1 is an agonist of angiogenesis through complex-binding of VEGF-A, but it can also work as an inhibitor through competitive binding of semaphorin-3<sup>a</sup>. The complex binding of semaphorin-3<sup>a</sup> to neuropilin-1 can also induce endothelial cell apoptosis, thus working as an antagonist of angiogenesis. The study finds that VEGF-A mRNA, VEGF-A protein, and neuropilin-1 mRNA are higher in angiomatous and non-angiomatous meningiomas compared to controls. VEGFR-2 protein is higher, and neuropilin-1 protein lower in angiomatous meningiomas compared to controls. The mean capillary length is 3614 mm/mm<sup>3</sup> in angiomatous, 605 mm/mm<sup>3</sup> in non-angiomatous meningiomas, and 229 mm/mm<sup>3</sup> in the controls. Non-angiomatous and angiomatous meningioma patients have equally sized tumours. The mean PTBE around the angiomatous meningiomas is 695 cm<sup>3</sup>, i.e. 477 cm<sup>3</sup> larger than the non-angiomatous

meningiomas ( $p = 0.0045$ ), and the mean oedema index is twice the size compared to the non-angiomatous meningiomas. Further comparison between the two meningioma groups shows that mean VEGF-A mRNA, VEGFR-2 protein, and neuropilin-1 mRNA is significantly higher and neuropilin-1 protein is lower in the angiomatous meningiomas. We believe that the VEGF-A pathway participates in the formation of PTBE in meningiomas by inducing formation of “leaky” capillaries, resulting in secretion of VEGF-A and plasma to the peritumoural brain tissue. It may therefore be worth pursuing therapies targeted directly against VEGF-A and its receptors through drugs like bevacizumab, sorafenib, sunitifib, and cediranib.

[826]

**TÍTULO / TITLE:** - Radiation-associated secondary brain tumors after conventional radiotherapy and radiosurgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Expert Rev Neurother. 2013 May;13(5):557-65. doi: 10.1586/ern.13.37.

●●Enlace al texto completo (gratis o de pago) [1586/ern.13.37](#)

**AUTORES / AUTHORS:** - Ecemis GC; Atmaca A; Meydan D

**INSTITUCIÓN / INSTITUTION:** - Dr. I Sevki Atasagun Government Hospital, Clinic of Endocrinology, Nevsehir, Turkey. [drgcengiz@yahoo.com](mailto:drgcengiz@yahoo.com).

**RESUMEN / SUMMARY:** - Although there is not enough strong molecular evidence for radiation to be a causal factor for the development of secondary brain tumors, a relationship has still been found. There is a slight but significant 2-2.7% increased risk of secondary brain tumors after conventional radiotherapy. However, this risk is small and should not preclude the use of radiotherapy as an effective treatment for uncontrolled pituitary tumors. The risk of radiosurgery-associated secondary brain tumors has not been precisely determined. Taking into account the considerable number of patients who received radiosurgery worldwide and the small number of secondary brain tumors, radiosurgery seems to be a safe treatment modality. This review summarizes the pathogenesis, prevalence and characteristics of secondary brain tumors after conventional radiotherapy and stereotactic radiosurgery for pituitary adenomas.

[827]

**TÍTULO / TITLE:** - ADAR2 editing activity in newly diagnosed versus relapsed pediatric high-grade astrocytomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - BMC Cancer. 2013 May 22;13:255. doi: 10.1186/1471-2407-13-255.

●●Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-255](#)

**AUTORES / AUTHORS:** - Tomaselli S; Galeano F; Massimi L; Di Rocco C; Lauriola L; Mastronuzzi A; Locatelli F; Gallo A

**INSTITUCIÓN / INSTITUTION:** - Laboratory of RNA Editing, Department of Pediatric Haematology/Oncology, Bambino Gesù Children's Hospital, IRCCS, Piazza S, Onofrio 4, Rome 00165, Italy. [angela.gallo@opbg.net](mailto:angela.gallo@opbg.net).

**RESUMEN / SUMMARY:** - BACKGROUND: High-grade (WHO grade III and IV) astrocytomas are aggressive malignant brain tumors affecting humans with a high risk of recurrence in both children and adults. To date, limited information is available on the genetic and molecular alterations important in the onset and progression of pediatric high-grade astrocytomas and, even less, on the prognostic factors that influence long-term outcome in children with recurrence. A-to-I RNA editing is an essential post-transcriptional mechanism that can alter the nucleotide sequence of several RNAs and is mediated by the ADAR enzymes. ADAR2 editing activity is particularly important in mammalian brain and is impaired in both adult and pediatric high-grade astrocytomas. Moreover, we have recently shown that the recovered ADAR2 activity in high-grade astrocytomas inhibits in vivo tumor growth. The aim of the present study is to investigate whether changes may occur in ADAR2-mediated RNA editing profiles of relapsed high-grade astrocytomas compared to their respective specimens collected at diagnosis, in four pediatric patients. METHODS: Total RNAs extracted from all tumor samples and controls were tested for RNA editing levels (by direct sequencing on cDNA pools) and for ADAR2 mRNA expression (by qRT-PCR). RESULTS: A significant loss of ADAR2-editing activity was observed in the newly diagnosed and recurrent astrocytomas in comparison to normal brain. Surprisingly, we found a substantial rescue of ADAR2 editing activity in the relapsed tumor of the only patient showing prolonged survival. CONCLUSIONS: High-grade astrocytomas display a generalized loss of ADAR2-mediated RNA editing at both diagnosis and relapse. However, a peculiar Case, in complete remission of disease, displayed a total rescue of RNA editing at relapse, intriguingly suggesting ADAR2 activity/expression as a possible marker for long-term survival of patients with high-grade astrocytomas.

[828]

**TÍTULO / TITLE:** - Inhibitory effect of neuropilin-1 monoclonal antibody (NRP-1 MAb) on glioma tumor in mice.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Biomed Nanotechnol. 2013 Apr;9(4):551-8.

**AUTORES / AUTHORS:** - Chen L; Miao W; Tang X; Zhang H; Wang S; Luo F; Yan J

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Zhongda Hospital Southeast University, Nanjing, 210009, China. [neuro\\_clk@hotmail.com](mailto:neuro_clk@hotmail.com)

**RESUMEN / SUMMARY:** - This article reports the effect of Neuropilin-1 monoclonal antibody (NRP-1 MAb) on glioma cell lines in vitro and the effect on nude mice bearing glioma tumor (U87) in vivo. MTT, the scratch test and transwell test

were used to evaluate the inhibitory effect of NRP-1 MAb on glioma cell lines. The tissue distribution and tumor targeting capability of NRP-1 MAb in U87 Xenografts nude mice was determined in Optical Imaging. Anti-glioma experiment was carried out by NRP-1 MAb on U87 Xenografts nude mice. NRP-1 MAb was showed to inhibit the proliferation, migration and invasion of glioma cells. NRP-1 MAb can specifically target the tumor in U87 Xenografts nude mice and reduce the proliferation activity of the tumor. The results of this study indicate that NRP-1 MAb can inhibit the proliferation, migration and metastasis of glioma cell lines and can target the glioma tumor to reduce tumor growth. Therefore, NRP-1 MAb may be an effective agent for glioma-targeted therapy.

[829]

**TÍTULO / TITLE:** - Highly prevalent TERT promoter mutations in bladder cancer and glioblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Cycle. 2013 May 15;12(10):1637-8. doi: 10.4161/cc.24662. Epub 2013 Apr 19.

●●Enlace al texto completo (gratis o de pago) [4161/cc.24662](#)

**AUTORES / AUTHORS:** - Liu X; Wu G; Shan Y; Hartmann C; von Deimling A; Xing M

**INSTITUCIÓN / INSTITUTION:** - Division of Endocrinology and Metabolism; Department of Medicine; Johns Hopkins University School of Medicine; Baltimore, MD USA.

[830]

**TÍTULO / TITLE:** - Upconversion Nanoparticles Conjugated with Gd -DOTA and RGD for Targeted Dual-Modality Imaging of Brain Tumor Xenografts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Adv Healthc Mater. 2013 Apr 30. doi: 10.1002/adhm.201300102.

●●Enlace al texto completo (gratis o de pago) [1002/adhm.201300102](#)

**AUTORES / AUTHORS:** - Jin J; Xu Z; Zhang Y; Gu YJ; Lam MH; Wong WT

**INSTITUCIÓN / INSTITUTION:** - Department of Chemistry, The University of Hong Kong, Pokfulam Road, Hong Kong, P.R. China.

**RESUMEN / SUMMARY:** - Glioblastoma multiforme (GBM) is the most common and malignant form of primary brain tumors in human. Small molecular magnetic resonance imaging (MRI) contrast agents are used for GBM diagnosis. However, conventional contrast agents have several limitations, such as low T1 relaxivity, short circulation half lives and absence of tumor targeting. Herein, we develop an upconversion nanoprobe labeled with Gd<sup>3+</sup> -DOTA and RGD (UCNP-Gd-RGD) for dual-modality imaging of glioblastoma. The preparation of UCNP-Gd-RGD starts with amine-functional upconversion

nanoparticle core, followed by PEGylation, Gd<sup>3+</sup> DOTA conjugation and RGD labeling. The obtained UCNP-Gd-RGD has improved colloidal stability and reduced cytotoxicity compared with the UCNP core counterpart. Meanwhile, UCNP-Gd-RGD shows strong upconversion luminescence in deep-red region and three times enhancement of T1 relaxivity over Gd<sup>3+</sup> DOTA. Due to the recognition between UCNP-Gd-RGD and integrin  $\alpha$ v $\beta$ 3 receptors, the nanoprobe specifically binds to U87MG cells, as evidenced by confocal microscopy and quantified by ICP-MS. Furthermore, UCNP-Gd-RGD demonstrates a preferential retention in subcutaneous U87MG tumor xenograft as shown in both in vivo upconversion fluorescence/MR imaging studies and ex vivo analysis. UCNP-Gd-RGD, conjugated with numerous RGD peptide and T1 contrast enhancing molecules, is promising for MR imaging of glioblastoma and delineating the tumor boundary before surgery. In addition, NIR-to-red upconversion characteristic of UCNP-Gd-RGD facilitates its potential intra-operative use for fluorescence-guided tumor resection.

[831]

**TÍTULO / TITLE:** - The Corpus Callosum Wallerian Degeneration in the Unilateral Brain Tumors: Evaluation with Diffusion Tensor Imaging (DTI).

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Clin Diagn Res. 2013 Feb;7(2):320-5. doi: 10.7860/JCDR/2013/4491.2757. Epub 2013 Feb 1.

●●Enlace al texto completo (gratis o de pago)

[7860/JCDR/2013/4491.2757](#)

**AUTORES / AUTHORS:** - Saksena S; Jain R; Schultz L; Jiang Q; Soltanian-Zadeh H; Scarpace L; Rosenblum M; Mikkelsen T; Nazem-Zadeh MR

**INSTITUCIÓN / INSTITUTION:** - Division of Neuroradiology, Department of Radiology, Henry Ford Health System, Detroit, MI 48202, USA.

**RESUMEN / SUMMARY:** - Purpose: The purpose of this study was to evaluate whether DTI could demonstrate the water diffusivity changes in the corpus callosum (CC), which were not visible on the morphologic imaging in patients with glioblastoma multiforme (GBM) and brain metastases with no midline CC infiltration. Materials and Methods: Twenty-seven patients with treatment naive unilateral GBM and eleven patients with a solitary brain metastasis with no midline CC infiltration underwent DTI. Ten controls with normal brain MRI were also included. Based on the tensors, the principal diffusion directions, the anisotropy values, and the prior information about the diffusivity pattern in CC, a similarity measure was proposed. Subsequently, the CC was automatically divided into the Witelson subdivisions. Results: We observed significantly decreased fractional anisotropy values in all the regions of CC in the patients with GBM and metastases as compared to those in the controls. The mean diffusivity values showed a significant increase in all the regions of CC, except the splenium in patients with GBM and the isthmus in the patients with

metastases, as compared to that in the controls respectively. Conclusion: In conclusion, DTI is more sensitive than the morphologic MR imaging in the evaluation of changes within the CC, in brain tumours which do not infiltrate the CC. However, these changes of the DTI metrics in the CC are due to a Wallerian degeneration rather than a tumour infiltration, as was shown by our results, as similar changes were seen in the GBM as well as the non-infiltrating metastases patients.

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[832]

**TÍTULO / TITLE:** - The role of astrocytes in CNS tumors: pre-clinical models and novel imaging approaches.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Cell Neurosci. 2013 Apr 16;7:40. doi: 10.3389/fncel.2013.00040. Print 2013.

●●Enlace al texto completo (gratis o de pago) [3389/fncel.2013.00040](#)

**AUTORES / AUTHORS:** - O'Brien ER; Howarth C; Sibson NR

**INSTITUCIÓN / INSTITUTION:** - Department of Oncology, CR-UK/MRC Gray Institute for Radiation Oncology and Biology, Churchill Hospital, University of Oxford Oxford, UK.

**RESUMEN / SUMMARY:** - Brain metastasis is a significant clinical problem, yet the mechanisms governing tumor cell extravasation across the blood-brain barrier (BBB) and CNS colonization are unclear. Astrocytes are increasingly implicated in the pathogenesis of brain metastasis but in vitro work suggests both tumoricidal and tumor-promoting roles for astrocyte-derived molecules. Also, the involvement of astrogliosis in primary brain tumor progression is under much investigation. However, translation of in vitro findings into in vivo and clinical settings has not been realized. Increasingly sophisticated resources, such as transgenic models and imaging technologies aimed at astrocyte-specific markers, will enable better characterization of astrocyte function in CNS tumors. Techniques such as bioluminescence and in vivo fluorescent cell labeling have potential for understanding the real-time responses of astrocytes to tumor burden. Transgenic models targeting signaling pathways involved in the astrocytic response also hold great promise, allowing translation of in vitro mechanistic findings into pre-clinical models. The challenging nature of in vivo CNS work has slowed progress in this area. Nonetheless, there has been a surge of interest in generating pre-clinical models, yielding insights into cell extravasation across the BBB, as well as immune cell recruitment to the parenchyma. While the function of astrocytes in the tumor microenvironment is still unknown, the relationship between astrogliosis and tumor growth is evident. Here, we review the role of astrogliosis in both primary and secondary brain tumors and outline the potential for the use of novel imaging modalities in research and clinical settings. These imaging approaches have the potential to

enhance our understanding of the local host response to tumor progression in the brain, as well as providing new, more sensitive diagnostic imaging methods.

[833]

**TÍTULO / TITLE:** - Prognostic relevance of cytochrome C oxidase in primary glioblastoma multiforme.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 10;8(4):e61035. doi: 10.1371/journal.pone.0061035. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0061035](#)

**AUTORES / AUTHORS:** - Griguer CE; Cantor AB; Fathallah-Shaykh HM; Gillespie GY; Gordon AS; Markert JM; Radovanovic I; Clement-Schatlo V; Shannon CN; Oliva CR

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, Department of Surgery, University of Alabama at Birmingham, Birmingham, Alabama, United States of America. [cgriguer@uab.edu](mailto:cgriguer@uab.edu)

**RESUMEN / SUMMARY:** - Patients with primary glioblastoma multiforme (GBM) have one of the lowest overall survival rates among cancer patients, and reliable biomarkers are necessary to predict patient outcome. Cytochrome c oxidase (CcO) promotes the switch from glycolytic to OXPHOS metabolism, and increased CcO activity in tumors has been associated with tumor progression after chemotherapy failure. Thus, we investigated the relationship between tumor CcO activity and the survival of patients diagnosed with primary GBM. A total of 84 patients with grade IV glioma were evaluated in this retrospective cohort study. Cumulative survival was calculated by the Kaplan-Meier method and analyzed by the log-rank test, and univariate and multivariate analyses were performed with the Cox regression model. Mitochondrial CcO activity was determined by spectrophotometrically measuring the oxidation of cytochrome c. High CcO activity was detected in a subset of glioma tumors (approximately 30%), and was an independent prognostic factor for shorter progression-free survival and overall survival [P = 0.0087 by the log-rank test, hazard ratio = 3.57 for progression-free survival; P<0.001 by the log-rank test, hazard ratio = 10.75 for overall survival]. The median survival time for patients with low tumor CcO activity was 14.3 months, compared with 6.3 months for patients with high tumor CcO activity. High CcO activity occurs in a significant subset of high-grade glioma patients and is an independent predictor of poor outcome. Thus, CcO activity may serve as a useful molecular marker for the categorization and targeted therapy of GBMs.

[834]

**TÍTULO / TITLE:** - Anaplastic lymphoma kinase is required for neurogenesis in the developing central nervous system of zebrafish.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 8;8(5):e63757. doi: 10.1371/journal.pone.0063757. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0063757](#)

**AUTORES / AUTHORS:** - Yao S; Cheng M; Zhang Q; Wasik M; Kelsh R; Winkler C

**INSTITUCIÓN / INSTITUTION:** - Department of Biological Sciences and Centre for Biomedical Sciences, National University of Singapore, Singapore.

**RESUMEN / SUMMARY:** - Anaplastic Lymphoma Kinase (ALK) was initially discovered as an oncogene in human lymphoma and other cancers, including neuroblastoma. However, little is known about the physiological function of ALK. We identified the alk ortholog in zebrafish (*Danio rerio*) and found that it is highly expressed in the developing central nervous system (CNS). Heat-shock inducible transgenic zebrafish lines were generated to over-express alk during early neurogenesis. Its ectopic expression resulted in activation of the MEK/ERK pathway, increased cell proliferation, and aberrant neurogenesis leading to mis-positioning of differentiated neurons. Thus, overexpressed alk is capable of promoting cell proliferation in the nervous system, similar to the situation in ALK-related cancers. Next, we used Morpholino mediated gene knock-down and a pharmacological inhibitor to interfere with expression and function of endogenous Alk. Alk inhibition did not affect neuron progenitor formation but severely compromised neuronal differentiation and neuron survival in the CNS. These data indicate that tightly controlled alk expression is critical for the balance between neural progenitor proliferation, differentiation and survival during embryonic neurogenesis.

[835]

**TÍTULO / TITLE:** - ABT-263 Enhances Sensitivity to Metformin and 2-Deoxyglucose in Pediatric Glioma by Promoting Apoptotic Cell Death.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 17;8(5):e64051. doi: 10.1371/journal.pone.0064051. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0064051](#)

**AUTORES / AUTHORS:** - Levesley J; Steele L; Taylor C; Sinha P; Lawler SE

**INSTITUCIÓN / INSTITUTION:** - Translational Neuro-Oncology Group, Leeds Institute of Molecular Medicine, University of Leeds, St James's University Hospital, Leeds, United Kingdom.

**RESUMEN / SUMMARY:** - Pediatric high grade glioma is refractory to conventional multimodal treatment, highlighting a need to develop novel efficacious therapies. We investigated tumor metabolism as a potential therapeutic target in a panel of diverse pediatric glioma cell lines (SF188, KNS42, UW479 and

RES186) using metformin and 2-deoxyglucose. As a single agent, metformin had little effect on cell viability overall. SF188 cells were highly sensitive to 2-deoxyglucose however, combination of metformin with 2-deoxyglucose significantly reduced cell proliferation compared to either drug alone in all cell lines tested. In addition, the combination of the two agents was associated with a rapid decrease in cellular ATP and subsequent AMPK activation. However, increased cell death was only observed in select cell lines after prolonged exposure to the drug combination and was caspase independent. Anti-apoptotic BCL-2 family proteins have been indicated as mediators of resistance against metabolic stress. Therefore we sought to determine whether pharmacological inhibition of BCL-2/BCL-xL with ABT-263 could potentiate apoptosis in response to these agents. We found that ABT-263 increased sensitivity to 2-deoxyglucose and promoted rapid and extensive cell death in response to the combination of 2-deoxyglucose and metformin. Furthermore, cell death was inhibited by the pan-caspase inhibitor, z-VAD-FMK suggesting that ABT-263 potentiated caspase-dependent cell death in response to 2-deoxyglucose or its combination with metformin. Overall, these data provide support for the concept that targeting metabolic and anti-apoptotic pathways may be an effective therapeutic strategy in pediatric glioma.

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[836]

**TÍTULO / TITLE:** - Identification of tumor differentiation factor (TDF) in select CNS neurons.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Brain Struct Funct. 2013 May 17.

●●Enlace al texto completo (gratis o de pago) [1007/s00429-013-0571-](#)

[1](#)

**AUTORES / AUTHORS:** - Woods AG; Sokolowska I; Deinhardt K; Sandu C; Darie CC

**INSTITUCIÓN / INSTITUTION:** - Biochemistry and Proteomics Group, Department of Chemistry and Biomolecular Science, Clarkson University, 8 Clarkson Avenue, Potsdam, NY, 13699-5810, USA.

**RESUMEN / SUMMARY:** - Identification of central nervous system (CNS) molecules elucidates normal and pathological brain function. Tumor differentiation factor (TDF) is a recently-found protein secreted by the pituitary into the blood. TDF mRNA was detected in brain; not heart, placenta, lung, liver, skeletal muscle, or pancreas. However, TDF has an unclear function. It is not known whether TDF is expressed only by pituitary or by other brain regions. It is also not known precisely where TDF is expressed in the brain or which cells produce TDF. Database searching revealed that this molecule shares no homology with any known protein. Therefore, we investigated the distribution of TDF in the rat brain using immunohistochemistry (IHC) and immunofluorescence (IF). TDF protein was detected in pituitary and most other

brain regions. Double-staining for TDF and glial fibrillary acidic protein (GFAP), an astrocyte marker, showed no co-localization. Double-staining for TDF with NeuN, a neuronal marker, showed co-localization. Not all NeuN positive cells were positive for TDF. Western blotting (WB) using NG108 neuroblastoma and GS9L astrocytoma cell lysate revealed TDF immunoreactivity in cultured neuroblastoma, not astrocytoma. These data suggest that TDF is localized in neurons, not in astrocytes. This is the first report of any cellular localization of TDF. TDF may have specific roles as a pituitary-derived hormone and in the CNS, and appears to be produced by distinct CNS neurons, not astroglia.

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[837]

**TÍTULO / TITLE:** - Oral cellular neurothekeoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Case Rep Otolaryngol. 2013;2013:935435. doi: 10.1155/2013/935435. Epub 2013 Apr 4.

●●Enlace al texto completo (gratis o de pago) [1155/2013/935435](#)

**AUTORES / AUTHORS:** - Emami N; Zawawi F; Ywakim R; Nahal A; Daniel SJ  
**INSTITUCIÓN / INSTITUTION:** - Department of Otolaryngology-Head and Neck Surgery, McGill University, Montreal, QC, Canada H3A 1<sup>a</sup>1.

**RESUMEN / SUMMARY:** - Cellular neurothekeoma is known as a cutaneous tumor with uncertain histogenesis. Very little involvement of mucosal membrane has been reported in the literature so far. This is a case report of an intraoral lesion in a 15-years-old girl. Histopathologic evaluation showed a tumor-consists of spindle to epitheloid cells forming micronodules in a concentric whorled shape pattern. Tumor cells were positive for CD63, vimentin, and NKI-C3. Total excision was performed and no recurrence happened after 16-month followup.

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[838]

**TÍTULO / TITLE:** - EGFR Mutation-Induced Alternative Splicing of Max Contributes to Growth of Glycolytic Tumors in Brain Cancer.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Metab. 2013 May 22. pii: S1550-4131(13)00156-3. doi: 10.1016/j.cmet.2013.04.013.

●●Enlace al texto completo (gratis o de pago) [1016/j.cmet.2013.04.013](#)

**AUTORES / AUTHORS:** - Babic I; Anderson ES; Tanaka K; Guo D; Masui K; Li B; Zhu S; Gu Y; Villa GR; Akhavan D; Nathanson D; Gini B; Mareninov S; Li R; Camacho CE; Kurdistani SK; Eskin A; Nelson SF; Yong WH; Cavenee WK; Cloughesy TF; Christofk HR; Black DL; Mischel PS

**INSTITUCIÓN / INSTITUTION:** - Ludwig Institute for Cancer Research, University of California, San Diego, La Jolla, CA 92093, USA.

**RESUMEN / SUMMARY:** - Alternative splicing contributes to diverse aspects of cancer pathogenesis including altered cellular metabolism, but the specificity of the process or its consequences are not well understood. We characterized

genome-wide alternative splicing induced by the activating EGFRvIII mutation in glioblastoma (GBM). EGFRvIII upregulates the heterogeneous nuclear ribonucleoprotein (hnRNP) A1 splicing factor, promoting glycolytic gene expression and conferring significantly shorter survival in patients. HnRNPA1 promotes splicing of a transcript encoding the Myc-interacting partner Max, generating Delta Max, an enhancer of Myc-dependent transformation. Delta Max, but not full-length Max, rescues Myc-dependent glycolytic gene expression upon induced EGFRvIII loss, and correlates with hnRNPA1 expression and downstream Myc-dependent gene transcription in patients. Finally, Delta Max is shown to promote glioma cell proliferation in vitro and augment EGFRvIII expressing GBM growth in vivo. These results demonstrate an important role for alternative splicing in GBM and identify Delta Max as a mediator of Myc-dependent tumor cell metabolism.

[839]

**TÍTULO / TITLE:** - In vitro drug response and efflux transporters associated with drug resistance in pediatric high grade glioma and diffuse intrinsic pontine glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 29;8(4):e61512. doi: 10.1371/journal.pone.0061512. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0061512](#)

**AUTORES / AUTHORS:** - Veringa SJ; Biesmans D; van Vuurden DG; Jansen MH; Wedekind LE; Horsman I; Wesseling P; Vandertop WP; Noske DP; Kaspers GJ; Hulleman E

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatric Oncology/Hematology, VU University Medical Center, Amsterdam, The Netherlands ; Department of Neuro-Oncology Research Group, VU University Medical Center, Amsterdam, The Netherlands.

**RESUMEN / SUMMARY:** - Pediatric high-grade gliomas (pHGG), including diffuse intrinsic pontine gliomas (DIPG), are the leading cause of cancer-related death in children. While it is clear that surgery (if possible), and radiotherapy are beneficial for treatment, the role of chemotherapy for these tumors is still unclear. Therefore, we performed an in vitro drug screen on primary glioma cells, including three DIPG cultures, to determine drug sensitivity of these tumours, without the possible confounding effect of insufficient drug delivery. This screen revealed a high in vitro cytotoxicity for melphalan, doxorubicine, mitoxantrone, and BCNU, and for the novel, targeted agents vandetanib and bortezomib in pHGG and DIPG cells. We subsequently determined the expression of the drug efflux transporters P-gp, BCRP1, and MRP1 in glioma cultures and their corresponding tumor tissues. Results indicate the presence of P-gp, MRP1 and BCRP1 in the tumor vasculature, and expression of MRP1 in

the glioma cells themselves. Our results show that pediatric glioma and DIPG tumors per se are not resistant to chemotherapy. Treatment failure observed in clinical trials, may rather be contributed to the presence of drug efflux transporters that constitute a first line of drug resistance located at the blood-brain barrier or other resistance mechanism. As such, we suggest that alternative ways of drug delivery may offer new possibilities for the treatment of pediatric high-grade glioma patients, and DIPG in particular.

[840]

**TÍTULO / TITLE:** - Late onset seizures and progressive cognitive decline: is it an arachnoid cyst?

**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 May 24;2013. pii: bcr2013009847. doi: 10.1136/bcr-2013-009847.

- Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-009847](http://1136/bcr-2013-009847)

**AUTORES / AUTHORS:** - Amin OS

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Sulaimaniya General Teaching Hospital, Sulaimaniya City, Iraq.

[841]

**TÍTULO / TITLE:** - Rathke's cyst with ectopic neurohypophysis presenting as severe short stature with delayed puberty.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2012 Dec;16(Suppl 2):S288-90. doi: 10.4103/2230-8210.104062.

- Enlace al texto completo (gratuito o de pago) [4103/2230-8210.104062](http://4103/2230-8210.104062)

**AUTORES / AUTHORS:** - Dutta D; Roy A; Ghosh S; Mukhopadhyay P; Dasgupta R; Mukhopadhyay S; Chowdhury S

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology & Metabolism, IPGMER & SSKM Hospital, Kolkata, India.

**RESUMEN / SUMMARY:** - Ectopic neurohypophysis (EN) is found in nearly half of children with growth hormone deficiency (GHD). Rathke's cyst (RC) is uncommon in children and when present, hypopituitarism is found in nearly half of them. We present a fourteen and half-year-old girl with severe short stature and delayed puberty who on evaluation was found to have GHD, secondary hypocortisolism, and hypogonadism. Imaging revealed hypoplastic anterior pituitary, stalk agenesis, EN at tuber cinereum and intrapituitary RC. This is perhaps the first report of simultaneous occurrence of EN and RC, which was seen in a girl with multiple pituitary hormone deficiency. A primary defect in

pituitary development may explain this simultaneous occurrence of EN and RC and hence this severe anterior pituitary function deficit.

[842]

**TÍTULO / TITLE:** - Ruptured Rathke Cleft Cyst Mimicking Pituitary Apoplexy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg A Cent Eur Neurosurg. 2013 May 21.

●●Enlace al texto completo (gratis o de pago) [1055/s-0033-1343985](#)

**AUTORES / AUTHORS:** - Neidert MC; Woernle CM; Leske H; Moller-Goede D; Pangalu A; Schmid C; Bernays RL

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, University Hospital Zurich, University of Zurich, Zurich, Switzerland.

**RESUMEN / SUMMARY:** - Rathke cleft cysts (RCCs) are benign cystic lesions of the sellar and suprasellar region that are asymptomatic in most cases. Occasionally, compression of the optic pathway and hypothalamo-pituitary structures may cause clinical symptoms, such as headaches, visual deficits and endocrinopathies. Acute presentation caused by hemorrhage into an RCC have been described in the literature, and the term “Rathke cleft cyst apoplexy” has been coined. We present the case of a 32-year-old man with acute onset of meningitis-type symptoms and imaging findings resembling hemorrhagic pituitary tumor apoplexy. In retrospect, clinical symptoms, intraoperative appearance, and histologic examination were compatible with the diagnosis of nonhemorrhagic rupture of an RCC. Thus, the clinical presentation of “Rathke cleft cyst apoplexy” is not necessarily caused by hemorrhage.

[843]

**TÍTULO / TITLE:** - Intra-operative neurophysiological prediction of upper trunk recovery in obstetric brachial plexus palsy with neuroma in continuity.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Bone Joint J. 2013 May;95-B(5):699-705. doi: 10.1302/0301-620X.95B5.30948.

●●Enlace al texto completo (gratis o de pago) [1302/0301-620X.95B5.30948](#)

**AUTORES / AUTHORS:** - Chin KF; Misra VP; Sicuri GM; Fox M; Sinisi M

**INSTITUCIÓN / INSTITUTION:** - Royal National Orthopaedic Hospital, Peripheral Nerve Unit, Brockley Hill, Stanmore, Middlesex HA7 4LP, UK.

**RESUMEN / SUMMARY:** - We investigated the predictive value of intra-operative neurophysiological investigations in obstetric brachial plexus injuries. Between January 2005 and June 2011 a total of 32 infants of 206 referred to our unit underwent exploration of the plexus, including neurolysis. The findings from intra-operative electromyography, sensory evoked potentials across the lesion and gross muscular response to stimulation were evaluated. A total of 22 infants underwent neurolysis alone and ten had microsurgical reconstruction. Of

the former, one was lost to follow-up, one had glenoplasty and three had subsequent nerve reconstructions. Of the remaining 17 infants with neurolysis, 13 (76%) achieved a modified Mallet score > 13 at a mean age of 3.5 years (0.75 to 6.25). Subluxation or dislocation of the shoulder is a major confounding factor. The positive predictive value and sensitivity of the intra-operative EMG for C5 were 100% and 85.7%, respectively, in infants without concurrent shoulder pathology. The positive and negative predictive values, sensitivity and specificity of the three investigations combined were 77%, 100%, 100% and 57%, respectively. In all, 20 infants underwent neurolysis alone for C6 and three had reconstruction. All of the former and one of the latter achieved biceps function of Raimondi grade 5. The positive and negative predictive values, sensitivity and specificity of electromyography for C6 were 65%, 71%, 87% and 42%, respectively. Our method is effective in evaluating the prognosis of C5 lesion. Neurolysis is preferred for C6 lesions. Cite this article: Bone Joint J 2013;95-B:699-705.

[844]

**TÍTULO / TITLE:** - 2-hydroxyglutarate as a magnetic resonance biomarker for glioma subtyping.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Transl Oncol. 2013 Apr;6(2):92-8. Epub 2013 Apr 1.

**AUTORES / AUTHORS:** - Esmaeili M; Vettukattil R; Bathen TF

**INSTITUCIÓN / INSTITUTION:** - Department of Circulation and Medical Imaging, Norwegian University of Science and Technology, Trondheim, Norway.

**RESUMEN / SUMMARY:** - Mutations in the isocitrate dehydrogenase (IDH) genes are frequently found in gliomas and in a fraction of acute myeloid leukemia patients. This results in the production of an oncometabolite, 2-hydroxyglutarate (2-HG). Glioma patients harboring IDH mutations have a longer survival than their wild-type counterparts. 2-HG has been detected noninvasively in gliomas with IDH mutations using magnetic resonance spectroscopy (MRS), suggesting its potential clinical relevance for identifying glioma subtypes with better prognosis. In this paper, the recent developments in the MRS detection of the 2-HG in gliomas are reviewed, including the therapeutic potentials and translational values.

[845]

**TÍTULO / TITLE:** - Cellular Neurothekeoma of the Upper Lip in an Infant.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Pediatr Neonatol. 2013 Jan 20. pii: S1875-9572(12)00213-6. doi: 10.1016/j.pedneo.2012.12.004.

●●Enlace al texto completo (gratis o de pago)

[1016/j.pedneo.2012.12.004](#)

**AUTORES / AUTHORS:** - Pan HY; Tseng SH; Weng CC; Chen Y

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Surgery, Department of Surgery, Far Eastern Memorial Hospital, Pan-Chiao, New Taipei 220, Taiwan.

**RESUMEN / SUMMARY:** - Cellular neurothekeoma is an uncommon benign skin neoplasm and also a variant of neurothekeoma. Cellular neurothekeomas usually occur in the skin of the upper trunk, head, or neck of children and young adults; however, they rarely occur in infants or involve the lip. A 6-month-old male infant was incidentally found to have a tumor in the upper lip. The tumor was elastic, nontender, and movable, and the overlying mucosa and skin were normal without discoloration. The tumor was excised from the mucosal side of the upper lip, and a pathological examination revealed cellular neurothekeoma. Cellular neurothekeoma in the lip of an infant without overlying skin discoloration might delay the diagnosis and lead to wrong preoperative diagnosis. No similar case has been reported in the literature.

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[846]

**TÍTULO / TITLE:** - Traumatic brain injury shows better functional recovery than brain tumor: a rehabilitative perspective.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Eur J Phys Rehabil Med. 2013 Apr 5.

**AUTORES / AUTHORS:** - Bilgin S; Kose N; Karakaya J; Mut M

**INSTITUCIÓN / INSTITUTION:** - Department of Physiotherapy and Rehabilitation Faculty of Health Sciences, Hacettepe University, Samanpazari, Ankara, Turkey - [sevilcuvalci@yahoo.com](mailto:sevilcuvalci@yahoo.com).

**RESUMEN / SUMMARY:** - Background: The similar symptoms seen in the brain tumor (BT) and traumatic brain injury (TBI) population. However, functional comparisons between these two diagnostic groups have been limited. Aim: To compare functional outcomes in patients with supratentorial BT and TBI after early rehabilitation. Design: This was a retrospective database analysis. Setting. Patients admitted to an Acute Care Unit as inpatient (Hacettepe Hospital, Ankara-Turkey). Population. The population included patients with BT and TBI. Methods: Thirty-four patients with BT and TBI were matched one-to-one by lesion side and sex. The Barthel Index was used to assess functional status at the pre- and postrehabilitation. The change rate and efficiency in BI were also calculated. The time between injury onset and admission to rehabilitation (the onset to admission interval, OAI) and length of stay in rehabilitation (LOS rehab) were recorded. In addition, the influence of lesion side (left and right) and age on functional outcome were analyzed. Results: The functional level was significantly lower in TBI patients than in patients BT before rehabilitation ( $P < 0.05$ ). The post-rehabilitation BI score was similar in patients with BT and TBI ( $P > 0.05$ ). Patients with TBI had greater the change rate and efficiency in BI ( $P < 0.05$ ). The OAI and LOS rehab was longer in patients with TBI ( $P < 0.05$ ). In terms of lesion side comparisons, no differences were found ( $P > 0.05$ ). The age had no effect on functional outcome in patients with TBI and

BT ( $P>0.05$ ), expect the age group 45-59 ( $P<0.05$ ). Conclusion: The early rehabilitation program improved functional ability of patients with brain tumors, as well as patients with traumatic brain injury. Despite the lower functional status, patients with TBI displayed better functional recovery than patients with BT. Lesion side had no effect on functional outcome in patients with TBI and BT. Differences in functional status begin to appear even in patients with TBI between 45 and 59 years. Further investigations with more detailed outcome instruments are required to better understand the qualitative limitations of a patient's recovery. Clinical Rehabilitation Impact: Patients with TBI will make functional gains comparable with patients with brain tumors in a similar rehabilitation setting.

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[847]

**TÍTULO / TITLE:** - Epidemiology of pediatric primary malignant central nervous system tumors in Iran: A 10 year report of National Cancer Registry.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Epidemiol. 2013 Apr 3. pii: S1877-7821(13)00035-0. doi: 10.1016/j.canep.2013.03.002.

●●Enlace al texto completo (gratis o de pago)

[1016/j.canep.2013.03.002](#)

**AUTORES / AUTHORS:** - Beygi S; Saadat S; Jazayeri SB; Rahimi-Movaghar V

**INSTITUCIÓN / INSTITUTION:** - Sina Trauma and Surgery Research Center, Tehran University of Medical Sciences, Tehran, Iran; National Elite Foundation, No 17, Haghghat Talab Street, Southern Nejatollahi Avenue, Tehran, Iran. Electronic address: [sara\\_beygi87@yahoo.com](mailto:sara_beygi87@yahoo.com).

**RESUMEN / SUMMARY:** - BACKGROUND: CNS tumors are the leading cause of cancer related deaths among children and adolescents. Nonetheless, the incidence of pediatric CNS tumors in developing countries is poorly understood. We aimed to provide epidemiologic features of primary malignant CNS tumors in Iranian children 0-19 years of age using National Cancer Registry (NCR) data bank. METHODS: The data recorded by NCR over a 10 year period (2000-2010) were reviewed. RESULTS: Of 1948 tumor cases, 93.3% were located in brain, 5.1% were found in the spinal cord & cauda equina, and 1.6% affected cranial nerves and other parts of the nervous system. The overall average annual age specific incidence rate was 1.43 per 100,000. Males were more likely to develop CNS tumors (1.65 per 100,000) compared to females (1.21 per 100,000,  $p<0.01$ ). Children under 5 years of age had the highest age specific incidence rate (1.86 per 100,000). Astrocytic tumors with the incidence rate of 0.61 per 100,000 were the most frequent specific histology followed by embryonal (0.38 per 100,000), and ependymal tumors (0.10 per 100,000). With regard to the histological distribution of tumors, some unique features including the high proportion of unspecified malignant neoplasms (7.6%) were noted. CONCLUSION: The overall incidence rate was markedly lower than western

findings. Major differences were also observed in incidence rates of specific histologies. Although the discrepancies may be attributable to diversity in classification schemes and registration practices, a real ethnic and geographical variation in predisposition to development of pediatric CNS cancers is strongly suggested.

[848]

**TÍTULO / TITLE:** - Transsphenoidal Surgery for Lesions Involving the Interpeduncular Fossa: What If the Path Is Not Created by the Tumor?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World Neurosurg. 2013 Feb 4. pii: S1878-8750(13)00113-7. doi: 10.1016/j.wneu.2013.01.052.

●●Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.01.052](#)

**AUTORES / AUTHORS:** - Doglietto F; Maira G

**INSTITUCIÓN / INSTITUTION:** - Institute of Neurosurgery, Catholic University School of Medicine, Rome, Italy.

[849]

**TÍTULO / TITLE:** - The current role of endoscopes in intracranial tumor surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Jan;4(1):3-5. doi: 10.4103/0976-3147.105599.

●●Enlace al texto completo (gratis o de pago) [4103/0976-3147.105599](#)

**AUTORES / AUTHORS:** - Mohanty A

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery, University of Texas Medical Branch at Galveston, Galveston, TX, USA.

[850]

**TÍTULO / TITLE:** - Tongue swelling and necrosis after brain tumor surgery.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian J Neurosurg. 2012 Oct;7(4):214-6. doi: 10.4103/1793-5482.106658.

●●Enlace al texto completo (gratis o de pago) [4103/1793-5482.106658](#)

**AUTORES / AUTHORS:** - Nimjee SM; Wright DR; Agrawal A; McDonagh DL; Husain AM; Britz GW

**INSTITUCIÓN / INSTITUTION:** - Division of Neurosurgery and Interventional Neuroradiology, Duke University Medical Center, Durham, North Carolina, USA.

**RESUMEN / SUMMARY:** - We present a case of tongue necrosis due to intraoperative pressure injury. A laryngeal mask airway with adhesive electrodes was inserted into the oropharynx, over an endotracheal tube, to facilitate glossopharyngeal nerve monitoring during craniotomy for a

cerebellopontine angle tumor. The case, mechanisms of injury, and modifications to our current practice are discussed.

[851]

**TÍTULO / TITLE:** - Delayed cerebral vasospasm following surgery for craniopharyngioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosci Rural Pract. 2013 Jan;4(1):107-9. doi: 10.4103/0976-3147.105648.

●●Enlace al texto completo (gratis o de pago) [4103/0976-3147.105648](#)

**AUTORES / AUTHORS:** - Salunke P; Sodhi HB; Aggarwal A; Ahuja CK

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery and Radiodiagnosis, PGIMER, Chandigarh, India.

[852]

**TÍTULO / TITLE:** - Convection-enhanced delivery of targeted quantum dot-immunoliposome hybrid nanoparticles to intracranial brain tumor models.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nanomedicine (Lond). 2013 Apr 30.

●●Enlace al texto completo (gratis o de pago) [2217/nnm.12.209](#)

**AUTORES / AUTHORS:** - Weng KC; Hashizume R; Noble CO; Serwer LP; Drummond DC; Kirpotin DB; Kuwabara AM; Chao LX; Chen FF; James CD; Park JW

**INSTITUCIÓN / INSTITUTION:** - UCSF Helen Diller Family Comprehensive Cancer Center, San Francisco, CA, 94115 USA.

**RESUMEN / SUMMARY:** - Aim: The aim of this work is to evaluate combining targeting strategy and convection-enhanced delivery in brain tumor models by imaging quantum dot-immunoliposome hybrid nanoparticles. Materials & methods: An EGF receptor-targeted, quantum dot-immunoliposome hybrid nanoparticle (QD-IL) was synthesized. In vitro uptake was measured by flow cytometry and intracellular localization was imaged by confocal microscopy. In the in vivo study, QD-ILs were delivered to intracranial xenografts via convection-enhanced delivery and fluorescence was monitored noninvasively in real-time. Results: QD-ILs exhibited specific and efficient uptake in vitro and exhibited approximately 1.3- to 5.0-fold higher total fluorescence compared with nontargeted counterpart in intracranial brain tumor xenografts in vivo. Conclusion: QD-ILs serve as an effective imaging agent in vitro and in vivo, and the data suggest that ligand-directed liposomal nanoparticles in conjunction with convection-enhanced delivery may offer therapeutic benefits for glioblastoma treatment as a result of specific and efficient uptake by malignant cells. Original submitted 15 June 2012; Revised submitted 12 November 2012.

[853]

**TÍTULO / TITLE:** - Progress on molecular biomarkers and classification of malignant gliomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Med. 2013 May 17.

●●Enlace al texto completo (gratis o de pago) [1007/s11684-013-0267-](#)

[1](#)

**AUTORES / AUTHORS:** - Zhang C; Bao Z; Zhang W; Jiang T

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, 100050, China.

**RESUMEN / SUMMARY:** - Gliomas are the most common primary intracranial tumors in adults. Anaplastic gliomas (WHO grade III) and glioblastomas (WHO grade IV) represent the major groups of malignant gliomas in the brain. Several diagnostic, predictive, and prognostic biomarkers for malignant gliomas have been reported over the last few decades, and these markers have made great contributions to the accuracy of diagnosis, therapeutic decision making, and prognosis of patients. However, heterogeneity in patient outcomes may still be observed, which highlights the insufficiency of a classification system based purely on histopathology. Great efforts have been made to incorporate new information about the molecular landscape of gliomas into novel classifications that may potentially guide treatment. In this review, we summarize three distinctive biomarkers, three most commonly altered pathways, and three classifications based on microarray data in malignant gliomas.

[854]

**TÍTULO / TITLE:** - Incidence, hormonal distribution and postoperative follow up of atypical pituitary adenomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(2):226-31. doi: 10.5137/1019-5149.JTN.6828-12.1.

●●Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.6828-12.1](#)

**AUTORES / AUTHORS:** - Yildirim AE; Divanlioglu D; Nacar OA; Dursun E; Sahinoglu M; Unal T; Belen AD

**INSTITUCIÓN / INSTITUTION:** - Ankara Numune Research and Education Hospital, Department of Neurosurgery, Ankara, Turkey. [alierdemyildirim@gmail.com](mailto:alierdemyildirim@gmail.com)

**RESUMEN / SUMMARY:** - AIM: To assess the incidence, hormonal activity and postoperative follow up of the cases that are histopathologically diagnosed as atypical pituitary adenoma (APA) in our series. MATERIAL AND METHODS: In this study, 13 atypical pituitary adenoma cases, by the WHO 2004 criteria, among the 146 pituitary adenoma patients operated on in our clinic between January 2009 and May 2012 by endoscopic endonasal transsphenoidal approach were included. RESULTS: In histological studies, 133 cases were diagnosed as typical pituitary adenoma (91.1%) and 13 cases were APAs

(8.9%) of which 10 were male (76.9%) and 3 were female (23.1%), ranged between 27 and 80 (mean 52.7) ages. Histopathological distribution of APAs was 9 nonsecretory adenomas (69.3%), 3 prolactinomas (23.1%) and 1 somatostatinoma (7.6%). Asymptomatic pituitary apoplexy was diagnosed in 4 cases (30.7%). Eleven cases of typical pituitary adenomas (8.2%) and 5 cases of the atypical pituitary adenomas (38.4%) were re-operated due to tumor recurrences. CONCLUSION: Accurate histopathological examination shows that atypical pituitary adenoma is not a rare disease. Although it is not the only determinant, APAs are more prone to recurrence than typical adenomas. In our opinion, if total resection is not possible for the patients with APA, close postoperative follow up and additional curative therapy modalities are needed.

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[855]

**TÍTULO / TITLE:** - Fluorescent affibody peptide penetration in glioma margin is superior to full antibody.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 12;8(4):e60390. doi: 10.1371/journal.pone.0060390. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0060390](http://1371/journal.pone.0060390)

**AUTORES / AUTHORS:** - Sexton K; Tichauer K; Samkoe KS; Gunn J; Hoopes PJ; Pogue BW

**INSTITUCIÓN / INSTITUTION:** - Thayer School of Engineering at Dartmouth College, Hanover, New Hampshire, USA. [kristian.j.sexton.th@dartmouth.edu](mailto:kristian.j.sexton.th@dartmouth.edu)

**RESUMEN / SUMMARY:** - OBJECT: Fluorescence imaging has the potential to significantly improve neurosurgical resection of oncologic lesions through improved differentiation between normal and cancerous tissue at the tumor margins. In order to successfully mark glioma tissue a fluorescent tracer must have the ability to penetrate through the blood brain barrier (BBB) and provide delineation in the tumor periphery where heterogeneously intact BBB may exist. In this study it was hypothesized that, due to its smaller size, fluorescently labeled anti-EGFR Affibody protein (approximately 7 kDa) would provide a more clear delineation of the tumor margin than would fluorescently labeled cetuximab, a full antibody (approximately 150 kDa) to the epidermal growth factor receptor (EGFR). METHODS: Cetuximab and anti-EGFR targeted Affibody were conjugated to two different fluorescent dyes (both emitting in the near-infrared) and injected intravenously into 6 athymic mice which were inoculated orthotopically with green fluorescent protein (GFP) expressing human U251 glioma cells. Each mouse was sacrificed at 1-h post injection, at which time brains were removed, snap frozen, sectioned and quantitatively analyzed for fluorescence distribution. RESULTS: Ex vivo analysis showed on average, nearly equal concentrations of cetuximab and Affibody within the tumor (on average Affibody made up 49+/-6% of injected protein), however, the

cetuximab was more confined to the center of the tumor with Affibody showing significantly higher concentrations at the tumor periphery (on average Affibody made up 72+/-15% of injected protein in the outer 50 um of the tumor). Further ex vivo analysis of detection studies showed that the Affibody provided superior discrimination for differentiation of tumor from surrounding normal brain.

CONCLUSIONS: The present study indicates that fluorescently labeled anti-EGFR Affibody can provide significantly better delineation of tumor margins than a fluorescently labeled anti-EGFR antibody and shows considerable potential for guiding margin detection during neurosurgery.

[856]

**TÍTULO / TITLE:** - Ossified choroid plexus papilloma of the fourth ventricle: elucidation of the mechanism of osteogenesis in benign brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 May 3.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.3.PEDS12400](#)

**AUTORES / AUTHORS:** - Manjila S; Miller E; Awadallah A; Murakami S; Cohen ML; Cohen AR

**INSTITUCIÓN / INSTITUTION:** - Division of Pediatric Neurosurgery, Rainbow Babies and Children's Hospital;

**RESUMEN / SUMMARY:** - True ossification within benign brain tumors is rare, and the molecular mechanism for this process is poorly understood. The authors report a case of ossified choroid plexus papilloma (CPP) and analyze it to help elucidate the underlying molecular basis of osteogenesis in benign brain tumors. A 21-year-old man presented with headache and depression that progressed over years. Computed tomography, MRI, and angiography demonstrated a large heavily calcified fourth ventricular tumor with a vascular blush and no hydrocephalus. The tumor was resected and was found to be an ossified CPP. Immunohistochemical staining for VEGF, Sox2, BMP-2, osterix, osteopontin, and osteocalcin was performed in an attempt to elucidate the mechanism of bone formation. The tumor was extensively ossified with mature bone trabeculae. Immunostaining for VEGF was positive. Additional staining showed the presence of osteocalcin in this ossified tumor but not in samples of nonossified CPPs collected from other patients. Staining for osterix and osteopontin was equivocally positive in the ossified CPP but also in the nonossified CPPs examined. The presence of osteocalcin in the ossified CPP demonstrates that there is true bone formation rather than simple calcification. Its appearance within cells around the trabeculae suggests the presence of osteoblasts. The presence of osterix suggests that a pluripotent cell, or one that is already partially differentiated, may be differentiated into an osteoblast through this pathway. This represents the first systematic immunohistochemical analysis of osteogenesis within choroid plexus tumors.

[857]

**TÍTULO / TITLE:** - Arachnoid cyst slit valves: the mechanism for arachnoid cyst enlargement.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 May 10.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.4.PEDS12609](#)

**AUTORES / AUTHORS:** - Halani SH; Safain MG; Heilman CB

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tufts Medical Center and Tufts University School of Medicine, Boston, Massachusetts.

**RESUMEN / SUMMARY:** - Arachnoid cysts are common, accounting for approximately 1% of intracranial mass lesions. Most are congenital, clinically silent, and remain static in size. Occasionally, they increase in size and produce symptoms due to mass effect or obstruction. The mechanism of enlargement of arachnoid cysts is controversial. One-way slit valves are often hypothesized as the mechanism for enlargement. The authors present 4 cases of suprasellar prepontine arachnoid cysts in which a slit valve was identified. The patients presented with hydrocephalus due to enlargement of the cyst. The valve was located in the arachnoid wall of the cyst directly over the basilar artery. The authors believe this slit valve was responsible for the net influx of CSF into the cyst and for its enlargement. They also present 1 case of an arachnoid cyst in the middle cranial fossa that had a small circular opening but lacked a slit valve. This cyst did not enlarge but surgery was required because of rupture and the development of a subdural hygroma. One-way slit valves exist and are a possible mechanism of enlargement of suprasellar prepontine arachnoid cysts. The valve was located directly over the basilar artery in each of these cases. Caudad-to-cephalad CSF flow during the cardiac cycle increased the opening of the valve, whereas cephalad-to-caudad CSF flow during the remainder of the cardiac cycle pushed the slit opening against the basilar artery and decreased the size of the opening. Arachnoid cysts that communicate CSF via circular, nonslit valves are probably more likely to remain stable.

[858]

**TÍTULO / TITLE:** - Multiple cerebral cavernous haemangiomas in an infant.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Pediatr Neurosci. 2012 Sep;7(3):200-1. doi: 10.4103/1817-1745.106479.

●●Enlace al texto completo (gratis o de pago) [4103/1817-1745.106479](#)

**AUTORES / AUTHORS:** - Verma P; Saleem R; Harijan P; Hussain N

**INSTITUCIÓN / INSTITUTION:** - Department of Paediatric Neurology, Leicester Royal Infirmary, Leicester, LE1 5WW, UK.

**RESUMEN / SUMMARY:** - Cerebral cavernous malformations (CCMs) are vascular malformations causing seizures and cerebral hemorrhages. We report a 20-month old male with multiple CCMs associated with Krev interaction trapped 1 (KRIT1) c.845 + 1 G > C heterozygous transversion mutation. This case demonstrates the importance of molecular genetic analysis in cases of multiple CCM.

[859]

**TÍTULO / TITLE:** - Successful Large-volume Leukapheresis for Hematopoietic Stem Cell Collection in a Very-low-weight Brain Tumor Infant with Coagulopathy.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *Pediatr Neonatol.* 2013 Jun;54(3):211-3. doi: 10.1016/j.pedneo.2013.03.007. Epub 2013 Apr 29.

●●Enlace al texto completo (gratis o de pago)

[1016/j.pedneo.2013.03.007](http://1016/j.pedneo.2013.03.007)

**AUTORES / AUTHORS:** - Liao YM; Yeh CJ; Shu HL; Lin PC; Chang TT; Chiou SS

**INSTITUCIÓN / INSTITUTION:** - Department of Pediatrics, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan.

**RESUMEN / SUMMARY:** - Peripheral apheresis has become a safe procedure to collect hematopoietic stem cells, even in pediatric patients and donors. However, the apheresis procedure for small and sick children is more complicated due to difficult venous access, relatively large extracorporeal volume, toxicity of citrate, and unstable hemostasis. We report a small and sick child with refractory medulloblastoma, impaired liver function, and coagulopathy after several major cycles of cisplatin-based chemotherapy. She successfully received large-volume leukapheresis for hematopoietic stem cell collection, although the patient experienced severe coagulopathy during the procedures. Health care providers should be alert to this potential risk.

[860]

**TÍTULO / TITLE:** - Sacrococcygeal myxopapillary ependymoma with anaplastic ependymoma component in an infant.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - *J Pediatr Neurosci.* 2012 Sep;7(3):218-20. doi: 10.4103/1817-1745.106485.

●●Enlace al texto completo (gratis o de pago) [4103/1817-1745.106485](http://4103/1817-1745.106485)

**AUTORES / AUTHORS:** - Chakraborti S; Kini H; Pai KG; Upadhyaya V

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Kasturba Medical College, Karnataka, India.

**RESUMEN / SUMMARY:** - Sacrococcygeal location of myxopapillary ependymoma (MPE) is uncommon. Local recurrence and metastases are on record in spite of its benign characteristics. We report a rare case of sacrococcygeal MPE in an

11-month-old female child who showed typical myxopapillary ependymal histology along with anaplastic ependymal component. Ki-67 labeling index in the myxopapillary component was 4-5% and in the anaplastic component was 70%. Six weeks after gross total resection of the tumor, the child presented with local recurrence and metastasis in the right inguinal lymph nodes and was treated with chemotherapy. The present case of sacrococcygeal MPE with anaplastic ependymoma component is the second case on record in the medical literature, and the first case without any syndromic features. Metastasis in this case can be explained because of the anaplastic component, with mitotic count of 5-6/high power field and high Ki-67 labeling index.

[861]

**TÍTULO / TITLE:** - Combined RNAi-mediated suppression of Rictor and EGFR resulted in complete tumor regression in an orthotopic glioblastoma tumor model.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013;8(3):e59597. doi: 10.1371/journal.pone.0059597. Epub 2013 Mar 15.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0059597](https://doi.org/10.1371/journal.pone.0059597)

**AUTORES / AUTHORS:** - Verreault M; Wepler SA; Stegeman A; Warburton C; Strutt D; Masin D; Bally MB

**INSTITUCIÓN / INSTITUTION:** - Experimental Neurooncology, Brain and Bone Marrow Institute Research Center, Pitie-Salpetriere Hospital, Paris, France. [maiteverreault@gmail.com](mailto:maiteverreault@gmail.com)

**RESUMEN / SUMMARY:** - The PI3K/AKT/mTOR pathway is commonly over activated in glioblastoma (GBM), and Rictor was shown to be an important regulator downstream of this pathway. EGFR overexpression is also frequently found in GBM tumors, and both EGFR and Rictor are associated with increased proliferation, invasion, metastasis and poor prognosis. This research evaluated in vitro and in vivo whether the combined silencing of EGFR and Rictor would result in therapeutic benefits. The therapeutic potential of targeting these proteins in combination with conventional agents with proven activity in GBM patients was also assessed. In vitro validation studies were carried out using siRNA-based gene silencing methods in a panel of three commercially available human GBM cell lines, including two PTEN mutant lines (U251MG and U118MG) and one PTEN-wild type line (LN229). The impact of EGFR and/or Rictor silencing on cell migration and sensitivity to chemotherapeutic drugs in vitro was determined. In vivo validation of these studies was focused on EGFR and/or Rictor silencing achieved using doxycycline-inducible shRNA-expressing U251MG cells implanted orthotopically in Rag2M mice brains. Target silencing, tumor size and tumor cell proliferation were assessed by quantification of immunohistofluorescence-stained markers. siRNA-mediated silencing of EGFR

and Rictor reduced U251MG cell migration and increased sensitivity of the cells to irinotecan, temozolomide and vincristine. In LN229, co-silencing of EGFR and Rictor resulted in reduced cell migration, and increased sensitivity to vincristine and temozolomide. In U118MG, silencing of Rictor alone was sufficient to increase this line's sensitivity to vincristine and temozolomide. In vivo, while the silencing of EGFR or Rictor alone had no significant effect on U251MG tumor growth, silencing of EGFR and Rictor together resulted in a complete eradication of tumors. These data suggest that the combined silencing of EGFR and Rictor should be an effective means of treating GBM.

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[862]

**TÍTULO / TITLE:** - NMR Metabolomics Analysis of the Effects of 5-Lipoxygenase Inhibitors on Metabolism in Glioblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Proteome Res. 2013 May 3;12(5):2165-2176. Epub 2013 Apr 22.

●●Enlace al texto completo (gratis o de pago) [1021/pr400026q](#)

**AUTORES / AUTHORS:** - Morin PJ; Ferguson D; Leblanc LM; Hebert MJ; Pare AF; Jean-Francois J; Surette ME; Touaibia M; Cuperlovic-Culf M

**INSTITUCIÓN / INSTITUTION:** - Department of Chemistry and Biochemistry, Universite de Moncton , Moncton, Canada.

**RESUMEN / SUMMARY:** - Changes across metabolic networks are emerging as an integral part of cancer development and progression. Increasing comprehension of the importance of metabolic processes as well as metabolites in cancer is stimulating exploration of novel, targeted treatment options. Arachidonic acid (AA) is a major component of phospholipids. Through the cascade catalyzed by cyclooxygenases and lipoxygenases, AA is also a precursor to cellular signaling molecules as well as molecules associated with a variety of diseases including cancer. 5-Lipoxygenase catalyzes the transformation of AA into leukotrienes (LT), important mediators of inflammation. High-throughput analysis of metabolic profiles was used to investigate the response of glioblastoma cell lines to treatment with 5-lipoxygenase inhibitors. Metabolic profiling of cells following drug treatment provides valuable information about the response and metabolic alterations induced by the drug action and give an indication of both on-target and off-target effects of drugs. Four different 5-lipoxygenase inhibitors and antioxidants were tested including zileuton, caffeic acid, and its analogues caffeic acid phenethyl ester and caffeic acid cyclohexethyl ester. A NMR approach identified metabolic signatures resulting from application of these compounds to glioblastoma cell lines, and metabolic data were used to develop a better understanding of the mode of action of these inhibitors.

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[863]

**TÍTULO / TITLE:** - Limbic encephalitis as the presenting symptom of oesophageal adenocarcinoma: another cancer to search?

**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 Apr 16;2013. pii: bcr2012008201. doi: 10.1136/bcr-2012-008201.

●●Enlace al texto completo (gratuito o de pago) [1136/bcr-2012-008201](http://1136/bcr-2012-008201)

**AUTORES / AUTHORS:** - Menezes RB; de Lucena AF; Maia FM; Marinho AR

**INSTITUCIÓN / INSTITUTION:** - Department of Emergency, Fortaleza's General Hospital, Fortaleza, Ceara, Brazil. [renata\\_bmenezes@yahoo.com.br](mailto:renata_bmenezes@yahoo.com.br)

**RESUMEN / SUMMARY:** - Limbic encephalitis is a syndrome characterised by irritability, depression, sleeping disturbance, convulsion, hallucination and short-period memory loss that is commonly associated with a malignancy even if there is no evidence of it by the time of presentation. Most reported cases of limbic encephalitis as a paraneoplastic syndrome are associated with small-cell lung cancer and lymphoma. This article is a case report of a patient with limbic encephalitis associated with an oesophageal adenocarcinoma. The patient is a middle-aged man who presented apathy and unstable mood. After months, developed diplopia, reduced visual acuity and involuntary movements. Later, gait disability, disorientation, memory loss and aggressive behaviour were detected, associated with seizures. After investigation, limbic encephalitis was diagnosed and, as the patient developed dysphagia, oesophageal adenocarcinoma was detected. Oesophageal carcinoma usually does not have neurological symptoms associated.

[864]

**TÍTULO / TITLE:** - Lomustine analogous drug structures for intervention of brain and spinal cord tumors: the benefit of in silico substructure search and analysis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Chemother Res Pract. 2013;2013:360624. doi: 10.1155/2013/360624. Epub 2013 Apr 16.

●●Enlace al texto completo (gratuito o de pago) [1155/2013/360624](http://1155/2013/360624)

**AUTORES / AUTHORS:** - Bartzatt R

**INSTITUCIÓN / INSTITUTION:** - University of Nebraska, College of Arts & Sciences, Durham Science Center, 6001 Dodge Street, Omaha, NE 68182, USA.

**RESUMEN / SUMMARY:** - Lomustine is a nitrosourea anticancer agent shown to be effective for treatment of childhood medulloblastoma. In silico substructure searches produced 17 novel nitrosourea agents analogous to lomustine and retaining activity for DNA alkylation and cytotoxic activity. The mean values for Log P, polar surface area, formula weight, number of oxygens & nitrogens, and rotatable bonds were 2.524, 62.89 Anstroms(2), 232.8, 5, and 2, respectively.

All 17 agents have formula weight less than 450 and Log P less than 5, two criteria preferred for blood-brain barrier penetration. These agents have a polar surface area less than 90 Angstroms(2). Each show zero violations of the Rule of five indicating favorable drug likeness and oral drug activity. Hierarchical cluster analysis indicated that 16 of the novel agents were highly similar to lomustine, save for agent 12 which bears a hydroxylated branched carbon substituent. A total of 17 novel anticancer agents were elucidated having molecular properties very effective for penetrating through the BBB and into the central nervous system. This study shows the effectiveness of in silico search and recognition of anticancer agents that are suitable for the clinical treatment of brain tumors.

[865]

**TÍTULO / TITLE:** - Spontaneous pineal apoplexy in a pineal parenchymal tumor of intermediate differentiation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Biol Med. 2013 Mar;10(1):43-6. doi: 10.7497/j.issn.2095-3941.2013.01.007.

●●Enlace al texto completo (gratis o de pago) [7497/j.issn.2095-3941.2013.01.007](#)

**AUTORES / AUTHORS:** - Wang CC; Turner J; Steel T

**INSTITUCIÓN / INSTITUTION:** - Nepean Hospital, Kingswood, NSW 2747, Australia;

**RESUMEN / SUMMARY:** - Pineal apoplexy is a rare clinical presentation of pineal parenchymal tumors. We report the curative treatment of a case of pineal parenchymal tumor of intermediate differentiation with spontaneous apoplectic hemorrhage. This case is shown through computed tomography and magnetic resonance imaging of the brain, and is confirmed via histopathological studies. Recurrent upward gaze paresis was observed after the stereotactic biopsy. The paresis required an expeditious tumor resection. The mechanism of the pineal apoplectic hemorrhage remains unclear although it has been observed in different pineal region lesions. Clinical and radiological evidence of the cure 5 years post-surgery is available.

[866]

**TÍTULO / TITLE:** - Role of PTEN in cholera toxin-induced SWO38 glioma cell differentiation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Mol Med Rep. 2013 Jun;7(6):1912-8. doi: 10.3892/mmr.2013.1434. Epub 2013 Apr 18.

●●Enlace al texto completo (gratis o de pago) [3892/mmr.2013.1434](#)

**AUTORES / AUTHORS:** - Wang MH; Lin CL; Zhang JJ; Weng ZP; Hu T; Xie Q; Zhong XY

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Hainan Medical College, Haikou, Hainan 571101, P.R. China.

**RESUMEN / SUMMARY:** - Malignant gliomas persist as a major disease responsible for high morbidity and mortality rates in adults. Differentiation therapy has emerged as a promising treatment modality. Phosphatase and tensin homolog deleted on chromosome 10 (PTEN) gene function is commonly lost in primary gliomas, particularly in glioblastomas, and this is associated with tumor differentiation. PTEN gene deletion is one of the main molecular events in gliomas. In this study, we aimed to explore the effect and mechanisms of PTEN on cholera toxin (CT)induced SWO-38 glioma cell differentiation. It has been shown that transfection of the exogenous PTEN gene induces glioma cell differentiation; however, the underlying mechanism remains to be elucidated. Results of the present study showed that CT-induced SWO-38 glioma cell differentiation was characterized by morphological changes, the increased expression of glial fibrillary acidic protein (GFAP), an accumulation of cells in the G0/G1 phase of the cell cycle, the decreased expression of cyclin D1 and a decreased invasion and migration capacity. Silencing of the PTEN protein using RNA interference resulted in suppressed cell differentiation. Furthermore, inhibition of the PI3K/AKT pathway by the inhibitor LY294002 led to attenuated differentiation, while differentiation remained stable with the inhibition of the MAPK/ERK pathway by PD0325901. Thus, PTEN may be important in glioma cell differentiation.

[867]

**TÍTULO / TITLE:** - In vitro Natural Killer Cell Immunotherapy for Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Oncol. 2013 Apr 19;3:94. doi: 10.3389/fonc.2013.00094. Print 2013.

●●Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00094](#)

**AUTORES / AUTHORS:** - Fernandez L; Portugal R; Valentin J; Martin R; Maxwell H; Gonzalez-Vicent M; Diaz MA; de Prada I; Perez-Martinez A

**INSTITUCIÓN / INSTITUTION:** - Department of Hemato-Oncology and Stem Cell Transplantation, Hospital Infantil Universitario Nino Jesus Madrid, España.

**RESUMEN / SUMMARY:** - How the immune system attacks medulloblastoma (MB) tumors effectively is unclear, although natural killer (NK) cells play an important role in immune defense against tumor cells. Interactions between receptors on NK cells and ligands expressed by tumor cells are critical for tumor control by immunotherapy. In this study, we analyzed tumor samples from 54 MB patients for expression of major histocompatibility complex class I-related chains A (MICA) and UL16 binding protein (ULBP-2), which are ligands for the NK group 2 member D activating receptor (NKG2D). The percentage of MICA and ULBP-2 positive cells was higher than 25% in 68% and 6% of MB patients, respectively. A moderate-high intensity of MICA cytoplasmic staining was

observed in 46% MB patients and weak ULBP-2 staining was observed in 8% MB patients. No correlation between MICA/ULBP-2 expression and patient outcome was found. We observed that HTB-186, a MB cell line, was moderately resistant to NK cell cytotoxicity in vitro. Blocking MICA/ULBP-2 on HTB-186, and NKG2D receptor on NK cells increased resistance to NK cell lysis in vitro. However, HLA class I blocking on HTB-186 and overnight incubation with IL-15 stimulated NK cells efficiently killed tumor cells in vitro. We conclude that although NKG2D/MICA-ULBP-2 interactions have a role in NK cell cytotoxicity against MB, high expression of HLA class I can protect MB from NK cell cytotoxicity. Even so, our in vitro data indicate that if NK cells are appropriately stimulated, they may have the potential to target MB in vivo.

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[868]

**TÍTULO / TITLE:** - Functional profiling of precursor MicroRNAs identifies MicroRNAs essential for glioma proliferation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013;8(4):e60930. doi: 10.1371/journal.pone.0060930. Epub 2013 Apr 5.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0060930](#)

**AUTORES / AUTHORS:** - Haapa-Paananen S; Chen P; Hellstrom K; Kohonen P; Hautaniemi S; Kallioniemi O; Perala M

**INSTITUCIÓN / INSTITUTION:** - Medical Biotechnology, VTT Technical Research Centre of Finland, Turku, Finland. [saija.haapa-paananen@vtt.fi](mailto:saija.haapa-paananen@vtt.fi)

**RESUMEN / SUMMARY:** - Cancer initiation and progression involve microRNAs that can function like tumor suppressors and oncogenes. The functional significance of most miRNAs is currently unknown. To determine systematically which microRNAs are essential for glioma growth, we screened a precursor microRNA library in three human glioblastoma and one astroglial cell line model systems. The most prominent and consistent cell proliferation-reducing hits were validated in secondary screening with an additional apoptosis endpoint. The functional screening data were integrated in the miRNA expression data to find underexpressed true functional tumor suppressor miRNAs. In addition, we used miRNA-target gene predictions and combined siRNA functional screening data to find the most probable miRNA-target gene pairs with a similar functional effect on proliferation. Nine novel functional miRNAs (hsa-miR-129, -136, -145, -155, -181b, -342-5p, -342-3p, -376<sup>a/b</sup>) in GBM cell lines were validated for their importance in glioma cell growth, and similar effects for six target genes (ROCK1, RHOA, MET, CSF1R, EIF2AK1, FGF7) of these miRNAs were shown functionally. The clinical significance of the functional hits was validated in miRNA expression data from the TCGA glioblastoma multiforme (GBM) tumor cohort. Five tumor suppressor miRNAs (hsa-miR-136, -145, -342, -129, -376<sup>a</sup>) showed significant underexpression in clinical GBM tumor samples from the

TCGA GBM cohort further supporting the role of these miRNAs in vivo. Most importantly, higher hsa-miR-145 expression in GBM tumors yielded significantly better survival ( $p < 0.005$ ) in a subset of patients thus validating it as a genuine tumor suppressor miRNA. This systematic functional profiling provides important new knowledge about functionally relevant miRNAs in GBM biology and may offer new targets for treating glioma.

[869]

**TÍTULO / TITLE:** - Subarachnoid Hemorrhage and Acute Hydrocephalus as a Complication of C1 Lateral Mass Screws.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Spine (Phila Pa 1976). 2013 May 15.

●●Enlace al texto completo (gratis o de pago)

[1097/BRS.0b013e31829a7c42](#)

**AUTORES / AUTHORS:** - George Stovell MM; Pillay MR

**INSTITUCIÓN / INSTITUTION:** - The Walton Centre for Neurology & Neurosurgery, Liverpool, L14DQ, United Kingdom.

**RESUMEN / SUMMARY:** - Study Design. Case report.Objective. Present a previously unreported complication of subarachnoid hemorrhage and hydrocephalus after C1 lateral mass screw insertion to inform spine specialists of this potential post-operative complication.Summary of Background Data. Damage to the carotid artery, vertebral artery, hypoglossal nerve and dural tears are all recognized complications. Acute hydrocephalus as a result of subarachnoid hemorrhage is not previously reported.Methods. A 63 year old lady with a traumatic C1 ring and C2 peg fracture underwent C1-C2 fixation. During insertion of the C1 lateral mass screws there was significant hemorrhage from the C1/C2 venous plexus. Three days post-operatively she developed headache, confusion and became drowsy.Results. CT brain revealed hydrocephalus and intraventricular blood that was managed with an external ventricular drain.Conclusion. The case of acute hydrocephalus due to intraventricular hemorrhage from C1 lateral mass screw placement has not previously been reported. Surgeons performing the procedure should consider the diagnosis if patients display signs of raised intracranial pressure post-operatively.

[870]

**TÍTULO / TITLE:** - Endoscopic-Assisted Resection of Intracranial Epidermoid Tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World Neurosurg. 2013 Mar 30. pii: S1878-8750(13)00569-X. doi: 10.1016/j.wneu.2013.03.073.

●●Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.03.073](#)

**AUTORES / AUTHORS:** - Tuchman A; Platt A; Winer J; Pham M; Giannotta S; Zada G

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery Keck School of Medicine Los Angeles County-USC Medical Center Los Angeles, CA. Electronic address: [alexandertuchman@gmail.com](mailto:alexandertuchman@gmail.com).

**RESUMEN / SUMMARY:** - **OBJECTIVE:** Intracranial epidermoid tumors are epithelially derived lesions that may present particular challenges to neurosurgeons, often encasing critical neurovascular structures and extending into multiple subarachnoid cisterns. We aimed to evaluate our recent experience with endoscopic assistance to craniotomy with microsurgical resection of these lesions. **METHODS:** A retrospective review of patients undergoing endoscopic-assisted craniotomy for resection of an epidermoid tumor at the Keck School of Medicine of USC between 2009-2012 was conducted. In all patients, the surgical approach and tumor resection were first performed microscopically. This was followed by use of an angled endoscope to facilitate further inspection and additional resection of tumor using a two-surgeon technique. **RESULTS:** Twelve patients undergoing 13 consecutive endoscopic-assisted craniotomies were included in the analysis. The mean patient age was 45 years. The mean maximal tumor diameter was 4.0 cm (range 2.4-5.8 cm). Surgery was for recurrent epidermoid in 6 of 13 cases (46%). Epidermoid tumor location included the cerebellopontine angle (9 patients, 75%), fourth ventricle (2 patients, 17%), and third ventricle (1 patient, 8%). Surgical approaches included retro-sigmoid craniotomy (8 patients), sub-occipital craniotomy (1 patient), sub-occipital craniotomy with supra-cerebellar approach (1 patient), extradural temporopolar approach (1 patient), and subtemporal approach (1 patient). In 11 of 13 cases (85%), additional tumor was identified upon inspection with an angled endoscope, facilitating additional tumor resection in each case. Gross or deliberate near total resection was achieved in 7 of 13 cases (54%). Four patients (31%) had improvement of cranial nerve function. Post-operative neurological deficits included transient abducens and oculomotor nerve paresis in 1 patient each. **CONCLUSION:** The endoscope is a safe and effective adjunct to the microscope in facilitating additional inspection and further resection of epidermoid tumors. Endoscopic-assisted surgery is particularly useful for identifying and removing additional tumor located around surgical corners.

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[871]

**TÍTULO / TITLE:** - Unusual Volume Reduction of Galassi Grade III Arachnoid Cyst Following Head Trauma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurol Surg A Cent Eur Neurosurg. 2013 May 21.

●●Enlace al texto completo (gratis o de pago) [1055/s-0033-1342931](#)

**AUTORES / AUTHORS:** - Prokopienko M; Kunert P; Marchel A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Medical University of Warsaw, Warsaw, Mazowieckie, Poland.

**RESUMEN / SUMMARY:** - We report the case of a 36-year-old woman with a Sylvian fissure arachnoid cyst, which diminished after head trauma and minor hemorrhage into the cyst. We discuss the relationship between the cyst volume reduction and the head trauma to determine the main mechanism of this self-healing process.

[872]

**TÍTULO / TITLE:** - Durable response of intracranial cellular hemangioma to bevacizumab and temozolomide.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Jun;11(6):682-6. doi: 10.3171/2013.2.PEDS12421. Epub 2013 Mar 29.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.2.PEDS12421](#)

**AUTORES / AUTHORS:** - Yeo KK; Puscasiu E; Keating RF; Rood BR

**INSTITUCIÓN / INSTITUTION:** - Departments of Pediatrics.

**RESUMEN / SUMMARY:** - Cellular hemangioma is a subtype of hemangioma that is associated with cellular immaturity and the potential for recurrence. Intracranial location of these lesions is extremely rare, and definitive treatment often requires radical neurosurgical resection. The authors report a case of a 12-year-old boy with a subtemporal cellular hemangioma. He underwent gross-total resection of the tumor, but within 1.5 months the tumor recurred, necessitating a second resection. Because of its proximity to vascular structures, only subtotal resection was possible. Repeat MRI 1 month after the second surgery showed significant tumor recurrence. Given the tumor's demonstrated capacity for recurrence and its proximity to the vein of Labbe and sigmoid sinus, further resection was not indicated. In an effort to limit radiation therapy for this young patient, treatment with bevacizumab and temozolomide was chosen and achieved a complete response that has proven durable for 36 months after cessation of therapy. This is the first report of the successful use of chemotherapy to treat an intracranial hemangioma, a rare condition with limited therapeutic options.

[873]

**TÍTULO / TITLE:** - Cerebral aneurysms one year after resection of a cardiac myxoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Neth Heart J. 2013 Jun;21(6):307-9. doi: 10.1007/s12471-013-0420-0.

●●Enlace al texto completo (gratis o de pago) [1007/s12471-013-0420-](#)

[0](#)

**AUTORES / AUTHORS:** - Oomen AW; Kuijpers SH

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[874]

**TÍTULO / TITLE:** - First successful transoral robotic resection of a laryngeal paraganglioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Otolaryngol Head Neck Surg. 2012 Dec 1;41(6):E54-7.

**AUTORES / AUTHORS:** - Tulin Kayhan F; Hakan Kaya K; Altintas A; Firat P; Sayin I

[875]

**TÍTULO / TITLE:** - Central nervous system tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Handb Clin Neurol. 2013;112:931-58. doi: 10.1016/B978-0-444-52910-7.00015-5.

●●Enlace al texto completo (gratis o de pago) [1016/B978-0-444-52910-7.00015-5](#)

**AUTORES / AUTHORS:** - Jacques G; Cormac O

**INSTITUCIÓN / INSTITUTION:** - Brain Tumor Program, Department of Pediatric and Adolescent Oncology, Gustave Roussy Cancer Institute, Villejuif, France. Electronic address: [grill@igr.fr](mailto:grill@igr.fr).

**RESUMEN / SUMMARY:** - Central nervous system tumors are the most frequent malignant tumor in children and the main cause of death in this age group after traffic accidents. The current estimates are that one adult in 2500 is a survivor of a brain tumor that occurred during childhood. These tumors are particularly heterogeneous in terms of histology/biology, treatment, and outcome. They share, however, a high risk of neurological and cognitive morbidity due to the disease itself and the treatment modalities (radiotherapy, surgery, and chemotherapy). Diagnosis is frequently delayed because symptoms are usually nonspecific at the beginning of the evolution. Posterior fossa is the most frequent site and the tumors present most frequently with signs of intracranial hypertension. Supratentorial tumors are more frequent in infants and in adolescents; seizures are not uncommon, especially for benign tumors. When adjuvant treatment is needed, radiotherapy is usually the mainstay apart from some histologies where chemotherapy may be sufficient: low-grade gliomas, desmoplastic medulloblastomas, malignant glial tumors in infants. Multidisciplinary care is best performed in tertiary care centers and should include early rehabilitation programs soon after surgery.

[876]

**TÍTULO / TITLE:** - Immature ovarian teratoma with unusual gliomatosis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Ovarian Res. 2013 Apr 16;6(1):28. doi: 10.1186/1757-2215-6-28.

●●Enlace al texto completo (gratis o de pago) [1186/1757-2215-6-28](#)

**AUTORES / AUTHORS:** - Gheorghisan-Galateanu A; Terzea DC; Carsote M; Poiana C

**INSTITUCIÓN / INSTITUTION:** - C.I.Parhon National Institute of Endocrinology, 34 Aviatorilor Blvd., Bucharest 011853, Romania. [agheorghisan.a@gmail.com](mailto:agheorghisan.a@gmail.com).

**RESUMEN / SUMMARY:** - This study aimed to investigate an unusual case of immature ovarian teratoma with onset of mature glial cells implanted on the contralateral ovary, a challenge in the diagnosis of the second ovarian tumor. We report the case of a 31-yr-old woman, who developed at the age of 16 an immature teratoma in the right ovary that was surgically removed. Six years later mature glial implants were present on the left ovary and six months later at the level of peritoneum that relapsed after other six months. The patient suffered three surgical resections after the initial one. Paraffin sections and immunohistochemical examinations using antibodies against glial and neuronal antigens were performed. In the teratoma, the neuroectodermal tissue expressed Glial fibrillary acidic protein (GFAP), S100 protein, Epithelial membrane antigen (EMA) and Cytokeratin 34 beta E12 (Ck34beta E12), whereas the implants expressed only GFAP and S100 protein. The immature teratoma is the rarest type of ovarian teratomas. Gliomatosis peritonei is an exceptional finding, especially with onset on the contralaterally ovary. The implant of the mature glial cells has a high risk of relapse, as seen in our case, thus close follow-up of the patient is necessary.

[877]

**TÍTULO / TITLE:** - Glioblastoma Metastasis to Parotid Gland and Neck Lymph Nodes: Fine-Needle Aspiration Cytology with Histopathologic Correlation.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Head Neck Pathol. 2013 May 1.

●●Enlace al texto completo (gratis o de pago) [1007/s12105-013-0448-](#)

[X](#)

**AUTORES / AUTHORS:** - Romero-Rojas AE; Diaz-Perez JA; Amaro D; Lozano-Castillo A; Chinchilla-Olaya SI

**INSTITUCIÓN / INSTITUTION:** - National Institute of Cancer, Bogota, Colombia.

**RESUMEN / SUMMARY:** - Glioblastoma (GBM) is one of the most highly aggressive neoplasms of the central nervous system. Extra-cranial metastases in GBM are rare. Here we present the case of a 26-year-old man with extra-cranial metastasis of a frontal lobe GBM to the parotid gland, cervical lymph nodes, and bones, with initial diagnosis made by fine needle aspiration cytology (FNAC) of the parotid gland. FNAC is a reliable technique in the study of

primary and secondary parotid gland neoplasms, allowing a presumptive diagnosis in difficult cases. We correlate the cytologic, histopathologic, and immunohistochemical findings in this case and discuss previous literature reports.

[878]

**TÍTULO / TITLE:** - Palatal tremor in relation to brainstem tumour involvement.

**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 May 2;2013. pii: bcr2013009438. doi: 10.1136/bcr-2013-009438.

●●Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-009438](http://1136/bcr-2013-009438)

**AUTORES / AUTHORS:** - Marques J; Nzwalo H; Azevedo A; Salgado D

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, Instituto Portugues de Oncologia de Lisboa, Francisco Gentil, Lisboa, Portugal.

[879]

**TÍTULO / TITLE:** - Epigenetic Silencing of DKK3 in Medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Mol Sci. 2013 Apr 8;14(4):7492-505. doi: 10.3390/ijms14047492.

●●Enlace al texto completo (gratuito o de pago) [3390/ijms14047492](http://3390/ijms14047492)

**AUTORES / AUTHORS:** - Valdora F; Banelli B; Stigliani S; Pfister SM; Moretti S; Kool M; Remke M; Bai AH; Brigati C; Hielscher T; Romani M; Servidei T; Zollo M; Cinalli G; Oberthuer A; Tonini GP; Coco S

**INSTITUCIÓN / INSTITUTION:** - Department of Experimental Medicine (DIMES), University of Genoa-IRCCS A.O.U. San Martino-IST National Cancer Research Institute, Genoa 16132, Italy. [gptonini@gmail.com](mailto:gptonini@gmail.com).

**RESUMEN / SUMMARY:** - Medulloblastoma (MB) is a malignant pediatric brain tumor arising in the cerebellum consisting of four distinct subgroups: WNT, SHH, Group 3 and Group 4, which exhibit different molecular phenotypes. We studied the expression of Dickkopf (DKK) 1-4 family genes, inhibitors of the Wnt signaling cascade, in MB by screening 355 expression profiles derived from four independent datasets. Upregulation of DKK1, DKK2 and DKK4 mRNA was observed in the WNT subgroup, whereas DKK3 was downregulated in 80% MBs across subgroups with respect to the normal cerebellum ( $p < 0.001$ ). Since copy number aberrations targeting the DKK3 locus (11p15.3) are rare events, we hypothesized that epigenetic factors could play a role in DKK3 regulation. Accordingly, we studied 77 miRNAs predicting to repress DKK3; however, no significant inverse correlation between miRNA/mRNA expression was observed. Moreover, the low methylation levels in the DKK3 promoters (median:

3%, 5% and 5% for promoter 1, 2 and 3, respectively) excluded the downregulation of gene expression by methylation. On the other hand, the treatment of MB cells with Trichostatin A (TSA), a potent inhibitor of histone deacetylases (HDAC), was able to restore both DKK3 mRNA and protein. In conclusion, DKK3 downregulation across all MB subgroups may be due to epigenetic mechanisms, in particular, through chromatin condensation.

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[880]

**TÍTULO / TITLE:** - Proteolysis of MOB1 by the ubiquitin ligase praja2 attenuates Hippo signalling and supports glioblastoma growth.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nat Commun. 2013;4:1822. doi: 10.1038/ncomms2791.

●●Enlace al texto completo (gratis o de pago) [1038/ncomms2791](#)

**AUTORES / AUTHORS:** - Lignitto L; Arcella A; Sepe M; Rinaldi L; Delle Donne R; Gallo A; Stefan E; Bachmann VA; Oliva MA; Tiziana Storlazzi C; L'abbate A; Brunetti A; Gargiulo S; Gramanzini M; Insabato L; Garbi C; Gottesman ME; Feliciello A

**INSTITUCIÓN / INSTITUTION:** - 1] Dipartimento di Medicina Molecolare and Biotechnologie Mediche, University Federico II and IEOS-CNR, 80131 Naples, Italy [2].

**RESUMEN / SUMMARY:** - Human glioblastoma is the most frequent and aggressive form of brain tumour in the adult population. Proteolytic turnover of tumour suppressors by the ubiquitin-proteasome system is a mechanism that tumour cells can adopt to sustain their growth and invasiveness. However, the identity of ubiquitin-proteasome targets and regulators in glioblastoma are still unknown. Here we report that the RING ligase praja2 ubiquitylates and degrades Mob, a core component of NDR/LATS kinase and a positive regulator of the tumour-suppressor Hippo cascade. Degradation of Mob through the ubiquitin-proteasome system attenuates the Hippo cascade and sustains glioblastoma growth in vivo. Accordingly, accumulation of praja2 during the transition from low- to high-grade glioma is associated with significant downregulation of the Hippo pathway. These findings identify praja2 as a novel upstream regulator of the Hippo cascade, linking the ubiquitin proteasome system to deregulated glioblastoma growth.

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[881]

**TÍTULO / TITLE:** - Bruns Nystagmus in Cerebellopontine Angle Tumor.

**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 Mar 18:1. doi:

10.1001/jamaneurol.2013.619.

- Enlace al texto completo (gratis o de pago)

[1001/jamaneurol.2013.619](http://1001/jamaneurol.2013.619)

**AUTORES / AUTHORS:** - Venkateswaran R; Gupta R; Swaminathan RP

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[882]

**TÍTULO / TITLE:** - Primary intracranial germ cell tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Asian J Neurosurg. 2012 Oct;7(4):197-202. doi: 10.4103/1793-5482.106652.

- Enlace al texto completo (gratis o de pago) [4103/1793-5482.106652](http://4103/1793-5482.106652)

**AUTORES / AUTHORS:** - Mufti ST; Jamal A

**INSTITUCIÓN / INSTITUTION:** - Department of Anatomic Pathology, Faculty of Medicine, King Abdulaziz University and Hospital, Jeddah, Kingdom of Saudi Arabia.

**RESUMEN / SUMMARY:** - BACKGROUND: Primary intracranial germ cell tumors are rare (ICGCTs) and usually localized in the pineal and suprasellar regions of the brain. They are divided into histologic types: Germinoma, teratoma, choriocarcinoma, embryonal carcinoma, yolk sac tumor, and malignant mixed germ cell tumors (MMGCTs). Neuroimaging evaluation is useful to distinguish between the types of ICGCTs. Germinoma is highly sensitive to radiotherapy or/and chemotherapy, and is potentially curable without surgery. MMGCTs are treated with the combination of chemotherapy and radiation, with a poorer prognosis. ICGCTs warrant correct pre-operative diagnosis in order to decide on appropriate management. AIM: To report the clinicopathological and immunohistochemical findings in three cases of primary intracranial germ-cell tumor. MATERIALS AND METHODS: Three cases of intracranial germ cell tumors inclusive of both genders and all brain regions were retrieved from the archives of the Anatomical Pathology Department at King Abdul Aziz University Hospital, Jeddah between the years, 1995-2011, through a computerized search. RESULTS: Based on histological examination, they were respectively diagnosed as MMGCTs (two cases) and germinoma. Clinical, radiological, pathological characteristics and immunohistochemical profile of the three ICGCTs are presented along with the review of recent literature. CONCLUSION: ICGCTs are rare tumors affecting males more than females, and at the end of three years follow-up in the present study, treatment morbidity appears to be low with no recurrence observed among surviving patients, indicating that suprasellar and basal ganglia ICGCTs may have a favorable prognosis regardless of histological type. Pineal MMGCTs may have an aggressive course.

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[883]

**TÍTULO / TITLE:** - Three different brain tumours evolving from a common origin.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncogenesis. 2013 Apr 1;2:e41. doi: 10.1038/oncsis.2013.1.

●●Enlace al texto completo (gratis o de pago) [1038/oncsis.2013.1](https://doi.org/10.1038/oncsis.2013.1)

**AUTORES / AUTHORS:** - Forsheo T; Lewis P; Waldman A; Peterson D; Glaser M; Brock C; Sheer D; Mulholland PJ

**INSTITUCIÓN / INSTITUTION:** - Queen Mary University of London, Barts and The London School of Medicine and Dentistry, Blizard Institute, London, UK.

**RESUMEN / SUMMARY:** - Despite an improved understanding of the molecular aberrations that occur in glioblastoma, the use of molecularly targeted therapies have so far been disappointing. We present a patient with three different brain tumours: astrocytoma, glioblastoma and gliosarcoma. Genetic analysis showed that the three different brain tumours were derived from a common origin but had each developed unique genetic aberrations. Included in these, the glioblastoma had PDGFRA amplification, whereas the gliosarcoma had MYC amplification. We propose that genetic heterogeneity contributes to treatment failure and requires comprehensive assessment in the era of personalised medicine.

[884]

**TÍTULO / TITLE:** - Optic chiasm B-cell lymphoma in a 20-month-old Mastiff dog.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Vet Ophthalmol. 2013 May 15. doi: 10.1111/vop.12045.

●●Enlace al texto completo (gratis o de pago) [1111/vop.12045](https://doi.org/10.1111/vop.12045)

**AUTORES / AUTHORS:** - Nagel C; Silver T; Grahn B

**INSTITUCIÓN / INSTITUTION:** - Department of Small Animal Clinical Sciences, Western College of Veterinary Medicine, 52 Campus Drive, Saskatoon, SK, S7N 5B4, Canada.

**RESUMEN / SUMMARY:** - A 20-month-old intact female Mastiff dog presented for evaluation of acute blindness. Computed tomography confirmed a tumor involved the optic chiasm and optic nerves. A B-cell lymphoma was confirmed with postmortem examinations. This case report documents a central nervous system neoplasm in a young dog.

[885]

**TÍTULO / TITLE:** - Neuro-oncology: Paediatric brain tumours-when to operate?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Nat Rev Neurol. 2013 May 28. doi: 10.1038/nrneurol.2013.97.

●●Enlace al texto completo (gratis o de pago) [1038/nrneurol.2013.97](https://doi.org/10.1038/nrneurol.2013.97)

**AUTORES / AUTHORS:** - Chaichana KL; Quinones-Hinojosa A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, The Johns Hopkins University School of Medicine, Cancer Research Building II, 1550 Orleans Street, Baltimore, MD 21231, USA.

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[886]

**TÍTULO / TITLE:** - Lymphocytic hypophysitis masquerading as pituitary adenoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2012 Dec;16(Suppl 2):S304-6. doi: 10.4103/2230-8210.104069.

●●Enlace al texto completo (gratis o de pago) [4103/2230-8210.104069](#)

**AUTORES / AUTHORS:** - Mittal R; Kalra P; Dharmalingam M; Verma RG; Kulkarni S; Shetty P

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology, MS Ramaiah Medical College, Bangalore, India.

**RESUMEN / SUMMARY:** - INTRODUCTION: Pituitary hypophysitis (PH) is characterized by pituitary infiltration of lymphocytes, macrophages, and plasma cells that could lead to loss of pituitary function. Hypophysitis may be autoimmune or secondary to systemic diseases or infections. Based on the histopathological findings PH is classified into lymphocytic, granulomatous, xanthomatous, mixed forms (lymphogranulomatous, xanthogranulomatous), necrotizing and Immunoglobulin- G4 (IgG4) plasmacytic types. OBJECTIVE: To report a case of lymphocytic hypophysitis (LH). CASE REPORT: A 15-year-old girl presented with history of headache, amenorrhea, and history of polyuria for past 4 months. Initial evaluation had suppressed follicular stimulating hormone (<0.01 mIU/ml), high prolactin levels (110.85 ng/ml) and diabetes insipidus (DI). Magnetic resonance imaging of sella was suggestive of pituitary macroadenoma with partial compression over optic chiasma. Patient underwent surgical decompression. Yellowish firm tissue was evacuated and xanthochromic fluid was aspirated. Histopathology was suggestive of LH. She resumed her cycles postoperatively after 4 months, prolactin levels normalized, however, she continues to have DI and is on desmopressin spray. This case has been presented here for its rare presentation in an adolescent girl because it is mostly seen in young females and postpartum period and its unique presentation as an expanding pituitary mass with optic chiasma compression. CONCLUSION: Definitive diagnosis of LH is based on histopathological evaluation. Therapeutic approach should be based on the grade of suspicion and clinical manifestations of LH.

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[887]

**TÍTULO / TITLE:** - A novel zebrafish xenotransplantation model for study of glioma stem cell invasion.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 16;8(4):e61801. doi: 10.1371/journal.pone.0061801. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0061801](https://doi.org/10.1371/journal.pone.0061801)

**AUTORES / AUTHORS:** - Yang XJ; Cui W; Gu A; Xu C; Yu SC; Li TT; Cui YH; Zhang X; Bian XW

**INSTITUCIÓN / INSTITUTION:** - Institute of Pathology and Southwest Cancer Center, Southwest Hospital, Third Military Medical University, Chongqing, China ; Key Laboratory of Tumor Immunopathology of Ministry of Education of China, Third Military Medical University, Chongqing, China.

**RESUMEN / SUMMARY:** - Invasion and metastasis of solid tumors are the major causes of death in cancer patients. Cancer stem cells (CSCs) constitute a small fraction of tumor cell population, but play a critical role in tumor invasion and metastasis. The xenograft of tumor cells in immunodeficient mice is one of commonly used in vivo models to study the invasion and metastasis of cancer cells. However, this model is time-consuming and labor intensive. Zebrafish (*Danio rerio*) and their transparent embryos are emerging as a promising xenograft tumor model system for studies of tumor invasion. In this study, we established a tumor invasion model by using zebrafish embryo xenografted with human glioblastoma cell line U87 and its derived cancer stem cells (CSCs). We found that CSCs-enriched from U87 cells spreaded via the vessels within zebrafish embryos and such cells displayed an extremely high level of invasiveness which was associated with the up-regulated MMP-9 by CSCs. The invasion of glioma CSCs (GSCs) in zebrafish embryos was markedly inhibited by an MMP-9 inhibitor. Thus, our zebrafish embryo model is considered a cost-effective approach to studies of the mechanisms underlying the invasion of CSCs and suitable for high-throughput screening of novel anti-tumor invasion/metastasis agents.

[888]

**TÍTULO / TITLE:** - Panhypopituitarism with empty sella a sequel of pituitary hyperplasia due to chronic primary hypothyroidism.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Indian J Endocrinol Metab. 2012 Dec;16(Suppl 2):S282-4. doi: 10.4103/2230-8210.104060.

●●Enlace al texto completo (gratis o de pago) [4103/2230-8210.104060](https://doi.org/10.4103/2230-8210.104060)

**AUTORES / AUTHORS:** - Dutta D; Maisnam I; Ghosh S; Mukhopadhyay P; Mukhopadhyay S; Chowdhury S

**INSTITUCIÓN / INSTITUTION:** - Department of Endocrinology and Metabolism, IPGMR & SSKM Hospital, Kolkata, India.

**RESUMEN / SUMMARY:** - Asymptomatic reversible pituitary hyperplasia is common in patients with untreated primary hypothyroidism. Occurrence of empty sella (ES) in this scenario is extremely rare (only three reports till the

date) and panhypopituitarism has not been reported in such patients. We report a 27 year man with severe short stature (height-133 cm; standard deviation score-7.36) and delayed puberty who had symptoms suggestive of hypothyroidism along with chronic persistent headache since 6 years of age. Pituitary imaging done for headache at 11 years age showed pituitary hyperplasia. He was diagnosed of primary hypothyroidism for the 1(st) time at 21 year age, a diagnosis which was likely missed for 15 years. Levothyroxine therapy leads to resolution of all symptoms and a height gain of 28 cm over last 6 years. Evaluation for lack of progression of puberty along with chronic nausea, vomiting, fatigue and weight loss for the last 1 year revealed secondary hypocortisolism (9 am cortisol-4.8 mcg/dl; ACTH-3.2 pg/ml), growth hormone deficiency (IGF-1: 65 ng/ml; normal: 117-325 ng/ml) and hypogonadotropic hypogonadism (9 am testosterone: 98 ng/dl; [280-1500] LH-0.01 mIU/L [1.14-5.75]) with ES on magnetic resonance imaging (MRI) brain. Uncontrolled thyrotroph hyperplasia due to chronic untreated primary hypothyroidism for 15 years may have been damaging the adjacent corticotrophs, somatotrophs and gonadotrophs resulting in panhypopituitarism and empty sella. This is perhaps the first report of panhypopituitarism with empty sella syndrome developing in a patient with pituitary hyperplasia, a sequel of chronic untreated primary hypothyroidism.

[889]

**TÍTULO / TITLE:** - Brain cancer in workers employed at a specialty chemical research facility.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Arch Environ Occup Health. 2013;68(4):218-27. doi: 10.1080/19338244.2012.701248.

●●Enlace al texto completo (gratis o de pago)

[1080/19338244.2012.701248](#)

**AUTORES / AUTHORS:** - Alexander BH; Mandel JH; Scott LL; Ramachandran G; Chen YC

**INSTITUCIÓN / INSTITUTION:** - a Division of Environmental Health Sciences , University of Minnesota School of Public Health , Minneapolis , Minnesota , USA.

**RESUMEN / SUMMARY:** - ABSTRACT This study evaluated unique exposures and their relationship to brain cancer mortality in employees of a specialty chemical research facility. Following an exposure assessment that concerned compounds distinct to this facility, the authors conducted a cohort mortality study of 5,284 workers to assess mortality in reference to the general population and a nested case-control study to evaluate brain cancer risk associated with specific jobs and unique chemical exposures. Four hundred eighty-six deaths, including 14 brain cancer deaths, were identified. Overall mortality was lower than expected. Brain cancer mortality was elevated

(standardized mortality ratio [SMR] = 2.02, 95% confidence interval [CI] = 1.11-3.40). Exposures to 5 specific chemical categories were assessed. Exploration of work history and the specific chemical exposures did not explain the brain cancer cases. No clear occupational etiology was identified.

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[890]

**TÍTULO / TITLE:** - Two-peaked 5-ALA-induced PpIX fluorescence emission spectrum distinguishes glioblastomas from low grade gliomas and infiltrative component of glioblastomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomed Opt Express. 2013 Apr 1;4(4):548-58. doi: 10.1364/BOE.4.000548. Epub 2013 Mar 13.

●●Enlace al texto completo (gratis o de pago) [1364/BOE.4.000548](#)

**AUTORES / AUTHORS:** - Montcel B; Mahieu-William L; Armoiry X; Meyronet D; Guyotat J

**INSTITUCIÓN / INSTITUTION:** - CREATIS; Universite de Lyon; Universite Lyon1; CNRS UMR5220; INSERM U1044; INSA Lyon, Villeurbanne, France.

**RESUMEN / SUMMARY:** - 5-ALA-induced protoporphyrin IX (PpIX) fluorescence enables to guiding in intra-operative surgical glioma resection. However at present, it has yet to be shown that this method is able to identify infiltrative component of glioma. In extracted tumor tissues we measured a two-peaked emission in low grade gliomas and in the infiltrative component of glioblastomas due to multiple photochemical states of PpIX. The second emission peak appearing at 620 nm (shifted by 14 nm from the main peak at 634 nm) limits the sensibility of current methods to measured PpIX concentration. We propose new measured parameters, by taking into consideration the two-peaked emission, to overcome these limitations in sensitivity. These parameters clearly distinguish the solid component of glioblastomas from low grade gliomas and infiltrative component of glioblastomas.

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[891]

**TÍTULO / TITLE:** - Editorial: Ependymomas.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Spine. 2013 May 10.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.1.SPINE121111](#)

**AUTORES / AUTHORS:** - McCormick PC

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Columbia-Presbyterian Medical Center, New York, New York.

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[892]

**TÍTULO / TITLE:** - Extradural cyst causing spinal cord compression in osteoporotic compression fracture.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Spine. 2013 May 10.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.4.SPINE121101](#)

**AUTORES / AUTHORS:** - Lee JH; Kim KT; Suk KS; Lee SH; Jeong BO; Oh HS; Lee CH; Kim MS

**INSTITUCIÓN / INSTITUTION:** - Department of Orthopaedic Surgery, College of Medicine, Kyung Hee University, Seoul, Korea.

**RESUMEN / SUMMARY:** - Intraspinial cystic lesions with different pathogeneses have been reported to cause neurological deficits; however, no one has focused on the intraspinal extradural cysts that develop after osteoporotic compression fracture. The reported case features a 66-year-old woman presenting with progressive neurological deficit, back pain, and no history of additional trauma after undergoing conservative treatment for an osteoporotic fracture of L-1. The authors present serial radiographs and MR images demonstrating an epidural cyst successfully treated via a single posterior approach. This appears to be the first such case reported in the literature.

[893]

**TÍTULO / TITLE:** - Left ventricular endocardial echinococcosis associated with multiple intracranial hydatid cysts.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cardiothorac Surg. 2013 Apr 20;8:104. doi: 10.1186/1749-8090-8-104.

●●Enlace al texto completo (gratis o de pago) [1186/1749-8090-8-104](#)

**AUTORES / AUTHORS:** - Darwazah AK; Zaghari M; Eida M; Batrawy M

**INSTITUCIÓN / INSTITUTION:** - Department of Cardiac Surgery, Ramallah Hospital, Ramallah, Israel. [darwaz30@hotmail.com](mailto:darwaz30@hotmail.com).

**RESUMEN / SUMMARY:** - Cardiac echinococcosis is a rare disease. Its incidence varies from 0.02-2%. Commonly seen in the left ventricle arising from the myocardium in the subepicardial region. We report a 15-year-old boy presented with a rare combination of a left ventricular subendocardial hydatid cyst associated with multiple cysts in the left cerebral hemisphere and right posterior occipital lobe. The patient underwent successful surgical excision of the left ventricular hydatid cyst using cardiopulmonary bypass.

[894]

**TÍTULO / TITLE:** - The possibility that multiple mucocutaneous (palisaded encapsulated and nonencapsulated) neuromas may be a distinct entity.

**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: <> Dermatol. 2013 Apr 1;149(4):498-500. doi: 10.1001/jamadermatol.2013.2153.

●●Enlace al texto completo (gratis o de pago)

[1001/jamadermatol.2013.2153](http://1001/jamadermatol.2013.2153)

**AUTORES / AUTHORS:** - Misago N; Joh K; Soejima H; Narisawa Y

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[895]

**TÍTULO / TITLE:** - Primary intraocular central nervous system lymphoma masquerading as diffuse retinal vasculitis.

**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 Apr 30;2013. pii: bcr2013009354. doi: 10.1136/bcr-2013-009354.

●●Enlace al texto completo (gratis o de pago) [1136/bcr-2013-009354](http://1136/bcr-2013-009354)

**AUTORES / AUTHORS:** - Katoch D; Bansal R; Nijhawan R; Gupta A

**INSTITUCIÓN / INSTITUTION:** - Department of Advanced Eye Centre, Post Graduate Institute of Medical Education and Research, Chandigarh, India.

**RESUMEN / SUMMARY:** - A 49-year-old woman had blurred vision and floaters of 4 days duration in the right eye. Ocular examination revealed granulomatous panuveitis, vitritis and diffuse retinal vasculitis. Following a strongly positive tuberculin skin test, she received antitubercular therapy with oral steroids and immunosuppressants. A year later, despite therapy, vitritis and vasculitis persisted. Additionally, yellowish white lesions appeared beneath the retinal pigment epithelium. Fluorescein angiography revealed a leopard skin appearance. Following a negative vitreous biopsy, she was subjected to a chorioretinal biopsy which revealed non-Hodgkin's lymphoma. MRI was normal. The ocular lesions resolved following intravitreal methotrexate injections. MRI of the brain was repeated every 3 months to rule out central nervous system (CNS) involvement. About 2.5 years after initial presentation, she complained of ataxia, hypersomnia and speech difficulty. MRI of the brain now showed lesions in the thalamocapsular region and the corpus callosum splenium suggestive of CNS lymphoma. She underwent a whole brain radiation with symptomatic improvement followed by chemotherapy.

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[896]

**TÍTULO / TITLE:** - Proteomic analysis of glioblastomas: What is the best brain control sample?

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Proteomics. 2013 May 4;85C:165-173. doi: 10.1016/j.jprot.2013.04.031.

●●Enlace al texto completo (gratis o de pago) [1016/j.jprot.2013.04.031](http://1016/j.jprot.2013.04.031)

**AUTORES / AUTHORS:** - Lemee JM; Com E; Clavreul A; Avril T; Quillien V; de Tayrac M; Pineau C; Menei P

**INSTITUCIÓN / INSTITUTION:** - Departement de Neurochirurgie, Centre Hospitalier Universitaire d'Angers, LUNAM universite, 4 rue Larrey, 49100 Angers, France; LUNAM Universite, INSERM UMR-1066, Micro- et Nanomedecine Biomimetiques (MINT), 4 rue Larrey, 49100 Angers, France. Electronic address: [lemee.jmichel@wanadoo.fr](mailto:lemee.jmichel@wanadoo.fr).

**RESUMEN / SUMMARY:** - Glioblastoma (GB) is the most frequent and aggressive tumor of the central nervous system. There is currently growing interest in proteomic studies of GB, particularly with the aim of identifying new prognostic or therapeutic response markers. However, comparisons between different proteomic analyses of GB have revealed few common differentiated proteins. The types of control samples used to identify such proteins may in part explain the different results obtained. We therefore tried to determine which control samples would be most suitable for GB proteomic studies. We used an isotope-coded protein labeling (ICPL) method followed by mass spectrometry to reveal and compare the protein patterns of two commonly used types of control sample: GB peritumoral brain zone samples (PBZ) from six patients and epilepsy surgery brain samples (EB) pooled from three patients. The data obtained were processed using AMEN software for network analysis. We identified 197 non-redundant proteins and 35 of them were differentially expressed. Among these 35 differentially expressed proteins, six were over-expressed in PBZ and 29 in EB, showing different proteomic patterns between the two samples. Surprisingly, EB appeared to display a tumoral-like expression pattern in comparison to PBZ. In our opinion, PBZ may be more appropriate control sample for GB proteomic analysis. **BIOLOGICAL SIGNIFICANCE:** This manuscript describes an original study in which we used an isotope-coded protein labeling method followed by mass spectrometry to identify and compare the protein patterns in two types of sample commonly used as control for glioblastoma (GB) proteomic analysis: peritumoral brain zone and brain samples obtained during surgery for epilepsy. The choice of control samples is critical for identifying new prognostic and/or diagnostic markers in GB.

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[897]

**TÍTULO / TITLE:** - Radiosensitization of Glioblastoma Cell Lines by the Dual PI3K and mTOR Inhibitor NVP-BE235 Depends on Drug-Irradiation Schedule.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Transl Oncol. 2013 Apr;6(2):169-79. Epub 2013 Apr 1.

**AUTORES / AUTHORS:** - Kuger S; Graus D; Brendtke R; Gunther N; Katzer A; Lutyj P; Polat B; Chatterjee M; Sukhorukov VL; Flentje M; Djuzenova CS

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, University of Wurzburg, Wurzburg, Germany.

**RESUMEN / SUMMARY:** - Previous studies have shown that the dual phosphatidylinositide 3-kinase/mammalian target of rapamycin (PI3K/mTOR) inhibitor NVP-BEZ235 radiosensitizes tumor cells if added shortly before ionizing radiation (IR) and kept in culture medium thereafter. The present study explores the impact of inhibitor and IR schedule on the radiosensitizing ability of NVP-BEZ235 in four human glioblastoma cell lines. Two different drug-IR treatment schedules were compared. In schedule I, cells were treated with NVP-BEZ235 for 24 hours before IR and the drug was removed before IR. In schedule II, the cells were exposed to NVP-BEZ235 1 hour before, during, and up to 48 hours after IR. The cellular response was analyzed by colony counts, expression of marker proteins of the PI3K/AKT/mTOR pathway, cell cycle, and DNA damage. We found that under schedule I, NVP-BEZ235 did not radiosensitize cells, which were mostly arrested in G1 phase during IR exposure. In addition, the drug-pretreated and irradiated cells exhibited less DNA damage but increased expressions of phospho-AKT and phospho-mTOR, compared to controls. In contrast, NVP-BEZ235 strongly enhanced the radiosensitivity of cells treated according to schedule II. Possible reasons of radiosensitization by NVP-BEZ235 under schedule II might be the protracted DNA repair, prolonged G2/M arrest, and, to some extent, apoptosis. In addition, the PI3K pathway was downregulated by the NVP-BEZ235 at the time of irradiation under schedule II, as contrasted with its activation in schedule I. We found that, depending on the drug-IR schedule, the NVP-BEZ235 can act either as a strong radiosensitizer or as a cytostatic agent in glioblastoma cells.

[898]

**TÍTULO / TITLE:** - A pituitary tumour presenting with rhinolalia and galactorrhoea.

**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 Apr 18;2013. pii: bcr2013009190. doi: 10.1136/bcr-2013-009190.

●●Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-009190](http://1136/bcr-2013-009190)

**AUTORES / AUTHORS:** - Anwuzia-Iwegbu C; Akker S

**INSTITUCIÓN / INSTITUTION:** - Department of Specialist Endocrine, Barts & The Royal London, London, UK. [c.anwuzia-iwegbu@uea.ac.uk](mailto:c.anwuzia-iwegbu@uea.ac.uk)

[899]

**TÍTULO / TITLE:** - An expanded role for Caveolin-1 in brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Cycle. 2013 May 15;12(10):1485-6. doi: 10.4161/cc.24855. Epub 2013 Apr 29.

●●Enlace al texto completo (gratuito o de pago) [4161/cc.24855](http://4161/cc.24855)

**AUTORES / AUTHORS:** - Tanowitz HB; Machado FS; Avantiaggiati ML; Albanese C

**INSTITUCIÓN / INSTITUTION:** - Departments of Pathology and Medicine; Albert Einstein College of Medicine; Bronx NY USA.

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[900]

**TÍTULO / TITLE:** - Glioblastoma multiforme masquerading as herpes simplex encephalitis.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Br J Hosp Med (Lond). 2013 Jan;74(1):52-3.

**AUTORES / AUTHORS:** - Smithson E; Lerner AJ

**INSTITUCIÓN / INSTITUTION:** - Walton Centre for Neurology and Neurosurgery, Liverpool L9 7LJ.

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[901]

**TÍTULO / TITLE:** - Esthesioneuroblastoma arising from the middle meatus.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Cancer Res Ther. 2013 Jan-Mar;9(1):99-101. doi: 10.4103/0973-1482.110391.

●●Enlace al texto completo (gratis o de pago) [4103/0973-1482.110391](http://4103/0973-1482.110391)

**AUTORES / AUTHORS:** - Kumar A; Sethi B; Kumar Y; Mishra JP

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, VCSG Govt Medical Sciences and Research Institute, Srinagar, Uttarakhand, India.

**RESUMEN / SUMMARY:** - A 35-year-old female presented with 13-year history of unilateral recurrent nasal mass, epistaxis and facial pain. Nasal examination revealed a pale glistening mass in the right nasal cavity. On probing, mass was insensitive to touch and bled on handling. Computed tomographic scan showed a mass filling the right nasal cavity, ipsilateral maxillary and ethmoid sinuses. Diagnosis of pansinusitis polyposis was made. Transnasal endoscopy-assisted excision of the mass was done, and the diagnosis of olfactory neuroblastoma was established by histopathology and confirmed by immunohistochemistry. The mass was classified as a Kadish stage B tumor. Further intervention including medial maxillectomy and ethmoidectomy, and complete endoscopic-resection of the tumor from cribriform plate was done via lateral rhinotomy approach. The tumor was found adhered to the lateral wall-the middle meatus and was easily peeled away from the cribriform plate and ethmoids. Patient was referred for radiotherapy. No evidence of loco-regional recurrence or systemic metastasis observed at 10-month follow-up.

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[902]

**TÍTULO / TITLE:** - Histological and Demographic Characteristics of the Distribution of Brain and Central Nervous System Tumors' Sizes: Results from SEER Registries Using Statistical Methods.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Biomed Sci. 2012 Sep;8(3):152-62.

**AUTORES / AUTHORS:** - Pokhrel KP; Vovoras D; Tsokos CP

**INSTITUCIÓN / INSTITUTION:** - Department of Mathematics and Statistics, University of South Florida, USA.

**RESUMEN / SUMMARY:** - The examination of brain tumor growth and its variability among cancer patients is an important aspect of epidemiologic and medical data. Several studies for tumors of brain interpreted descriptive data, in this study we perform inference in the extent possible, suggesting possible explanations for the differentiation in the survival rates apparent in the epidemiologic data. Population based information from nine registries in the USA are classified with respect to age, gender, race and tumor histology to study tumor size variation. The Weibull and Dagum distributions are fitted to the highly skewed tumor sizes distributions, the parametric analysis of the tumor sizes showed significant differentiation between sexes, increased skewness for both the male and female populations, as well as decreased kurtosis for the black female population. The effect of population characteristics on the distribution of tumor sizes is estimated by quantile regression model and then compared with the ordinary least squares results. The higher quantiles of the distribution of tumor sizes for whites are significantly higher than those of other races. Our model predicted that the effect of age in the lower quantiles of the tumor sizes distribution is negative given the variables race and sex. We apply probability and regression models to explore the effects of demographic and histology types and observe significant racial and gender differences in the form of the distributions. Efforts are made to link tumor size data with available survival rates in relation to other prognostic variables.

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[903]

**TÍTULO / TITLE:** - Isolated thalamic tuberculoma presenting as ataxic hemiparesis.

**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 Apr 10;2013. pii: bcr2013009100. doi: 10.1136/bcr-2013-009100.

- Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-009100](http://1136/bcr-2013-009100)

**AUTORES / AUTHORS:** - Sahu R; Patil TB; Kori P; Shukla R

**INSTITUCIÓN / INSTITUTION:** - Department of Neurology, King George's Medical University, Lucknow, Uttar Pradesh, India.

**RESUMEN / SUMMARY:** - Lacunar syndrome is a neurodeficit secondary to a deep cerebral lesion, usually because of microatheroma of small arteries. Ataxic hemiparesis (AH) is a lacunar syndrome with unilateral pyramidal weakness

and ipsilateral ataxia. Thalamic tuberculoma, as a cause of AH, has not been previously described in the literature. We describe an elderly man who presented with left hemiparesis and ipsilateral ataxia. Clinical examination revealed upper motor neuron left facial paresis and left-sided hemiparesis. The patient had incoordination in left upper and lower limbs. Mantoux test was positive and erythrocyte sedimentation rate was elevated. MRI of brain showed a conglomerated hypointense lesion in the right thalamus with a peripheral hyperintensity on T1-weighted imaging and a hyperintense lesion in T2-weighted imaging with significant perilesional oedema, suggesting a tuberculoma. The patient was treated with antitubercular therapy and was symptomatically better at the 9 months follow-up.

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[904]

**TÍTULO / TITLE:** - Primary central nervous system lymphoma in immunocompetent individuals: a single center experience.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Exp Pathol. 2013 May 15;6(6):1068-75. Print 2013.

**AUTORES / AUTHORS:** - Aki H; Uzunaslán D; Saygin C; Batur S; Tuzuner N; Kafadar A; Ongoren S; Oz B

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Istanbul University, Cerrahpasa Faculty of Medicine Istanbul, Turkey.

**RESUMEN / SUMMARY:** - Primary central nervous system lymphoma (PCNSL) is defined as the involvement of brain, leptomeninges, eyes or spinal cord by non-Hodgkin lymphoma. The role of various prognostic markers in predicting adverse outcome is debated. **OBJECTIVES:** To investigate the clinical and immunohistochemical findings of immunocompetent PCNSL cases (39 cases) diagnosed at the study center, and evaluate the influence of potential prognostic factors on overall survival (OS) of patients. **METHODS:** Data regarding patient characteristics, neuroimaging, pathological and immunohistochemical features and follow-up were obtained from patient records. The influence of potential prognostic parameters on OS was investigated by log-rank test and Cox regression analysis. **RESULTS:** Patients who received combined chemotherapy and radiotherapy had a significantly better OS when compared to chemotherapy alone. Other variables included in this study were not associated with a significant survival advantage. **CONCLUSION:** In this study, we failed to demonstrate a relationship between different clinicopathological variables and OS of patients. Prospective studies with large patient series are needed to investigate other potential prognostic factors.

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[905]

**TÍTULO / TITLE:** - Caveolin-1 is a negative regulator of tumor growth in glioblastoma and modulates chemosensitivity to temozolomide.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cell Cycle. 2013 May 15;12(10):1510-20. doi: 10.4161/cc.24497. Epub 2013 Apr 17.

●●Enlace al texto completo (gratis o de pago) [4161/cc.24497](#)

**AUTORES / AUTHORS:** - Quann K; Gonzales DM; Mercier I; Wang C; Sotgia F; Pestell RG; Lisanti MP; Jasmin JF

**INSTITUCIÓN / INSTITUTION:** - Department of Stem Cell Biology & Regenerative Medicine; Kimmel Cancer Center; Thomas Jefferson University; Philadelphia, PA USA.

**RESUMEN / SUMMARY:** - Caveolin-1 (Cav-1) is a critical regulator of tumor progression in a variety of cancers where it has been shown to act as either a tumor suppressor or tumor promoter. In glioblastoma multiforme, it has been previously demonstrated to function as a putative tumor suppressor. Our studies here, using the human glioblastoma-derived cell line U-87MG, further support the role of Cav-1 as a negative regulator of tumor growth. Using a lentiviral transduction approach, we were able to stably overexpress Cav-1 in U-87MG cells. Gene expression microarray analyses demonstrated significant enrichment in gene signatures corresponding to downregulation of MAPK, PI3K/AKT and mTOR signaling, as well as activation of apoptotic pathways in Cav-1-overexpressing U-87MG cells. These same gene signatures were later confirmed at the protein level in vitro. To explore the ability of Cav-1 to regulate tumor growth in vivo, we further show that Cav-1-overexpressing U-87MG cells display reduced tumorigenicity in an ectopic xenograft mouse model, with marked hypoactivation of MAPK and PI3K/mTOR pathways. Finally, we demonstrate that Cav-1 overexpression confers sensitivity to the most commonly used chemotherapy for glioblastoma, temozolomide. In conclusion, Cav-1 negatively regulates key cell growth and survival pathways and may be an effective biomarker for predicting response to chemotherapy in glioblastoma.

[906]

**TÍTULO / TITLE:** - RTEL1 tagging SNPs and haplotypes were associated with glioma development.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Diagn Pathol. 2013 May 17;8:83. doi: 10.1186/1746-1596-8-83.

●●Enlace al texto completo (gratis o de pago) [1186/1746-1596-8-83](#)

**AUTORES / AUTHORS:** - Li G; Jin T; Liang H; Zhang Z; He S; Tu Y; Yang H; Geng T; Cui G; Chen C; Gao G

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Tangdu hospital, the Fourth Military Medical University, Xi'an, 710038, China. [chenchao@163.com](mailto:chenchao@163.com).

**RESUMEN / SUMMARY:** - As glioma ranks as the first most prevalent solid tumors in primary central nervous system, certain single-nucleotide polymorphisms (SNPs) may be related to increased glioma risk, and have implications in carcinogenesis. The present case-control study was carried out to elucidate how common variants contribute to glioma susceptibility. Ten candidate tagging SNPs (tSNPs) were selected from seven genes whose polymorphisms have been proven by classical literatures and reliable databases to be tended to relate with gliomas, and with the minor allele frequency (MAF) > 5% in the HapMap Asian population. The selected tSNPs were genotyped in 629 glioma patients and 645 controls from a Han Chinese population using the multiplexed SNP MassEXTEND assay calibrated. Two significant tSNPs in RTEL1 gene were observed to be associated with glioma risk (rs6010620, P = 0.0016, OR: 1.32, 95% CI: 1.11-1.56; rs2297440, P = 0.001, OR: 1.33, 95% CI: 1.12-1.58) by chi2 test. It was identified the genotype "GG" of rs6010620 acted as the protective genotype for glioma (OR, 0.46; 95% CI, 0.31-0.7; P = 0.0002), while the genotype "CC" of rs2297440 as the protective genotype in glioma (OR, 0.47; 95% CI, 0.31-0.71; P = 0.0003). Furthermore, haplotype "GCT" in RTEL1 gene was found to be associated with risk of glioma (OR, 0.7; 95% CI, 0.57-0.86; Fisher's P = 0.0005; Pearson's P = 0.0005), and haplotype "ATT" was detected to be associated with risk of glioma (OR, 1.32; 95% CI, 1.12-1.57; Fisher's P = 0.0013; Pearson's P = 0.0013). Two single variants, the genotypes of "GG" of rs6010620 and "CC" of rs2297440 (rs6010620 and rs2297440) in the RTEL1 gene, together with two haplotypes of GCT and ATT, were identified to be associated with glioma development. And it might be used to evaluate the glioma development risks to screen the above RTEL1 tagging SNPs and haplotypes. VIRTUAL SLIDES: The virtual slides for this article can be found here: <http://www.diagnosticpathology.diagnomx.eu/vs/1993021136961998>.

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[907]

**TÍTULO / TITLE:** - Invasion of primary glioma- and cell line-derived spheroids implanted into corticostriatal slice cultures.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Int J Clin Exp Pathol. 2013;6(4):546-60. Epub 2013 Mar 15.

**AUTORES / AUTHORS:** - Aaberg-Jessen C; Norregaard A; Christensen K; Pedersen CB; Andersen C; Kristensen BW

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Odense University Hospital, Odense, Denmark.

**RESUMEN / SUMMARY:** - Gliomas are highly invasive tumors and the pronounced invasive features of gliomas prevent radical surgical resection. In the search for new therapeutics targeting invasive glioma cells, in vivo-like in vitro models are of great interest. We developed and evaluated an in vivo-like in vitro model preserving the invasive features and stem cell features of glioma cells.

Fluorescently labelled primary glioma spheroids and U87MG cell line-derived spheroids were implanted into organotypic rat corticostriatal slice cultures and the invasion was followed over time by confocal microscopy. The invasion was validated immunohistochemically with paraffin sections using a human-specific vimentin antibody. Moreover, the preservation of immature stem cell features was evaluated immunohistochemically using the stem cell markers CD133, Sox2, Bmi-1 and nestin. The confocal and immunohistochemical results showed that the primary glioma spheroid area was constant or decreasing after implantation, with a clear increase in the number of invading cells over time. In contrast, the U87MG spheroid area increased after implantation, with no convincing tumor cell invasion. High levels of Bmi-1 and nestin were found in all spheroids, whereas high levels of Sox2 and low to moderate levels of CD133 were only found in the primary spheroids. In conclusion, the invasion of gliomas is preserved using primary glioma spheroids. Some stem cell features are preserved as well, making this model useful in drug development elucidating both invasion and cancer stemness at the early in vitro level.

[908]

**TÍTULO / TITLE:** - Paraganglioma of the thyroid gland: cytologists' enigma.

**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 May 22;2013. pii: bcr2013009518. doi: 10.1136/bcr-2013-009518.

●●Enlace al texto completo (gratis o de pago) [1136/bcr-2013-009518](http://1136/bcr-2013-009518)

**AUTORES / AUTHORS:** - Akhtar K; Sen Ray P; Ahmad SS; Sherwani RK

**INSTITUCIÓN / INSTITUTION:** - Department of Pathology, Jawaharlal Nehru Medical College, AMU, Aligarh, Uttar Pradesh, India.

**RESUMEN / SUMMARY:** - Paraganglioma is a neuroendocrine tumour derived from extra-adrenal cells of the neural crest paraganglia of the autonomic nervous system. These rare neoplasms comprise of around 0.012% of head and neck tumours. Paraganglioma arising in the thyroid gland is exceptionally uncommon and can present as a diagnostic challenge on fine-needle aspiration cytology (FNAC). We report a case of primary thyroid paraganglioma in a 19-year-old woman who presented with a solitary thyroid nodule without palpable cervical lymphadenopathy. FNAC from the lesion caused diagnostic dilemma by mimicking follicular neoplasm and C-cell-derived thyroid tumours; final diagnosis was established by histopathology and immunohistochemistry. The main purpose of this case report is to discuss the differential diagnosis and emphasise on the need of immune markers in the diagnosis of thyroid paraganglioma. In view of the uncertain malignant potential of these tumours, a long-term follow-up is recommended.

[909]

**TÍTULO / TITLE:** - Selective targeting of brain tumors with gold nanoparticle-induced radiosensitization.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 30;8(4):e62425. doi: 10.1371/journal.pone.0062425. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062425](https://doi.org/10.1371/journal.pone.0062425)

**AUTORES / AUTHORS:** - Joh DY; Sun L; Stangl M; Al Zaki A; Murty S; Santoiemma PP; Davis JJ; Baumann BC; Alonso-Basanta M; Bhang D; Kao GD; Tsourkas A; Dorsey JF

**INSTITUCIÓN / INSTITUTION:** - Department of Radiation Oncology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, United States of America.

**RESUMEN / SUMMARY:** - Successful treatment of brain tumors such as glioblastoma multiforme (GBM) is limited in large part by the cumulative dose of Radiation Therapy (RT) that can be safely given and the blood-brain barrier (BBB), which limits the delivery of systemic anticancer agents into tumor tissue. Consequently, the overall prognosis remains grim. Herein, we report our pilot studies in cell culture experiments and in an animal model of GBM in which RT is complemented by PEGylated-gold nanoparticles (GNPs). GNPs significantly increased cellular DNA damage inflicted by ionizing radiation in human GBM-derived cell lines and resulted in reduced clonogenic survival (with dose-enhancement ratio of approximately 1.3). Intriguingly, combined GNP and RT also resulted in markedly increased DNA damage to brain blood vessels. Follow-up in vitro experiments confirmed that the combination of GNP and RT resulted in considerably increased DNA damage in brain-derived endothelial cells. Finally, the combination of GNP and RT increased survival of mice with orthotopic GBM tumors. Prior treatment of mice with brain tumors resulted in increased extravasation and in-tumor deposition of GNP, suggesting that RT-induced BBB disruption can be leveraged to improve the tumor-tissue targeting of GNP and thus further optimize the radiosensitization of brain tumors by GNP. These exciting results together suggest that GNP may be usefully integrated into the RT treatment of brain tumors, with potential benefits resulting from increased tumor cell radiosensitization to preferential targeting of tumor-associated vasculature.

[910]

**TÍTULO / TITLE:** - Components of the canonical and non-canonical wnt pathways are not mis-expressed in pituitary tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 26;8(4):e62424. doi: 10.1371/journal.pone.0062424. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062424](https://doi.org/10.1371/journal.pone.0062424)

**AUTORES / AUTHORS:** - Colli LM; Saggiaro F; Serafini LN; Camargo RC; Machado HR; Moreira AC; Antonini SR; de Castro M

**INSTITUCIÓN / INSTITUTION:** - Department of Internal Medicine, School of Medicine of Ribeirao Preto, University of Sao Paulo, Sao Paulo, Brazil.

**RESUMEN / SUMMARY:** - INTRODUCTION: Canonical and non-canonical Wnt pathways are involved in the genesis of multiple tumors; however, their role in pituitary tumorigenesis is mostly unknown. OBJECTIVE: This study evaluated gene and protein expression of Wnt pathways in pituitary tumors and whether these expression correlate to clinical outcome. MATERIALS AND METHODS: GENES OF THE WNT CANONICAL PATHWAY: activating ligands (WNT11, WNT4, WNT5A), binding inhibitors (DKK3, sFRP1), beta-catenin (CTNNB1), beta-catenin degradation complex (APC, AXIN1, GSK3beta), inhibitor of beta-catenin degradation complex (AKT1), sequester of beta-catenin (CDH1), pathway effectors (TCF7, MAPK8, NFAT5), pathway mediators (DVL-1, DVL-2, DVL-3, PRICKLE, VANGL1), target genes (MYB, MYC, WISP2, SPRY1, TP53, CCND1); calcium dependent pathway (PLCB1, CAMK2A, PRKCA, CHP); and planar cell polarity pathway (PTK7, DAAM1, RHOA) were evaluated by QPCR, in 19 GH-, 18 ACTH-secreting, 21 non-secreting (NS) pituitary tumors, and 5 normal pituitaries. Also, the main effectors of canonical (beta-catenin), planar cell polarity (JNK), and calcium dependent (NFAT5) Wnt pathways were evaluated by immunohistochemistry. RESULTS: There are no differences in gene expression of canonical and non-canonical Wnt pathways between all studied subtypes of pituitary tumors and normal pituitaries, except for WISP2, which was over-expressed in ACTH-secreting tumors compared to normal pituitaries (4.8x; p = 0.02), NS pituitary tumors (7.7x; p = 0.004) and GH-secreting tumors (5.0x; p = 0.05). beta-catenin, NFAT5 and JNK proteins showed no expression in normal pituitaries and in any of the pituitary tumor subtypes. Furthermore, no association of the studied gene or protein expression was observed with tumor size, recurrence, and progressive disease. The hierarchical clustering showed a regular pattern of genes of the canonical and non-canonical Wnt pathways randomly distributed throughout the dendrogram. CONCLUSIONS: Our data reinforce previous reports suggesting no activation of canonical Wnt pathway in pituitary tumorigenesis. Moreover, we describe, for the first time, evidence that non-canonical Wnt pathways are also not mis-expressed in the pituitary tumors.

[911]

**TÍTULO / TITLE:** - Neuroleptic malignant syndrome masked by cerebral malaria.

**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 May 22;2013. pii: bcr2013009061. doi: 10.1136/bcr-2013-009061.

●●Enlace al texto completo (gratuito o de pago) [1136/bcr-2013-009061](http://1136/bcr-2013-009061)

**AUTORES / AUTHORS:** - Rajesh KM; Sinnathamby V; Sakthi AN

**INSTITUCIÓN / INSTITUTION:** - Medicine Based Department, School of Medicine, Universiti Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia.

**RESUMEN / SUMMARY:** - A 38-year-old man with an underlying psychiatric illness presented with altered sensorium and abnormal behaviour. He was febrile at 38 degrees C and weak looking; otherwise no other abnormalities were detected. A blood film conducted for malarial parasite (BFMP) revealed Plasmodium falciparum; hence a diagnosis of cerebral malaria was made. He was treated with antimalarial drugs for 2 days prior to being transferred out to the ward following clinical improvement. He subsequently developed episodes of stupor and refusal of feeding. Following an evaluation by the psychiatrist, a diagnosis of catatonic schizophrenia was made and he was started on oral sulpiride and benhexol. Unfortunately, he developed high-grade fever at 40 degrees C with muscle rigidity and fasciculation. The diagnosis of neuroleptic malignant syndrome (NMS) was clinched and the antipsychotics were discontinued. However he succumbed to NMS several days later due to multiorgan failure.

[912]

**TÍTULO / TITLE:** - Exomic sequencing of four rare central nervous system tumor types.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Oncotarget. 2013 Apr;4(4):572-83.

**AUTORES / AUTHORS:** - Bettegowda C; Agrawal N; Jiao Y; Wang Y; Wood LD; Rodriguez FJ; Hruban RH; Gallia GL; Binder ZA; Riggins CJ; Salmasi V; Riggins GJ; Reitman ZJ; Rasheed A; Keir S; Shinjo S; Marie S; McLendon R; Jallo G; Vogelstein B; Bigner D; Yan H; Kinzler KW; Papadopoulos N

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Johns Hopkins University School of Medicine, Baltimore, MD, USA.

**RESUMEN / SUMMARY:** - A heterogeneous population of uncommon neoplasms of the central nervous system (CNS) cause significant morbidity and mortality. To explore their genetic origins, we sequenced the exomes of 12 pleomorphic xanthoastrocytomas (PXA), 17 non-brainstem pediatric glioblastomas (PGBM), 8 intracranial ependymomas (IEP) and 8 spinal cord ependymomas (SCEP). Analysis of the mutational spectra revealed that the predominant single base pair substitution was a C:G>T:A transition in each of the four tumor types. Our data confirm the critical roles of several known driver genes within CNS neoplasms, including TP53 and ATRX in PGBM, and NF2 in SCEPs.

Additionally, we show that activating BRAF mutations play a central role in both low and high grade glial tumors. Furthermore, alterations in genes coding for members of the mammalian target of rapamycin (mTOR) pathway were observed in 33% of PXA. Our study supports the hypothesis that pathologically similar tumors arising in different age groups and from different compartments may represent distinct disease processes with varied genetic composition.

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[913]

**TÍTULO / TITLE:** - Craniopharyngiomas: infradiaphragmatic and supradiaphragmatic type and their management in modern times.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World Neurosurg. 2013 Mar 26. pii: S1878-8750(13)00551-2. doi: 10.1016/j.wneu.2013.03.057.

●●Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.03.057](#)

**AUTORES / AUTHORS:** - Cavallo LM; Cappabianca P

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences & Reproductive and Odontostomatological Sciences, Division of Neurosurgery Università degli Studi di Napoli Federico II, Naples, Italy.

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[914]

**TÍTULO / TITLE:** - Cerebral Revascularization for Skull Base Tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - World Neurosurg. 2013 Mar 26. pii: S1878-8750(13)00546-9. doi: 10.1016/j.wneu.2013.03.052.

●●Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.03.052](#)

**AUTORES / AUTHORS:** - Berg-Johnsen J; Helseth E; Langmoen IA

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosurgery, Oslo University Hospital and University of Oslo, Oslo Norway Postal address: Pb 4956 Nydalen, 0424 Oslo, Norway.

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[915]

**TÍTULO / TITLE:** - Prominin 1/CD133 Endothelium Sustains Growth of Proneural Glioma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 Apr 25;8(4):e62150. doi: 10.1371/journal.pone.0062150. Print 2013.

●●Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0062150](#)

**AUTORES / AUTHORS:** - Ding BS; James D; Iyer R; Falciatori I; Hambardzumyan D; Wang S; Butler JM; Rabbany SY; Hormigo A

**INSTITUCIÓN / INSTITUTION:** - Ansary Stem Cell Institute, and Department of Genetic Medicine, Weill Cornell Medical College, New York, New York, United States of America.

**RESUMEN / SUMMARY:** - In glioblastoma high expression of the CD133 gene, also called Prominin1, is associated with poor prognosis. The PDGF-driven proneural group represents a subset of glioblastoma in which CD133 is not overexpressed. Interestingly, this particular subset shows a relatively good prognosis. As with many other tumors, glioblastoma is believed to arise and be maintained by a restricted population of stem-like cancer cells that express the CD133 transmembrane protein. The significance of CD133(+) cells for gliomagenesis is controversial because of conflicting supporting evidence. Contributing to this inconsistency is the fact that the isolation of CD133(+) cells has largely relied on the use of antibodies against ill-defined glycosylated epitopes of CD133. To overcome this problem, we used a knock-in lacZ reporter mouse, Prom1(lacZ/+), to track Prom1(+) cells in the brain. We found that Prom1 (prominin1, murine CD133 homologue) is expressed by cells that express markers characteristic of the neuronal, glial or vascular lineages. In proneural tumors derived from injection of RCAS-PDGF into the brains of tv-a;Ink4a-Arf(-/-) Prom1(lacZ/+) mice, Prom1(+) cells expressed markers for astrocytes or endothelial cells. Mice co-transplanted with proneural tumor sphere cells and Prom1(+) endothelium had a significantly increased tumor burden and more vascular proliferation (angiogenesis) than those co-transplanted with Prom1(-) endothelium. We also identified specific genes in Prom1(+) endothelium that code for endothelial signaling modulators that were not overexpressed in Prom1(-) endothelium. These factors may support proneural tumor progression and could be potential targets for anti-angiogenic therapy.

[916]

**TÍTULO / TITLE:** - Telomere length modulation in human astroglial brain tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - PLoS One. 2013 May 14;8(5):e64296. doi: 10.1371/journal.pone.0064296. Print 2013.

●●Enlace al texto completo (gratuito o de pago)

[1371/journal.pone.0064296](http://dx.doi.org/10.1371/journal.pone.0064296)

**AUTORES / AUTHORS:** - La Torre D; Conti A; Aguenouz MH; De Pasquale MG; Romeo S; Angileri FF; Cardali S; Tomasello C; Alafaci C; Germano A

**INSTITUCIÓN / INSTITUTION:** - Department of Neurosciences, University of Messina School of Medicine, Messina, Italy.

**RESUMEN / SUMMARY:** - BACKGROUND: Telomeres alteration during carcinogenesis and tumor progression has been described in several cancer types. Telomeres length is stabilized by telomerase (h-TERT) and controlled by several proteins that protect telomere integrity, such as the Telomere Repeat-

binding Factor (TRF) 1 and 2 and the tankyrase-poli-ADP-ribose polymerase (TANKs-PARP) complex. OBJECTIVE: To investigate telomere dysfunction in astroglial brain tumors we analyzed telomeres length, telomerase activity and the expression of a panel of genes controlling the length and structure of telomeres in tissue samples obtained in vivo from astroglial brain tumors with different grade of malignancy. MATERIALS AND METHODS: Eight Low Grade Astrocytomas (LGA), 11 Anaplastic Astrocytomas (AA) and 11 Glioblastoma Multiforme (GBM) samples were analyzed. Three samples of normal brain tissue (NBT) were used as controls. Telomeres length was assessed through Southern Blotting. Telomerase activity was evaluated by a telomere repeat amplification protocol (TRAP) assay. The expression levels of TRF1, TRF2, h-TERT and TANKs-PARP complex were determined through Immunoblotting and RT-PCR. RESULTS: LGA were featured by an up-regulation of TRF1 and 2 and by shorter telomeres. Conversely, AA and GBM were featured by a down-regulation of TRF1 and 2 and an up-regulation of both telomerase and TANKs-PARP complex. CONCLUSIONS: In human astroglial brain tumours, up-regulation of TRF1 and TRF2 occurs in the early stages of carcinogenesis determining telomeres shortening and genomic instability. In a later stage, up-regulation of PARP-TANKs and telomerase activation may occur together with an ADP-ribosylation of TRF1, causing a reduced ability to bind telomeric DNA, telomeres elongation and tumor malignant progression.

[917]

**TÍTULO / TITLE:** - Circulating biomarkers of CNS tumors: an update.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Biomark Med. 2013 Apr;7(2):267-85. doi: 10.2217/bmm.13.12.

●●Enlace al texto completo (gratis o de pago) [2217/bmm.13.12](#)

**AUTORES / AUTHORS:** - Ilhan-Mutlu A; Wagner L; Preusser M

**INSTITUCIÓN / INSTITUTION:** - Department of Medicine I/Oncology, Medical University of Vienna, WaehringerGuertel 18-20, 1090 Vienna, Austria.

**RESUMEN / SUMMARY:** - CNS tumors comprise approximately 120 histological subtypes. Advances of surgical resection, radiation and systemic therapy have increased the survival rates of distinct types of CNS tumor patients. There is growing interest in identification of diagnostic, prognostic or predictive blood biomarkers in CNS tumor patients, and emerging studies indicate that certain brain tumors are indeed associated with distinct profiles of circulating factors such as proteins (e.g., glial fibrillary acidic protein), DNA fragments (e.g., containing mutated IDH) or miRNAs (e.g., miRNA-21). However, blood biomarker research in neurooncology is, for the most part, at an exploratory level, and adequately powered and well-designed studies are needed to translate the available interesting but preliminary findings into actual clinical

use. In this review, the current knowledge on circulating biomarkers of CNS tumors is briefly summarized.

[918]

**TÍTULO / TITLE:** - Targeting Tregs in Malignant Brain Cancer: Overcoming IDO.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Front Immunol. 2013 May 15;4:116. doi:

10.3389/fimmu.2013.00116. Print 2013.

●●Enlace al texto completo (gratis o de pago) [3389/fimmu.2013.00116](#)

**AUTORES / AUTHORS:** - Wainwright DA; Dey M; Chang A; Lesniak MS

**INSTITUCIÓN / INSTITUTION:** - The Brain Tumor Center, The University of Chicago Chicago, IL, USA.

**RESUMEN / SUMMARY:** - One of the hallmark features of glioblastoma multiforme (GBM), the most common adult primary brain tumor with a very dismal prognosis, is the accumulation of CD4(+)CD25(+)Foxp3(+) regulatory T cells (Tregs). Regulatory T cells (Tregs) segregate into two primary categories: thymus-derived natural Tregs (nTregs) that develop from the interaction between immature T cells and thymic epithelial stromal cells, and inducible Tregs (iTregs) that arise from the conversion of CD4(+)FoxP3(-) T cells into FoxP3 expressing cells. Normally, these Treg subsets complement one another's actions by maintaining tolerance of self-antigens, thereby suppressing autoimmunity, while also enabling effective immune responses toward non-self-antigens, thus promoting infectious protection. However, Tregs have also been shown to be associated with the promotion of pathological outcomes, including cancer. In the setting of GBM, nTregs appear to be primary players that contribute to immunotherapeutic failure, ultimately leading to tumor progression. Several attempts have been made to therapeutically target these cells with variable levels of success. The blood brain barrier-crossing chemotherapeutics, temozolomide, and cyclophosphamide (CTX), vaccination against the Treg transcriptional regulator, FoxP3, as well as mAbs against Treg-associated cell surface molecules CD25, CTLA-4, and GITR are all different therapeutic approaches under investigation. Contributing to the poor success of past approaches is the expression of indoleamine 2,3-dioxygenase 1 (IDO), a tryptophan catabolizing enzyme overexpressed in GBM, and critically involved in regulating tumor-infiltrating Treg levels. Herein, we review the current literature on Tregs in brain cancer, providing a detailed phenotype, causative mechanisms involved in their pathogenesis, and strategies that have been used to target this population, therapeutically.

[919]

**TÍTULO / TITLE:** - Fatal B-cell Lymphoma Following Chronic Lymphocytic Inflammation With Pontine Perivascular Enhancement Responsive to Steroids.

**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 May 6:1-4. doi:

10.1001/jamaneurol.2013.2016.

●●Enlace al texto completo (gratis o de pago)

[1001/jamaneurol.2013.2016](http://1001/jamaneurol.2013.2016)

**AUTORES / AUTHORS:** - De Graaff HJ; Wattjes MP; Rozemuller-Kwakkel AJ; Petzold A; Killestein J

**RESUMEN / SUMMARY:** - IMPORTANCE Recent reports on chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids (CLIPPERS) suggest that patients who have a relapse respond very well and that disease progression can be avoided if timely corticosteroid therapy is started. We report on a well-documented patient who presented with clinical, radiological, and pathological characteristics of CLIPPERS and who had an unfavorable outcome. OBSERVATIONS We present the clinical, imaging, laboratory, brain biopsy, and autopsy findings of a 57-year-old male patient with CLIPPERS who repeatedly responded well to high-dose corticosteroids. During follow-up, however, treatment failed, and he had a biopsy-confirmed diagnosis of lymphomatoid granulomatosis that evolved into fatal B-cell lymphoma of the central nervous system. CONCLUSIONS AND RELEVANCE The clinical and imaging features of CLIPPERS include an abundance of differential diagnoses, and the follow-up periods of the described cases classified as CLIPPERS have been limited. Therefore, the question remains whether CLIPPERS is an actual new disease entity or represents a syndrome that includes different overlapping diseases and their prestages. Our case report shows that a typical presentation of CLIPPERS does not uniformly imply a favorable outcome, even when timely treatment regimens have been given.

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[920]

**TÍTULO / TITLE:** - An intracerebral mass: tuberculosis or sarcoidosis?

**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 May 2;2013. pii: bcr2013009570. doi: 10.1136/bcr-2013-009570.

●●Enlace al texto completo (gratis o de pago) [1136/bcr-2013-009570](http://1136/bcr-2013-009570)

**AUTORES / AUTHORS:** - Tuna T; Ozkaya S; Dirican A; Erkan L

**INSTITUCIÓN / INSTITUTION:** - Department of Pulmonary Medicine, Samsun Chest Diseases and Thoracic Surgery Hospital, Samsun, Turkey.

**RESUMEN / SUMMARY:** - Sarcoidosis is an idiopathic, chronic granulomatous disease and it can affect almost any organ. In autopsy series, it has been reported that the central nervous system involvement has occurred in 5-16% of

the patients with sarcoidosis, while the neurological symptoms have occurred only in 3-9% of them. A 40-year-old female patient was admitted to the hospital with complaints of aphasia, balance disorder and drowsiness. An intracerebral mass was detected on cranial CT scans and neurosarcoidosis was diagnosed with clinical, radiological and histopathological findings.

[921]

**TÍTULO / TITLE:** - Subacute cystic expansion of intracranial juvenile psammomatoid ossifying fibroma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - J Neurosurg Pediatr. 2013 Jun;11(6):687-91. doi: 10.3171/2013.2.PEDS12253. Epub 2013 Mar 29.

●●Enlace al texto completo (gratis o de pago)

[3171/2013.2.PEDS12253](#)

**AUTORES / AUTHORS:** - Rowland NC; Jermakowicz WJ; Tihan T; El-Sayed IH; McDermott MW

**INSTITUCIÓN / INSTITUTION:** - Brain Tumor Center, Department of Neurological Surgery;

**RESUMEN / SUMMARY:** - Juvenile psammomatoid ossifying fibroma (JPOF) is a benign fibro-osseous lesion typically associated with the jaw, paranasal region, or orbit. However, JPOF may also originate from the skull base and locally invade the cranium. In published reports, intracranial JPOFs constitute only a small percentage of cases, and therefore it is not known whether more aggressive behavior typifies this distinct population of JPOFs compared with those in other locations. Nevertheless, JPOF histopathology is characterized by a number of active processes, including cystic transformation, that may precipitate violation of skull base boundaries. In the following article, the authors present a case of skull base JPOF that underwent cystic expansion in a young girl, produced a focal neurological deficit, and was resolved using a staged surgical approach.

[922]

**TÍTULO / TITLE:** - Neurocognitive effects of CNS tumors.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Handb Clin Neurol. 2013;112:967-72. doi: 10.1016/B978-0-444-52910-7.00017-9.

●●Enlace al texto completo (gratis o de pago) [1016/B978-0-444-](#)

[52910-7.00017-9](#)

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**INSTITUCIÓN / INSTITUTION:** - Division of Clinical Neurosciences, School of Medicine, University of Southampton, Southampton, UK.

**RESUMEN / SUMMARY:** - There is ample evidence that many children treated for brain tumors experience long-term neurocognitive deficits. The severity of those

deficits is determined by a complex interaction of the child's genetic make-up and age, neuroanatomical damage caused by tumor and surgery, radiotherapy and chemotherapy, the psychosocial environment, and the intensity of targeted rehabilitation. The consequences of neurocognitive deficits are moderated by the number and severity of other deficits, including neurological and endocrine impairments, and this wider context must be considered. The impact of intellectual decline on academic functioning is evident, and underlies, for example, poor reading, writing, and mathematical skills. The effects of early brain damage on development are cumulative as more functions are expected to mature. Many survivors of CNS tumors can be expected to grow into deficits that have far-reaching consequences not only for academic achievement but also for their psychological and social development and their ability to be self-sufficient. Because the problems typically only become apparent over time, surveillance for their detection is an essential prerequisite for early educational and other interventions to support learning and successful transition to independent adult life.

[923]

**TÍTULO / TITLE:** - MYC and MYCN amplification can be reliably assessed by aCGH in medulloblastoma.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Cancer Genet. 2013 Apr 8. pii: S2210-7762(13)00027-6. doi: 10.1016/j.cancergen.2013.02.003.

●●Enlace al texto completo (gratis o de pago)

[1016/j.cancergen.2013.02.003](#)

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**INSTITUCIÓN / INSTITUTION:** - INSERM U830, Laboratory of Genetics and Biology of Cancers, Curie Institute, Paris, France; Department of Pediatric Oncology, Curie Institute, Paris, France. Electronic address: [franck.bourdeaut@curie.fr](mailto:franck.bourdeaut@curie.fr).

**RESUMEN / SUMMARY:** - As prognostic factors, MYC and MYCN amplifications are routinely assessed in medulloblastomas. Fluorescence in situ hybridization (FISH) is currently considered as the technique of reference. Recently, array comparative genomic hybridization (aCGH) has been developed as an alternative technique to evaluate genomic abnormalities in other tumor types; however, this technique has not been widely adopted as a replacement for FISH in medulloblastoma. In this study, 34 tumors were screened by both FISH and aCGH. In all cases showing amplification by FISH, aCGH also unambiguously revealed the abnormality. The aCGH technique was also performed on tumors showing no amplification by FISH, and the absence of amplification was confirmed in all cases. Interestingly, one tumor showed a subclonal MYC amplification by FISH. This subclonal amplification was

observed in approximately 20% of tumor cells and was clearly evident on aCGH. In conclusion, our analysis confirms that aCGH is as safe as FISH for the detection of MYC/MYCN gene amplification. Given its cost efficiency in comparison to two FISH tests and the global genomic information additionally provided by an aCGH experiment, this reproducible technique can be safely retained as an alternative to FISH for routine investigation of medulloblastoma.

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[924]

**TÍTULO / TITLE:** - Intracranial blastomycosis presenting as an enhancing cerebellopontine mass.

**RESUMEN / SUMMARY:** - [Enlace al Resumen / Link to its Summary](#)

**REVISTA / JOURNAL:** - Turk Neurosurg. 2013;23(2):252-5. doi: 10.5137/1019-5149.JTN.4399-11.1.

●●Enlace al texto completo (gratis o de pago) [5137/1019-](#)

[5149.JTN.4399-11.1](#)

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**INSTITUCIÓN / INSTITUTION:** - University of Wisconsin, Department of Neurological Surgery, Madison, Wisconsin, USA.

**RESUMEN / SUMMARY:** - Isolated Blastomyces dermatitidis infection of the central nervous system is an uncommonly encountered entity. If left untreated it can be fatal; thus accurate diagnosis in a timely manner is critical. A 37-year-old white male presented with a severe headache. An MRI scan revealed a right-sided enhancing cerebellopontine angle mass with extension into the internal acoustic canal and diffuse basilar enhancement. After thorough assessment of the patient, an open surgical biopsy of the lesion was performed for pathological evaluation. The biopsy demonstrated broad-based budding yeasts. The cerebrospinal fluid antigen enzyme immunoassay (EIA) (MVista®) for Blastomyces dermatitidis was also positive with a level of 4.28 EIA units.

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