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

GLIOMAS AND RELATED TUMORS

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

Agosto - Septiembre 2013 / August - September 2013

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[1]

TÍTULO / TITLE: - Combinational targeting offsets antigen escape and enhances effector functions of adoptively transferred T cells in Glioblastoma.

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

REVISTA / JOURNAL: - Mol Ther. 2013 Aug 13. doi: 10.1038/mt.2013.185.

●● [Enlace al texto completo \(gratis o de pago\) 1038/mt.2013.185](#)

AUTORES / AUTHORS: - Hegde M; Corder A; Chow KK; Mukherjee M; Ashoori A; Kew Y; Zhang J; Baskin DS; Merchant FA; Brawley VS; Byrd TT; Krebs S; Wu J; Liu H; Heslop HE; Gottschalk S; Yvon E; Ahmed N

INSTITUCIÓN / INSTITUTION: - [1] Center for Cell and Gene Therapy [2] Texas Children's Cancer Center, Departments of [3] Pediatrics.

RESUMEN / SUMMARY: - Preclinical and early clinical studies have demonstrated that chimeric antigen receptor (CAR)-redirected T cells are highly promising in cancer therapy. We observed that targeting HER2 in a Glioblastoma cell line results in the emergence of HER2-null tumor cells that maintain the expression of non-targeted tumor associated antigens (TAA). Combinational targeting of these TAAs could thus offset this escape mechanism. We studied the single-cell co-expression patterns of HER2, IL-13Ralpha2 and EphA2 in primary Glioblastoma samples using multicolor flow

cytometry and immunofluorescence, and applied a binomial routine to the permutations of antigen expression and the related odds of complete tumor elimination. This mathematical model demonstrated that co-targeting HER2 and IL-13Ralpha2 could maximally expand the therapeutic reach of the T cell product in all primary tumors studied. Targeting a third antigen did not predict an added advantage in the tumor cohort studied. We thus generated bispecific T cell products from healthy donors and from GBM patients by pooling T cells individually expressing HER2 and IL-13Ralpha2-specific CARs and by making individual T cells to co-express both molecules. Both HER2/IL-13Ralpha2-bispecific T cell products offset antigen escape, producing enhanced effector activity in vitro immunoassays (against autologous glioma cells in the case of GBM patient products) and in an orthotopic xenogeneic murine model. Further, T cells co-expressing HER2- and IL-13Ralpha2-CARs exhibited accentuated yet antigen-dependent downstream signaling and a particularly enhanced antitumor activity. *Molecular Therapy* (2013); doi:10.1038/mt.2013.185.

TÍTULO / TITLE: - Prevalence of cerebral aneurysms in patients treated for left cardiac myxoma: A prospective study.

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

REVISTA / JOURNAL: - *Clin Radiol.* 2013 Nov;68(11):e624-e628. doi: 10.1016/j.crad.2013.06.010. Epub 2013 Aug 9.

●● Enlace al texto completo (gratis o de pago) [1016/j.crad.2013.06.010](http://dx.doi.org/10.1016/j.crad.2013.06.010)

AUTORES / AUTHORS: - Viganò S; Papini GD; Cotticelli B; Valvassori L; Frigiola A; Menicanti L; Di Leo G; Sardanelli F

INSTITUCIÓN / INSTITUTION: - Scuola di Specializzazione in Radiodiagnostica, Università degli Studi di Milano, Milano, Italy.

RESUMEN / SUMMARY: - AIM: To estimate the prevalence of cerebral aneurysms in patients previously treated for left cardiac myxoma (LCM). MATERIALS AND METHODS: This prospective institutional review board-approved study included patients treated for LCM. All patients treated at our institution (IRCCS Policlinico San Donato, Italy) were telephoned and those enrolled underwent unenhanced brain magnetic resonance imaging (MRI) using sagittal T1-weighted turbo spin-echo (TSE); axial T2-weighted TSE; axial fluid-attenuated inversion-recovery; axial echo-planar diffusion-weighted; and three-dimensional time-of-flight angiographic sequences. RESULTS: Seventy-six patients were telephoned, and data regarding their clinical history since tumor resection were obtained for 49 patients (64%). Four of the 49 (8%) patients were deceased, one due to a cerebral hemorrhage from a ruptured cerebral aneurysm 8 years after tumor resection. One patient had a pacemaker preventing MRI. Of the remaining 44 patients, 31 refused MRI and 13 were enrolled (10 females; mean age 64 years). Three of the 13 (23%; two females; 59-78 years) were diagnosed with a cerebral aneurysm, from 2 mm to 4-5 mm in diameter, involving the right middle

cerebral artery (n = 2) or the right internal carotid artery (n = 1). Including the deceased patient, the resulting prevalence was 4/14 (29%). CONCLUSION: From this preliminary study, one-third of patients treated for LCM may present with a cerebral aneurysm. Longitudinal large studies are needed to further clarify this matter.

[2]

TÍTULO / TITLE: - Cationic core-shell nanoparticles with carmustine contained within O(6)-benzylguanine shell for glioma therapy.

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

REVISTA / JOURNAL: - Biomaterials. 2013 Nov;34(35):8968-78. doi: 10.1016/j.biomaterials.2013.07.097. Epub 2013 Aug 16.

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

[1016/j.biomaterials.2013.07.097](https://doi.org/10.1016/j.biomaterials.2013.07.097)

AUTORES / AUTHORS: - Qian L; Zheng J; Wang K; Tang Y; Zhang X; Zhang H; Huang F; Pei Y; Jiang Y

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Smart Drug Delivery (Fudan University), Ministry of Education, Department of Pharmaceutics, School of Pharmacy, Fudan University, Lane 826, Zhang Heng Road, Shanghai 201203, PR China.

RESUMEN / SUMMARY: - The application of carmustine (BCNU) for glioma treatment is limited due to its poor selectivity for tumor and tumor resistance caused by O(6)-methylguanine-DNA-methyl transferase (MGMT). To improve the efficacy of BCNU, we constructed chitosan surface-modified poly (lactide-co-glycolides) nanoparticles (PLGA/CS NPs) for targeting glioma, loading BCNU along with O(6)-benzylguanine (BG), which could directly deplete MGMT. With core-shell structure, PLGA/CS NPs in the diameter around 177 nm showed positive zeta potential. In vitro plasma stability of BCNU in NPs was improved compared with free BCNU. The cellular uptake of NPs increased with surface modification of CS and decreasing particle size. The cytotoxicity of BCNU against glioblastoma cells was enhanced after being encapsulated into NPs; furthermore, with the co-encapsulation of BCNU and BG into NPs, BCNU + BG PLGA/CS NPs showed the strongest inhibiting ability. Compared to free drugs, PLGA/CS NPs could prolong circulation time and enhance accumulation in tumor and brain. Among all treatment groups, F98 glioma-bearing rats treated with BCNU + BG PLGA/CS NPs showed the longest survival time and the smallest tumor size. The studies suggested that the co-encapsulation of BCNU and BG into PLGA/CS NPs could remarkably enhance the efficacy of BCNU, accompanied with greater convenience for therapy.

TÍTULO / TITLE: - Breast metastases from oligodendroglioma: An unusual extraneural spread in two young women and a review of the literature.

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

REVISTA / JOURNAL: - Crit Rev Oncol Hematol. 2013 Aug 13. pii: S1040-8428(13)00161-3. doi: 10.1016/j.critrevonc.2013.07.010.

●● Enlace al texto completo (gratis o de pago) 1016/j.critrevonc.2013.07.010

AUTORES / AUTHORS: - Mazza E; Belli C; Terreni M; Doglioni C; Losio C; Cantore M; Mambrini A; Reni M

INSTITUCIÓN / INSTITUTION: - Department of Medical Oncology, San Raffaele Scientific Institute, via Olgettina 60, 20132 Milan, Italy.

RESUMEN / SUMMARY: - BACKGROUND: Extranural dissemination of oligodendroglioma is rare. Cases of breast metastases have never been described in the literature. CASE REPORTS: We report the first two cases of young women with initial diagnosis of anaplastic oligodendroglioma who experienced mammary gland metastases and a review of the literature. RESULTS: Immunohistochemical analysis performed on material from both primary and metastatic sites did not allow to draw any conclusion on possible etiopathogenetic hypothesis. A review of literature yielded 35 cases of extracranial metastatic oligodendroglioma from 1989 to 2012. CONCLUSION: Though rare, extracranial dissemination from oligodendroglioma may occur not only in long surviving heavily pre-treated patients. The review of literature and these two cases suggest that spread is primarily to bone and then from bone to other organs through hematogenous route mostly due to leptomeningeal or dura mater invasion. Chemotherapy regimens similar to those commonly used for non metastatic oligodendroglioma are recommended for patients with good performance status.

[3]

TÍTULO / TITLE: - Phase III Randomized Trial Comparing the Efficacy of Cediranib As Monotherapy, and in Combination With Lomustine, Versus Lomustine Alone in Patients With Recurrent Glioblastoma.

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

REVISTA / JOURNAL: - J Clin Oncol. 2013 Sep 10;31(26):3212-3218. Epub 2013 Aug 12.

●● Enlace al texto completo (gratis o de pago) 1200/JCO.2012.47.2464

AUTORES / AUTHORS: - Batchelor TT; Mulholland P; Neyns B; Nabors LB; Campone M; Wick A; Mason W; Mikkelsen T; Phuphanich S; Ashby LS; Degroot J; Gattamaneni R; Cher L; Rosenthal M; Payer F; Jurgensmeier JM; Jain RK; Sorensen AG; Xu J; Liu Q; van den Bent M

INSTITUCIÓN / INSTITUTION: - Tracy T. Batchelor, Rakesh K. Jain, and Gregory Sorensen, Massachusetts General Hospital, Boston, MA; Paul Mulholland, University College London, London; Rao Gattamaneni, the Christie Foundation Trust Hospital, Manchester, United Kingdom; Bart Neyns, Universitair Ziekenhuis Brussel, Brussels, Belgium; L. Burt Nabors, University of Alabama at Birmingham, Birmingham, AL; Mario Campone, Centre Rene Gauducheau, Saint-Herblain, France; Antje Wick, University of Heidelberg, Heidelberg, Germany; Warren Mason, Princess Margaret Hospital,

Toronto, Ontario, Canada; Tom Mikkelsen, Henry Ford Hospital, Detroit, MI; Surasak Phuphanich, Cedars-Sinai Medical Center, Los Angeles, CA; Lynn S. Ashby, Barrow Neurological Institute, Phoenix, AZ; John DeGroot, MD Anderson Cancer Center, Houston, TX; Lawrence Cher, Austin Health Cancer Services; Mark Rosenthal, Royal Melbourne Hospital, Melbourne, Australia; Franz Payer, Medical University, Graz, Austria; Juliane M. Jurgensmeier, John Xu, and Qi Liu, AstraZeneca, Wilmington, DE; and Martin van den Bent, Erasmus University Medical Center-Daniel den Hoed Cancer Center, Rotterdam, the Netherlands.

RESUMEN / SUMMARY: - PURPOSE: A randomized, phase III, placebo-controlled, partially blinded clinical trial (REGAL [Recentin in Glioblastoma Alone and With Lomustine]) was conducted to determine the efficacy of cediranib, an oral pan-vascular endothelial growth factor (VEGF) receptor tyrosine kinase inhibitor, either as monotherapy or in combination with lomustine versus lomustine in patients with recurrent glioblastoma. PATIENTS AND METHODS: Patients (N = 325) with recurrent glioblastoma who previously received radiation and temozolomide were randomly assigned 2:2:1 to receive (1) cediranib (30 mg) monotherapy; (2) cediranib (20 mg) plus lomustine (110 mg/m²); (3) lomustine (110 mg/m²) plus a placebo. The primary end point was progression-free survival based on blinded, independent radiographic assessment of postcontrast T1-weighted and noncontrast T2-weighted magnetic resonance imaging (MRI) brain scans. RESULTS: The primary end point of progression-free survival (PFS) was not significantly different for either cediranib alone (hazard ratio [HR] = 1.05; 95% CI, 0.74 to 1.50; two-sided P = .90) or cediranib in combination with lomustine (HR = 0.76; 95% CI, 0.53 to 1.08; two-sided P = .16) versus lomustine based on independent or local review of postcontrast T1-weighted MRI. CONCLUSION: This study did not meet its primary end point of PFS prolongation with cediranib either as monotherapy or in combination with lomustine versus lomustine in patients with recurrent glioblastoma, although cediranib showed evidence of clinical activity on some secondary end points including time to deterioration in neurologic status and corticosteroid-sparing effects.

[4]

TÍTULO / TITLE: - Genomics informs glioblastoma biology.

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

REVISTA / JOURNAL: - Nat Genet. 2013 Sep 26;45(10):1105-7. doi: 10.1038/ng.2775.

●● [Enlace al texto completo \(gratis o de pago\) 1038/ng.2775](#)

AUTORES / AUTHORS: - Schonberg DL; Bao S; Rich JN

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

RESUMEN / SUMMARY: - Identifying genomic alterations in cancer does not guarantee therapeutic benefit. A new study combining DNA and RNA sequencing with functional

validation uncovers new genetic driver alterations in glioblastoma with potential for clinical translation.

[5]

TÍTULO / TITLE: - The integrated landscape of driver genomic alterations in glioblastoma.

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

REVISTA / JOURNAL: - Nat Genet. 2013 Oct;45(10):1141-9. doi: 10.1038/ng.2734. Epub 2013 Aug 5.

●● Enlace al texto completo (gratis o de pago) [1038/ng.2734](#)

AUTORES / AUTHORS: - Frattini V; Trifonov V; Chan JM; Castano A; Lia M; Abate F; Keir ST; Ji AX; Zoppoli P; Niola F; Danussi C; Dolgalev I; Porrati P; Pellegatta S; Heguy A; Gupta G; Pisapia DJ; Canoll P; Bruce JN; McLendon RE; Yan H; Aldape K; Finocchiaro G; Mikkelsen T; Prive GG; Bigner DD; Lasorella A; Rabadan R; Iavarone A

INSTITUCIÓN / INSTITUTION: - [1] Institute for Cancer Genetics, Columbia University Medical Center, New York, New York, USA. [2].

RESUMEN / SUMMARY: - Glioblastoma is one of the most challenging forms of cancer to treat. Here we describe a computational platform that integrates the analysis of copy number variations and somatic mutations and unravels the landscape of in-frame gene fusions in glioblastoma. We found mutations with loss of heterozygosity in LZTR1, encoding an adaptor of CUL3-containing E3 ligase complexes. Mutations and deletions disrupt LZTR1 function, which restrains the self renewal and growth of glioma spheres that retain stem cell features. Loss-of-function mutations in CTNND2 target a neural-specific gene and are associated with the transformation of glioma cells along the very aggressive mesenchymal phenotype. We also report recurrent translocations that fuse the coding sequence of EGFR to several partners, with EGFR-SEPT14 being the most frequent functional gene fusion in human glioblastoma. EGFR-SEPT14 fusions activate STAT3 signaling and confer mitogen independence and sensitivity to EGFR inhibition. These results provide insights into the pathogenesis of glioblastoma and highlight new targets for therapeutic intervention.

[6]

TÍTULO / TITLE: - CSF-1R inhibition alters macrophage polarization and blocks glioma progression.

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

REVISTA / JOURNAL: - Nat Med. 2013 Sep 22. doi: 10.1038/nm.3337.

●● Enlace al texto completo (gratis o de pago) [1038/nm.3337](#)

AUTORES / AUTHORS: - Pyonteck SM; Akkari L; Schuhmacher AJ; Bowman RL; Sevenich L; Quail DF; Olson OC; Quick ML; Huse JT; Teijeiro V; Setty M; Leslie CS; Oei Y; Pedraza A; Zhang J; Brennan CW; Sutton JC; Holland EC; Daniel D; Joyce JA

INSTITUCIÓN / INSTITUTION: - 1] Cancer Biology and Genetics, Memorial Sloan-Kettering Cancer Center (MSKCC), New York, New York, USA. [2].

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) comprises several molecular subtypes, including proneural GBM. Most therapeutic approaches targeting glioma cells have failed. An alternative strategy is to target cells in the glioma microenvironment, such as tumor-associated macrophages and microglia (TAMs). Macrophages depend on colony stimulating factor-1 (CSF-1) for differentiation and survival. We used an inhibitor of the CSF-1 receptor (CSF-1R) to target TAMs in a mouse proneural GBM model, which significantly increased survival and regressed established tumors. CSF-1R blockade additionally slowed intracranial growth of patient-derived glioma xenografts. Surprisingly, TAMs were not depleted in treated mice. Instead, glioma-secreted factors, including granulocyte-macrophage CSF (GM-CSF) and interferon-gamma (IFN-gamma), facilitated TAM survival in the context of CSF-1R inhibition. Expression of alternatively activated M2 markers decreased in surviving TAMs, which is consistent with impaired tumor-promoting functions. These gene signatures were associated with enhanced survival in patients with proneural GBM. Our results identify TAMs as a promising therapeutic target for proneural gliomas and establish the translational potential of CSF-1R inhibition for GBM.

[7]

TÍTULO / TITLE: - Brain tumor initiating cells adapt to restricted nutrition through preferential glucose uptake.

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

REVISTA / JOURNAL: - Nat Neurosci. 2013 Oct;16(10):1373-82. doi: 10.1038/nn.3510. Epub 2013 Sep 1.

●● [Enlace al texto completo \(gratis o de pago\) 1038/nn.3510](#)

AUTORES / AUTHORS: - Flavahan WA; Wu Q; Hitomi M; Rahim N; Kim Y; Sloan AE; Weil RJ; Nakano I; Sarkaria JN; Stringer BW; Day BW; Li M; Lathia JD; Rich JN; Hjelmeland AB

INSTITUCIÓN / INSTITUTION: - 1] Department of Molecular Medicine, Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, Cleveland, Ohio, USA. [2] Department of Stem Cell Biology and Regenerative Medicine, Lerner Research Institute, Cleveland Clinic, Cleveland, Ohio, USA.

RESUMEN / SUMMARY: - Like all cancers, brain tumors require a continuous source of energy and molecular resources for new cell production. In normal brain, glucose is an essential neuronal fuel, but the blood-brain barrier limits its delivery. We now report that nutrient restriction contributes to tumor progression by enriching for brain tumor initiating cells (BTICs) owing to preferential BTIC survival and to adaptation of non-BTICs through acquisition of BTIC features. BTICs outcompete for glucose uptake by co-opting the high affinity neuronal glucose transporter, type 3 (Glut3, SLC2A3). BTICs preferentially express Glut3, and targeting Glut3 inhibits BTIC growth and tumorigenic

potential. Glut3, but not Glut1, correlates with poor survival in brain tumors and other cancers; thus, tumor initiating cells may extract nutrients with high affinity. As altered metabolism represents a cancer hallmark, metabolic reprogramming may maintain the tumor hierarchy and portend poor prognosis.

[8]

TÍTULO / TITLE: - Starvation favors glioma stem cells.

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

REVISTA / JOURNAL: - Nat Neurosci. 2013 Oct;16(10):1359-61. doi: 10.1038/nn.3524.

●● Enlace al texto completo (gratis o de pago) [1038/nn.3524](#)

AUTORES / AUTHORS: - Ilkhanizadeh S; Weiss WA

INSTITUCIÓN / INSTITUTION: - Departments of Neurology, Pediatrics and Neurosurgery, and the Helen Diller Family Comprehensive Cancer Center, University of California, San Francisco, California, USA.

[9]

TÍTULO / TITLE: - Complete regression of glioblastoma by mesenchymal stem cells mediated prodrug gene therapy simulating clinical therapeutic scenario.

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

REVISTA / JOURNAL: - Int J Cancer. 2013 Aug 26. doi: 10.1002/ijc.28455.

●● Enlace al texto completo (gratis o de pago) [1002/ijc.28455](#)

AUTORES / AUTHORS: - Altaner C; Altanero V; Cihova M; Ondicova K; Rychly B; Baciak L; Mravec B

INSTITUCIÓN / INSTITUTION: - Cancer Research Institute, Slovak Academy of Sciences, Bratislava, Slovakia; St. Elisabeth Cancer Institute, Bratislava, Slovakia.

RESUMEN / SUMMARY: - Suicide gene therapy mediated by mesenchymal stem cells with their ability to engraft into tumors makes these therapeutic stem cells an attractive tool to activate prodrugs directly within the tumor mass. In this study, we evaluated the therapeutic efficacy of human mesenchymal stem cells derived from bone marrow and from adipose tissue, engineered to express the suicide gene cytosine deaminase::uracil phosphoribosyltransferase to treat intracerebral rat C6 glioblastoma in a simulated clinical therapeutic scenario. Intracerebrally grown glioblastoma was treated by resection and subsequently with single or repeated intracerebral inoculations of therapeutic stem cells followed by a continuous intracerebroventricular delivery of 5-fluorocytosine using an osmotic pump. Kaplan-Meier survival curves revealed that surgical resection of the tumor increased the survival time of the resected animals depending on the extent of surgical intervention. However, direct injections of therapeutic stem cells into the brain tissue surrounding the postoperative resection cavity led to a curative outcome in a significant number of treated animals.

Moreover, the continuous supply of therapeutic stem cells into the brain with growing glioblastoma by osmotic pumps together with continuous prodrug delivery also proved to be therapeutically efficient. We assume that observed curative therapy of glioblastoma by stem cell-mediated prodrug gene therapy might be caused by the destruction of both tumor cells and the niche where glioblastoma initiating cells reside.
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[10]

TÍTULO / TITLE: - PD-L1 Expression by Neurons Nearby Tumors Indicates Better Prognosis in Glioblastoma Patients.

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

REVISTA / JOURNAL: - J Neurosci. 2013 Aug 28;33(35):14231-45. doi: 10.1523/JNEUROSCI.5812-12.2013.

●● Enlace al texto completo (gratis o de pago) [1523/JNEUROSCI.5812-](#)

[12.2013](#)

AUTORES / AUTHORS: - Liu Y; Carlsson R; Ambjorn M; Hasan M; Badn W; Darabi A; Siesjo P; Issazadeh-Navikas S

INSTITUCIÓN / INSTITUTION: - Neuroinflammation Unit, Biotech Research and Innovation Centre, University of Copenhagen, DK-2200 Copenhagen, Denmark, and Glioma Immunotherapy Group, Section of Neurosurgery, Clinical Sciences, University of Lund, 221 00 Lund, Sweden.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most aggressive form of brain tumor. In general, tumor growth requires disruption of the tissue microenvironment, yet how this affects glioma progression is unknown. We studied program death-ligand (PD-L)1 in neurons and gliomas in tumors from GBM patients and associated the findings with clinical outcome. Remarkably, we found that upregulation of PD-L1 by neurons in tumor-adjacent brain tissue (TABT) associated positively with GBM patient survival, whereas lack of neuronal PD-L1 expression was associated with high PD-L1 in tumors and unfavorable prognosis. To understand the molecular mechanism of PD-L1 signaling in neurons, we investigated PD-L1 function in cerebellar and cortical neurons and its impact on gliomas. We discovered that neuronal PD-L1-induced caspase-dependent apoptosis of glioma cells. Because interferon (IFN)-beta induces PD-L1 expression, we studied the functional consequences of neuronal Ifnb gene deletion on PD-L1 signaling and function. Ifnb(-/-) neurons lacked PD-L1 and were defective in inducing glioma cell death; this effect was reversed on PD-L1 gene transfection. Ifnb(-/-) mice with intracerebral isografts survived poorly. Similar to the observations in GBM patients, better survival in wild-type mice was associated with high neuronal PD-L1 in TABT and downregulation of PD-L1 in tumors, which was defective in Ifnb(-/-) mice. Our data indicated that neuronal PD-L1 signaling in brain cells was important for GBM patient survival. Reciprocal PD-L1

regulation in TABT and tumor tissue could be a prognostic biomarker for GBM. Understanding the complex interactions between tumor and adjacent stromal tissue is important in designing targeted GBM therapies.

[11]

TÍTULO / TITLE: - Phase II clinical study on intraoperative photodynamic therapy with talaporfin sodium and semiconductor laser in patients with malignant brain tumors.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Oct;119(4):845-852. Epub 2013 Aug 16.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.7.JNS13415](#)

AUTORES / AUTHORS: - Muragaki Y; Akimoto J; Maruyama T; Iseki H; Ikuta S; Nitta M; Maebayashi K; Saito T; Okada Y; Kaneko S; Matsumura A; Kuroiwa T; Karasawa K; Nakazato Y; Kayama T

INSTITUCIÓN / INSTITUTION: - Faculty of Advanced Techno-Surgery, Institute of Advanced Biomedical Engineering and Science, and.

RESUMEN / SUMMARY: - Object The objective of the present study was to perform a prospective evaluation of the potential efficacy and safety of intraoperative photodynamic therapy (PDT) using talaporfin sodium and irradiation using a 664-nm semiconductor laser in patients with primary malignant parenchymal brain tumors. Methods In 27 patients with suspected newly diagnosed or recurrent primary malignant parenchymal brain tumors, a single intravenous injection of talaporfin sodium (40 mg/m²) was administered 1 day before resection of the neoplasm. The next day after completion of the tumor removal, the residual lesion and/or resection cavity were irradiated using a 664-nm semiconductor laser with a radiation power density of 150 mW/cm² and a radiation energy density of 27 J/cm². The procedure was performed 22-27 hours after drug administration. The study cohort included 22 patients with a histopathologically confirmed diagnosis of primary malignant parenchymal brain tumor. Thirteen of these neoplasms (59.1%) were newly diagnosed glioblastomas multiforme (GBM). Results Among all 22 patients included in the study cohort, the 12-month overall survival (OS), 6-month progression-free survival (PFS), and 6-month local PFS rates after surgery and PDT were 95.5%, 91%, and 91%, respectively. Among patients with newly diagnosed GBMs, all these parameters were 100%. Side effects on the skin, which could be attributable to the administration of talaporfin sodium, were noted in 7.4% of patients and included rash (2 cases), blister (1 case), and erythema (1 case). Skin photosensitivity test results were relatively mild and fully disappeared within 15 days after administration of photosensitizer in all patients. Conclusions Intraoperative PDT using talaporfin sodium and a semiconductor laser may be considered as a potentially effective and sufficiently safe option for adjuvant management of primary malignant parenchymal brain tumors. The inclusion of intraoperative PDT in a combined treatment strategy may have a positive impact on OS

and local tumor control, particularly in patients with newly diagnosed GBMs. Clinical trial registration no.: JMA-IIA00026 (<https://dbcentre3.imacct.med.or.jp/jmactr/App/JMACTRS06/JMACTRS06.aspx?seqno=862>).

[12]

TÍTULO / TITLE: - Clinical and Genetic Factors Associated With Severe Hematological Toxicity in Glioblastoma Patients During Radiation Plus Temozolomide Treatment: A Prospective Study.

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

REVISTA / JOURNAL: - Am J Clin Oncol. 2013 Sep 21.

●● [Enlace al texto completo \(gratis o de pago\) 1097/COC.0b013e3182a790ea](#)

AUTORES / AUTHORS: - Lombardi G; Rumiato E; Bertorelle R; Saggiaro D; Farina P; Della Puppa A; Zustovich F; Berti F; Sacchetto V; Marcato R; Amadori A; Zagonel V

INSTITUCIÓN / INSTITUTION: - *Medical Oncology 1 daggerMolecular Immunology and Oncology section signRadiotherapy and Nuclear Medicine Unit, Veneto Institute of Oncology - IRCCS double daggerNeurosurgery Department, Azienda Ospedale parallelDepartment of Surgery, Oncology and Gastroenterology, University of Padua, Padua, Italy.

RESUMEN / SUMMARY: - BACKGROUND:: Temozolomide (TMZ) administered daily with radiation therapy (RT) for 6 weeks, followed by adjuvant TMZ for 6 cycles, is the standard therapy for newly diagnosed glioblastoma (GBM) patients. Although TMZ is considered to be a safe drug, it has been demonstrated to cause severe myelotoxicity; in particular, some case reports and small series studies have reported severe myelotoxicity developing during TMZ and concomitant RT. We performed a prospective study to analyze the incidence of early severe myelotoxicity and its possible clinical and genetic factors. PATIENTS AND METHODS:: From November 2010 to July 2012, newly diagnosed GBM patients were enrolled. They were eligible for the study if they met the following criteria: pathologically proven GBM, age 18 years and older, an Eastern Cooperative Oncology Group performance status of 0 to 2, adequate renal and hepatic function, and adequate blood cell counts before starting TMZ plus RT. Grading of hematologic toxicity developing during radiation and TMZ was based on the National Cancer Institute Common Terminology Criteria for Adverse Events version 4.0. Clinical factors from all patients were recorded. The methylation status and polymorphic variants of O-methylguanine-DNA methyl-transferase gene in peripheral blood mononuclear cells, and polymorphic genetic variants of genes involved in the pharmacokinetics and pharmacodynamics of TMZ, were analyzed. For genetic analyses, patients with toxicity were matched (1:2) for age, performance status, anticonvulsants, and proton pump inhibitors with patients without myelotoxicity. RESULTS:: We enrolled 87 consecutive GBM patients: 32 women and 55 men; the

average age was 60 years. During TMZ and RT, 4 patients (5%) showed grade 3-4 myelotoxicity, and its median duration was 255 days. Predictor factors of severe myelotoxicity were female sex, pretreatment platelet count of $\leq 3,00,000/\text{mm}^3$, methylated O-methylguanine-DNA methyltransferase promoter in the hematopoietic cell system, and specific polymorphic variants of the cytochrome P450 oxidoreductase and methionine adenosyltransferase 1^a genes. CONCLUSIONS:: Although we studied a small population, we suggest that both clinical and genetic factors might simultaneously be associated with severe myelosuppression developed during TMZ plus RT. However, our results deserve validation in larger prospective studies and, if the factors associated with severe myelotoxicity are validated, dose adjustments of TMZ for those patients may reduce the risk of severe myelotoxicity during the concomitant treatment.

[13]

TÍTULO / TITLE: - Diffuse intrinsic pontine glioma treated with prolonged temozolomide and radiotherapy - Results of a United Kingdom phase II trial (CNS 2007 04).

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

REVISTA / JOURNAL: - Eur J Cancer. 2013 Sep 4. pii: S0959-8049(13)00770-3. doi: 10.1016/j.ejca.2013.08.006.

●● Enlace al texto completo (gratis o de pago) [1016/j.ejca.2013.08.006](#)

AUTORES / AUTHORS: - Bailey S; Howman A; Wheatley K; Wherton D; Boota N; Pizer B; Fisher D; Kearns P; Picton S; Saran F; Gibson M; Glaser A; Connolly DJ; Hargrave D

INSTITUCIÓN / INSTITUTION: - Great North Childrens Hospital, Newcastle upon Tyne, United Kingdom. Electronic address: simon.bailey@ncl.ac.uk.

RESUMEN / SUMMARY: - Diffuse intrinsic pontine glioma (DIPG) has a dismal prognosis with no chemotherapy regimen so far resulting in any significant improvement over standard radiotherapy. In this trial, a prolonged regimen (21/28d) of temozolomide was studied with the aim of overcoming O6-methylguanine methyltransferase (MGMT) mediated resistance. Forty-three patients with a defined clinico-radiological diagnosis of DIPG received radiotherapy and concomitant temozolomide (75mg/m²) after which up to 12 courses of 21d of adjuvant temozolomide (75-100mg/m²) were given 4 weekly. The trial used a 2-stage design and passed interim analysis. At diagnosis median age was 8years (2-20years), 81% had cranial nerve abnormalities, 76% ataxia and 57% long tract signs. Median Karnofsky/Lansky score was 80 (10-100). Patients received a median of three courses of adjuvant temozolomide, five received all 12 courses and seven did not start adjuvant treatment. Three patients were withdrawn from study treatment due to haematological toxicity and 10 had a dose reduction. No other significant toxicity related to temozolomide was noted. Overall survival (OS) (95% confidence interval (CI)) was 56% (40%, 69%) at 9months, 35% (21%, 49%) at 1year and 17% (7%, 30%) at 2years. Median survival was 9.5months (range 7.5-

11.4months). There were five 2-year survivors with a median age of 13.6years at diagnosis. This trial demonstrated no survival benefit of the addition of dose dense temozolomide, to standard radiotherapy in children with classical DIPG. However, a subgroup of adolescent DIPG patients did have a prolonged survival, which needs further exploration.

[14]

TÍTULO / TITLE: - Elevated CD3 and CD8 tumor-infiltrating immune cells correlate with prolonged survival in glioblastoma patients despite integrated immunosuppressive mechanisms in the tumor microenvironment and at the systemic level.

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

REVISTA / JOURNAL: - J Neuroimmunol. 2013 Aug 31. pii: S0165-5728(13)00234-8. doi: 10.1016/j.jneuroim.2013.08.013.

●● Enlace al texto completo (gratis o de pago) [1016/j.jneuroim.2013.08.013](#)

AUTORES / AUTHORS: - Kmiecik J; Poli A; Brons NH; Waha A; Eide GE; Enger PO; Zimmer J; Chekenya M

INSTITUCIÓN / INSTITUTION: - Department of Biomedicine, University of Bergen, Jonas Lies vei 91, 5009 Bergen, Norway.

RESUMEN / SUMMARY: - We characterized GBM patients' tumor and systemic immune contexture with aim to reveal the mechanisms of immunological escape, their impact on patient outcome, and identify targets for immunotherapy. Increased CD3+ T-cell infiltration was associated with prolonged survival independent of age, MGMT promoter methylation and post-operative treatment that implies potential for immunotherapy for GBM. Several mechanisms of escape were identified: within the tumor microenvironment: induced CD8+CD28-Foxp3+ Tregs that may tolerize antigen presenting cells, elevated CD73 and CD39 ectonucleotidases that suppress T-cell function, and at the systemic level: elevated IL-10 levels in serum, diminished helper T-cell counts, and upregulated inhibitory CTLA-4.

[15]

TÍTULO / TITLE: - Histogram Analysis of Intravoxel Incoherent Motion for Differentiating Recurrent Tumor from Treatment Effect in Patients with Glioblastoma: Initial Clinical Experience.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Aug 22.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3719](#)

AUTORES / AUTHORS: - Kim HS; Suh CH; Kim N; Choi CG; Kim SJ

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

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Intravoxel incoherent motion can simultaneously measure diffusion and perfusion characteristics. Our aim was to determine whether the perfusion and diffusion parameters derived from intravoxel incoherent motion could act as imaging biomarkers for distinguishing recurrent tumor from treatment effect in patients with glioblastoma. MATERIALS AND METHODS: Fifty-one patients with pathologically confirmed recurrent tumor (n = 31) or treatment effect (n = 20) were assessed by means of intravoxel incoherent motion MR imaging. The histogram cutoffs of the 90th percentiles for perfusion and normalized CBV and the 10th percentiles for diffusion and ADC were calculated and correlated with the final pathology results. A leave-one-out cross-validation was used to evaluate the diagnostic performance of our classifiers. RESULTS: The mean 90th percentile for perfusion was significantly higher in the recurrent tumor group (0.084 +/- 0.020) than in the treatment effect group (0.040 +/- 0.010) (P < .001). The 90th percentile for perfusion provided a smaller number of patients within an overlap zone in which misclassifications can occur, compared with the 90th percentile for normalized CBV. The mean 10th percentile for diffusion was significantly lower in the recurrent tumor group than in the treatment effect group (P = .006). Receiver operating characteristic curve analyses showed the 90th percentile for perfusion to be a significant predictor for differentiation, with a sensitivity of 87.1% and a specificity of 95.0%. There was a significant positive correlation between the 90th percentiles for perfusion and normalized CBV (r = 0.674; P < .001). CONCLUSIONS: A histogram analysis of intravoxel incoherent motion parameters can be used as a noninvasive imaging biomarker for differentiating recurrent tumor from treatment effect in patients with glioblastoma.

[16]

TÍTULO / TITLE: - Personalizing the treatment of pediatric medulloblastoma: Polo-like kinase PLK1 as a molecular target in high-risk children.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-12-4331](https://doi.org/10.1158/0008-5472.CAN-12-4331)

AUTORES / AUTHORS: - Triscott J; Lee C; Foster C; Manoranjan B; Pambid MR; Berns R; Fotovati A; Venugopal C; O'Halloran K; Narendran A; Hawkins C; Ramaswamy V; Bouffet E; Taylor MD; Singhal A; Maxwell CA; Rassekh R; Yip S; Northcott P; Singh SK; Dunham C; Dunn SE

INSTITUCIÓN / INSTITUTION: - Pediatrics, British Columbia Children's Hospital.

RESUMEN / SUMMARY: - Medulloblastoma (MB) is the most common malignant brain tumor in children. This disease is heterogeneous and it is comprised of four subtypes of MB (WNT, SHH, Group 3, and Group 4). An immediate goal is to identify novel molecular targets for the most aggressive forms of MB. Polo-like kinase 1 (PLK1) is an oncogenic kinase that controls cell cycle and proliferation making it a strong candidate

for MB treatment. In this study, pediatric MBs were subtyped in two patient cohorts (Training cohort; n=65 patients, Validation cohort; n=57 patients) using NanoString nCounter analysis and PLK1 mRNA was assessed. We determined that the SHH and Group 3 subtypes were independently associated with poor outcomes in children as was PLK1 using Cox regression analyses. Further, we screened a library of 129 compounds in clinical trials using a model of pediatric MB and determined that PLK1 inhibitors were the most promising class of agents against the growth of MB. In patient-derived primary MB isolates, the PLK1 small molecule inhibitor BI2536 suppressed the self-renewal of PLK1-high but not PLK1-low expressing cells. PLK1 inhibition prevented MB cell proliferation, self-renewal, cell cycle progression, and induced apoptosis. In contrast, the growth of normal neural stem cells was unaffected by BI2536. Finally, BI2536 extended survival in MB-bearing mice with efficacy comparable to Headstart, a standard-of-care chemotherapy regime. We conclude that patients with MB expressing high levels of PLK1 are at elevated risk. These pre-clinical studies pave the way for improving the treatment of MB through PLK1 inhibition.

[17]

TÍTULO / TITLE: - Intranasal Delivery of Mesenchymal Stem Cells Significantly Extends Survival of Irradiated Mice with Experimental Brain Tumors.

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

REVISTA / JOURNAL: - Mol Ther. 2013 Sep 3. doi: 10.1038/mt.2013.199.

●● Enlace al texto completo (gratis o de pago) [1038/mt.2013.199](#)

AUTORES / AUTHORS: - Balyasnikova IV; Prasol MS; Ferguson SD; Han Y; Ahmed AU; Gutova M; Tobias AL; Mustafi D; Rincon E; Zhang L; Aboody KS; Lesniak MS

INSTITUCIÓN / INSTITUTION: - The Brain Tumor Center, The University of Chicago, Chicago, IL 60637, USA.

RESUMEN / SUMMARY: - Treatment options of glioblastoma multiforme are limited due to the blood brain barrier. In this study, we investigated the utility of intranasal delivery as a means of transporting stem cell based anti-glioma therapeutics. We hypothesized that mesenchymal stem cells (MSCs) delivered via nasal application could impart therapeutic efficacy when expressing TNF-related apoptosis-inducing ligand (TRAIL) in a model of human glioma. ¹¹¹In-oxine, histology and magnetic resonance imaging were utilized to track MSCs within the brain and associated tumor. We demonstrate that MSCs can penetrate the brain from nasal cavity and infiltrate intracranial glioma xenografts in a mouse model. Furthermore, irradiation of tumor-bearing mice tripled the penetration of ¹¹¹In-oxine labeled MSCs in the brain with a five-fold increase in cerebellum. Significant increase in CXCL12 expression was observed in irradiated xenograft tissue, implicating a CXCL12-dependent mechanism of MSCs migration towards irradiated glioma xenografts. Finally, MSCs expressing TRAIL improved the median survival of irradiated mice bearing intracranial U87 glioma

xenografts in comparison with non-irradiated and irradiated control mice. Cumulatively, our data suggest that intranasal delivery of stem cell-based therapeutics is a feasible and highly efficacious treatment modality, allowing for repeated application of modified stem cells to target malignant glioma. *Molecular Therapy* (2013); doi:10.1038/mt.2013.199.

[18]

TÍTULO / TITLE: - Cytotoxic activity of ex-vivo generated IFN α -induced monocyte-derived dendritic cells in brain glioma patients.

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

REVISTA / JOURNAL: - *Cell Immunol.* 2013 July - August;284(1-2):146-153. doi: 10.1016/j.cellimm.2013.07.013. Epub 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [1016/j.cellimm.2013.07.013](http://dx.doi.org/10.1016/j.cellimm.2013.07.013)

AUTORES / AUTHORS: - Tyrinova TV; Leplina OY; Mishinov SV; Tikhonova MA; Shevela EY; Stupak VV; Pendyurin IV; Shilov AG; Alyamkina EA; Rubtsova NV; Bogachev SS; Ostanin AA; Chernykh ER

INSTITUCIÓN / INSTITUTION: - Institute of Clinical Immunology SB RAMS, 14 Yadrintsevskaya Str., 630099 Novosibirsk, Russia. Electronic address: tyrinova@gmail.com.

RESUMEN / SUMMARY: - Recent studies have revealed that besides the important role in triggering the adoptive antitumor immunity, dendritic cells (DCs) possess direct cytotoxic antitumor activity. Here, we investigated brain glioma patient monocyte-derived DCs generated in the presence of IFN α and GM-CSF (IFN-DCs). These DCs were characterized by reduced cytotoxic activity against TRAIL-resistant HEp-2 cells. The impairment of DC cytotoxic function was observed mainly in high-grade glioma patients and associated with poor survival. The dysfunction of patient DC cytotoxicity was partially restored under in vitro pretreatment of DCs with double-stranded human DNA as well as rIL-2. In contrast to healthy donors, IFN-DCs in a part of high-grade glioma patients also failed to lyse primary autologous or allogeneic glioma cells. Our findings point to possible contribution of DC impairment in tumor pathogenesis in brain glioma and justify the necessity to evaluate and correct DC cytotoxic function when exploring DCs as cancer vaccines in glioma.

[19]

TÍTULO / TITLE: - Improved therapeutic effect on malignant glioma with adenoviral suicide gene therapy combined with temozolomide.

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

REVISTA / JOURNAL: - *Gene Ther.* 2013 Sep 26. doi: 10.1038/gt.2013.46.

●● Enlace al texto completo (gratis o de pago) [1038/gt.2013.46](http://dx.doi.org/10.1038/gt.2013.46)

AUTORES / AUTHORS: - Stedt H; Samaranayake H; Pikkarainen J; Maatta AM; Alasaarela L; Airenne K; Yla-Herttuala S

INSTITUCIÓN / INSTITUTION: - Department of Biotechnology and Molecular Medicine, A. I. Virtanen Institute for Molecular Sciences, University of Eastern Finland, Kuopio, Finland.

RESUMEN / SUMMARY: - Malignant gliomas (MGs) are cancers with poor prognosis and limited therapeutic options. Herpes Simplex virus-1 thymidine kinase expressed from adenoviruses with prodrug ganciclovir (TK/GCV) is the best-characterized suicide gene therapy, whereas temozolomide (TMZ) is the first-line chemotherapy for MG. However, the potential of their combination has not been studied thoroughly. The aim of this study was to evaluate the therapeutic response of this combination and to study whether addition of valproic acid (VPA) could benefit the treatment outcome. Efficacies of different treatments were first studied in vitro in BT4C rat MG cells. Therapeutic assessment in vivo was done in an immunocompetent rat MG model for treatment efficacy and toxicity. In vitro, VPA was able to significantly enhance cytotoxicity and increase adenovirus-mediated transduction efficiency up to sevenfold. In vivo, rats receiving TK/GCV+TMZ had notably smaller tumors and enhanced survival ($P < 0.001$) in comparison with control rats. However, VPA was not able to further enhance the treatment response in vivo. Leukocytopenia and thrombocytopenia were the major side effects. We conclude that careful optimization of the treatment schedules and doses of individual therapies are necessary to achieve an optimal therapeutic effect with TK/GCV+TMZ combination. No further in vivo benefit with VPA was observed. Gene Therapy advance online publication, 26 September 2013; doi:10.1038/gt.2013.46.

[20]

TÍTULO / TITLE: - Glypican-1 Stimulates S Phase Entry and DNA Replication in Human Glioma Cells and Normal Astrocytes.

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

REVISTA / JOURNAL: - Mol Cell Biol. 2013 Sep 9.

- [Enlace al texto completo \(gratis o de pago\) 1128/MCB.00238-13](#)

AUTORES / AUTHORS: - Qiao D; Meyer K; Friedl A

INSTITUCIÓN / INSTITUTION: - Department of Pathology and Laboratory Medicine, University of Wisconsin, Madison, WI 53705.

RESUMEN / SUMMARY: - Malignant gliomas are highly lethal neoplasms with limited treatment options. We previously found that the heparan sulfate proteoglycan glypican-1 (GPC1) is universally and highly expressed in human gliomas. In this study, we investigated the biological activity of GPC1 expression in both human glioma cells and normal astrocytes in vitro. Expression of GPC1 inactivates the G1/S checkpoint and strongly stimulates DNA replication. Constitutive expression of GPC1 causes DNA

re-replication and DNA damage, suggesting a mutagenic activity for GPC1. GPC1 expression leads to a significant downregulation of the tumor suppressors pRb, Cip/Kip CKIs and CDH1, and upregulation of the pro-oncogenic proteins cyclin E, CDK2, Skp2 and Cdt1. These GPC1-induced changes are accompanied by a significant reduction in all types of D cyclins, which is independent of serum supplementation. Likely, GPC1 stimulates the so-called Skp2-autoinduction-loop, independent of cyclin D/CDK4/6. Knockdown of Skp2, CDK2 or cyclin E, three key elements within the network modulated by GPC1, results in a reduction of the S-phase and aneuploid fraction, implying a functional role for these regulators in GPC1-induced S phase entry and DNA re-replication. In addition, a significant activation of both the ERK/MAPK and PI3K/Akt signaling pathways by GPC1 is seen in normal human astrocytes even in the presence of growth factor supplement. Both pathways are constitutively activated in human gliomas. The surprising magnitude and the mitogenic and mutagenic nature of the effect exerted by GPC1 on the cell cycle imply that GPC1 may play an important role in both glioma tumorigenesis and growth.

[21]

TÍTULO / TITLE: - Phenotypical analysis, relation to malignancy and prognostic relevance of ICOS+T regulatory and dendritic cells in patients with gliomas.

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

REVISTA / JOURNAL: - J Neuroimmunol. 2013 Sep 12. pii: S0165-5728(13)00243-9. doi: 10.1016/j.jneuroim.2013.09.001.

●● Enlace al texto completo (gratis o de pago) 1016/j.jneuroim.2013.09.001

AUTORES / AUTHORS: - Gousias K; von Ruecker A; Voulgari P; Simon M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital of Bonn, Sigmund-Freud-Strasse 25, 53105, Germany. Electronic address: kostasgousias@yahoo.com.

RESUMEN / SUMMARY: - We determined circulating T helper, T regulatory and ICOS+T regulatory as well as DC cell counts in 29 patients with cerebral gliomas. Samples from patients with gliomas vs. healthy controls and from patients with glioblastomas vs. patients with glioma WHO grades I-III contained significantly ($p < 0.05$) decreased numbers of total as well as mature, i.e. myeloid and plasmacytoid DCs. Patients with glioblastomas demonstrated significantly lower values of CD4+ as well as an increased fraction of ICOS+T regulatory/CD4+ cells. Higher CD4+ cell counts (≥ 225 cells/ μ l, median) were associated with improved survival in glioblastomas.

[22]

TÍTULO / TITLE: - Granulocyte Macrophage-Colony Stimulation Factor Promotes the Immunosuppressive Activity of Glioma-Infiltrating Myeloid Cells through Interleukin-4 Receptor-alpha

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

REVISTA / JOURNAL: - Cancer Res. 2013 Sep 12.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-12-4124](#)

AUTORES / AUTHORS: - Kohanbash G; McKaveney K; Sakaki M; Ueda R; Mintz AH; Amankulor N; Fujita M; Ohlfest JR; Okada H

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of Pittsburgh.

RESUMEN / SUMMARY: - Malignant gliomas, such as glioblastoma, are lethal cancers in the brain and heavily infiltrated by myeloid cells. Interleukin-4 receptor-alpha (IL-4Ralpha) is known to mediate immunosuppressive functions of myeloid cells, and polymorphisms in the IL-4Ralpha gene are associated with altered glioma risk and prognosis. We therefore sought to determine the role of IL-4Ralpha in glioma development. In both mouse de novo gliomas and human glioblastoma cases, IL-4Ralpha is up-regulated on glioma-infiltrating myeloid cells but not in the periphery or normal brains. Mice deficient for IL-4Ralpha gene demonstrate slower growth of glioma associated with reduced production of arginase in the glioma microenvironment. In vitro studies with bone marrow-derived myeloid cells show that IL-4Ralpha mediates IL-13-induced production of arginase, which is critical for the T-cell suppressing function of myeloid cells. Furthermore, glioma-derived myeloid cells suppress T-cell proliferation in an IL-4Ralpha-dependent manner (myeloid-derived suppressor cells). Granulocyte-macrophage colony-stimulating factor (GM-CSF) plays a central role for the induction of IL-4Ralpha expression on myeloid cells, and is up-regulated in both human and mouse glioma environments compared with normal brains or peripheral blood samples. Our data demonstrate a novel GM-CSF-induced immunosuppression mechanism in the glioma microenvironment via up-regulation of IL-4Ralpha.

[23]

TÍTULO / TITLE: - Overexpression of MACC1 protein and its clinical implications in patients with glioma.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Aug 28.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1112-5](#)

AUTORES / AUTHORS: - Yang T; Kong B; Kuang YQ; Cheng L; Gu JW; Zhang JH; Shu HF; Yu SX; He WQ; Xing XM; Huang HD

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Chengdu Military General Hospital, No. 270, Tianhui Road, Rongdu Avenue, Chengdu, 610083, China.

RESUMEN / SUMMARY: - Metastasis associated in colon cancer 1 (MACC1) has been regarded as a novel potential therapeutic target for multiple cancers. However, the impact of MACC1 in glioma remains unclear. The aim of this study was to analyze the correlation of MACC1 expression with the clinicopathological features of glioma. MACC1 mRNA and protein expression levels in human glioma tissues were detected by quantitative real-time polymerase chain reaction and immunohistochemistry assays, respectively. MACC1 mRNA and protein expression were both significantly higher in glioma tissues than in corresponding noncancerous brain tissues (both $P < 0.001$). In addition, statistical analysis suggested that high MACC1 expression was significantly correlated with advanced pathological grade ($P = 0.004$) and that patients with high expression of MACC1 protein exhibited a poorer prognosis than those with low MACC1 expression. Furthermore, Cox multivariate analysis showed that MACC1 overexpression was an independent prognostic factor for predicting the overall survival of glioma patients. In conclusion, expression of MACC1 in glioma could be adopted as a candidate biomarker for the diagnosis of clinical stage and for assessing prognosis, indicating for the first time that MACC1 may play an important role in the tumor development and progression in glioma. MACC1 might be considered as a novel therapeutic target against this cancer.

[24]

TÍTULO / TITLE: - Neurological and cytological response as potential early predictors of time-to-progression and overall survival in patients with leptomeningeal carcinomatosis treated with intrathecal liposomal cytarabine: a retrospective cohort study.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 15.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1241-0](#)

AUTORES / AUTHORS: - Fusco JP; Castanon E; Carranza OE; Zubiri L; Martin P; Espinos J; Rodriguez J; Santisteban M; Aramendia JM; Gil-Bazo I

INSTITUCIÓN / INSTITUTION: - Department of Oncology, Clinica Universidad de Navarra, c/Pio XII 36, 31008, Pamplona, España.

RESUMEN / SUMMARY: - Interesting neurological and cytological response rates after intrathecal (i.t) liposomal cytarabine have been observed in patients with leptomeningeal carcinomatosis (LMC) from solid tumors. However, the potential use of those responses as early predictors of time-to-progression (TTP) and overall survival (OS) is unexplored. 27 consecutive patients with LMC treated with 50 mg i.t liposomal cytarabine under compassionate drug use were retrospectively studied. All patients received i.t treatment every 2 weeks during induction and every 4 weeks during maintenance periods. Neurological and cytological responses were assessed before every liposomal cytarabine cycle. Most of the patients were female (17/27) diagnosed

with breast cancer (15/27). A complete neurological response was seen among 11 % of the patients; partial response in 22 % of the patients; stable disease in 30 % of the patients and progressive disease in 37 % of them. Cytological assessment was available in 11/27 patients showing a 26 % complete response rate. The median time to neurological and cytological response was 15 days and 14 days, respectively. Patients showing a combined neurological and cytological response showed a significantly longer median TTP (122 vs. 3 days; $p = 0.001$) and OS (141 vs. 3 days; $p = 0.002$) compared to those showing both neurological and cytological progression. No grade 4 toxicities were recorded. According to these preliminary results, early neurological and cytological responses may be further studied as early predictors of TTP and OS in patients receiving i.t liposomal cytarabine for LMC.

[25]

TÍTULO / TITLE: - Processing speed, attention, and working memory after treatment for medulloblastoma: an international, prospective, and longitudinal study.

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

REVISTA / JOURNAL: - J Clin Oncol. 2013 Oct 1;31(28):3494-500. doi: 10.1200/JCO.2012.47.4775. Epub 2013 Aug 26.

●● [Enlace al texto completo \(gratis o de pago\) 1200/JCO.2012.47.4775](#)

AUTORES / AUTHORS: - Palmer SL; Armstrong C; Onar-Thomas A; Wu S; Wallace D; Bonner MJ; Schreiber J; Swain M; Chapieski L; Mabbott D; Knight S; Boyle R; Gajjar A

INSTITUCIÓN / INSTITUTION: - Shawna L. Palmer, Arzu Onar-Thomas, Shengjie Wu, Dana Wallace, Jane Schreiber, and Amar Gajjar, St Jude Children's Research Hospital, Memphis, TN; Carol Armstrong, Children's Hospital of Philadelphia, Philadelphia, PA; Melanie J. Bonner, Duke University Medical Center, Durham, NC; Lynn Chapieski, Texas Children's Hospital, Houston, TX; Michelle Swain, Royal Children's Hospital of Brisbane, Queensland; Sarah Knight, Royal Children's Hospital of Melbourne, Melbourne, Victoria; Robyn Boyle, Sydney Children's Hospital, Sydney, New South Wales, Australia; and Donald Mabbott, The Hospital for Sick Children, Toronto, Ontario, Canada.

RESUMEN / SUMMARY: - **PURPOSE:** The current study prospectively examined processing speed (PS), broad attention (BA), and working memory (WM) ability of patients diagnosed with medulloblastoma over a 5-year period. **PATIENTS AND METHODS:** The study included 126 patients, ages 3 to 21 years at diagnosis, enrolled onto a collaborative protocol for medulloblastoma. Patients were treated with postsurgical risk-adapted craniospinal irradiation ($n = 36$ high risk [HR]; $n = 90$ average risk) followed by four cycles of high-dose chemotherapy with stem-cell support. Patients completed 509 neuropsychological evaluations using the Woodcock-Johnson Tests of Cognitive Abilities Third Edition (median of three observations per patient). **RESULTS:** Linear mixed effects models revealed that younger age at diagnosis, HR classification, and higher baseline scores were significantly associated with poorer outcomes in PS.

Patients treated as HR and those with higher baseline scores are estimated to have less favorable outcomes in WM and BA over time. Parent education and marital status were significantly associated with BA and WM baseline scores but not change over time. CONCLUSION: Of the three key domains, PS was estimated to have the lowest scores at 5 years after diagnosis. Identifying cognitive domains most vulnerable to decline should guide researchers who are aiming to develop efficacious cognitive intervention and rehabilitation programs, thereby improving the quality of survivorship for the pediatric medulloblastoma population.

[26]

TÍTULO / TITLE: - Analysis of FET-PET imaging for target volume definition in patients with gliomas treated with conformal radiotherapy.

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

REVISTA / JOURNAL: - Radiother Oncol. 2013 Aug 13. pii: S0167-8140(13)00325-3. doi: 10.1016/j.radonc.2013.06.043.

●● Enlace al texto completo (gratis o de pago) 1016/j.radonc.2013.06.043

AUTORES / AUTHORS: - Rieken S; Habermehl D; Giesel FL; Hoffmann C; Burger U; Rief H; Welzel T; Haberkorn U; Debus J; Combs SE

INSTITUCIÓN / INSTITUTION: - University Hospital of Heidelberg, Department of Radiation Oncology, Germany. Electronic address: Stefan.Rieken@med.uni-heidelberg.de.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Modern radiotherapy (RT) techniques such as stereotactic RT, intensity-modulated RT, or particle irradiation allow local dose escalation with simultaneous sparing of critical organs. Several trials are currently investigating their benefit in glioma reirradiation and boost irradiation. Target volume definition is of critical importance especially when steep dose gradient techniques are employed. In this manuscript we investigate the impact of O-(2-(F-18)fluoroethyl)-l-tyrosine-positron emission tomography/computer tomography (FET-PET/CT) on target volume definition in low and high grade glioma patients undergoing either first or re-irradiation with particles. METHODS AND MATERIAL: We investigated volumetric size and uniformity of magnetic resonance imaging (MRI)- vs. FET-PET/CT-derived gross tumor volumes (GTVs) and planning target volumes (PTVs) of 41 glioma patients. Clinical cases are presented to demonstrate potential benefits of integrating FET-PET/CT-planning into daily routine. RESULTS: Integrating FET-uptake into the delineation of GTVs yields larger volumes. Combined modality-derived PTVs are significantly enlarged in high grade glioma patients and in case of primary RT. The congruence of MRI and FET signals for the identification of glioma GTVs is poor with mean uniformity indices of 0.39. MRI-based PTVs miss 17% of FET-PET/CT-based GTVs. Non significant alterations were detected in low grade glioma patients and in those undergoing reirradiation. CONCLUSIONS: Target volume definition for malignant gliomas during initial RT may yield significantly differing results depending upon the

imaging modality, which the contouring process is based upon. The integration of both MRI and FET-PET/CT may help to improve GTV coverage by avoiding larger incongruences between physical and biological imaging techniques. In low grade gliomas and in cases of reirradiation, more studies are needed in order to investigate a potential benefit of FET-PET/CT for planning of RT.

[27]

TÍTULO / TITLE: - Engineered knottin peptide enables noninvasive optical imaging of intracranial medulloblastoma.

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

REVISTA / JOURNAL: - Proc Natl Acad Sci U S A. 2013 Sep 3;110(36):14598-603. doi: 10.1073/pnas.1311333110. Epub 2013 Aug 15.

●● Enlace al texto completo (gratis o de pago) [1073/pnas.1311333110](https://doi.org/10.1073/pnas.1311333110)

AUTORES / AUTHORS: - Moore SJ; Hayden Gephart MG; Bergen JM; Su YS; Rayburn H; Scott MP; Cochran JR

INSTITUCIÓN / INSTITUTION: - Departments of Bioengineering, Neurosurgery, Developmental Biology, Genetics, and Chemical Engineering, Center for Children's Brain Tumors, Stanford Cancer Institute, and Howard Hughes Medical Institute, Stanford University, Stanford, CA 94305.

RESUMEN / SUMMARY: - Central nervous system tumors carry grave clinical prognoses due to limited effectiveness of surgical resection, radiation, and chemotherapy. Thus, improved strategies for brain tumor visualization and targeted treatment are critically needed. We demonstrate that mouse cerebellar medulloblastoma (MB) can be targeted and illuminated with a fluorescent, engineered cystine knot (knottin) peptide that binds with high affinity to $\alpha v \beta 3$, $\alpha v \beta 5$, and $\alpha 5 \beta 1$ integrin receptors. This integrin-binding knottin peptide, denoted EETI 2.5F, was evaluated as a molecular imaging probe in both orthotopic and genetic models of MB. Following tail vein injection, fluorescence arising from dye-conjugated EETI 2.5F was localized to the tumor compared with the normal surrounding brain tissue, as measured by optical imaging. The imaging signal intensity correlated with tumor volume. Due to its unique ability to bind to $\alpha 5 \beta 1$ integrin, EETI 2.5F showed superior in vivo and ex vivo brain tumor imaging contrast compared with other engineered integrin-binding knottin peptides and with c(RGDfK), a well-studied integrin-binding peptidomimetic. Next, EETI 2.5F was fused to an antibody fragment crystallizable (Fc) domain (EETI 2.5F-Fc) to determine if a larger integrin-binding protein could also target intracranial brain tumors. EETI 2.5F-Fc, conjugated to a fluorescent dye, illuminated MB following i.v. injection and was able to distribute throughout the tumor parenchyma. In contrast, brain tumor imaging signals were not detected in mice injected with EETI 2.5F proteins containing a scrambled integrin-binding sequence, demonstrating the importance of

target specificity. These results highlight the potential of using EETI 2.5F and EETI 2.5-Fc as targeted molecular probes for brain tumor imaging.

[28]

TÍTULO / TITLE: - Effects of the Selective MPS1 Inhibitor MPS1-IN-3 on Glioblastoma Sensitivity to Antimitotic Drugs.

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

REVISTA / JOURNAL: - J Natl Cancer Inst. 2013 Sep 4;105(17):1322-1331. Epub 2013 Aug 12.

●● [Enlace al texto completo \(gratis o de pago\) 1093/jnci/djt168](#)

AUTORES / AUTHORS: - Tannous BA; Kerami M; Van der Stoop PM; Kwiatkowski N; Wang J; Zhou W; Kessler AF; Lewandrowski G; Hiddingh L; Sol N; Lagerweij T; Wedekind L; Niers JM; Barazas M; Nilsson RJ; Geerts D; De Witt Hamer PC; Hagemann C; Vandertop WP; Van Tellingen O; Noske DP; Gray NS; Wurdinger T

INSTITUCIÓN / INSTITUTION: - Affiliations of authors: Neuroscience Center and Molecular Neurogenetics Unit, Departments of Neurology, Harvard Medical School, Boston, MA (BAT, MK, GL, MB, TW); Center for Molecular Imaging Research, Department of Radiology, Massachusetts General Hospital, Boston, MA (BAT, MK, GL, MB, TW); Neuroscience Program, Harvard Medical School, Boston, MA (BAT, MK, GL, MB, TW); Neuro-oncology Research Group, Department of Neurosurgery, VU University Medical Center, Amsterdam, The Netherlands (MK, PMVdS, LH, NS, LW, JMN, MB, RJAN, PCDWH, WPV, DPN, TW); Department of Cancer Biology, Dana Farber Cancer Institute, Boston, MA (NK, JW, WZ, NSG); and Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston, MA (NK, JW, WZ, NSG); Department of Neurosurgery, Tumorbiology Laboratory, University of Wurzburg, Wurzburg, Germany (AFK, CH); Department of Radiation Sciences, Oncology, Umea University, Umea, Sweden (RJAN); Department of Pediatric Oncology/Hematology, Sophia Children's Hospital, Erasmus University Medical Center, Rotterdam, The Netherlands (DG); Department of Clinical Chemistry/Preclinical Pharmacology, The Netherlands Cancer Institute, Antoni van Leeuwenhoek Hospital, Amsterdam, The Netherlands (OVT).

RESUMEN / SUMMARY: - BACKGROUND: Glioblastomas exhibit a high level of chemotherapeutic resistance, including to the antimitotic agents vincristine and taxol. During the mitotic agent-induced arrest, glioblastoma cells are able to perform damage-control and self-repair to continue proliferation. Monopolar spindle 1 (MPS1/TTK) is a checkpoint kinase and a gatekeeper of the mitotic arrest. METHODS: We used glioblastoma cells to determine the expression of MPS1 and to determine the effects of MPS1 inhibition on mitotic errors and cell viability in combination with vincristine and taxol. The effect of MPS1 inhibition was assessed in different orthotopic glioblastoma mouse models (n = 3-7 mice/group). MPS1 expression levels were

examined in relation to patient survival. RESULTS: Using publicly available gene expression data, we determined that MPS1 overexpression corresponds positively with tumor grade and negatively with patient survival (two-sided t test, $P < .001$). Patients with high MPS1 expression ($n = 203$) had a median and mean survival of 487 and 913 days (95% confidence intervals [CI] = 751 to 1075), respectively, and a 2-year survival rate of 35%, whereas patients with intermediate MPS1 expression ($n = 140$) had a median and mean survival of 858 and 1183 days (95% CI = 1177 to 1189), respectively, and a 2-year survival rate of 56%. We demonstrate that MPS1 inhibition by RNAi results in sensitization to antimetabolic agents. We developed a selective small-molecule inhibitor of MPS1, MPS1-IN-3, which caused mitotic aberrancies in glioblastoma cells and, in combination with vincristine, induced mitotic checkpoint override, increased aneuploidy, and augmented cell death. MPS1-IN-3 sensitizes glioblastoma cells to vincristine in orthotopic mouse models (two-sided log-rank test, $P < .01$), resulting in prolonged survival without toxicity. CONCLUSIONS: Our results collectively demonstrate that MPS1, a putative therapeutic target in glioblastoma, can be selectively inhibited by MPS1-IN-3 sensitizing glioblastoma cells to antimetabolic drugs.

[29]

TÍTULO / TITLE: - Constitutive Activation of Signal Transducer and Activator of Transcription 3 (STAT3) and Nuclear Factor kappaB Signaling in Glioblastoma Cancer Stem Cells Regulates the Notch Pathway.

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

REVISTA / JOURNAL: - J Biol Chem. 2013 Sep 6;288(36):26167-76. doi: 10.1074/jbc.M113.477950. Epub 2013 Jul 31.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.M113.477950](#)

AUTORES / AUTHORS: - Garner JM; Fan M; Yang CH; Du Z; Sims M; Davidoff AM; Pfeiffer LM

INSTITUCIÓN / INSTITUTION: - From the Department of Pathology and Laboratory Medicine and the Center for Cancer Research, University of Tennessee Health Science Center, Memphis, Tennessee 38163 and.

RESUMEN / SUMMARY: - Malignant gliomas are locally aggressive, highly vascular tumors that have a dismal prognosis, and present therapies provide little improvement in the disease course and outcome. Many types of malignancies, including glioblastoma, originate from a population of cancer stem cells (CSCs) that are able to initiate and maintain tumors. Although CSCs only represent a small fraction of cells within a tumor, their high tumor-initiating capacity and therapeutic resistance drives tumorigenesis. Therefore, it is imperative to identify pathways associated with CSCs to devise strategies to selectively target them. In this study, we describe a novel relationship between glioblastoma CSCs and the Notch pathway, which involves the constitutive activation of STAT3 and NF-kappaB signaling. Glioma CSCs were isolated

and maintained in vitro using an adherent culture system, and the biological properties were compared with the traditional cultures of CSCs grown as multicellular spheres under nonadherent culture conditions. Interestingly, both adherent and spheroid glioma CSCs show constitutive activation of the STAT3/NF-kappaB signaling pathway and up-regulation of STAT3- and NF-kappaB-dependent genes. Gene expression profiling also identified components of the Notch pathway as being deregulated in glioma CSCs, and the deregulated expression of these genes was sensitive to treatment with STAT3 and NF-kappaB inhibitors. This finding is particularly important because Notch signaling appears to play a key role in CSCs in a variety of cancers and controls cell fate determination, survival, proliferation, and the maintenance of stem cells. The constitutive activation of STAT3 and NF-kappaB signaling pathways that leads to the regulation of Notch pathway genes in glioma CSCs identifies novel therapeutic targets for the treatment of glioma.

[30]

TÍTULO / TITLE: - How I treat CNS lymphomas.

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

REVISTA / JOURNAL: - Blood. 2013 Oct 3;122(14):2318-2330. Epub 2013 Aug 20.

●● [Enlace al texto completo \(gratis o de pago\) 1182/blood-2013-06-453084](#)

AUTORES / AUTHORS: - Rubenstein JL; Gupta NK; Mannis GN; Lamarre AK; Treseler P

INSTITUCIÓN / INSTITUTION: - Division of Hematology/Oncology, Helen Diller Comprehensive Cancer Center.

RESUMEN / SUMMARY: - The pathogenesis of primary and secondary central nervous system (CNS) lymphoma poses a unique set of diagnostic, prognostic, and therapeutic challenges. During the past 10 years, there has been significant progress in the elucidation of the molecular properties of CNS lymphomas and their microenvironment, as well as evolution in the development of novel treatment strategies. Although a CNS lymphoma diagnosis was once assumed to be uniformly associated with a dismal prognosis, it is now reasonable to anticipate long-term survival, and possibly a cure, for a significant fraction of CNS lymphoma patients. The pathogenesis of CNS lymphomas affects multiple compartments within the neuroaxis, and proper treatment of the CNS lymphoma patient requires a multidisciplinary team with expertise not only in hematology/oncology but also in neurology, neuroradiology, neurosurgery, clinical neuropsychology, ophthalmology, pathology, and radiation oncology. Given the evolving principles of management and the evidence for improvements in survival, our goal is to provide an overview of current knowledge regarding the pathogenesis of CNS lymphomas and to highlight promising strategies that we believe to be most effective in establishing diagnosis, staging, and therapeutic management.

[31]

TÍTULO / TITLE: - From the Cover: Neutralization of terminal differentiation in gliomagenesis.

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

REVISTA / JOURNAL: - Proc Natl Acad Sci U S A. 2013 Sep 3;110(36):14520-7. doi: 10.1073/pnas.1308610110. Epub 2013 Aug 5.

●● Enlace al texto completo (gratis o de pago) [1073/pnas.1308610110](https://doi.org/10.1073/pnas.1308610110)

AUTORES / AUTHORS: - Hu J; Ho AL; Yuan L; Hu B; Hua S; Hwang SS; Zhang J; Hu T; Zheng H; Gan B; Wu G; Wang YA; Chin L; Depinho RA

INSTITUCIÓN / INSTITUTION: - Departments of Cancer Biology, Genomic Medicine, and Experimental Radiation Oncology and Institute of Applied Cancer Science, University of Texas MD Anderson Cancer Center, Houston, TX 77030.

RESUMEN / SUMMARY: - An immature state of cellular differentiation-characterized by stem cell-like tendencies and impaired differentiation-is a hallmark of cancer. Using glioblastoma multiforme (GBM) as a model system, we sought to determine whether molecular determinants that drive cells toward terminal differentiation are also genetically targeted in carcinogenesis and whether neutralizing such genes also plays an active role to reinforce the impaired differentiation state and promote malignancy. To that end, we screened 71 genes with known roles in promoting nervous system development that also sustain copy number loss in GBM through antineoplastic assay and identified A2BP1 (ataxin 2 binding protein 1, Rbfox1), an RNA-binding and splicing regulator that is deleted in 10% of GBM cases. Integrated in silico analysis of GBM profiles to elucidate the A2BP1 pathway and its role in glioma identified myelin transcription factor 1-like (Myt1L) as a direct transcriptional regulator of A2BP1. Reintroduction of A2BP1 or Myt1L in GBM cell lines and glioma stem cells profoundly inhibited tumorigenesis in multiple assays, and conversely, shRNA-mediated knockdown of A2BP1 or Myt1L in premalignant neural stem cells compromised neuronal lineage differentiation and promoted orthotopic tumor formation. On the mechanistic level, with the top-represented downstream target TPM1 as an illustrative example, we demonstrated that, among its multiple functions, A2BP1 serves to regulate TPM1's alternative splicing to promote cytoskeletal organization and terminal differentiation and suppress malignancy. Thus, in addition to the activation of self-renewal pathways, the neutralization of genetic programs that drive cells toward terminal differentiation may also promote immature and highly plastic developmental states that contribute to the aggressive malignant properties of GBM.

[32]

TÍTULO / TITLE: - Early response to high-dose methotrexate, vincristine, and procarbazine chemotherapy-adapted strategy for primary CNS lymphoma: no consolidation therapy for patients achieving early complete response.

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

REVISTA / JOURNAL: - Ann Hematol. 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1007/s00277-013-1853-7](#)

AUTORES / AUTHORS: - Kim YR; Kim SH; Chang JH; Suh CO; Kim SJ; Kim Y; Hwang DY; Jang JE; Hyun SY; Cheong JW; Min YH; Kim JS

INSTITUCIÓN / INSTITUTION: - Division of Hematology, Department of Internal Medicine, Severance Hospital, Yonsei University College of Medicine, 50 Yonsei-ro, Seodaemun-gu, Seoul, 120-752, South Korea.

RESUMEN / SUMMARY: - Optimal treatment strategies for primary central nervous system lymphoma (PCNSL) have not been established. In this study, we investigated the treatment outcomes and prognostic factors of high-dose methotrexate, vincristine, and procarbazine (MVP) chemotherapy followed by an interim response-adapted intensification strategy in immunocompetent patients with PCNSL. We evaluated the evidence of infection with Epstein-Barr virus (EBV) in both brain tumor tissue and whole blood. Forty patients were retrospectively reviewed. Ten (25 %) patients who achieved complete response (CR) in the interim analysis did not receive any additional consolidation treatment after completion of planned high-dose MVP chemotherapy. Additional radiotherapy (n = 9) or autologous stem cell transplantation (ASCT) (n = 7) was performed in patients who did not achieve CR in the interim analysis. The median age was 55 years. The overall CR rate was 62.5 % (n = 25), and the objective response rate was 75.0 %. Two-year overall survival (OS) was 59.8 %, and 2-year progression-free survival was 47.1 %. Grade 3 or 4 neutropenia and thrombocytopenia occurred in 47.5 and 32.5 % of patients, respectively. Treatment-related mortality was 15.0 % (n = 6), and four patients developed delayed neurotoxicity. There was no evidence of EBV-encoded RNA expression in brain tumor tissue. Ten (29.4 %) of 34 patients showed detectable EBV-DNA in whole blood. Poor performance status and EBV-DNA positivity in whole blood were significantly associated with inferior OS (p = 0.032, p = 0.023, respectively). We suggest that high-dose MVP chemotherapy followed by an early response-adapted intensification strategy may be effective and minimize the number of patients who receive radiotherapy or ASCT in the early course of treatment.

[33]

TÍTULO / TITLE: - Solitary fibrous tumors of the central nervous system: clinical features and imaging findings in 22 patients.

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

REVISTA / JOURNAL: - J Comput Assist Tomogr. 2013 Sep-Oct;37(5):658-65. doi: 10.1097/RCT.0b013e3182a05687.

●● Enlace al texto completo (gratis o de pago) [1097/RCT.0b013e3182a05687](https://doi.org/10.1097/RCT.0b013e3182a05687)

AUTORES / AUTHORS: - Wang XQ; Zhou Q; Li ST; Liao CL; Zhang H; Zhang BY

INSTITUCIÓN / INSTITUTION: - From the *Department of Neurosurgery, Xinhua Hospital, Shanghai Jiaotong University School of Medicine, Shanghai; daggerDepartment of Medical Oncology, Jiangsu Provincial Cancer Hospital, Nanjing; double daggerDepartment of Ultrasonography, Xinhua Hospital, Shanghai Jiaotong University School of Medicine, Shanghai; and section signDepartment of Radiotherapy, Jiangsu Province Hospital of Traditional Chinese Medicine, Nanjing, China.

RESUMEN / SUMMARY: - **INTRODUCTION:** Solitary fibrous tumor (SFT) is a rare mesenchymal neoplasm originating in the central nervous system (CNS), with imaging features currently not well known. The purposes were to describe and characterize clinical features and imaging findings of CNS SFT. **METHODS:** We retrospectively reviewed computed tomographic (CT; n = 10) and magnetic resonance (MR) images (n = 18) of 22 patients with SFT (13 males and 9 females; mean, 47.6 years) with associated clinical records. **RESULTS:** Each lesion was found as a solitary, well-defined mass, ranging in size from 12 to 70 mm (mean, 38 mm). The tumor shape was roundlike in 16 cases (72.7%) and irregular in 6 cases (27.2%). The cerebellopontine angle zone was the most affected area (n = 6). On precontrast CT scans, 10 cases showed predominantly hyperattenuation (n = 9) and isoattenuation (n = 1). No lesion contained calcification, and 2 cases showed bone invasions. All 18 tumors examined by MR imaging showed homogeneous hypointense (n = 5) or isointense (n = 7) signal intensity and heterogeneous mixed isointense and hypointense signal intensity (n = 6) on T1-weighted images, whereas most tumors were predominantly isointense (n = 13) and hypointense (n = 4) to the cortex on T2-weighted images; on postcontrast CT and MR images, enhancement was marked homogeneous (n = 10) or heterogeneous (n = 12). Fourteen tumors had thickening of the meninges adjacent to the tumor. **CONCLUSIONS:** Although SFT is a rare neoplasm in the CNS, it should be considered in the differential diagnosis. The most affected area is the cerebellopontine angle zone. Solitary fibrous tumor tends to have some imaging features, such as high attenuation on CT, isointense to hypointense signal intensity on MR images, and marked enhancement.

[34]

TÍTULO / TITLE: - Increased expression of the 58-kD microspherule protein (MSP58) is correlated with poor prognosis in glioma patients.

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

REVISTA / JOURNAL: - Med Oncol. 2013 Dec;30(4):677. doi: 10.1007/s12032-013-0677-6. Epub 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) [1007/s12032-013-0677-6](https://doi.org/10.1007/s12032-013-0677-6)

AUTORES / AUTHORS: - Lin W; Li XM; Zhang J; Huang Y; Wang J; Zhang J; Jiang XF; Fei Z

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Xijing Hospital, Fourth Military Medical University, Xi'an, 710032, China.

RESUMEN / SUMMARY: - The pathological grading system for human gliomas is usually used to evaluate the prognosis of glioma patients. However, some glioma patients with similar grades have obvious discrepancies in survival. It is therefore necessary to identify some new certain tumor biomarkers that are more suitable for the prognostic assessment of gliomas than the grading system. The 58-kD microspherule protein (MSP58) is an evolutionarily conserved nuclear protein and plays an important role in the regulation of cell proliferation and malignant transformation. However, whether MSP58 can be used as a biomarker to evaluate the malignancy and the prognosis of glioma patients is unknown. In the present study, we performed immunohistochemical analysis to evaluate MSP58 protein expression in 158 specimens of human gliomas and 34 normal control brain tissues. Compared with the control tissues, MSP58 expression was not only significantly higher in the glioma tissues ($P < 0.05$), but also increased with the increasing pathological grade ($P < 0.001$). Furthermore, the Kaplan-Meier analysis showed that high expression of MSP58 could predict poor survival in glioma patients ($P < 0.001$). In the multivariate analysis, high expression of MSP58 was also an independent unfavorable prognostic factor for the overall survival in glioma patients ($P < 0.001$, hazard ratio, 8.177, 95 % CI 2.571-26.008). In conclusion, the increased expression of MSP58 is correlated with a higher malignant grade and poor prognosis in glioma patients. MSP58 is valuable both as an indicator of the malignancy of gliomas and as a prognostic factor for the clinical outcome of glioma patients.

[35]

TÍTULO / TITLE: - Circulating T regulatory cells migration and phenotype in glioblastoma patients: an in vitro study.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 5.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1236-x](https://doi.org/10.1007/s11060-013-1236-x)

AUTORES / AUTHORS: - Vasco C; Canazza A; Rizzo A; Mossa A; Corsini E; Silvani A; Fariselli L; Salmaggi A; Ciusani E

INSTITUCIÓN / INSTITUTION: - Laboratory of Clinical Pathology and Medical Genetics, Foundation IRCCS Neurological Institute C. Besta, Via Celoria, 11, 20133, Milan, Italy.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most aggressive primary human brain tumor. The relatively high amount of T regulatory lymphocytes present in the tumor, contributes to the establishment of an immunosuppressive microenvironment. Samples of peripheral blood were collected from GBM patients and healthy controls and a purified population of Treg (CD4+/CD25bright) was isolated

using flow cytometric cell sorting. Treg migrating capacities toward human glioma cell line conditioned medium were evaluated through an in vitro migration test. Our data show that supernatants collected from GBM cell lines were more attractant to Treg when compared to complete standard medium. The addition of an anti-CCL2 antibody to conditioned medium decreased conditioned medium-dependent Treg migration, suggesting that CCL2 (also known as Monocyte Chemoattractant Protein, MCP-1) is implicated in the process. The number of circulating CD4⁺/μL or Treg/μL was similar in GBM patients and controls. Specific Treg markers (FOXP3; CD127; Helios; GITR; CTLA4; CD95; CCR2, CCR4; CCR7) were screened in peripheral blood and no differences could be detected between the two populations. These data confirm that the tumor microenvironment is attractive to Treg, which tend to migrate toward the tumor region changing the immunological response. Though we provide evidence that CCL2 is implicated in Treg migration, other factors are needed as well to provide such effect.

[36]

TÍTULO / TITLE: - Endoscopic endonasal surgery for craniopharyngiomas: surgical outcome in 64 patients.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug 2.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.6.JNS122259](#)

AUTORES / AUTHORS: - Koutourousiou M; Gardner PA; Fernandez-Miranda JC; Tyler-Kabara EC; Wang EW; Snyderman CH

INSTITUCIÓN / INSTITUTION: - Departments of Neurological Surgery and.

RESUMEN / SUMMARY: - Object The proximity of craniopharyngiomas to vital neurovascular structures and their high recurrence rates make them one of the most challenging and controversial management dilemmas in neurosurgery. Endoscopic endonasal surgery (EES) has recently been introduced as a treatment option for both pediatric and adult craniopharyngiomas. The object of the present study was to present the results of EES and analyze outcome in both the pediatric and the adult age groups. Methods The authors retrospectively reviewed the records of patients with craniopharyngioma who had undergone EES in the period from June 1999 to April 2011. Results Sixty-four patients, 47 adults and 17 children, were eligible for this study. Forty-seven patients had presented with primary craniopharyngiomas and 17 with recurrent tumors. The mean age in the adult group was 51 years (range 28-82 years); in the pediatric group, 9 years (range 4-18 years). Overall, the gross-total resection rate was 37.5% (24 patients); near-total resection (> 95% of tumor removed) was 34.4% (22 patients); subtotal resection (>= 80% of tumor removed) 21.9% (14 patients); and partial resection (< 80% of tumor removed) 6.2% (4 patients). In 9 patients, EES had been combined with radiation therapy (with radiosurgery in 6 cases) as the initial

treatment. Among the 40 patients (62.5%) who had presented with pituitary insufficiency, pituitary function remained unchanged in 19 (47.5%), improved or normalized in 8 (20%), and worsened in 13 (32.5%). In the 24 patients who had presented with normal pituitary function, new pituitary deficit occurred in 14 (58.3%). Nineteen patients (29.7%) suffered from diabetes insipidus at presentation, and the condition developed in 21 patients (46.7%) after treatment. Forty-four patients (68.8%) had presented with impaired vision. In 38 (86.4%) of them, vision improved or even normalized after surgery; in 5, it remained unchanged; and in 1, it temporarily worsened. One patient without preoperative visual problems showed temporary visual deterioration after treatment. Permanent visual deterioration occurred in no one after surgery. The mean follow-up was 38 months (range 1-135 months). Tumor recurrence after EES was discovered in 22 patients (34.4%) and was treated with repeat surgery (6 patients), radiosurgery (1 patient), combined repeat surgery and radiation therapy (8 patients), interferon (1 patient), or observation (6 patients). Surgical complications included 15 cases (23.4%) with CSF leakage that was treated with surgical reexploration (13 patients) and/or lumbar drain placement (9 patients). This leak rate was decreased to 10.6% in recent years after the introduction of the vascularized nasoseptal flap. Five cases (7.8%) of meningitis were found and treated with antibiotics without further complications. Postoperative hydrocephalus occurred in 7 patients (12.7%) and was treated with ventriculoperitoneal shunt placement. Five patients experienced transient cranial nerve palsies. There was no operative mortality.

Conclusions With the goal of gross-total or maximum possible safe resection, EES can be used for the treatment of every craniopharyngioma, regardless of its location, size, and extension (excluding purely intraventricular tumors), and can provide acceptable results comparable to those for traditional craniotomies. Endoscopic endonasal surgery is not limited to adults and actually shows higher resection rates in the pediatric population.

[37]

TÍTULO / TITLE: - Cytotoxic human peripheral blood-derived gammadeltaT cells kill glioblastoma cell lines: implications for cell-based immunotherapy for patients with glioblastoma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 24.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1258-4](#)

AUTORES / AUTHORS: - Nakazawa T; Nakamura M; Park YS; Motoyama Y; Hironaka Y; Nishimura F; Nakagawa I; Yamada S; Matsuda R; Tamura K; Sugimoto T; Takeshima Y; Marutani A; Tsujimura T; Ouji N; Ouji Y; Yoshikawa M; Nakase H

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RESUMEN / SUMMARY: - Glioblastoma (GBM) is a highly aggressive brain tumor for which novel therapeutic approaches, such as immunotherapy, are urgently needed. Zoledronate (ZOL), an inhibitor of osteoclastic activity, is known to stimulate peripheral blood-derived gammadeltaT cells and sensitize tumors to gammadeltaT cell-mediated killing. To investigate the feasibility of gammadeltaT cell-based immunotherapy for patients with GBM, we focused on the killing of GBM cell lines by gammadeltaT cells and the molecular mechanisms involved in these cell-cell interactions. Peripheral blood mononuclear cells were expanded in ZOL and interleukin (IL)-2 for 14 days, and gammadeltaT cells were enriched in the expanded cells by the immunomagnetic depletion of alphabetaT cells. Gliomas are resistant to NK cells but susceptible to lymphokine-activated killer cells and some cytotoxic T lymphocytes. When the gammadeltaT cell-mediated killing of three GBM cell lines (U87MG, U138MG and A172 cells) and an NK-sensitive leukemia cell line (K562 cells) were tested, 32 % U87MG, 15 % U138MG, 1 % A172, and 50 % K562 cells were killed at an effector:target ratio of 5:1. The gammadeltaT cell-mediated killing of all three GBM cell lines was significantly enhanced by ZOL and this ZOL-enhanced killing was blocked by an anti-T cell receptor (TcR) antibody. These results indicated that TcR gammadelta is crucial for the recognition of ZOL-treated GBM cells by gammadeltaT cells. Since the low level killing of GBM cells by the gammadeltaT cells was enhanced by ZOL, gammadeltaT cell-targeting therapy in combination with ZOL treatment could be effective for patients with GBM.

[38]

TÍTULO / TITLE: - Helping survivors of medulloblastoma learn from what we learn.

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

REVISTA / JOURNAL: - J Clin Oncol. 2013 Oct 1;31(28):3480-2. doi: 10.1200/JCO.2013.51.0578. Epub 2013 Aug 26.

●● Enlace al texto completo (gratis o de pago) [1200/JCO.2013.51.0578](#)

AUTORES / AUTHORS: - Sands SA

INSTITUCIÓN / INSTITUTION: - Columbia University Medical Center, New York, NY.

[39]

TÍTULO / TITLE: - Isolated plasmacytoma involving the brain parenchyma and cerebral spinal fluid.

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

REVISTA / JOURNAL: - Blood. 2013 Jul 4;122(1):6.

AUTORES / AUTHORS: - Huang Q

INSTITUCIÓN / INSTITUTION: - City of Hope National Medical Center, CA, USA.

[40]

TÍTULO / TITLE: - C1q-tumor necrosis factor-related protein 8 (CTRP8) is a novel interaction partner of relaxin receptor RXFP1 in human brain cancer cells.

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

REVISTA / JOURNAL: - J Pathol. 2013 Sep 6. doi: 10.1002/path.4257.

●● [Enlace al texto completo \(gratis o de pago\) 1002/path.4257](#)

AUTORES / AUTHORS: - Glogowska A; Kunanuvat U; Stetefeld J; Patel TR; Thanasupawat T; Krcek J; Weber E; Wong GW; Del Bigio MR; Hoang-Vu C; Hombach-Klonisch S; Klonisch T

INSTITUCIÓN / INSTITUTION: - Depts. of Human Anatomy and Cell Science, University of Manitoba, Winnipeg, Manitoba, Canada.

RESUMEN / SUMMARY: - We report a novel ligand-receptor system composed of the leucine-rich G protein coupled relaxin receptor, RXFP1, and the C1q-tumor necrosis factor-related protein 8 (CTRP8) in human primary brain cancer, a tumor entity devoid of the classical RXFP1 ligands, RLN1-3. In structural homology studies and computational docking experiments we delineated the N-terminal region of the globular C1q region of CTRP8 and the leucine-rich repeat units 7 and 8 of RXFP1 to mediate this new ligand-receptor interaction. CTRP8 secreted from HEK293T cells, recombinant human (rh)CTRP8 and short synthetic peptides derived from the C1q globular domain of human CTRP8 caused the activation of RXFP1 as determined by elevated intracellular cAMP levels and the induction of a marked pro-migratory phenotype in established glioblastoma (GB) cell lines and primary cells from GB patients. Employing a small competitor peptide, we were able to disrupt the CTRP8-RXFP1 induced increased GB motility. The CTRP8-RXFP1 mediated migration in GB cells involves the activation of PI3K and specific protein kinase C pathways and the increased production/ secretion of the potent lysosomal protease cathepsin B (cathB), a known prognostic marker of GB. Specific inhibition of CTRP8 induced cathB activity effectively blocked the ability of primary GB to invade laminin matrices. Finally, co-immunoprecipitation studies revealed the direct interaction of human CTRP8 with RXFP1. Our results support a therapeutic approach in GB aimed at targeting multiple steps of the CTRP8-RXFP1 signaling pathway by a combined inhibitor and peptide-based strategy to block GB dissemination within the brain.

[41]

TÍTULO / TITLE: - MicroRNA-218 Inhibits Glioma Invasion, Migration, Proliferation, and Cancer Stem-like Cell Self-Renewal by Targeting the Polycomb Group Gene Bmi1.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Oct 1;73(19):6046-6055. Epub 2013 Aug 15.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-0358](#)

AUTORES / AUTHORS: - Tu Y; Gao X; Li G; Fu H; Cui D; Liu H; Jin W; Zhang Y

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Departments of Experimental Surgery, Neurosurgery, and Administration, Tangdu Hospital, Fourth Military Medical University; Department of Cell Biology, School of Basic Medical Sciences, Xi'an Medical University, Xi'an; Department of Bio-Nano-Science and Engineering, Institute of Micro-Nano Science and Technology; and School of Life Sciences and Biotechnology, Shanghai Jiao Tong University, Shanghai, China.

RESUMEN / SUMMARY: - Malignant gliomas are the most common central nervous system tumors and the molecular mechanism driving their development and recurrence is still largely unknown, limiting the treatment of this disease. Here, we show that restoring the expression of miR-218, a microRNA commonly downregulated in glioma, dramatically reduces the migration, invasion, and proliferation of glioma cells. Quantitative reverse transcription PCR and Western blotting analysis revealed that expression of the stem cell-promoting oncogene Bmi1 was decreased after overexpression of miR-218 in glioma cells. Mechanistic investigations defined Bmi1 as a functional downstream target of miR-218 through which miR-218 ablated cell migration and proliferation. We documented that miR-218 also blocked the self-renewal of glioma stem-like cells, consistent with the suggested role of Bmi1 in stem cell growth. Finally, we showed that miR-218 regulated a broad range of genes involved in glioma cell development, including Wnt pathways that suppress glioma cell stem-like qualities. Taken together, our findings reveal miR-218 as a tumor suppressor that prevents migration, invasion, proliferation, and stem-like qualities in glioma cells. Cancer Res; 73(19); 6046-55. ©2013 AACR.

[42]

TÍTULO / TITLE: - Semiautomated Volumetric Measurement on Postcontrast MR Imaging for Analysis of Recurrent and Residual Disease in Glioblastoma Multiforme.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Aug 29.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3724](#)

AUTORES / AUTHORS: - Chow DS; Qi J; Guo X; Miloushev VZ; Iwamoto FM; Bruce JN; Lassman AB; Schwartz LH; Lignelli A; Zhao B; Filippi CG

INSTITUCIÓN / INSTITUTION: - Departments of Radiology, Neurology, and Neurosurgery, College of Physicians and Surgeons, Columbia University, New York, New York.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE:A limitation in postoperative monitoring of patients with glioblastoma is the lack of objective measures to quantify residual and recurrent disease. Automated computer-assisted volumetric analysis of

contrast-enhancing tissue represents a potential tool to aid the radiologist in following these patients. In this study, we hypothesize that computer-assisted volumetry will show increased precision and speed over conventional 1D and 2D techniques in assessing residual and/or recurrent tumor. MATERIALS AND METHODS: This retrospective study included patients with native glioblastomas with MR imaging performed at 24-48 hours following resection and 2-4 months postoperatively. 1D and 2D measurements were performed by 2 neuroradiologists with Certificates of Added Qualification. Volumetry was performed by using manual segmentation and computer-assisted volumetry, which combines region-based active contours and a level set approach. Tumor response was assessed by using established 1D, 2D, and volumetric standards. Manual and computer-assisted volumetry segmentation times were compared. Interobserver correlation was determined among 1D, 2D, and volumetric techniques. RESULTS: Twenty-nine patients were analyzed. Discrepancy in disease status between 1D and 2D compared with computer-assisted volumetry was 10.3% (3/29) and 17.2% (5/29), respectively. The mean time for segmentation between manual and computer-assisted volumetry techniques was 9.7 minutes and <1 minute, respectively (P < .01). Interobserver correlation was highest for volumetric measurements (0.995; 95% CI, 0.990-0.997) compared with 1D (0.826; 95% CI, 0.695-0.904) and 2D (0.905; 95% CI, 0.828-0.948) measurements. CONCLUSIONS: Computer-assisted volumetry provides a reproducible and faster volumetric assessment of enhancing tumor burden, which has implications for monitoring disease progression and quantification of tumor burden in treatment trials.

[43]

TÍTULO / TITLE: - Atypical and malignant meningioma: outcome and prognostic factors in 68 irradiated patients.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 18.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1239-7](#)

AUTORES / AUTHORS: - Detti B; Di Cataldo V; Monteleone E; Cipressi S; Bordi L; Pellicano G; Gadda D; Saieva C; Greto D; Pecchioli G; Buccoliero A; Ceroti M; Ammannati F; Biti G

INSTITUCIÓN / INSTITUTION: - Radioterapia, Azienda Ospedaliero-Universitaria Careggi, Viale Morgagni 85, 50144, Florence, Italy, beatrice.detti@aouc.unifi.it.

RESUMEN / SUMMARY: - Meningiomas account for up to 20 % of all primary intracranial neoplasms; although the majority of these have a benign course, as many as 5-10 % can display more aggressive behavior and a higher incidence of disease progression. The benefit of immediate adjuvant radiotherapy is still being debated for atypical and malignant meningiomas. This study aimed to retrospectively assess prognostic factors and outcome in 68 patients with atypical and malignant meningiomas. Sixty-eight meningioma patients were treated with radiotherapy after initial resection or for

recurrence, between January 1993 and December 2011. Surgery was macroscopically complete in 80 % of the patients; histology was atypical and malignant in 51 patients and 17 patients, respectively. Mean dose of radiotherapy was 54.6 Gy. Fifty-six percent of all patients received radiotherapy after surgical resection, 26 % at the first relapse, and 18 % at the second relapse. Median follow-up was 6.7 years, (range 1.5-19.9 years). The 5- and 10-year actuarial overall survival (OS) rates were 74.1 and 45.6 %, respectively. At univariate analysis age >60 years, radiotherapy dose >52 Gy showed statistical significance, (p = 0.04 and p = 0.03, respectively). At the multivariate analysis radiotherapy dose >52 Gy maintained the statistical significance, (p = 0.037). OS of patients treated with radiotherapy at diagnosis was longer than the survival of patients treated with salvage radiotherapy; however this difference did not reach statistical significance when tested for the entire series or for the subgroups of grade 2 and grade 3 patients. The 5- and 10-year disease-free survival (DFS) rates were 76.5 and 69.5 %, respectively, and were significantly influenced by size >5 cm (p = 0.04) and grading (p = 0.003) on univariate analysis. At multivariate analysis, size and grading both remained significant prognostic factors, p = 0.044 and p = 0.0006, respectively. Grade \leq 2 acute side effects were seen during radiotherapy treatment in 16 % of the patients, with no \geq grade 3 acute toxicity, based on the Common Terminology Criteria for Adverse Events. In this mono-institutional retrospective study, age and radiotherapy dose were associated with a longer OS, while preoperative size and grading of the tumor influenced DFS. Although there were some advantages in terms of OS for patients treated with postoperative radiotherapy, the benefit did not reach the significance. Multicenter prospective studies are necessary to clarify the management and the correct timing of radiotherapy in such a rare disease.

[44]

TÍTULO / TITLE: - The RNA-binding protein Musashi-1 regulates proteasome subunit expression in breast cancer- and glioma-initiating cells.

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

REVISTA / JOURNAL: - Stem Cells. 2013 Sep 10. doi: 10.1002/stem.1537.

●● [Enlace al texto completo \(gratis o de pago\) 1002/stem.1537](#)

AUTORES / AUTHORS: - Lagadec C; Vlashi E; Frohnen P; Alhiyari Y; Chan M; Pajonk F

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, David Geffen School of Medicine, UCLA.

RESUMEN / SUMMARY: - Cancer stem cells (CSCs) or tumor-initiating cells, similar to normal tissue stem cells, rely on developmental pathways, such as the Notch pathway, to maintain their stem cell state. One of the regulators of the Notch pathway is Musashi-1, a mRNA-binding protein. Musashi-1 promotes Notch signaling by binding to the mRNA of Numb, the negative regulator of Notch signaling, thus preventing its translation. Cancer stem cells have also been shown to down-regulate their 26S

proteasome activity in several types of solid tumors, thus making them resistant to proteasome-inhibitors used as anti-cancer agents in the clinic. Interestingly, the Notch pathway can be inhibited by proteasomal degradation of the Notch intracellular domain (Notch-ICD), therefore down-regulation of the 26S proteasome activity can lead to stabilization of Notch-ICD. Here we present evidence that the down-regulation of the 26S proteasome in CSCs constitutes another level of control by which Musashi-1 promotes signaling through the Notch pathway and maintenance of the stem cell phenotype of this subpopulation of cancer cells. We demonstrate that Musashi-1 mediates the down-regulation of the 26S proteasome by binding to the mRNA of NF-YA, the transcriptional factor regulating 26S proteasome subunit expression, thus providing an additional route by which the degradation of Notch-ICD is prevented, and Notch signaling is sustained. Stem Cells 2013.

[45]

TÍTULO / TITLE: - The Malignant Brain Tumor (MBT) Domain Protein SFMBT1 Is an Integral Histone Reader Subunit of the LSD1 Demethylase Complex for Chromatin Association and Epithelial-to-mesenchymal Transition.

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

REVISTA / JOURNAL: - J Biol Chem. 2013 Sep 20;288(38):27680-91. doi: 10.1074/jbc.M113.482349. Epub 2013 Aug 8.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.M113.482349](#)

AUTORES / AUTHORS: - Tang M; Shen H; Jin Y; Lin T; Cai Q; Pinaud MA; Biswas S; Tran Q; Li G; Shenoy AK; Tongdee E; Lin S; Gu Y; Law BK; Zhou L; McKenna R; Wu L; Lu J

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

RESUMEN / SUMMARY: - Chromatin readers decipher the functional readouts of histone modifications by recruiting specific effector complexes for subsequent epigenetic reprogramming. The LSD1 (also known as KDM1A) histone demethylase complex modifies chromatin and represses transcription in part by catalyzing demethylation of dimethylated histone H3 lysine 4 (H3K4me2), a mark for active transcription. However, none of its currently known subunits recognizes methylated histones. The Snai1 family transcription factors are central drivers of epithelial-to-mesenchymal transition (EMT) by which epithelial cells acquire enhanced invasiveness. Snai1-mediated transcriptional repression of epithelial genes depends on its recruitment of the LSD1 complex and ensuing demethylation of H3K4me2 at its target genes. Through biochemical purification, we identified the MBT domain-containing protein SFMBT1 as a novel component of the LSD1 complex associated with Snai1. Unlike other mammalian MBT domain proteins characterized to date that selectively recognize mono- and dimethylated lysines, SFMBT1 binds di- and trimethyl H3K4, both of which are enriched at active promoters. We show that SFMBT1 is essential for Snai1-dependent

recruitment of LSD1 to chromatin, demethylation of H3K4me2, transcriptional repression of epithelial markers, and induction of EMT by TGFbeta. Carcinogenic metal nickel is a widespread environmental and occupational pollutant. Nickel alters gene expression and induces EMT. We demonstrate the nickel-initiated effects are dependent on LSD1-SFMBT1-mediated chromatin modification. Furthermore, in human cancer, expression of SFMBT1 is associated with mesenchymal markers and unfavorable prognosis. These results highlight a critical role of SFMBT1 in epigenetic regulation, EMT, and cancer.

[46]

TÍTULO / TITLE: - Human mesenchymal stem cells and their paracrine factors for the treatment of brain tumors.

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

REVISTA / JOURNAL: - Cancer Gene Ther. 2013 Sep 20. doi: 10.1038/cgt.2013.59.

●● [Enlace al texto completo \(gratis o de pago\) 1038/cgt.2013.59](#)

AUTORES / AUTHORS: - Chan JK; Lam PY

INSTITUCIÓN / INSTITUTION: - 1] Experimental Fetal Medicine Group, Department of Obstetrics and Gynaecology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore [2] Department of Reproductive Medicine, KK Women's and Children's Hospital, Singapore [3] Cancer and Stem Cell Biology Program, Duke-NUS Graduate Medical School, Singapore.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM or World Health Organization (WHO) grade IV) is the most malignant tumor of the brain. Despite conventional combination treatment of surgery, radiotherapy and chemotherapy, the survival of patients with GBM is generally <1 year. It is a great challenge to identify an effective drug that could efficiently inhibit (i) the growth of cancer cells; (ii) angiogenesis; (iii) metastasis; (iv) tumor-associated inflammation; (v) inactivate proliferative signal, (vi) induce specific apoptosis, and yet causes minimal harm to normal cells. Mesenchymal stem cells (MSCs) do possess some unique features (inherent tumor tropism; anti-inflammatory and immunosuppressive properties) that are not commonly found in current anticancer agents. These cells are known to secrete a vast array of proteins including growth factors, cytokines, chemokines and so on that regulate their biology in an autocrine or paracrine manner in accordance to the surrounding microenvironment. This review briefly summarizes the biology of MSCs and discusses their properties and new development for brain cancer treatment. Cancer Gene Therapy advance online publication, 20 September 2013; doi:10.1038/cgt.2013.59.

[47]

TÍTULO / TITLE: - Differences between rat strains in the development of PRL-secreting pituitary tumors with long-term estrogen treatment: In vitro insulin-like growth factor-1-induced lactotroph proliferation and gene expression are affected in Wistar-Kyoto rats with low estrogen-susceptibility.

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

REVISTA / JOURNAL: - Endocr J. 2013 Aug 29.

AUTORES / AUTHORS: - Mitsui T; Ishida M; Izawa M; Arita J

INSTITUCIÓN / INSTITUTION: - Department of Physiology, Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi, Chuo 409-3898, Japan.

RESUMEN / SUMMARY: - There are differences in the susceptibility of rat strains to pituitary growth and lactotroph proliferation caused by long-term treatment with estrogens. To investigate the pituitary mechanism for this strain difference in estrogen-induced lactotroph proliferation, we compared the abilities of 17-beta estradiol (E2) and insulin-like growth factor-1 (IGF-1) to modulate lactotroph proliferation and gene expression in vitro in Wistar and Wistar-Kyoto (WKY) rats. These two strains of rats have a high and very low susceptibility to estrogen, respectively. Long-term in vivo treatment with E2 was confirmed to markedly increase pituitary weight and lactotroph proliferation in ovariectomized Wistar, but not in WKY rats. Pituitary lactotrophs in primary cultures showed similar proliferative responsiveness to the culture condition-dependent, stimulatory and inhibitory actions of E2 in both strains. The only difference in lactotroph proliferation in vitro was a lower response to IGF-1 in WKY cells compared with Wistar cells. This difference in proliferation was associated with strain differences in IGF-1-induced gene expression in Wistar and WKY cultured cells. Of the genes tested, IGF-1-induced expression of the Wnt4, Stc1, Mybl1, and Myc genes was attenuated or abolished in WKY cells. These results suggest that the proliferative response to estrogen in lactotrophs in primary culture does not reflect the proliferative response to long-term estrogen treatment observed in vivo in Wistar and WKY rats. The strain difference in proliferation and gene expression to IGF-1 may be implicated in the variable degree of susceptibility for lactotroph proliferation observed in different strains of rats following long-term estrogen treatment.

[48]

TÍTULO / TITLE: - Electroconvulsive therapy for psychosis in a patient with epilepsy related to hypothalamic hamartoma.

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

REVISTA / JOURNAL: - Epileptic Disord. 2013 Sep;15(3):347-51. doi: 10.1684/epd.2013.0589.

●● Enlace al texto completo (gratuito o de pago) [1684/epd.2013.0589](#)

AUTORES / AUTHORS: - Ruppert E; Lalanne L; Foucher J; Zimmermann MA; Hirsch E; Vidailhet P

INSTITUCIÓN / INSTITUTION: - Neurology Department, University Hospital of Strasbourg and Medical School of Strasbourg, Institut des Neurosciences Cellulaires et Integratives CNRS UPR 3212, Federation de Medecine Translationnelle de Strasbourg (FMTS), Strasbourg, France.

RESUMEN / SUMMARY: - Psychosis is more common in people with temporal lobe epilepsy than it is in the general population. Treatment can be difficult in these patients because of the complex interactions between antipsychotic and antiepileptic drugs. Some antipsychotic drugs also decrease the seizure threshold. We report the case of a 49-year-old man with a hypothalamic hamartoma, with a history of both gelastic and temporal lobe seizures. The patient was rendered seizure-free after three neurosurgical procedures but developed a drug-resistant paranoid psychosis. He was treated with electroconvulsive therapy (ECT). After two weeks with six stimulations that resulted in seizures, the psychiatric phenomena disappeared completely. There was no relapse of either the psychiatric symptoms or the seizures during the 42 months of follow-up. This case report suggests that ECT might be safe for psychosis in patients with a history of seizures that have previously been successfully treated with neurosurgery, although caution should be exercised in drawing general conclusions from a single case report.

[49]

TÍTULO / TITLE: - Infratentorial Neurosurgery Is an Independent Risk Factor for Respiratory Failure and Death in Patients Undergoing Intracranial Tumor Resection.

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

REVISTA / JOURNAL: - J Neurosurg Anesthesiol. 2013 Aug 8.

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

[1097/ANA.0b013e3182a43ed8](#)

AUTORES / AUTHORS: - Flexman AM; Merriman B; Griesdale DE; Mayson K; Choi PT; Ryerson CJ

INSTITUCIÓN / INSTITUTION: - *Department of Anesthesiology, Pharmacology and Therapeutics daggerDepartment of Medicine, Division of Respiratory, University of British Columbia, Vancouver, BC, Canada.

RESUMEN / SUMMARY: - **BACKGROUND::** Respiratory failure and death are devastating outcomes in the postoperative period. Patients undergoing neurosurgical procedures experience a greater frequency of respiratory failure compared with other surgical specialties. Resection of infratentorial mass lesions may be associated with an even higher risk because of several unique factors. Our objectives were: (1) to determine the incidence of postoperative respiratory failure and death in the neurosurgical population; and (2) to determine whether infratentorial procedures are associated with a higher risk compared with supratentorial procedures. **METHODS::** We retrospectively analyzed the American College of Surgeons National Surgical Quality

Improvement Program database to identify patients undergoing intracranial tumor resection. The primary outcome was a composite of reintubation within 30 days, failure to wean from mechanical ventilation within 48 hours, and death within 30 days after surgery. We examined the association between the surgical site and the outcomes using multivariate logistic regression. RESULTS:: A total of 1699 patients met inclusion criteria (79% supratentorial and 21% infratentorial). The primary outcome occurred in 3.8% of supratentorial procedures and 6.6% of infratentorial procedures (P=0.02). Infratentorial tumor resection was independently associated with the composite outcome in the final model (odds ratio, 1.75; 95% confidence interval, 1.03-2.99; P=0.04) with the strongest association seen between infratentorial site and death (odds ratio, 2.44; 95% confidence interval, 1.23-4.87; P=0.01). CONCLUSIONS:: Infratentorial neurosurgery is an independent risk factor for respiratory failure and death in patients undergoing intracranial tumor resection. Mortality is an important contributor to this risk and should be a focus for future research.

[50]

TÍTULO / TITLE: - MicroRNA-650 expression in glioma is associated with prognosis of patients.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 24.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1243-y](#)

AUTORES / AUTHORS: - Sun B; Pu B; Chu D; Chu X; Li W; Wei D

INSTITUCIÓN / INSTITUTION: - Medical Department of Neurology, Affiliated Hospital of Beihua University, Jilin, 132011, People's Republic of China, sunboqian@live.cn.

RESUMEN / SUMMARY: - MicroRNAs are known as non-coding RNAs that regulate the expression of target mRNA. Accumulating evidence has indicated that microRNA expression in human malignancies can be utilized as a prognostic marker for patients. However, the prognostic value of miR-650 in human glioma has not been investigated yet. In the present investigation, we have recruited 168 cases glioma specimens and 21 normal control brain specimens. Quantitative real-time PCR was carried out to investigate the expression of miR-650. Kaplan-Meier analysis and Cox's proportional hazards model was used to evaluate the association of miR-650 with prognosis of glioma patients. Results showed that miR-650 expression was increased in glioma compared with normal control specimens (P < 0.001). It was also found that miR-650 expression was related to World Health Organization grade and Karnofsky performance score (KPS) for high expression was more frequently detected in glioma of high grade or low KPS score (P < 0.001). The prognosis of glioma with high miR-650 expression was significantly worse compared with that of glioma with low miR-650 expression. These results proved that miR-650 expression was a significant prognostic indicator in glioma, which may suggest new management of human glioma.

[51]

TÍTULO / TITLE: - Clustering of mutations in the 5' tertile of the NF1 gene in Slovakia patients with optic pathway glioma.

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

REVISTA / JOURNAL: - Neoplasma. 2013;60(6):655-65. doi: 10.4149/neo_2013_084.

●● Enlace al texto completo (gratis o de pago) [4149/neo_2013_084](#)

AUTORES / AUTHORS: - Bolcekova A; Nemethova M; Zatkova A; Hlinkova K; Pozgayova S; Hlavata A; Kadasi L; Durovcikova D; Gerinec A; Husakova K; Pavlovicova Z; Holobrada M; Kovacs L; Ilencikova D

RESUMEN / SUMMARY: - Optic pathway gliomas (OPG) occur in 15% of patients with neurofibromatosis type 1 (NF1; OMIM 162200). Genotype-phenotype correlations in patients with NF1 may help to determine the risk group for developing complications such as OPG in coincidence with other NF1 features. We evaluated 52 patients with NF1 (25 with OPG and 27 without OPG). All subjects underwent a clinical examination focused on neurofibromatosis type 1 and molecular diagnostics of NF1 gene using a protocol based on RNA analysis confirming the diagnosis of NF1. In the group with OPG patients, there was a significantly higher incidence of freckling ($P=0.017$), neurofibromatosis bright objects (NBO) ($P=0.0038$), compared to the group without OPG. The differences between the groups with respect to Lisch nodules were on the borderline of statistical significance ($P=0.088$). The frequency of neurofibromas in the group with OPG was not significant ($P=0.9$). From all patients with the mutation localized in the first tertile of the NF1 gene majority (71%) had optic glioma compared to individuals who didn't have the OPG 29% ($P=0.0049$). Our results present the clustering of mutations in the 5' tertile of NF1 gene in patients with optic nerve glioma and suggest higher incidence of freckling and neurofibromatosis brain objects in these patients. Molecular analysis of NF1 gene is an important part in the complex management of NF1 patients and contributes to a better understanding of the clinical picture of NF1 patients. Keywords: optic pathway glioma, NF1 mutation, genotype-phenotype correlation.

[52]

TÍTULO / TITLE: - Targeting by cmHsp70.1-antibody coated and survivin miRNA plasmid loaded nanoparticles to radiosensitize glioblastoma cells.

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

REVISTA / JOURNAL: - J Control Release. 2013 Sep 2;172(1):201-206. doi: 10.1016/j.jconrel.2013.08.020.

●● Enlace al texto completo (gratis o de pago) [1016/j.jconrel.2013.08.020](#)

AUTORES / AUTHORS: - Gaca S; Reichert S; Multhoff G; Wacker M; Hehlhans S; Botzler C; Gehrman M; Rodel C; Kreuter J; Rodel F

INSTITUCIÓN / INSTITUTION: - Department of Pharmaceutical Technology, University of Frankfurt, Max-von-Laue-Str. 9, 60438 Frankfurt am Main, Germany.

RESUMEN / SUMMARY: - Nanoparticles (NP) as carriers for anti-cancer drugs have shown great promise. Specific targeting of NP to malignant cells, however, remains an unsolved problem. Conjugation of antibodies specific for tumor membrane antigens to NP represents one approach to improve specificity and to increase therapeutic efficacy. In the present study, for the first time a novel membrane heat shock protein (Hsp70)-specific antibody (cmHsp70.1) was coupled to human serum albumin (HSA) NP, loaded with microRNA (miRNA) plasmids to target the inhibitor of apoptosis protein survivin. The physicochemical properties of monodisperse miRNA-loaded NP showed a diameter of 180nm to 220nm, a plasmid incorporation of more than 95% and a surface binding capacity of the antibody of 70-80%. Antibody-conjugated NP displayed an increased cellular uptake in U87MG and LN229 glioblastoma cells compared to isotype control antibody, PEG-coupled controls and peripheral blood lymphocytes (PBL). Survivin expression was significantly reduced in cells treated with the Hsp70-miRNA-NP as compared to non-conjugated NP. Hsp70-miRNA-NP enhanced radiation-induced increase in caspase 3/7 activity and decrease in clonogenic cell survival. In summary, cmHsp70.1 miRNA-NP comprise an enhanced tumor cell uptake and increased therapeutic efficacy of radiation therapy in vitro and provide the basis for the development of antibody-based advanced carrier systems for a tumor cell specific targeting.

[53]

TÍTULO / TITLE: - Natural history and role of radiation in patients with supratentorial and infratentorial WHO grade II ependymomas: results from a population-based study.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 21.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1237-9](#)

AUTORES / AUTHORS: - Aizer AA; Ancukiewicz M; Nguyen PL; Macdonald SM; Yock TI; Tarbell NJ; Shih HA; Loeffler JS; Oh KS

INSTITUCIÓN / INSTITUTION: - Harvard Radiation Oncology Program, Department of Radiation Oncology, Massachusetts General Hospital, 55 Fruit Street, Lunder LL3, Boston, MA, 02114, USA, aaaizer@partners.org.

RESUMEN / SUMMARY: - Patients with World Health Organization (WHO) grade II supratentorial ependymomas are commonly observed after gross total resection (GTR), although supporting data are limited. We sought to characterize the natural history of such tumors. We used the Surveillance, Epidemiology, and End Results program to identify 112 patients ages 0-77 diagnosed with WHO grade II

ependymomas between 1988 and 2007, of whom 63 (56 %) and 49 (44 %) had supratentorial and infratentorial primaries, respectively. Inclusion criteria were strict to ensure patient homogeneity. Of 33 patients with supratentorial tumors after GTR, 18 (55 %) received adjuvant radiation therapy and 15 (45 %) did not. Ependymoma-specific mortality (ESM) was the primary endpoint. With a median follow up of 4.5 years, only 1 of 33 patients with supratentorial ependymoma died of their disease after GTR; the 5-year estimate of ESM in this population was 3.3 % (95 % CI 0.2-14.8 %). Among patients with infratentorial ependymomas after GTR, the 5-year estimate of ESM was 8.7 % (95 % CI 1.4-24.6 %). In patients with subtotally resected tumors, 5-year estimates of ESM in patients with supratentorial and infratentorial primaries were 20.1 % (95 % CI 8.0-36.2 %) and 12.3 % (95 % CI 2.9-28.8 %), respectively. Among the whole cohort, on both univariable and multivariable regression, extent of resection was predictive of ESM, while tumor location and use of radiation were not. After GTR, patients with WHO grade II supratentorial ependymomas have a very favorable natural history with low associated cancer-specific mortality. Observation, with radiation reserved as a salvage option, may be a reasonable postoperative strategy in this population.

[54]

TÍTULO / TITLE: - The functional Aquaporin 1 -783G/C-polymorphism is associated with survival in patients with glioblastoma multiforme.

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

REVISTA / JOURNAL: - J Surg Oncol. 2013 Sep 6. doi: 10.1002/jso.23421.

●● [Enlace al texto completo \(gratis o de pago\) 1002/jso.23421](#)

AUTORES / AUTHORS: - El Hindy N; Rump K; Lambertz N; Zhu Y; Frey UH; Bankfalvi A; Siffert W; Sure U; Peters J; Adamzik M; Sandalcioglu IE

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Duisburg-Essen & University Hospital Essen, Essen, Germany.

RESUMEN / SUMMARY: - BACKGROUND: Despite a dismal prognosis, variability exists regarding the survival-time in patients with glioblastoma-multiforme (GBM), which may be explained by genetic variation. A possible candidate-gene for such variation is Aquaporin-1 (AQP1), since Aquaporin-1-expression influences the pathogenesis and outcome of various malignancies. Functional genetic variants in the promoter of AQP1, modifying Aquaporin-1-expression, could be associated with altered survival in patients with GBM. METHODS: We sequenced the human AQP1-promoter to detect novel sequence variants, which might impact on Aquaporin-1-expression and tested the hypothesis, that functional single nucleotide polymorphisms are associated with different survival-times of patients suffering from GBM. RESULTS: Sequencing the AQP1-promoter revealed a novel -783G/C-polymorphism. Reporter-assays showed that substitution of G for C was associated both with increased transcriptional-

activation of the AQP1-promoter by serum and with increased AQP1 mRNA expression. Finally, we assessed in a cohort of 155 Caucasian patients with GBM whether the functional single-nucleotide-783G/C-polymorphism is associated with survival-time. Cox-regression analyses revealed the AQP1 -783G/C genotype status as an independent prognostic-factor when jointly considering other predictors of survival. Homozygous CC subjects had a significantly worse outcome compared to GC/GG genotypes (hazard ratio: 3.09; 95% CI, 1.43-6.65; P = 0.004). CONCLUSIONS: Our findings suggest the novel AQP1 polymorphism as a survival prognosticator in patients suffering from GBM that could help to identify a subgroup of patients at high risk for death. Further studies are necessary to reveal the exact molecular mechanisms. J. Surg. Oncol. © 2013 Wiley Periodicals, Inc.

[55]

TÍTULO / TITLE: - Comparison of carbon ion radiotherapy to photon radiation alone or in combination with temozolomide in patients with high-grade gliomas: Explorative hypothesis-generating retrospective analysis.

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

REVISTA / JOURNAL: - Radiother Oncol. 2013 Jul;108(1):132-5. doi: 10.1016/j.radonc.2013.06.026. Epub 2013 Aug 6.

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

AUTORES / AUTHORS: - Combs SE; Bruckner T; Mizoe JE; Kamada T; Tsujii H; Kieser M; Debus J

INSTITUCIÓN / INSTITUTION: - University Hospital of Heidelberg, Department of Radiation Oncology, Germany. Electronic address: Stephanie.Combs@med.uni-heidelberg.de.

RESUMEN / SUMMARY: - PURPOSE: To compare retrospectively outcome after photon radiotherapy alone, radiochemotherapy with temozolomide (TMZ), and carbon ion radiotherapy in patients with high-grade gliomas and to generate a hypothetical outcome curve for C12 and TMZ. PATIENTS AND METHODS: Patients treated within a Phase I/II Trial with a carbon ion boost were compared retrospectively with randomly chosen patients treated with photons or photons in combination with TMZ in a retrospective analysis. Per treatment group, 16 patients with anaplastic astrocytoma (AA), and 32 patients with glioblastoma (GBM) were included. Treatment outcome with focus on progression-free survival (PFS) and overall survival (OS) was analyzed. RESULTS: Median OS for patients with GBM was 9months with RT, 14months with RCHT group, and 18months in the C12 group. There was no significant difference between the C12 and the RCHT group. For patients with AA, median OS was 13months for RT, 39months for RCHT, and 35months after C12. The difference from RCHT to C12 was not significant. Median PFS for patients with GBM was 5months in the RT group, 6months in the RCHT group, and 8months in the C12 group. There was a significant difference between the RCHT group and the C12 group. For AA, median PFS was

15months with RT, 6months with RCHT, and 34 with C12. Comparing subgroups, C12 was significantly different from RCHT. Based on the significant OS increase from RT to RCHT, and from RT to C12, we projected the potential increase in outcome when combined C12 and TMZ would have been applied. A generated hypothetical curve based on the abovementioned outcome as well as preclinical examinations suggests there might be a benefit from the addition of C12 in patients with high-grade gliomas. CONCLUSIONS: This exploratory retrospective study suggests a potential benefit of carbon ions in patients with high-grade gliomas. This hypothesis is now being evaluated prospectively in GBM within the randomized CLEOPATRA clinical trial.

[56]

TÍTULO / TITLE: - Utility of Diffusion Tensor Imaging in Evaluation of the Peritumoral Region in Patients with Primary and Metastatic Brain Tumors.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Sep 19.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3702](#)

AUTORES / AUTHORS: - Sternberg EJ; Lipton ML; Burns J

INSTITUCIÓN / INSTITUTION: - From Tufts University School of Medicine, Boston, Massachusetts; the Gruss Magnetic Resonance Research Center and Departments of Radiology, Psychiatry, and Behavioral Sciences and the Dominick P. Purpura Department of Neuroscience, Albert Einstein College of Medicine, Bronx, New York; Department of Radiology, Montefiore Medical Center, Bronx, New York.

RESUMEN / SUMMARY: - SUMMARY:In the brain, diffusion tensor imaging is a useful tool for defining white matter anatomy, planning a surgical approach to space-occupying lesions, and characterizing tumors, including distinguishing primary tumors from metastases. Recent studies have attempted, with varying success, to use DTI to define the extent of tumor microinfiltration beyond the apparent borders on T2-weighted imaging. In the present review, we discuss the current state of research on the utility of DTI for evaluating the peritumoral region of brain tumors.

[57]

TÍTULO / TITLE: - Letter to the Editor: Cognitive assessment in glioma patients.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug 30.

●● Enlace al texto completo (gratis o de pago) [3171/2012.2.JNS112372](#)

AUTORES / AUTHORS: - Duffau H

INSTITUCIÓN / INSTITUTION: - Gui de Chauliac Hospital, Montpellier University Medical Center, Institute for Neuroscience of Montpellier, Hopital Saint Eloi, Montpellier, France.

[58]

TÍTULO / TITLE: - Right parietal cortex and calculation processing: intraoperative functional mapping of multiplication and addition in patients affected by a brain tumor.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug 9.

●● Enlace al texto completo (gratis o de pago) [3171/2013.6.JNS122445](#)

AUTORES / AUTHORS: - Della Puppa A; De Pellegrin S; d'Avella E; Gioffre G; Munari M; Saladini M; Salillas E; Scienza R; Semenza C

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery.

RESUMEN / SUMMARY: - Object The role of parietal areas in number processing is well known. The significance of intraoperative functional mapping of these areas has been only partially explored, however, and only a few discordant data are available in the surgical literature with regard to the right parietal lobe. The purpose of this study was to evaluate the clinical impact of simple calculation in cortical electrostimulation of right-handed patients affected by a right parietal brain tumor. Methods Calculation mapping in awake surgery was performed in 3 right-handed patients affected by high-grade gliomas located in the right parietal lobe. Preoperatively, none of the patients presented with calculation deficits. In all 3 cases, after sensorimotor and language mapping, cortical and intraparietal sulcus areas involved in single-digit multiplication and addition calculations were mapped using bipolar electrostimulation. Results In all patients, different sites of the right parietal cortex, mainly in the inferior lobule, were detected as being specifically related to calculation (multiplication or addition). In 2 patients the intraparietal sulcus was functionally specific for multiplication. No functional sites for language were detected. All sites functional for calculation were spared during tumor resection, which was complete in all cases without postoperative neurological deficits. Conclusions These findings provide intraoperative data in support of an anatomofunctional organization for multiplication and addition within the right parietal area. Furthermore, the study shows the potential clinical relevance of intraoperative mapping of calculation in patients undergoing surgery in the right parietal area. Further and larger studies are needed to confirm these data and assess whether mapped areas are effectively essential for function.

[59]

TÍTULO / TITLE: - Integration of Patient Specific MRI Imaging Data Into a Stochastic Low-Grade Glioma Model.

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

REVISTA / JOURNAL: - Biomed Tech (Berl). 2013 Sep 7. pii: /j/bmte.2013.58.issue-s1-N/bmt-2013-4342/bmt-2013-4342.xml. doi: 10.1515/bmt-2013-4342.

●● Enlace al texto completo (gratis o de pago) [1515/bmt-2013-4342](https://doi.org/10.1515/bmt-2013-4342)

AUTORES / AUTHORS: - Roque T; Concepcion Garcia Otaduy M; Zylka W

[60]

TÍTULO / TITLE: - EGF-enhanced vascular cell adhesion molecule-1 (VCAM-1) expression promotes macrophage and glioblastoma cell interaction and tumor cell invasion.

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

REVISTA / JOURNAL: - J Biol Chem. 2013 Sep 17.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.M113.499020](https://doi.org/10.1074/jbc.M113.499020)

AUTORES / AUTHORS: - Zheng Y; Yang W; Aldape K; He J; Lu Z

INSTITUCIÓN / INSTITUTION: - The University of Texas MD Anderson Cancer Center, United States;

RESUMEN / SUMMARY: - Activated epidermal growth factor receptor (EGFR) signaling plays an instrumental role in glioblastoma progression. However, how EGFR activation regulates the tumor microenvironment to promote glioblastoma cell invasion remains to be clarified. Here we demonstrated that the levels of EGFR activation in tumor cells correlated with the levels of macrophage infiltration in human glioblastoma specimens. This was supported by our observation that EGFR activation enhanced the interaction between macrophages and glioblastoma cells. In addition, EGF treatment induced upregulation of vascular cell adhesion molecule-1 (VCAM-1) expression in a PKCepsilon and nuclear factor (NF)-kappaB dependent manner. Depletion of VCAM-1 interrupted the binding of macrophages to glioblastoma cells and inhibited EGF-induced and macrophage-promoted glioblastoma cell invasion. These results demonstrated an instrumental role for EGF-induced upregulation of VCAM-1 expression in EGFR activation-promoted macrophage-tumor cell interaction and tumor cell invasion, and indicated that VCAM-1 is a potential molecular target for improving cancer therapy.

[61]

TÍTULO / TITLE: - Novel Oncogenic PDGFRA Mutations in Pediatric High-Grade Gliomas.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Aug 22.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-1491](https://doi.org/10.1158/0008-5472.CAN-13-1491)

AUTORES / AUTHORS: - Paugh BS; Zhu X; Qu C; Endersby R; Diaz AK; Zhang J; Bax DA; Carvalho D; Reis RM; Onar-Thomas A; Broniscer A; Wetmore C; Zhang J; Jones C; Ellison DW; Baker SJ

INSTITUCIÓN / INSTITUTION: - Developmental Neurobiology, St. Jude Children's Research Hospital.

RESUMEN / SUMMARY: - The outcome for children with high-grade gliomas (HGG) remains dismal, with a two-year survival rate of only 10-30%. Diffuse intrinsic pontine glioma (DIPG) comprise a subset of HGG that arise in brainstem almost exclusively in children. Genome-wide analyses of copy number imbalances previously showed that platelet derived growth factor receptor alpha (PDGFRA) is the most frequent target of focal amplification in pediatric HGGs, including DIPGs. To determine whether PDGFRA is also targeted by more subtle mutations missed by copy number analysis, we sequenced all PDGFRA coding exons from a cohort of pediatric HGGs. Somatic activating mutations were identified in 14.4% (13/90) of non-brainstem pediatric HGGs and 4.7% (2/43) of DIPGs, including missense mutations and in-frame deletions and insertions not previously described. 40% of tumors with mutation showed concurrent amplification, while 60% carried heterozygous mutations. Six different mutations impacting different domains all resulted in ligand-independent receptor activation that was blocked by small molecule inhibitors of PDGFR. Expression of mutants in p53-null primary mouse astrocytes conferred a proliferative advantage in vitro, and generated HGGs in vivo with complete penetrance when implanted into brain. The gene expression signatures of these murine HGGs reflected the spectrum of human diffuse HGGs. PDGFRA intragenic deletion of exons 8 and 9 were previously shown in adult HGG, but were not detected in 83 non-brainstem pediatric HGG and 57 DIPGs. Thus, a distinct spectrum of mutations confers constitutive receptor activation and oncogenic activity to PDGFRalpha in childhood HGG.

[62]

TÍTULO / TITLE: - Competence in Caregivers of Adolescent and Young Adult Childhood Brain Tumor Survivors.

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

REVISTA / JOURNAL: - Health Psychol. 2013 Aug 19.

●● Enlace al texto completo (gratis o de pago) [1037/a0033756](#)

AUTORES / AUTHORS: - Deatrick JA; Hobbie W; Ogle S; Fisher MJ; Barakat L; Hardie T; Reilly M; Li Y; Ginsberg JP

RESUMEN / SUMMARY: - Objective: Caregivers of adolescents and young adults (AYA) with complex medical conditions, including brain tumor survivors, have protracted and often complex roles, yet a gap exists in understanding their perceived competence. The aim of this study is to test a hypothesized model based on the theoretical and empirical literature: better caregiver health, better survivor health, and better family functioning contribute directly to fewer caregiving demands, which in turn contribute to greater caregiver competence. Method: Telephone interviews using structured self-report questionnaires were conducted in this cross-sectional study with

a sample of 186 caregivers (mothers) of childhood brain tumor survivors aged 14-40 years old who live with at least one parent. Structural equation modeling (SEM) was used to test the hypothesized model. Results: The final SEM model suggests that survivor health and family functioning directly predict caregiver competence. Caregiver health indirectly predicts caregiver competence through caregiver demands and then family functioning. Family income directly predicts family functioning. The model showed adequate fit (CFI = 0.905, TFI = 0.880, and RMSEA = 0.081). Overall, the model accounted for 45% of variance in caregiver competence. Conclusions: For this sample of caregivers of AYA with medically complex conditions, family functioning and the health of survivors are both important to how they evaluate their skills as caregivers. The results of this study underscore the crucial role of care models that focus on optimizing the health of the survivor, caregiver, and family, along with supporting a family centered approach to their care. (PsycINFO Database Record © 2013 APA, all rights reserved).

[63]

TÍTULO / TITLE: - Long-Term Outcomes of Fractionated Stereotactic Radiation Therapy for Pituitary Adenomas at the BC Cancer Agency.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Nov 1;87(3):528-33. doi: 10.1016/j.ijrobp.2013.06.2057. Epub 2013 Aug 14.

●● Enlace al texto completo (gratis o de pago) 1016/j.ijrobp.2013.06.2057

AUTORES / AUTHORS: - Kim JO; Ma R; Akagami R; McKenzie M; Johnson M; Gete E; Nichol A

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, British Columbia Cancer Agency, Vancouver, Canada; Division of Radiation Oncology and Developmental Radiotherapeutics, University of British Columbia, Vancouver, Canada.

RESUMEN / SUMMARY: - PURPOSE: To assess the long-term disease control and toxicity outcomes of fractionated stereotactic radiation therapy (FSRT) in patients with pituitary adenomas treated at the BC Cancer Agency. METHODS AND MATERIALS: To ensure a minimum of 5 years of clinical follow-up, this study identified a cohort of 76 patients treated consecutively with FSRT between 1998 and 2007 for pituitary adenomas: 71% (54/76) had nonfunctioning and 29% (22/76) had functioning adenomas (15 adrenocorticotrophic hormone-secreting, 5 growth hormone-secreting, and 2 prolactin-secreting). Surgery was used before FSRT in 96% (73/76) of patients. A median isocenter dose of 50.4 Gy was delivered in 28 fractions, with 100% of the planning target volume covered by the 90% isodose. Patients were followed up clinically by endocrinologists, ophthalmologists, and radiation oncologists. Serial magnetic resonance imaging was used to assess tumor response. RESULTS: With a median follow-up time of 6.8 years (range, 0.6 - 13.1 years), the 7-year progression-

free survival was 97.1% and disease-specific survival was 100%. Of the 2 patients with tumor progression, both had disease control after salvage surgery. Of the 22 patients with functioning adenomas, 50% (11/22) had complete and 9% (2/22) had partial responses after FSRT. Of the patients with normal pituitary function at baseline, 48% (14/29) experienced 1 or more hormone deficiencies after FSRT. Although 79% (60/76) of optic chiasmata were at least partially within the planning target volumes, no patient experienced radiation-induced optic neuropathy. No patient experienced radionecrosis. No secondary malignancy occurred during follow-up. CONCLUSION: In this study of long-term follow-up of patients treated for pituitary adenomas, FSRT was safe and effective.

[64]

TÍTULO / TITLE: - Targeting Sonic Hedgehog-Associated Medulloblastoma through Inhibition of Aurora and Polo-like Kinases.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-12-4258](https://doi.org/10.1158/0008-5472.CAN-12-4258)

AUTORES / AUTHORS: - Markant SL; Esparza LA; Sun J; Barton KL; McCoig LM; Grant GA; Crawford JR; Levy ML; Northcott PA; Shih D; Remke M; Taylor MD; Wechsler-Reya RJ

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Tumor Initiation and Maintenance Program, National Cancer Institute (NCI)-Designated Cancer Center, Sanford-Burnham Medical Research Institute; Sanford Consortium for Regenerative Medicine; Departments of Pediatrics, Neurosciences, and Neurosurgery, University of California San Diego, La Jolla; Rady Children's Hospital, San Diego, California; Departments of Pharmacology and Cancer Biology, Medicine, Division of Pulmonary, Allergy, and Critical Care, Pediatrics, Division of Pediatric Hematology/Oncology, and Surgery, Duke University Medical Center, Durham, North Carolina; German Cancer Research Center (DKFZ), Heidelberg, Germany; and Hospital for Sick Children, University of Toronto, Toronto, Ontario, Canada.

RESUMEN / SUMMARY: - Medulloblastoma is the most common malignant brain tumor in children. Although aggressive surgery, radiation, and chemotherapy have improved outcomes, survivors suffer severe long-term side effects, and many patients still succumb to their disease. For patients whose tumors are driven by mutations in the sonic hedgehog (SHH) pathway, SHH antagonists offer some hope. However, many SHH-associated medulloblastomas do not respond to these drugs, and those that do may develop resistance. Therefore, more effective treatment strategies are needed for both SHH and non-SHH-associated medulloblastoma. One such strategy involves targeting the cells that are critical for maintaining tumor growth, known as tumor-propagating cells (TPC). We previously identified a population of TPCs in tumors from patched mutant mice, a model for SHH-dependent medulloblastoma. These cells

express the surface antigen CD15/SSEA-1 and have elevated levels of genes associated with the G2-M phases of the cell cycle. Here, we show that CD15+ cells progress more rapidly through the cell cycle than CD15- cells and contain an increased proportion of cells in G2-M, suggesting that they might be vulnerable to inhibitors of this phase. Indeed, exposure of tumor cells to inhibitors of Aurora kinase (Aurk) and Polo-like kinases (Plk), key regulators of G2-M, induces cell-cycle arrest, apoptosis, and enhanced sensitivity to conventional chemotherapy. Moreover, treatment of tumor-bearing mice with these agents significantly inhibits tumor progression. Importantly, cells from human patient-derived medulloblastoma xenografts are also sensitive to Aurk and Plk inhibitors. Our findings suggest that targeting G2-M regulators may represent a novel approach for treatment of human medulloblastoma. Cancer Res; 73(20); 1-13. ©2013 AACR.

[65]

TÍTULO / TITLE: - Prognostic value of neutrophil-to-lymphocyte ratio in patients with glioblastoma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 15.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1240-1](#)

AUTORES / AUTHORS: - Alexiou GA; Vartholomatos E; Voulgaris S

INSTITUCIÓN / INSTITUTION: - University Hospital of Ioannina, P.O. Box 103, Neochoropoulo, 455 00, Ioannina, Greece, alexiougrg@yahoo.gr.

[66]

TÍTULO / TITLE: - Ten years of international primary CNS lymphoma collaborative group studies.

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

REVISTA / JOURNAL: - J Clin Oncol. 2013 Sep 20;31(27):3444-5. doi:

10.1200/JCO.2013.51.7557. Epub 2013 Aug 19.

●● Enlace al texto completo (gratis o de pago) [1200/JCO.2013.51.7557](#)

AUTORES / AUTHORS: - Ferreri AJ; Zucca E; Armitage J; Batchelor TT

INSTITUCIÓN / INSTITUTION: - San Raffaele Scientific Institute, Milan, Italy.

[67]

TÍTULO / TITLE: - Cerebrospinal fluid of postherpetic neuralgia patients induced interleukin-6 release in human glial cell-line T98G.

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

REVISTA / JOURNAL: - Neurochem Int. 2013 Sep 2;63(5):517-521. doi: 10.1016/j.neuint.2013.08.007.

●● Enlace al texto completo (gratis o de pago) [1016/j.neuint.2013.08.007](https://doi.org/10.1016/j.neuint.2013.08.007)

AUTORES / AUTHORS: - Tay AS; Liu EH; Lee TL; Miyazaki S; Nishimura W; Minami T; Chan YH; Low CM; Tachibana S

INSTITUCIÓN / INSTITUTION: - Department of Anaesthesia, Yong Loo Lin School of Medicine, National University of Singapore, 5 Lower Kent Ridge Road, Singapore 119074, Singapore.

RESUMEN / SUMMARY: - Chronic intractable pain caused by postherpetic neuralgia (PHN) can be alleviated by intrathecal (i.t.) steroid therapy. We investigated the possibility that interleukin-6 (IL-6) release in an in vitro system could be a potential marker for evaluating the effectiveness of i.t. steroid therapy in PHN patients. We studied 32 patients who received a course of i.t. injection of water-soluble dexamethasone. Their therapeutic index was calculated as such: $((\text{Pain score before treatment} - \text{Pain score after treatment}) / \text{Pain score before treatment}) \times 100\%$, and they were divided into two groups, therapy effective (index > 50%) and ineffective (index < 50%). Cerebrospinal fluid (CSF) from the patients was used to stimulate cultures of T98G glioblastoma cells, and the subsequent IL-6 release was measured by enzyme-linked immunosorbent assay (ELISA). Our results showed that the CSF triggered IL-6 release from T98G cells in a volume-dependent manner. IL-6 release was significantly lower when using CSF from the therapy effective patient group ($p < 0.001$) compared to the therapy ineffective group. In particular, therapy effective patients had less IL-6 release even before treatment as compared to therapy ineffective patients. In the therapy effective group, in vitro steroid treatment suppressed the CSF's IL-6 releasing effect almost completely, whereas in the therapy ineffective group, the IL-6 release was significantly reduced but remained detectable. These in vitro tests may provide an objective evaluation on the efficacy of i.t. steroid therapy administered to PHN patients.

[68]

TÍTULO / TITLE: - Toca 511 gene transfer and 5-fluorocytosine in combination with temozolomide demonstrates synergistic therapeutic efficacy in a temozolomide-sensitive glioblastoma model.

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

REVISTA / JOURNAL: - Cancer Gene Ther. 2013 Aug 23. doi: 10.1038/cgt.2013.51.

●● Enlace al texto completo (gratis o de pago) [1038/cgt.2013.51](https://doi.org/10.1038/cgt.2013.51)

AUTORES / AUTHORS: - Huang TT; Hlavaty J; Ostertag D; Espinoza FL; Martin B; Petznek H; Rodriguez-Aguirre M; Ibanez CE; Kasahara N; Gunzburg W; Gruber HE; Pertschuk D; Jolly DJ; Robbins JM

INSTITUCIÓN / INSTITUTION: - Tocagen, San Diego, CA, USA.

RESUMEN / SUMMARY: - Toca 511 (vocimagene amiretrorepvec), an amphotropic retroviral replicating vector (RRV), can successfully and safely deliver a functional, optimized cytosine deaminase (CD) gene to tumors in orthotopic glioma models. This agent, in conjunction with subsequent oral extended-release 5-fluorocytosine (5-FC) (Toca FC), is currently under investigation in patients with recurrent high-grade glioma. Temozolomide (TMZ) with radiation is the most frequently used first-line treatment for patients with glioblastoma, the most common and aggressive form of primary brain cancer in adults. However, subsets of patients with certain genetic alterations do not respond well to TMZ treatment and the overall median survival for patients who respond remains modest, suggesting that combinatorial approaches may be necessary to significantly improve outcomes. We show that in vitro TMZ delays but does not prevent RRV spread, nor interfere with Toca 511+5-FC-mediated cell killing in glioma tumor cells, and in vivo there is no significant hematologic effect from the combination of 5-FC and the clinically relevant dose of TMZ. A synergistic long-term survival advantage is observed in mice bearing an orthotopic TMZ-sensitive glioma after Toca 511 administration followed by coadministration of TMZ and 5-FC. These results provide support for the investigation of this novel combination treatment strategy in patients with newly diagnosed malignant glioma. Cancer Gene Therapy advance online publication, 23 August 2013; doi:10.1038/cgt.2013.51.

[69]

TÍTULO / TITLE: - Double Minute Chromosomes in Glioblastoma Multiforme Are Revealed by Precise Reconstruction of Oncogenic Amplicons.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Oct 1;73(19):6036-6045. Epub 2013 Aug 12.

●● [Enlace al texto completo \(gratis o de pago\) 1158/0008-5472.CAN-13-0186](#)

AUTORES / AUTHORS: - Sanborn JZ; Salama SR; Grifford M; Brennan CW; Mikkelsen T; Jhanwar S; Katzman S; Chin L; Haussler D

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Five3 Genomics, LLC; Center for Biomolecular Science and Engineering, University of California; Howard Hughes Medical Institute, Santa Cruz, California; Human Oncology & Pathogenesis Program and Department of Neurosurgery; Cytogenetics Laboratory, Department of Pathology, Memorial Sloan-Kettering Cancer Center, New York, New York; Departments of Neurology & Neurosurgery, Henry Ford Hospital, Detroit, Michigan; and Department of Genomic Medicine, The University of Texas MD Anderson Cancer Center, Houston, Texas.

RESUMEN / SUMMARY: - DNA sequencing offers a powerful tool in oncology based on the precise definition of structural rearrangements and copy number in tumor genomes. Here, we describe the development of methods to compute copy number and detect structural variants to locally reconstruct highly rearranged regions of the tumor

genome with high precision from standard, short-read, paired-end sequencing datasets. We find that circular assemblies are the most parsimonious explanation for a set of highly amplified tumor regions in a subset of glioblastoma multiforme samples sequenced by The Cancer Genome Atlas (TCGA) consortium, revealing evidence for double minute chromosomes in these tumors. Further, we find that some samples harbor multiple circular amplicons and, in some cases, further rearrangements occurred after the initial amplicon-generating event. Fluorescence in situ hybridization analysis offered an initial confirmation of the presence of double minute chromosomes. Gene content in these assemblies helps identify likely driver oncogenes for these amplicons. RNA-seq data available for one double minute chromosome offered additional support for our local tumor genome assemblies, and identified the birth of a novel exon made possible through rearranged sequences present in the double minute chromosomes. Our method was also useful for analysis of a larger set of glioblastoma multiforme tumors for which exome sequencing data are available, finding evidence for oncogenic double minute chromosomes in more than 20% of clinical specimens examined, a frequency consistent with previous estimates. Cancer Res; 73(19); 6036-45. ©2013 AACR.

[70]

TÍTULO / TITLE: - 5,10-Methylenetetrahydrofolate reductase (MTHFR), methionine synthase (MTRR), and methionine synthase reductase (MTR) gene polymorphisms and adult meningioma risk.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 20.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1218-z](#)

AUTORES / AUTHORS: - Zhang J; Zhou YW; Shi HP; Wang YZ; Li GL; Yu HT; Xie XY

INSTITUCIÓN / INSTITUTION: - Clinical Laboratory, Sir Run Run Show Hospital, School of Medicine, Zhejiang University, No. 3 QingChun East Road, Hangzhou, 310016, China.

RESUMEN / SUMMARY: - The causes of meningiomas are not well understood. Folate metabolism gene polymorphisms have been shown to be associated with various human cancers. It is still controversial and ambiguous between the functional polymorphisms of folate metabolism genes 5,10-methylenetetrahydrofolate reductase (MTHFR), methionine synthase (MTRR), and methionine synthase reductase (MTR) and risk of adult meningioma. A population-based case-control study involving 600 meningioma patients (World Health Organization [WHO] Grade I, 391 cases; WHO Grade II, 167 cases; WHO Grade III, 42 cases) and 600 controls was done for the MTHFR C677T and A1298C, MTRR A66G, and MTR A2756G variants in Chinese Han population. The folate metabolism gene polymorphisms were determined by using a polymerase chain reaction-restriction fragment length polymorphism assay. Meningioma cases had a significantly lower frequency of MTHFR 677 TT genotype

[odds ratio (OR) = 0.49, 95 % confidence interval (CI) 0.33-0.74; P = 0.001] and T allele (OR = 0.80, 95 % CI 0.67-0.95; P = 0.01) than controls. A significant association between risk of meningioma and MTRR 66 GG (OR = 1.41, 95 % CI 1.02-1.96; P = 0.04) was also observed. When stratifying by the WHO grade of meningioma, no association was found. Our study suggested that MTHFR C677T and MTRR A66G variants may affect the risk of adult meningioma in Chinese Han population.

[71]

TÍTULO / TITLE: - CDKN2A exon-wise deletion status and novel somatic mutations in Indian glioma patients.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1201-5](#)

AUTORES / AUTHORS: - Sibin MK; Bhat DI; Lavanya C; Jeru Manoj M; Aakershita S; Chetan GK

INSTITUCIÓN / INSTITUTION: - Department of Human Genetics, National Institute of Mental Health and Neuro Sciences, Bangalore, 560029, India.

RESUMEN / SUMMARY: - Over the years, deletions of CDKN2A (p16) tumor suppressor gene has been studied using FISH and multiplex PCR, with major focus on exon 2 in various cancers, and the frequency of mutation is found to be varied in different studies. In this study, we analyzed the deletion status of all three exons of p16 and frequency of exon 2 somatic point mutations in glioma from the Indian population and its clinical implications. Multiplex PCR was carried out in order to check deletion of all 3 exons in 50 glioma samples. Nonconventional PCR-SSCP analysis and sequencing was done to identify mutations in 48 cases. Deletion of at least one of the three exons of p16 INK4A was observed in ten cases (20 %). The frequencies of exon-wise deletions were 10 % for exon 1, 4 % for exon 2, and 8 % for exon 3. Two out of 48 samples were positive for mutations in p16 exon 2. One sample had a transition of G to C on position 147 with a codon change TGG to TGC which does not contribute to the protein structure. Another sample had a transversion of A to G on the position 154 with a codon change ATG to GTG with change in amino acid methionine to valine in 52nd position. Deletion pattern was found to be varied in three exons. Frequency of p16 gene mutation was less in the Indian population (4.2 %), and this mutation does not contribute to any remarkable change in protein structure.

[72]

TÍTULO / TITLE: - The miR-223/Nuclear Factor I-A Axis Regulates Glial Precursor Proliferation and Tumorigenesis in the CNS.

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

REVISTA / JOURNAL: - J Neurosci. 2013 Aug 14;33(33):13560-13568.

●● Enlace al texto completo (gratis o de pago) [1523/JNEUROSCI.0321-](https://doi.org/10.1523/JNEUROSCI.0321-13.2013)

[13.2013](https://doi.org/10.1523/JNEUROSCI.0321-13.2013)

AUTORES / AUTHORS: - Glasgow SM; Laug D; Brawley VS; Zhang Z; Corder A; Yin Z; Wong ST; Li XN; Foster AE; Ahmed N; Deneen B

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RESUMEN / SUMMARY: - Contemporary views of tumorigenesis regard its inception as a convergence of genetic mutation and developmental context. Glioma is the most common and deadly malignancy in the CNS; therefore, understanding how regulators of glial development contribute to its formation remains a key question. Previously we identified nuclear factor I-A (NFIA) as a key regulator of developmental gliogenesis, while miR-223 has been shown to repress NFIA expression in other systems. Using this relationship as a starting point, we found that miR-223 can suppress glial precursor proliferation via repression of NFIA during chick spinal cord development. This relationship is conserved in glioma, as miR-223 and NFIA expression is negatively correlated in human glioma tumors, and the miR-223/NFIA axis suppresses tumorigenesis in a human glioma cell line. Subsequent analysis of NFIA function revealed that it directly represses p21 and is required for tumorigenesis in a mouse neural stem cell model of glioma. These studies represent the first characterization of miR-223/NFIA axis function in glioma and demonstrate that it is a conserved proliferative mechanism across CNS development and tumorigenesis.

[73]

TÍTULO / TITLE: - Effects of polymorphisms in nucleotide excision repair genes on glioma risk in a Chinese population.

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

REVISTA / JOURNAL: - Gene. 2013 Oct 25;529(2):317-20. doi: 10.1016/j.gene.2013.07.025. Epub 2013 Jul 31.

●● Enlace al texto completo (gratis o de pago) [1016/j.gene.2013.07.025](https://doi.org/10.1016/j.gene.2013.07.025)

AUTORES / AUTHORS: - Wang XF; Liu S; Shao ZK

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Fourth Affiliated Hospital of Harbin Medical University, Harbin, People's Republic of China.

RESUMEN / SUMMARY: - We performed a case-control study to assess the relationship between six single nucleotide polymorphisms (SNPs) of xeroderma pigmentosum

complementation group F (XPF) on glioma risk in a Chinese population. The six SNPs were genotyped in 330 glioma cases and 652 cancer-free controls using a 384-well plate format on the Sequenom MassARRAY platform (Sequenom, San Diego, USA). Rs1800067 did not follow the Hardy-Weinberg equilibrium in the control group, and the genotype distributions differed significantly between the two groups for SNPs rs1800067 and rs2276466. For rs1800067, the variant genotype T/T was strongly associated with an increased risk of glioma when compared with the A/A genotype (OR=3.77, 95% CI=2.38-6.01). Individuals with the rs1800067 G allele had a relatively high risk of glioma in a dominant model (OR=3.47, 95% CI=2.26-5.37). The rs2276466 G/G genotype was significantly associated with a moderate increased risk of glioma (OR=1.82, 95% CI=1.10-3.02) in a codominant model, and variation of rs25489 was associated with a 1.31- and 1.78-fold glioma risk in dominant and recessive models, respectively. Our study is the first to identify polymorphisms in rs1800067 and rs2276466 as correlated with glioma susceptibility.

[74]

TÍTULO / TITLE: - Revised diagnostic criteria for the pseudotumor cerebri syndrome in adults and children.

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

REVISTA / JOURNAL: - Neurology. 2013 Sep 24;81(13):1159-65. doi: 10.1212/WNL.0b013e3182a55f17. Epub 2013 Aug 21.

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

[1212/WNL.0b013e3182a55f17](#)

AUTORES / AUTHORS: - Friedman DI; Liu GT; Digre KB

INSTITUCIÓN / INSTITUTION: - From the University of Texas Southwestern Medical Center (D.I.F.), Dallas; Hospital of the University of Pennsylvania, Children's Hospital of Philadelphia, and the Perelman School of Medicine at the University of Pennsylvania (G.T.L.), Philadelphia; and the University of Utah (K.B.D.), Salt Lake City.

RESUMEN / SUMMARY: - The pseudotumor cerebri syndrome (PTCS) may be primary (idiopathic intracranial hypertension) or arise from an identifiable secondary cause. Characterization of typical neuroimaging abnormalities, clarification of normal opening pressure in children, and features distinguishing the syndrome of intracranial hypertension without papilledema from intracranial hypertension with papilledema have furthered our understanding of this disorder. We propose updated diagnostic criteria for PTCS to incorporate advances and insights into the disorder realized over the past 10 years.

[75]

TÍTULO / TITLE: - Illuminating Radiogenomic Characteristics of Glioblastoma Multiforme through Integration of MR Imaging, Messenger RNA Expression, and DNA Copy Number Variation.

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

REVISTA / JOURNAL: - Radiology. 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) [1148/radiol.13130078](http://dx.doi.org/10.1148/radiol.13130078)

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RESUMEN / SUMMARY: - Purpose: To perform a multilevel radiogenomics study to elucidate the glioblastoma multiforme (GBM) magnetic resonance (MR) imaging radiogenomic signatures resulting from changes in messenger RNA (mRNA) expression and DNA copy number variation (CNV). Materials and Methods: Radiogenomic analysis was performed at MR imaging in 23 patients with GBM in this retrospective institutional review board-approved HIPAA-compliant study. Six MR imaging features—contrast enhancement, necrosis, contrast-to-necrosis ratio, infiltrative versus edematous T2 abnormality, mass effect, and subventricular zone (SVZ) involvement—were independently evaluated and correlated with matched genomic profiles (global mRNA expression and DNA copy number profiles) in a significant manner that also accounted for multiple hypothesis testing by using gene set enrichment analysis (GSEA), resampling statistics, and analysis of variance to gain further insight into the radiogenomic signatures in patients with GBM. Results: GSEA was used to identify various oncogenic pathways with MR imaging features. Correlations between 34 gene loci were identified that showed concordant variations in gene dose and mRNA expression, resulting in an MR imaging, mRNA, and CNV radiogenomic association map for GBM. A few of the identified gene-to-trait associations include association of the contrast-to-necrosis ratio with *KLK3* and *RUNX3*; association of SVZ involvement with Ras oncogene family members, such as *RAP2A*, and the metabolic enzyme *TYMS*; and association of vasogenic edema with the oncogene *FOXP1* and *PIK3IP1*, which is a member of the PI3K signaling network. Conclusion: Construction of an MR imaging, mRNA, and CNV radiogenomic association map has led to identification of MR traits that are associated with some known high-grade glioma biomarkers and association with genomic biomarkers that have been identified for other malignancies but not GBM. Thus, the traits and genes identified on this map highlight new candidate radiogenomic biomarkers for further evaluation in future studies. © RSNA, 2013

Supplemental material:

<http://radiology.rsna.org/lookup/suppl/doi:10.1148/radiol.13130078/-/DC1>.

TÍTULO / TITLE: - Chondroitin Sulfate Proteoglycans Potently Inhibit Invasion and Serve as a Central Organizer of the Brain Tumor Microenvironment.

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

REVISTA / JOURNAL: - J Neurosci. 2013 Sep 25;33(39):15603-15617.

●● Enlace al texto completo (gratis o de pago) [1523/JNEUROSCI.3004-](#)

[12.2013](#)

AUTORES / AUTHORS: - Silver DJ; Siebzehnrubl FA; Schildts MJ; Yachnis AT; Smith GM; Smith AA; Scheffler B; Reynolds BA; Silver J; Steindler DA

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of Florida, Gainesville, Florida 32611, Department of Pathology, Immunology and Laboratory Medicine, University of Florida College of Medicine, Gainesville, Florida 32610, Department of Neuroscience, Temple University, Philadelphia, Pennsylvania 19140, Arnold Palmer Hospital for Children, MD Anderson Cancer Center, Orlando, Florida 32806, Institute of Reconstructive Neurobiology, University of Bonn Medical Center, D-53105 Bonn, Germany, and Department of Neurosciences, Case Western Reserve University, Cleveland, Ohio 44106.

RESUMEN / SUMMARY: - Glioblastoma (GBM) remains the most pervasive and lethal of all brain malignancies. One factor that contributes to this poor prognosis is the highly invasive character of the tumor. GBM is characterized by microscopic infiltration of tumor cells throughout the brain, whereas non-neural metastases, as well as select lower grade gliomas, develop as self-contained and clearly delineated lesions. Illustrated by rodent xenograft tumor models as well as pathological human patient specimens, we present evidence that one fundamental switch between these two distinct pathologies-invasion and noninvasion-is mediated through the tumor extracellular matrix. Specifically, noninvasive lesions are associated with a rich matrix containing substantial amounts of glycosylated chondroitin sulfate proteoglycans (CSPGs), whereas glycosylated CSPGs are essentially absent from diffusely infiltrating tumors. CSPGs, acting as central organizers of the tumor microenvironment, dramatically influence resident reactive astrocytes, inducing their exodus from the tumor mass and the resultant encapsulation of noninvasive lesions. Additionally, CSPGs induce activation of tumor-associated microglia. We demonstrate that the astrogliotic capsule can directly inhibit tumor invasion, and its absence from GBM presents an environment favorable to diffuse infiltration. We also identify the leukocyte common antigen-related phosphatase receptor (PTPRF) as a putative intermediary between extracellular glycosylated CSPGs and noninvasive tumor cells. In all, we present CSPGs as critical regulators of brain tumor histopathology and help to clarify the role of the tumor microenvironment in brain tumor invasion.

TÍTULO / TITLE: - Three polymorphisms of DNA repair gene XRCC1 and the risk of glioma: a case-control study in northwest China.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Sep 19.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1191-3](#)

AUTORES / AUTHORS: - Xu G; Wang M; Xie W; Bai X

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of Medical School, Xi'an Jiaotong University, 277 Yanta West Road, Xi'an, 710061, China, gfxu72@hotmail.com.

RESUMEN / SUMMARY: - Three polymorphisms of X-ray repair cross-complementing groups 1 (XRCC1) Arg194Trp, Arg280His, and Arg399Gln may be associated with the individual susceptibility to glioma. The aim of this study was to investigate any association between three polymorphisms of the XRCC1 gene at codon 194, 280, and 399 and potential glioma risk. We conducted a hospital-based case-control study in northwest China. A total of 1,772 subjects, including 886 glioma patients and 886 healthy controls, were recruited in this study. The peripheral blood samples were extracted. Polymerase chain reaction-restriction fragment length polymorphism method was used to test genotypes. Glioma patients had a significantly higher frequency of XRCC1 194 TT (odds ratio [OR] = 1.76, 95 % confidence interval [CI] = 1.14, 2.72; P = 0.01) and XRCC1 399 AA genotype (OR = 1.62, 95 % CI = 1.09, 2.40; P = 0.02) than controls. When stratified by the grade of glioma, patients with WHO IV glioma had a significantly higher frequency of XRCC1 194 TT (OR = 1.60, 95 % CI = 1.02, 2.51; P = 0.04) and XRCC1 399 AA genotype (OR = 1.59, 95 % CI = 1.04, 2.42; P = 0.03). When stratified by the histology of glioma, there was no significant difference in the distribution of each genotype. This study suggested that XRCC1 Arg194Trp and Arg399Gln polymorphisms were associated with the risk of glioma.

[78]

TÍTULO / TITLE: - The regulation of mitochondrial DNA copy number in glioblastoma cells.

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

REVISTA / JOURNAL: - Cell Death Differ. 2013 Aug 30. doi: 10.1038/cdd.2013.115.

●● Enlace al texto completo (gratis o de pago) [1038/cdd.2013.115](#)

AUTORES / AUTHORS: - Dickinson A; Yeung KY; Donoghue J; Baker MJ; Kelly RD; McKenzie M; Johns TG; St John JC

INSTITUCIÓN / INSTITUTION: - 1] The Mitochondrial Genetics Group, Centre for Genetic Diseases, Monash Institute of Medical Research, Monash University, 27-31 Wright Street, Clayton, Victoria 3168, Australia [2] Molecular Basis of Metabolic Disease, Division of Metabolic and Vascular Health, Warwick Medical School, The University of Warwick, Clifford Bridge Road, Coventry, CV2 2DX, UK.

RESUMEN / SUMMARY: - As stem cells undergo differentiation, mitochondrial DNA (mtDNA) copy number is strictly regulated in order that specialized cells can generate appropriate levels of adenosine triphosphate (ATP) through oxidative phosphorylation (OXPHOS) to undertake their specific functions. It is not understood whether tumor-initiating cells regulate their mtDNA in a similar manner or whether mtDNA is essential for tumorigenesis. We show that human neural stem cells (hNSCs) increased their mtDNA content during differentiation in a process that was mediated by a synergistic relationship between the nuclear and mitochondrial genomes and results in increased respiratory capacity. Differentiating multipotent glioblastoma cells failed to match the expansion in mtDNA copy number, patterns of gene expression and increased respiratory capacity observed in hNSCs. Partial depletion of glioblastoma cell mtDNA rescued mtDNA replication events and enhanced cell differentiation. However, prolonged depletion resulted in impaired mtDNA replication, reduced proliferation and induced the expression of early developmental and pro-survival markers including POU class 5 homeobox 1 (OCT4) and sonic hedgehog (SHH). The transfer of glioblastoma cells depleted to varying degrees of their mtDNA content into immunocompromised mice resulted in tumors requiring significantly longer to form compared with non-depleted cells. The number of tumors formed and the time to tumor formation was relative to the degree of mtDNA depletion. The tumors derived from mtDNA depleted glioblastoma cells recovered their mtDNA copy number as part of the tumor formation process. These outcomes demonstrate the importance of mtDNA to the initiation and maintenance of tumorigenesis in glioblastoma multiforme. Cell Death and Differentiation advance online publication, 30 August 2013; doi:10.1038/cdd.2013.115.

[79]

TÍTULO / TITLE: - Successful Treatment of Tumor-Induced Osteomalacia due to an Intracranial Tumor by Fractionated Stereotactic Radiotherapy.

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

REVISTA / JOURNAL: - J Clin Endocrinol Metab. 2013 Sep 12.

●● Enlace al texto completo (gratis o de pago) [1210/jc.2013-2528](#)

AUTORES / AUTHORS: - Tarasova VD; Trepp-Carrasco AG; Thompson R; Recker RR; Chong WH; Collins MT; Armas LA

INSTITUCIÓN / INSTITUTION: - Creighton University (V.D.T., A.G.T.-C.), Omaha, Nebraska 68131; University of Nebraska Medical Center (R.T.), Omaha, Nebraska 68198; Creighton University (R.R.R.), Omaha, Nebraska 68131; National Institutes of Health (W.H.C., M.T.C.), Bethesda, Maryland 20892; and Creighton University (L.A.G.A.), Omaha, Nebraska 68131.

RESUMEN / SUMMARY: - Context:Tumor-induced osteomalacia (TIO) is a rare paraneoplastic syndrome, characterized by tumor secretion of fibroblast growth factor-23 (FGF23) causing hypophosphatemia due to renal phosphate wasting. TIO is

usually caused by small, benign, difficult-to-localize, mesenchymal tumors. Although surgery with wide excision of tumor borders is considered the “gold standard” for definitive therapy, it can be associated with considerable morbidity depending on the location. To date, radiation therapy has not been considered as an effective treatment modality in TIO. Objective: A 67-year-old female presented with multiple nontraumatic fractures, progressive bone pain, and muscle weakness for 4 years. She was found to have biochemical evidence of urinary phosphate wasting with low serum phosphorus, low-normal serum calcium, normal 25-hydroxyvitamin D and 1,25-dihydroxyvitamin D, and high serum FGF23 levels. TIO was diagnosed. Selective venous sampling for FGF23 confirmed that a 1.6-cm left frontal mass, radiographically similar to a meningioma, was the causative tumor. She declined surgery due to fear of complications and instead underwent fractionated stereotactic radiotherapy for 6 weeks. Results: In less than 4 years after radiation therapy, she was successfully weaned off phosphorus and calcitriol, starting from 2 g of oral phosphorus daily and 1 mug of calcitriol daily. Her symptoms have resolved, and she has not had any new fractures. Conclusions: Stereotactic radiotherapy was an effective treatment modality for TIO in our patient. Fractionated stereotactic radiation therapy represents an alternative to surgery for patients with TIO who are not surgical candidates or who decline surgery.

[80]

TÍTULO / TITLE: - Prognostic significance of CD147 in patients with glioblastoma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Oct;115(1):19-26. Epub 2013 Aug 8.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1207-2](#)

AUTORES / AUTHORS: - Yang M; Yuan Y; Zhang H; Yan M; Wang S; Feng F; Ji P; Li Y; Li B; Gao G; Zhao J; Wang L

INSTITUCIÓN / INSTITUTION: - Institute of Orthopaedics and Traumatology of PLA of China, Xijing Hospital, The Fourth Military Medical University, Xi'an, 710032, Shaanxi, People's Republic of China.

RESUMEN / SUMMARY: - CD147, also known as extracellular matrix metalloproteinase inducer, is a widely distributed cell surface glycoprotein that belongs to the immunoglobulin superfamily. CD147 has been proved to be enriched on the surface of many tumor cells, promoting tumor growth, invasion and metastasis by its stimulation effect on adjacent fibroblasts to produce matrix metalloproteinases. In this study, we aimed to explore the expression pattern of CD147 in glioblastoma (GBM) and investigate whether it could be used to assess subsequent prognosis of patients. For that, we recruited a total of 206 patients with pathologically confirmed GBM and 36 normal control brain tissue specimens. The expression of CD147 in GBM and normal tissues was investigated by immunohistochemistry assay. Genetic factors including

MGMT and IDH1 mutation were also investigated to justify the prognostic significance of CD147. Results showed that CD147 expression was increased in GBM compared with that in normal tissues. Kaplan-Meier analysis showed that increased CD147 expression was associated with poor overall survival of patients with GBM. Moreover, Cox's proportional hazards model revealed that CD147 expression was an independent and significant prognostic marker of overall survival in GBM patients. These results proved that CD147 expression was relatively abundant in GBM and can be potentially used to predict prognosis and treatment response in GBM patients.

[81]

TÍTULO / TITLE: - Differential Expression of the Tumor Suppressor A-Kinase Anchor Protein 12 in Human Diffuse and Pilocytic Astrocytomas Is Regulated by Promoter Methylation.

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

REVISTA / JOURNAL: - J Neuropathol Exp Neurol. 2013 Oct;72(10):933-941.

- Enlace al texto completo (gratis o de pago)

[1097/NEN.0b013e3182a59a88](#)

AUTORES / AUTHORS: - Goeppert B; Schmidt CR; Geiselhart L; Dutruel C; Capper D; Renner M; Vogel MN; Zachskorn C; Zinke J; Campos B; Schmezer P; Popanda O; Weller M; Meyermann R; Schittenhelm J; Harter PN; Simon P; Schirmacher P; Plass C; Mittelbronn M

INSTITUCIÓN / INSTITUTION: - From the Institute of Pathology, University Hospital Heidelberg (BG, MR, WW, PS); Division of Epigenomics and Cancer Risk Factors, German Cancer Research Center (DKFZ) (CRS, LG, CD, PS, OP, CP); Department of Neuropathology, University of Heidelberg (DC); Clinical Cooperation Unit Neuropathology, German Cancer Research Center (DKFZ) (DC, WW); and Department of Neuroradiology, University of Heidelberg (MNV), Heidelberg; Edinger Institute, University Hospital Frankfurt a.M., Frankfurt (CZ, JZ, PNH, MM); and Division of Neurosurgical Research, Department of Neurosurgery, University of Heidelberg (BC); and Department of Neurooncology, Neurology Clinic and National Center for Tumor Diseases, University of Heidelberg (WW), Heidelberg, Germany; Department of Neurology, University Hospital Zurich, Zurich, Switzerland (MW); and Department of Neuropathology, Institute of Pathology and Neuropathology, Eberhard-Karls-University of Tübingen, Tübingen (RM, JS); and Department of Sports Medicine, Rehabilitation and Disease Prevention, Johannes Gutenberg University, Mainz (PS), Germany.

RESUMEN / SUMMARY: - The scaffold protein A-kinase anchor protein 12 (AKAP12) exerts tumor suppressor activity and is downregulated in several tumor entities. We characterized AKAP12 expression and regulation in astrocytomas, including pilocytic and diffusely infiltrating astrocytomas. We examined 194 human gliomas and 23 normal brain white matter samples by immunohistochemistry or immunoblotting for

AKAP12 expression. We further performed quantitative methylation analysis of the AKAP12 promoter by MassARRAY® of normal brain, World Health Organization (WHO) grade I to IV astrocytomas, and glioma cell lines. Our results show that AKAP12 is expressed in a perivascular distribution in normal CNS, strongly upregulated in tumor cells in pilocytic astrocytomas, and weakly expressed in diffuse astrocytomas of WHO grade II to IV. Methylation analyses revealed specific hypermethylation of AKAP12alpha promoter in WHO grade II to IV astrocytomas. Restoration experiments using 5-aza-2'-deoxycytidine in primary glioblastoma cells decreased AKAP12alpha promoter methylation and markedly increased AKAP12alpha mRNA levels. In summary, we demonstrate that AKAP12 is differentially expressed in human astrocytomas showing high expression in pilocytic but low expression in diffuse astrocytomas of all WHO-grades. Our results further indicate that epigenetic mechanisms are involved in silencing AKAP12 in diffuse astrocytomas; however, a tumor suppressive role of AKAP12 in distinct astrocytoma subtypes remains to be determined.

[82]

TÍTULO / TITLE: - Multi-institutional validation of a preoperative scoring system which predicts survival for patients with glioblastoma.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Aug 5. pii: S0967-5868(13)00131-8. doi: 10.1016/j.jocn.2013.02.007.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2013.02.007

AUTORES / AUTHORS: - Chaichana KL; Pendleton C; Chambless L; Camara-Quintana J; Nathan JK; Hassam-Malani L; Li G; Harsh GR 4th; Thompson RC; Lim M; Quinones-Hinojosa A

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RESUMEN / SUMMARY: - Glioblastoma is the most common and aggressive type of primary brain tumor in adults. Average survival is approximately 1 year, but individual survival is heterogeneous. Using a single institutional experience, we have previously identified preoperative factors associated with survival and devised a prognostic scoring system based on these factors. The aims of the present study are to validate these preoperative factors and verify the efficacy of this scoring system using a multi-institutional cohort. Of the 334 patients in this study from three different institutions, the preoperative factors found to be negatively associated with survival in a Cox analysis were age >60 years ($p < 0.0001$), Karnofsky Performance Scale score 80 ($p = 0.03$), motor deficit ($p = 0.02$), language deficit ($p = 0.04$), and periventricular tumor location ($p = 0.04$). Patients possessing 0-1, 2, 3, and 4-5 of these variables were

assigned a preoperative grade of 1, 2, 3, and 4, respectively. Patients with a preoperative grade of 1, 2, 3, and 4 had a median survival of 17.9, 12.3, 10, and 7.5 months, respectively. Survival of each of these grades was statistically significant ($p < 0.05$) in log-rank analysis. This grading system, based only on preoperative variables, may provide patients and physicians with prognostic information that may guide medical and surgical therapy before any intervention is pursued.

[83]

TÍTULO / TITLE: - Recurrent high-grade glioma treated with bevacizumab: prognostic value of MGMT methylation, EGFR status and pretreatment MRI in determining response and survival.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 22.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1225-0](#)

AUTORES / AUTHORS: - Chen C; Huang R; Maclean A; Muzikansky A; Mukundan S; Wen PY; Norden AD

INSTITUCIÓN / INSTITUTION: - Harvard Medical School, 250 Longwood Avenue, Boston, MA, 02115, USA.

RESUMEN / SUMMARY: - Although bevacizumab represented an important advance in treatment of recurrent high-grade gliomas (HGG), responses occur in fewer than half of patients. There are no validated biomarkers for anti-angiogenic therapy that are available for routine clinical use. We assessed the prognostic values of imaging and molecular markers in this patient population. MRI scans from 191 patients with recurrent HGG obtained prior to initiating bevacizumab were reviewed for areas of enhancement, necrosis, T2/FLAIR abnormality, and ADC values. Serial MRI scans following the initiation of bevacizumab were evaluated for response and progression. Non-radiographic markers including EGFR and MGMT status were also assessed with respect to response and patient survival. 65 of 191 patients (34 %) showed complete or partial response at the time of their best response MRI and demonstrated longer progression free survival (PFS) and overall survival (OS) compared to the group without response (PFS: 6.9 vs 3.5 months, OS: 10.9 vs 6.1 months). Minimum ADC values within enhancing and non-enhancing regions were lower in responders compared to those of non-responders ($1,099$ vs 984×10^{-6} mm²/s, $p = 0.006$). Smaller enhancing area was associated with longer OS (HR = 1.99, $p = 0.017$). The ratio of T2/FLAIR to enhancing area was prognostic of OS for only the Grade III HGG subgroup (HR = 0.14, $p = 0.004$). Area of enhancing tumor at baseline can stratify survival in patients with recurrent HGG treated with bevacizumab. The extent of edema relative to enhancing area may have a prognostic role specific to Grade III HGG.

[84]

TÍTULO / TITLE: - Morbidity in survivors of child and adolescent meningioma.

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

REVISTA / JOURNAL: - Cancer. 2013 Sep 19. doi: 10.1002/cncr.28366.

●● [Enlace al texto completo \(gratis o de pago\) 1002/cncr.28366](#)

AUTORES / AUTHORS: - Kotecha RS; Jacoby P; Cole CH; Gottardo NG

INSTITUCIÓN / INSTITUTION: - Department of Haematology and Oncology, Princess Margaret Hospital for Children, Perth, Western Australia, Australia; School of Paediatrics and Child Health, University of Western Australia, Perth, Western Australia, Australia; Telethon Institute for Child Health Research and Centre for Child Health Research, University of Western Australia, Perth, Western Australia, Australia.

RESUMEN / SUMMARY: - BACKGROUND: The extent of initial surgical resection has been identified as the strongest prognostic indicator for survival in child and adolescent meningioma. Given the paucity of data concerning long-term outcome, the authors undertook a meta-analysis to analyze morbidity in survivors of this disease. METHODS: Individual patient data were obtained from 19 case series published over the last 23 years through direct communication with the authors. Ordinal logistic regression models were used to assess the influence of risk factors on morbidity. RESULTS: Of 261 patients, 48% reported a completely normal life with no morbidity, and 25% had moderate/severe meningioma-associated morbidity at last follow-up. Multivariate analysis identified relapse as the only independent variable associated with an increased risk of morbidity (odds ratio, 4.02; 95% confidence interval, 2.11-7.65; $P \leq .001$). Univariate analysis also revealed an increased risk for patients with neurofibromatosis (odds ratio, 1.90; 95% confidence interval, 1.04-3.48; $P = .04$). Subgroup analysis identified a higher incidence of morbidity among patients who had intracranial tumors with a skull base location compared with a nonskull base location ($P \leq .001$). Timing at which morbidity occurred was available for 70 patients, with persistence of preoperative tumor-related symptoms in 67% and as a result of therapy in 20%. CONCLUSIONS: The majority of survivors of child and adolescent meningioma had no or only mild long-term morbidity, whereas 25% had moderate/severe morbidity, with a significantly increased risk in patients with relapsed disease. In the majority, morbidity occurred as a consequence of the tumor itself, justifying aggressive surgery to achieve gross total resection. However, for patients with neurofibromatosis and skull base meningioma, a more cautious surgical approach should be reserved. Cancer 2013. © 2013 The Authors. Cancer published by Wiley Periodicals, Inc. on behalf of the American Cancer Society. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs Licence, which permits use and distribution in any medium, provided the original work is properly cited, the use is noncommercial, and no modifications or adaptations are made.

[85]

TÍTULO / TITLE: - Cortical hemosiderin is associated with seizures in patients with newly diagnosed malignant brain tumors.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 18.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1247-7](#)

AUTORES / AUTHORS: - Roelcke U; Boxheimer L; Schwyzer L; Ortega M; Berberat J; Remonda L

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Neurooncology, Cantonal Hospital, 5001, Aarau, Switzerland, roelcke@ksa.ch.

RESUMEN / SUMMARY: - Hemorrhage is common in brain tumors. Due to characteristic magnetic field changes induced by hemosiderin it can be detected using susceptibility weighted MRI (SWI). Its relevance to clinical syndromes is unclear. Here we investigated the patterns of intra-tumoral SWI positivity (SWIpos) as a surrogate for hemosiderin with regard to the prevalence of epilepsy. We report on 105 patients with newly diagnosed supra-tentorial gliomas and brain metastasis. The following parameters were recorded from pre-operative MRI: (1) SWIpos defined as dot-like or fine linear signal changes; (2) allocation of SWIpos to tumor compartments (contrast enhancement, central hypointensity, non-enhancing area outside contrast-enhancement); (3) allocation of SWIpos to include the cortex, or SWIpos in subcortical tumor parts only; (4) tumor size on T2 weighted and gadolinium-enhanced T1 images. 80 tumors (76 %) showed SWIpos (4/14 diffuse astrocytoma WHO II, 5/9 anaplastic astrocytoma WHO III, 41/46 glioblastoma WHO IV, 30/36 metastasis). The presence of SWIpos depended on tumor size but not on patient's age, medication with antiplatelet drugs or anticoagulation. Seizures occurred in 60 % of patients. Cortical SWIpos significantly correlated with seizures in brain metastasis ($p = 0.044$), and as a trend in glioblastoma ($p = 0.062$). Cortical SWIpos may confer a risk for seizures in patients with newly diagnosed brain metastasis and glioblastoma. Whether development of cortical SWIpos induced by treatment or by the natural course of tumors also leads to the new onset of seizures has to be addressed in longitudinal studies in larger patient cohorts.

[86]

TÍTULO / TITLE: - Isocitrate dehydrogenase 1 (IDH1) mutation-specific microRNA signature predicts favorable prognosis in glioblastoma patients with IDH1 wild type.

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

REVISTA / JOURNAL: - J Exp Clin Cancer Res. 2013 Aug 29;32(1):59.

●● Enlace al texto completo (gratis o de pago) [1186/1756-9966-32-59](#)

AUTORES / AUTHORS: - Wang Z; Bao Z; Yan W; You G; Wang Y; Li X; Zhang W

RESUMEN / SUMMARY: - BACKGROUND: To date, no prognostic microRNAs (miRNAs) for isocitrate dehydrogenase 1 (IDH1) wild-type glioblastoma multiformes (GBM) have

been reported. The aim of the present study was to identify a miRNA signature of prognostic value for IDH1 wild-type GBM patients using miRNA expression dataset from the The Cancer Genome Atlas (TCGA). METHODS: Differential expression profiling analysis of miRNAs was performed on samples from 187 GBM patients, comprising 17 mutant-type IDH1 and 170 wild-type IDH1 samples. RESULTS: A 23-miRNA signature which was specific to the IDH1 mutation was revealed. Survival data was available for 140 of the GBM patients with wild-type IDH1. Using these data, the samples were characterized as high-risk or low-risk group according to the ranked protective scores for each of the 23 miRNAs in the 23-miRNA signature. Then, the 23 IDH1 mutation-specific miRNAs were classified as risky group and protective group miRNAs based on the significance analysis of microarrays d-score (SAM d-value) (positive value or negative value). The risky group miRNAs were found to be expressed more in the high-risk samples while the protective group miRNAs were expressed more in the low-risk samples. Patients with high protective scores had longer survival times than those with low protective scores. CONCLUSION: These findings show that IDH1 mutation-specific miRNA signature is a marker for favorable prognosis in primary GBM patients with the IDH1 wild type.

[87]

TÍTULO / TITLE: - Language mapping in healthy volunteers and brain tumor patients with a novel navigated TMS system: Evidence of tumor-induced plasticity.

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

REVISTA / JOURNAL: - Clin Neurophysiol. 2013 Sep 16. pii: S1388-2457(13)01004-3. doi: 10.1016/j.clinph.2013.08.015.

●● Enlace al texto completo (gratis o de pago) [1016/j.clinph.2013.08.015](#)

AUTORES / AUTHORS: - Rosler J; Niraula B; Strack V; Zdunczyk A; Schilt S; Savolainen P; Lioumis P; Makela J; Vajkoczy P; Frey D; Picht T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Charite University Hospital, Berlin, Germany.

RESUMEN / SUMMARY: - OBJECTIVE: This article explores the feasibility of a novel repetitive navigated transcranial magnetic stimulation (rnTMS) system and compares language mapping results obtained by rnTMS in healthy volunteers and brain tumor patients. METHODS: Fifteen right-handed healthy volunteers and 50 right-handed consecutive patients with left-sided gliomas were examined with a picture-naming task combined with time-locked rnTMS (5-10Hz and 80-120% resting motor threshold) applied over both hemispheres. Induced errors were classified into four psycholinguistic types and assigned to their respective cortical areas according to the coil position during stimulation. RESULTS: In healthy volunteers, language disturbances were almost exclusively induced in the left hemisphere. In patients errors were more frequent and induced at a comparative rate over both hemispheres. Predominantly

dysarthric errors were induced in volunteers, whereas semantic errors were most frequent in the patient group. CONCLUSION: The right hemisphere's increased sensitivity to rTMS suggests reorganization in language representation in brain tumor patients. SIGNIFICANCE: rTMS is a novel technology for exploring cortical language representation. This study proves the feasibility and safety of rTMS in patients with brain tumor.

[88]

TÍTULO / TITLE: - Effect of dural detachment on long-term tumor control for meningiomas treated using Simpson Grade IV resection.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) [3171/2013.8.JNS13832](#)

AUTORES / AUTHORS: - Fukushima Y; Oya S; Nakatomi H; Shibahara J; Hanakita S; Tanaka S; Shin M; Kawai K; Fukayama M; Saito N

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery and.

RESUMEN / SUMMARY: - Object Meningiomas treated by subtotal or partial resection are associated with significantly shorter recurrence-free survival than those treated by gross-total resection. The Simpson grading system classifies incomplete resections into a single category, namely Simpson Grade IV, with wide variations in the volume and location of residual tumors, making it complicated to evaluate the achievement of surgical goals and predict the prognosis of these tumors. Authors of the present study investigated the factors related to necessity of retreatment and tried to identify any surgical nuances achievable with the aid of modern neurosurgical techniques for meningiomas treated using Simpson Grade IV resection. Methods This retrospective analysis included patients with WHO Grade I meningiomas treated using Simpson Grade IV resection as the initial therapy at the University of Tokyo Hospital between January 1995 and April 2010. Retreatment was defined as resection or stereotactic radiosurgery due to postoperative tumor growth. Results A total of 38 patients were included in this study. Regrowth of residual tumor was observed in 22 patients with a mean follow-up period of 6.1 years. Retreatment was performed for 20 of these 22 tumors with regrowth. Risk factors related to significantly shorter retreatment-free survival were age younger than 50 years ($p = 0.006$), postresection tumor volume of 4 cm³ or more ($p = 0.016$), no dural detachment ($p = 0.001$), and skull base location ($p = 0.016$). Multivariate analysis revealed that no dural detachment (hazard ratio [HR] 6.42, 95% CI 1.41-45.0; $p = 0.02$) and skull base location (HR 11.6, 95% CI 2.18-218; $p = 0.002$) were independent risk factors for the necessity of early retreatment, whereas postresection tumor volume of 4 cm³ or more was not a statistically significant risk factor. Conclusions Compared with Simpson Grade I, II, and III resections, Simpson Grade IV resection includes highly heterogeneous tumors in terms of resection rate

and location of the residual mass. Despite the difficulty in analyzing such diverse data, these results draw attention to the favorable effect of dural detachment (instead of maximizing the resection rate) on long-term tumor control. Surgical strategy with an emphasis on detaching the tumor from the affected dura might be another important option in resection of high-risk meningiomas not amenable to gross-total resection.

[89]

TÍTULO / TITLE: - Digitoxin sensitizes glioma cells to TRAIL-mediated apoptosis by upregulation of death receptor 5 and downregulation of survivin.

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

REVISTA / JOURNAL: - Anticancer Drugs. 2013 Sep 16.

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

[1097/CAD.0000000000000015](#)

AUTORES / AUTHORS: - Lee DH; Lee CS; Kim DW; Ae JE; Lee TH

INSTITUCIÓN / INSTITUTION: - aDepartment of Neurosurgery, School of Medicine
bDepartment of Microbiology, Immunology, and Cancer Biology, University of Virginia, Charlottesville, Virginia, USA cDepartment of Obstetrics and Gynecology, College of Medicine, Kosin University, Korea.

RESUMEN / SUMMARY: - Glioblastoma multiforme is the most lethal and aggressive astrocytoma among primary brain tumors in adults. However, most glioblastoma cells have been reported to be resistant to tumor necrosis factor-related apoptosis-inducing ligand (TRAIL)-induced apoptosis. Here, we have shown that digitoxin (DT), a clinically approved cardiac glycoside for heart failure, can induce TRAIL-mediated apoptosis of glioblastoma cells. DT in noncytotoxic doses (20 nmol/l) can increase TRAIL-induced apoptosis in TRAIL-resistant U87MG glioblastoma cells. Treatment with DT led to apoptosis and a robust reduction in the levels of the antiapoptotic protein survivin by inducing its proteasomal degradation; however, it did not affect the levels of many other apoptosis regulators. Moreover, silencing survivin with small interfering RNAs sensitized glioma cells to TRAIL-induced apoptosis, underscoring the functional role of survivin depletion in the TRAIL-sensitizing actions of DT. We demonstrate that inactivation of survivin and death receptor 5 expression by DT is sufficient to restore TRAIL sensitivity in resistant glioma cells. Our results suggest that combining DT with TRAIL treatments may be useful in the treatment of TRAIL-resistant glioma cells.

[90]

TÍTULO / TITLE: - Sinonasal paraganglioma with long-delayed recurrence and metastases: genetic and imaging findings.

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

REVISTA / JOURNAL: - J Clin Endocrinol Metab. 2013 Sep 12.

- Enlace al texto completo (gratis o de pago) [1210/jc.2013-2320](https://doi.org/10.1186/jc.2013-2320)

AUTORES / AUTHORS: - Michel J; Taieb D; Jolibert M; Torrents J; Wassef M; Morange I; Essamet W; Barlier A; Dessi P; Fakhry N

INSTITUCIÓN / INSTITUTION: - 1Department of Otorhinolaryngology - Head and Neck Surgery, LA Timone University Hospital, REFCOR, Aix-Marseille University, France;

RESUMEN / SUMMARY: - Context:Sinonasal paragangliomas (SNPGL) have rarely been reported in the literature. They are often aggressive.Patient:We report an original case of SNPGL with a tumor recurrence diagnosed 13 years after resection of the primary tumor. SRS and [18F]-FDG PET/CT were the most sensitive functional imaging techniques and ruled out distant metastases. Interestingly, [18F]-FDOPA PET/CT was negative, a feature that may be considered a sign of functional dedifferentiation. Screening for germline mutations of the SDHB, SDHC, SDHD, SDHAF2, VHL, MAX and TMEM127 was negative.Conclusion:The diagnosis of malignancy remains challenging at initial diagnosis and patients should be followed during their entire lifetime.

[91]

TÍTULO / TITLE: - Targeting Protein Kinase CK2 Suppresses Pro-survival Signaling Pathways and Growth of Glioblastoma.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Sep 13.

- Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-0265](https://doi.org/10.1158/1078-0432.CCR-13-0265)

AUTORES / AUTHORS: - Zheng Y; McFarland BC; Drygin D; Yu H; Bellis SL; Kim H; Bredel M; Benveniste EN

INSTITUCIÓN / INSTITUTION: - Department of Cell, Developmental and Integrative Biology, University of Alabama at Birmingham.

RESUMEN / SUMMARY: - PURPOSE: Gliomas are the most frequently occurring primary malignancies in the brain, and glioblastoma (GBM) is the most aggressive of these tumors. Protein kinase CK2 is composed of two catalytic subunits (alpha and/or alpha') and two beta regulatory subunits. CK2 suppresses apoptosis, promotes neo-angiogenesis, and enhances activation of the JAK/STAT, NF-kappaB, PI3K/AKT, Hsp90, Wnt and Hedgehog pathways. Aberrant activation of the NF-kappaB, PI3K/AKT and JAK/STAT-3 pathways is implicated in GBM progression. Since CK2 is involved in their activation, the expression and function of CK2 in GBM was evaluated. Experimental Design and RESULTS: Analysis of 537 GBMs from The Cancer Genome Atlas Project demonstrates the CSNK2A1 gene, encoding CK2alpha, has gene dosage gains in GBM (33.7%), and is significantly associated with the classical GBM subtype. Inhibition of CK2 activity by CX-4945, a selective CK2 inhibitor, or CK2 knockdown by siRNA suppresses activation of the JAK/STAT, NF-kappaB and AKT pathways and downstream gene expression in human GBM xenografts. On a functional level, CX-4945 treatment decreases the adhesion and migration of GBM cells, in part through inhibition of

integrin beta1 and alpha4 expression. In vivo, CX-4945 inhibits activation of STAT-3, NF-kappaB p65 and AKT, and promotes survival of mice with intracranial human GBM xenografts. CONCLUSIONS: CK2 inhibitors may be considered for treatment of patients with GBM.

[92]

TÍTULO / TITLE: - Concomitant and adjuvant temozolomide of newly diagnosed glioblastoma in elderly patients.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Oct;115(10):2142-6. doi: 10.1016/j.clineuro.2013.08.002. Epub 2013 Aug 12.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.08.002](#)

AUTORES / AUTHORS: - Behm T; Horowski A; Schneider S; Bock HC; Mielke D; Rohde V; Stockhammer F

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Universitätsmedizin Gottingen, Robert-Koch-Str. 40, 37075 Gottingen, Germany.

RESUMEN / SUMMARY: - OBJECTIVE: The effect of concomitant and adjuvant temozolomide in glioblastoma patients above the age of 65 years lacks evidence. However, after combined treatment became standard at our center all patients were considered for combined therapy. We retrospectively analyzed the effect of temozolomide focused on elderly patients. METHODS: 293 patients with newly diagnosed glioblastoma treated single-centered between 1998 and 2010, by radiation alone or concomitant and adjuvant radiochemotherapy, were included. Treatment groups were analyzed by multi- and univariate analysis. Matched pairs for age, by a 5-year-caliper, extent of resection and general state was generated for all patients and elderly subgroups. RESULTS: 103 patients received radiation only and 190 combined treatment. Multivariate and matched pair analysis revealed a benefit due to combined temozolomide (HR 1.895 and 1.752, respectively). For patients older than 65 years median survival was 3.6 (95% CI 3.2-4.7) and 8.7 months (6.3-11.8) for radiotherapy only and combined treatment (HR 3.097, p<0.0001, n=90). Over the age of 70 and 75 years median survival was 3.2 (2.3-4.2) vs. 7.5 (5.1-10.9, HR 4.453, p<0.0001, n=62) and 3.2 (1.4-3.9) vs. 9.2 months (4.7-13.5; HR 9.037, p<0.0001, n=24), respectively. In 8/56 (14%) patients over the age of 70 years temozolomide was terminated due to toxicity. CONCLUSION: Retrospective matched pair analysis gives class 2b evidence for prolonged survival due to concomitant and adjuvant temozolomide in elderly glioblastoma patients. Until prospective data for combined radiochemotherapy in elderly patients will be available concomitant and adjuvant temozolomide therapy should not be withheld.

[93]

TÍTULO / TITLE: - A study of embryonic stem cell-related proteins in human astrocytomas: Identification of Nanog as a predictor of survival.

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

REVISTA / JOURNAL: - Int J Cancer. 2013 Aug 19. doi: 10.1002/ijc.28441.

●● [Enlace al texto completo \(gratis o de pago\) 1002/ijc.28441](#)

AUTORES / AUTHORS: - Elsir T; Edqvist PH; Carlson J; Ribom D; Bergqvist M; Ekman S; Popova SN; Alafuzoff I; Ponten F; Nister M; Smits A

INSTITUCIÓN / INSTITUTION: - Department of Neuroscience, Neurology, Uppsala University, University Hospital, S-751 85 Uppsala; Karolinska Institutet, Department of Oncology-Pathology, CCK R8:05, Karolinska University Hospital, S-17176 Stockholm, Sweden.

RESUMEN / SUMMARY: - Recent studies suggest that the regulatory networks controlling the functions of stem cells during development may be abnormally active in human cancers. An embryonic stem cell (ESC) gene signature was found to correlate with a more undifferentiated phenotype of several human cancer types including gliomas, and associated with poor prognosis in breast cancer. In the present study, we used tissue microarrays of 80 low-grade (WHO grade II) and 98 high-grade human gliomas (WHO grade III and IV) to investigate the presence of the ESC-related proteins Nanog, Klf4, Oct4, Sox2 and c-Myc by immunohistochemistry. While similar patterns of co-expressed proteins between low- and high-grade gliomas were present, we found up-regulated protein levels of Nanog, Klf4, Oct4 and Sox2 in high-grade gliomas. Survival analysis by Kaplan-Meier analysis revealed a significant shorter survival in the subgroups of low-grade astrocytomas (n=42) with high levels of Nanog protein (p=0.0067) and of Klf4 protein (p=0.0368), in high-grade astrocytomas (n=85) with high levels of Nanog (p=0.0042), Klf4 (p=0.0447), and c-Myc (p=0.0078) and in glioblastomas only (n=71) with high levels of Nanog (p=0.0422) and of c-Myc (p=0.0256). In the multivariate model, Nanog was identified as an independent prognostic factor in the subgroups of low-grade astrocytomas (p=0.0039), high-grade astrocytomas (p=0.0124) and glioblastomas only (p=0.0544), together with established clinical variables in these tumors. These findings provide further evidence for the joint regulatory pathways of ESC-related proteins in gliomas and identify Nanog as one of the key players in determining clinical outcome of human astrocytomas. © 2013 Wiley Periodicals, Inc.

[94]

TÍTULO / TITLE: - Triacetin-based acetate supplementation as a chemotherapeutic adjuvant therapy in glioma.

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

REVISTA / JOURNAL: - Int J Cancer. 2013 Aug 30. doi: 10.1002/ijc.28465.

●● Enlace al texto completo (gratuito o de pago) [1002/ijc.28465](https://doi.org/10.1002/ijc.28465)

AUTORES / AUTHORS: - Tsen AR; Long PM; Driscoll HE; Davies MT; Teasdale BA; Penar PL; Pendlebury WW; Spees JL; Lawler SE; Viapiano MS; Jaworski DM

INSTITUCIÓN / INSTITUTION: - University of Vermont (UVM) College of Medicine (COM), Department of Surgery Division of Neurosurgery, Burlington, VT, 05405.

RESUMEN / SUMMARY: - Cancer is associated with epigenetic (i.e., histone hypoacetylation) and metabolic (i.e., aerobic glycolysis) alterations. Levels of N-acetyl-L-aspartate (NAA), the primary storage form of acetate in the brain, and aspartoacylase (ASPA), the enzyme responsible for NAA catalysis to generate acetate, are reduced in glioma; yet, few studies have investigated acetate as a potential therapeutic agent. This preclinical study sought to test the efficacy of the food additive Triacetin (glyceryl triacetate, GTA) as a novel therapy to increase acetate bioavailability in glioma cells. The growth-inhibitory effects of GTA, compared to the histone deacetylase inhibitor Vorinostat (SAHA), were assessed in established human glioma cell lines (HOG and Hs683 oligodendroglioma, U87 and U251 glioblastoma) and primary tumor-derived glioma stem-like cells (GSCs), relative to an oligodendrocyte progenitor line (Oli-Neu), normal astrocytes, and neural stem cells (NSCs) in vitro. GTA was also tested as a chemotherapeutic adjuvant with temozolomide (TMZ) in orthotopically grafted GSCs. GTA induced cytostatic growth arrest in vitro comparable to Vorinostat, but, unlike Vorinostat, GTA did not alter astrocyte growth and promoted NSC expansion. GTA alone increased survival of mice engrafted with glioblastoma GSCs and potentiated TMZ to extend survival longer than TMZ alone. GTA was most effective on GSCs with a mesenchymal cell phenotype. Given that GTA has been chronically administered safely to infants with Canavan disease, a leukodystrophy due to ASPA mutation, GTA-mediated acetate supplementation may provide a novel, safe chemotherapeutic adjuvant to reduce the growth of glioma tumors, most notably the more rapidly proliferating, glycolytic, and hypoacetylated mesenchymal glioma tumors. © 2013 Wiley Periodicals, Inc.

[95]

TÍTULO / TITLE: - Acetylcholine esterase is a regulator of GFAP expression and a target of dichlorvos in astrocytic differentiation of rat glioma C6 cells.

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

REVISTA / JOURNAL: - Brain Res. 2013 Aug 31. pii: S0006-8993(13)01168-2. doi: 10.1016/j.brainres.2013.08.031.

●● Enlace al texto completo (gratuito o de pago) [1016/j.brainres.2013.08.031](https://doi.org/10.1016/j.brainres.2013.08.031)

AUTORES / AUTHORS: - Ozawa A; Kadowaki E; Haga Y; Sekiguchi H; Hemmi N; Kaneko T; Maki T; Sakabe K; Hara S; Yamamoto M; Arishima K; Sakaue M

INSTITUCIÓN / INSTITUTION: - Department of Anatomy II, School of Veterinary Medicine, Azabu University, Sagamihara 229-8501, Japan.

RESUMEN / SUMMARY: - The main target of neurotoxins is neurons because they comprise the main part of neural function, but glial cells may be indirect targets because they support the function of neurons. Among the glial cells, astrocytes in particular act as “nurse cells”, regulating neuronal survival and functions. In the present study, to reveal whether a known neurotoxic substance, organophosphate dichlorvos (DDVP), affects the differentiation of astrocytes, we used an astrocyte differentiation model in rat glioma C6 cells. Morphological change and induction of GFAP expression in the differentiating C6 cells were suppressed by DDVP treatment. The known potential targets of DDVP are acetylcholine esterase (AChE), fatty acid amide hydrolase and methyl guanine methyl transferase. Among the specific inhibitors against these enzymes, the AChE inhibitor paraoxon successfully suppressed the cellular morphological changes and the induction of GFAP expression in differentiating C6 cells. These results indicate that DDVP inhibits differentiation in the C6 astrocyte-differentiation model, in which at least AChE inhibition is involved and that AChE is a potent regulator of the differentiation. Furthermore, considering that the main substrate of AChE is ACh, thus, ACh may act as regulators of astrocyte differentiation.

[96]

TÍTULO / TITLE: - In Vivo PET/CT in a Human Glioblastoma Chicken Chorioallantoic Membrane Model: A New Tool for Oncology and Radiotracer Development.

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

REVISTA / JOURNAL: - J Nucl Med. 2013 Oct;54(10):1782-1788. Epub 2013 Aug 22.

●● Enlace al texto completo (gratis o de pago) [2967/jnumed.112.117150](#)

AUTORES / AUTHORS: - Warnock G; Turtoi A; Blomme A; Bretin F; Bahri MA; Lemaire C; Libert LC; Seret AE; Luxen A; Castronovo V; Plenevaux AR

INSTITUCIÓN / INSTITUTION: - Cyclotron Research Center, University of Liege, Liege, Belgium; and.

RESUMEN / SUMMARY: - For many years the laboratory mouse has been used as the standard model for in vivo oncology research, particularly in the development of novel PET tracers, but the growth of tumors on chicken chorioallantoic membrane (CAM) provides a more rapid, low cost, and ethically sustainable alternative. For the first time, to our knowledge, we demonstrate the feasibility of in vivo PET and CT imaging in a U87 glioblastoma tumor model on chicken CAM, with the aim of applying this model for screening of novel PET tracers. METHODS: U87 glioblastoma cells were implanted on the CAM at day 11 after fertilization and imaged at day 18. A small-animal imaging cell was used to maintain incubation and allow anesthesia using isoflurane. Radiotracers were injected directly into the exposed CAM vasculature. Sodium 18F-fluoride was used to validate the imaging protocol, demonstrating that image-degrading motion can be removed with anesthesia. Tumor glucose metabolism was imaged using 18F-FDG, and tumor protein synthesis was imaged using 2-18F-

fluoro-I-tyrosine. Anatomic images were obtained by contrast-enhanced CT, facilitating clear delineation of the tumor, delineation of tracer uptake in tumor versus embryo, and accurate volume measurements. RESULTS: PET imaging of tumor glucose metabolism and protein synthesis was successfully demonstrated in the CAM U87 glioblastoma model. Catheterization of CAM blood vessels facilitated dynamic imaging of glucose metabolism with ^{18}F -FDG and demonstrated the ability to study PET tracer uptake over time in individual tumors, and CT imaging improved the accuracy of tumor volume measurements. CONCLUSION: We describe the novel application of PET/CT in the CAM tumor model, with optimization of typical imaging protocols. PET imaging in this valuable tumor model could prove particularly useful for rapid, high-throughput screening of novel radiotracers.

[97]

TÍTULO / TITLE: - Genetic polymorphisms in XRCC1 gene and susceptibility to glioma in Chinese Han population.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Aug 6.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1050-2](#)

AUTORES / AUTHORS: - Jin Z; Xu H; Zhang X; Zhao G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Bethune Hospital, Jilin University, No. 71 Xinmin Street, Changchun, 130021, Jilin Province, People's Republic of China.

RESUMEN / SUMMARY: - Glioma is the most common type of primary brain malignancy in adults. The X-ray repair cross-complementing group 1 (XRCC1) is an important candidate gene for influencing the pathogenesis of glioma. This study aimed to evaluate the potential association between XRCC1 genetic polymorphisms and glioma susceptibility. This case-control study was conducted in Chinese Han populations consisting of 620 glioma cases and 630 cancer-free controls. XRCC1 genetic polymorphisms were detected by the polymerase chain reaction-restriction fragment length polymorphism and verified using DNA sequencing methods. The c.910^a>G and c.1779C>G genetic polymorphisms were identified in this study. Our data suggested that the genotypes/alleles of these two genetic polymorphisms were statistically associated with the increased risk of glioma. As for c.910^a>G, the risk of glioma for genotype GG was significantly higher than wild genotype AA (odds ratio (OR) = 1.98, 95 % confidence interval (CI) 1.33-2.94, P = 0.001). As for c.1779C>G, the genotype GG was statistically associated with the increased risk of glioma compared to wild genotype CC (OR = 1.80, 95 % CI 1.17-2.78, P = 0.007). Both of alleles G in c.910^a>G and c.1779C>G may contribute to glioma susceptibility (G versus (vs.) A, OR = 1.30, 95 % CI 1.09-1.54, P = 0.003; G vs. C, OR = 1.19, 95 % CI 1.00-1.42, P = 0.045). Our findings indicate that the c.910^a>G and c.1779C>G genetic polymorphisms are associated with

the susceptibility to glioma in Chinese Han populations and might be used as molecular markers for evaluating glioma risk.

[98]

TÍTULO / TITLE: - Fibronectin expression in glioblastomas promotes cell cohesion, collective invasion of basement membrane in vitro and orthotopic tumor growth in mice.

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

REVISTA / JOURNAL: - Oncogene. 2013 Aug 5. doi: 10.1038/onc.2013.305.

●● [Enlace al texto completo \(gratis o de pago\) 1038/onc.2013.305](#)

AUTORES / AUTHORS: - Serres E; Debarbieux F; Stanchi F; Maggiorella L; Grall D; Turchi L; Burel-Vandenbos F; Figarella-Branger D; Virolle T; Rougon G; Van Obberghen-Schilling E

INSTITUCIÓN / INSTITUTION: - 1] Universite de Nice-Sophia Antipolis, Nice, France [2] Institut de Biologie Valrose, CNRS UMR7277-INSERM U1091, Nice, France.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) are highly invasive and angiogenic malignancies with a median survival time from diagnosis of <15 months. Previous work has revealed robust overexpression of fibronectin (FN) mRNA in GBM, although immunohistochemical staining of FN in these tumors is typically associated with the angiogenic vasculature. Here we sought to examine the expression of tumor cell FN and address its possible involvement in the invasive phenotype of GBM. We found that FN was expressed and assembled into fibrillar arrays in human tumors and in established GBM lines. Cultured cells spontaneously formed dense cellular networks and spheroid-like domes. Depletion of FN by targeted-short hairpin RNA expression disrupted matrix assembly and multicellular network organization by exerting profound effects on cell adhesion and motility. Although FN depletion enhanced persistent directional migration of single cells, it compromised collective invasion of spheroids through a laminin-rich matrix and sensitized cells to ionizing radiation. In orthotopic grafts, FN depletion significantly reduced tumor growth and angiogenesis. Together our results show that FN produced by the tumor cells has a role in GBM pathophysiology and they provide insights into the implications that targeting FN interactions may have for combating this dreaded disease. Oncogene advance online publication, 5 August 2013; doi:10.1038/onc.2013.305.

[99]

TÍTULO / TITLE: - Analysis of the raw serum peptidomic pattern in glioma patients.

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

REVISTA / JOURNAL: - Clin Chim Acta. 2013 Aug 13;425C:221-226. doi: 10.1016/j.cca.2013.08.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.cca.2013.08.002](https://doi.org/10.1016/j.cca.2013.08.002)

AUTORES / AUTHORS: - Li Z; Lu H; Yang J; Zeng X; Zhao L; Li H; Liao Q; Peng S; Zhou M; Wu M; Xiang J; Wang Y; Li G

INSTITUCIÓN / INSTITUTION: - Cancer Research Institute, Key Laboratory of Carcinogenesis of Ministry of Health, Central South University, 110 Xiangya Road, Changsha, Hunan, 410078, PR China.

RESUMEN / SUMMARY: - BACKGROUND: Glioma is a common and lethal type of brain tumor. Serum peptides reflected the pathological changes of the body. Here we studied the serum peptide profiles to distinguish glioma disease and measure glioma staging. METHODS: Serum peptides were captured by WCX magnetic beads and were analyzed by MALDI-TOF mass spectrometer. Sera from 53 glioma patients and 69 age-matched healthy controls were analyzed. Clinpro Tools software was used to obtain a common peak m/z list from all measured samples. An optimal subset of peptides was selected to establish a predictive classification model with the newly developed competitive adaptive reweighted sampling (CARS) variable selection method. Serum peptide profiles were classified through a partial least-squares-linear discriminate analysis (PLS-LDA). We also searched for progressively different peptide peaks that correlated with an increasing malignancy of glioma. RESULTS: The following pattern recognition equation was established with selected peptide signals: $Y = -0.1113 - 0.113X_1 - 0.2916X_2 + 0.1128X_3 - 0.2057X_4 - 0.2047X_5 - 0.3048X_6 + 0.2835X_7 + 0.3121X_8 - 0.1458X_9 + 0.0354X_{10} - 0.2022X_{11}$. Using this pattern, classification sensitivity and specificity achieved were 0.9057 and 0.9855, respectively. Additionally, we detected 3 peptide signals that correlated with glioma grade. Among these, the intensity of peak 2082.32Da correlated positively with the glioma progressing, and peaks with sizes of 3316.08Da and 6631.45Da show a decreasing intensity with increasing glioma grade. CONCLUSIONS: 11 peptide recognition patterns and specific peak intensities might be useful for the early detection and tumor staging of glioma, but they need to be further validated and evaluated independently in clinical settings.

[100]

TÍTULO / TITLE: - Together and apart: providing psychosocial support for patients and families living with brain tumors.

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

REVISTA / JOURNAL: - Support Care Cancer. 2013 Aug 29.

●● Enlace al texto completo (gratis o de pago) [1007/s00520-013-1933-1](https://doi.org/10.1007/s00520-013-1933-1)

AUTORES / AUTHORS: - Kanter C; D'Agostino NM; Daniels M; Stone A; Edelstein K

RESUMEN / SUMMARY: - PURPOSE: Brain tumors are associated with neurological sequelae and poor survival, contributing to distress in patients and their families. Our institution has conducted separate support groups for brain tumor patients and caregivers since 1999. This retrospective cohort study aimed to identify characteristics

of brain tumor group participants in relation to attendance frequency, and compare themes of discussion in patient and caregiver groups. METHODS: Demographic and medical characteristics were obtained from patient and caregiver group registration sheets and medical chart review. We quantified discussion topics recorded by group facilitators between 1999 and 2006, extracted themes, and examined similarities and differences in the way these themes were expressed. RESULTS: A total of 137 patients and 238 caregivers attended the groups; about half attended more than one session. The chart review of a randomly selected subset of patient participants revealed that 57.5 % were married, 58.8 % had high-grade gliomas, and 55 % attended their first group within 3 months of diagnosis or at tumor progression. Both groups discussed physical and cognitive consequences, emotional reactions, relationships, coping, end of life, and practical issues. Caregivers discussed difficulties achieving self-care and caregiver burden. CONCLUSIONS: Brain tumor support group facilitators can expect to encounter a range of medical and psychosocial issues in accommodating patients' and caregivers' diverse concerns. Separate brain tumor patient and caregiver groups may allow participants to explore those concerns without worrying about effects on their friends or family. It remains to be seen whether the groups meet the needs of attendees, and whether those who do not attend the groups have unmet needs.

[101]

TÍTULO / TITLE: - New validated prognostic models and prognostic calculators in patients with low-grade gliomas diagnosed by central pathology review: a pooled analysis of EORTC/RTOG/NCCTG phase III clinical trials.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Sep 18.

●● Enlace al texto completo (gratis o de pago) 1093/neuonc/not117

AUTORES / AUTHORS: - Gorlia T; Wu W; Wang M; Baumert BG; Mehta M; Buckner JC; Shaw E; Brown P; Stupp R; Galanis E; Lacombe D; van den Bent MJ

INSTITUCIÓN / INSTITUTION: - EORTC Headquarters, Brussels, Belgium (T.G., D.L.); North Central Cancer Treatment Group, Rochester, Minnesota (W.W., J.C.B., P.B., E.G.); Radiation Therapy Oncology Group, Philadelphia, Pennsylvania (M.W., M.M., E.S.); Radiation Oncology (MAASTRO), GROW, Maastricht University Medical Centre, Maastricht, the Netherlands (B.G.B.); MediClin Robert Janker Klinik, Bonn, Germany (B.G.B.); Centre Hospitalier Universitaire Vaudois (CHUV) and University of Lausanne, Vaud, Switzerland (R.S.); Department of Neuro-Oncology, Dr. Daniel den Hoed Cancer Center, AE Rotterdam, the Netherlands (M.J.v.d.B.).

RESUMEN / SUMMARY: - Background In a previous study, the European Organisation for Research and Treatment of Cancer (EORTC) reported a scoring system to predict survival of patients with low-grade gliomas (LGGs). A major issue in the diagnosis of brain tumors is the lack of agreement among pathologists. New models in patients

with LGGs diagnosed by central pathology review are needed. Methods Data from 339 EORTC patients with LGGs diagnosed by central pathology review were used to develop new prognostic models for progression-free survival (PFS) and overall survival (OS). Data from 450 patients with centrally diagnosed LGGs recruited into 2 large studies conducted by North American cooperative groups were used to validate the models. Results Both PFS and OS were negatively influenced by the presence of baseline neurological deficits, a shorter time since first symptoms (<30 wk), an astrocytic tumor type, and tumors larger than 5 cm in diameter. Early irradiation improved PFS but not OS. Three risk groups have been identified (low, intermediate, and high) and validated. Conclusions We have developed new prognostic models in a more homogeneous LGG population diagnosed by central pathology review. This population better fits with modern practice, where patients are enrolled in clinical trials based on central or panel pathology review. We could validate the models in a large, external, and independent dataset. The models can divide LGG patients into 3 risk groups and provide reliable individual survival predictions. Inclusion of other clinical and molecular factors might still improve models' predictions.

[102]

TÍTULO / TITLE: - Three single nucleotide polymorphisms of the vascular endothelial growth factor (VEGF) gene and glioma risk in a Chinese population.

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

REVISTA / JOURNAL: - J Int Med Res. 2013 Sep 5.

●● [Enlace al texto completo \(gratis o de pago\) 1177/0300060513498667](#)

AUTORES / AUTHORS: - Jiang H; Lian M; Xie J; Li J; Wang M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi Province, China.

RESUMEN / SUMMARY: - **OBJECTIVE:** To investigate the association between three single nucleotide polymorphisms (SNPs) of the vascular endothelial growth factor (VEGF) gene and the risk of glioma in a Han Chinese population. **METHODS:** This hospital-based case-control study used polymerase chain reaction-restriction fragment length polymorphism analysis to detect three SNPs (-634 G/C, +936 C/T and +1612 G/A) of the VEGF gene in patients with glioma compared with healthy control subjects. **RESULTS:** The study investigated 880 patients with gliomas and 880 age- and sex-matched healthy control subjects. Patients with gliomas had a significantly higher frequency of the -634 CC genotype (odds ratio [OR] 1.35, 95% confidence interval [CI] 1.05, 1.75) and the +936 TT (OR 1.73, 95% CI 1.20, 2.48) genotype compared with the control subjects. Patients with glioblastomas had a significantly higher frequency of the -634 CC and +936 TT genotypes. Patients with grade IV gliomas had a significantly higher frequency of the -634 CC and +936 TT genotypes. The +1612 G/A polymorphisms were not associated with glioma risk. **CONCLUSION:** The VEGF - 634 CC

and +936 TT genotypes were associated with a higher risk of glioma in a Han Chinese population.

[103]

TÍTULO / TITLE: - Primary fourth ventricular B-cell lymphoma in an immunocompetent patient.

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

REVISTA / JOURNAL: - Clin Neuropathol. 2013 Aug 7.

●● [Enlace al texto completo \(gratis o de pago\) 5414/NP300658](#)

AUTORES / AUTHORS: - Fabiano AJ; Syriac S; Fenstermaker RA; Qiu J

[104]

TÍTULO / TITLE: - Intracranial Papillary Meningioma: A Clinicopathologic Study of 30 Cases at a Single Institution.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug 5.

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

[1227/NEU.0000000000000133](#)

AUTORES / AUTHORS: - Wang XQ; Chen H; Zhao L; Li ST; Hu J; Mei GH; Jiang CC

INSTITUCIÓN / INSTITUTION: - 1Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai 200040, China 2Department of Neuropathology, Huashan Hospital, Fudan University, Shanghai, 200040, China 3Department of Neurosurgery, Xinhua Hospital, Shanghai Jiaotong University School of Medicine, Shanghai, 200092, China.

RESUMEN / SUMMARY: - BACKGROUND:: Papillary meningioma (PM) is an uncommon meningioma subtype and the clinical characteristics remain unclear. OBJECTIVE:: To determine the clinical characteristics and prognosis of PM. METHODS:: The clinical data of thirty PM patients were collected, the samples were re-examined, and their prognoses were based on clinical observations and were calculated according to the Kaplan-Meier method. RESULTS:: The 30 patients included 16 males and 14 females (median: 34.0 years upon initial diagnosis). Of the 48 intracranial operations in the 30 patients, total removal (TR) was attained in 34 surgeries, and subtotal removal (STR) in 14 surgeries. Radiotherapy was provided in 20 patients. In 40 specimens with follow-up, 29 attained the positive aggressive factors. Six tumours showed positive PR combined with negative Bcl-2. The median follow-up period was 39.0 months. Tumour recurrence occurred in 18 patients (median: 17.0 months); the recurrence rates following TR and STR were 57.1% and 100%, respectively. Fourteen patients died from the recurrence. In the univariate analyses, positive aggressive factors (p=0.021), positive PR combined with negative Bcl-2 immunoreactivity (p=0.011), the extent of

resection (p=0.001), and radiotherapy (p=0.002) were significantly related to progress-free survival (PFS). The MIB-1 LI was not significantly related to PFS (p=0.88).
CONCLUSION:: PM is a rare subtype of meningioma with a tendency of recurrence. The extent of resection is an important prognosis factor. The presence of positive histopathological index increases the recurrence risk. Positive PR combined with negative Bcl-2 immunoreaction might predict a good prognosis. Postoperative radiotherapy may play a vital role in prolonging time to tumour recurrence.

[105]

TÍTULO / TITLE: - Inflammatory pseudotumor of the lateral ventricle in a pediatric patient.

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

REVISTA / JOURNAL: - *Pediatr Neurosurg.* 2012;48(6):374-8. doi: 10.1159/000353609. Epub 2013 Aug 16.

●● Enlace al texto completo (gratis o de pago) [1159/000353609](#)

AUTORES / AUTHORS: - Choi BD; Hodges TR; Grant GA; Fuchs HE; Cummings TJ; Muh CR
INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Department of Surgery, Duke University Medical Center, Durham, N.C., USA.

RESUMEN / SUMMARY: - Inflammatory pseudotumor (IP) is a benign process that most commonly occurs in the lung and orbit. Extension into the central nervous system is extremely rare, and primary intraventricular lesions of the lateral ventricles are even more infrequent with only 2 cases reported in pediatric patients to date. Here, the authors present an unusual case of IP occurring in a 16-year-old female presenting with a 2-week history of progressive headaches and vomiting, without focal neurological deficits or radiographic evidence of hydrocephalus. The patient underwent left parietal craniotomy and complete resection of the tumor, with no signs of recurrence at 3-month follow-up. Although the rarity of intraventricular IP in pediatric patients can make its initial identification difficult, IP should be considered as a potential diagnosis in this population wherein good outcomes may be achieved following surgical resection.

[106]

TÍTULO / TITLE: - Benefits of contrast-enhanced SWI in patients with glioblastoma multiforme.

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

REVISTA / JOURNAL: - *Eur Radiol.* 2013 Oct;23(10):2868-79. doi: 10.1007/s00330-013-2895-x. Epub 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1007/s00330-013-2895-x](#)

AUTORES / AUTHORS: - Fahrendorf D; Schwindt W; Wolfer J; Jeibmann A; Kooijman H; Kugel H; Grauer O; Heindel W; Hesselmann V; Bink A

INSTITUCIÓN / INSTITUTION: - Department of Clinical Radiology, University Hospital Munster, Albert-Schweitzer-Campus 1, Building A1, 48149, Munster, Germany, deliamarie.fahrendorf@ukmuenster.de.

RESUMEN / SUMMARY: - INTRODUCTION: SWI can help to identify high-grade gliomas (HGG). The objective of this study was to analyse SWI and CE-SWI characteristics, i.e. the relationship between contrast-induced phase shifts (CIPS) and intratumoral susceptibility signals (ITSS) and their association with tumour volume in patients with glioblastoma multiforme (GBM). MATERIALS AND METHODS: MRI studies of 29 patients were performed to evaluate distinct susceptibility signals comparing SWI and CE-SWI characteristics. The relationship between these susceptibility signals and CE-T1w tumour volume was analysed by using Spearman's rank correlation coefficient and Kruskal-Wallis-test. Tumour biopsies of different susceptibility signals were performed in one patient. RESULTS: Comparison of SWI and CE-SWI demonstrated different susceptibility signals. Susceptibility signals visible on SWI images are consistent with ITSS; those only seen on CE-SWI were identified as CIPS. Correlation with CE-T1w tumour volume revealed that CIPS were especially present in small or medium-sized GBM (Spearman's rho $r = 0.843$, $P < 0.001$). Histology identified the area with CIPS as the tumour invasion zone, while the area with ITSS represented micro-haemorrhage, highly pathological vessels and necrosis. CONCLUSION: CE-SWI adds information to the evaluation of GBM before therapy. It might have the potential to non-invasively identify the tumour invasion zone as demonstrated by biopsies in one case. KEY POINTS: * MRI is used to help differentiate between low- and high-grade gliomas. * Contrast-enhanced susceptibility-weighted MRI (CE-SWI) helps to identify patients with glioblastoma multiforme. * CE-SWI delineates the susceptibility signal (CIPS and ITSS) more than the native SWI. * CE-SWI might have the potential to non-invasively identify the tumour invasion zone.

[107]

TÍTULO / TITLE: - Radiation-induced opticochiasmatic glioblastoma multiforme following conventional radiotherapy for Cushing's disease.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.841850](https://doi.org/10.1093/oxfordjournals.bjns.a018500)

AUTORES / AUTHORS: - Sarkar S; Rajaratnam S; Backianathan S; Chacko G; Chacko AG

INSTITUCIÓN / INSTITUTION: - Department of Neurological Sciences, Christian Medical College, Vellore, TN, India.

RESUMEN / SUMMARY: - We report the rare occurrence of an opticochiasmatic glioblastoma multiforme 6 years following conventional radiotherapy for Cushing's

disease. This article highlights the risks of collateral damage to the optic apparatus when irradiating the sellar region.

[108]

TÍTULO / TITLE: - Role of collagen matrix in tumor angiogenesis and glioblastoma multiforme progression.

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

REVISTA / JOURNAL: - Am J Pathol. 2013 Oct;183(4):1293-305. doi: 10.1016/j.ajpath.2013.06.026. Epub 2013 Aug 5.

●● Enlace al texto completo (gratis o de pago) [1016/j.ajpath.2013.06.026](https://doi.org/10.1016/j.ajpath.2013.06.026)

AUTORES / AUTHORS: - Mammoto T; Jiang A; Jiang E; Panigrahy D; Kieran MW; Mammoto A

INSTITUCIÓN / INSTITUTION: - Vascular Biology Program, Department of Surgery, Boston Children's Hospital and Harvard Medical School, Boston, Massachusetts.

RESUMEN / SUMMARY: - Glioblastoma is a highly vascularized brain tumor, and antiangiogenic therapy improves its progression-free survival. However, current antiangiogenic therapy induces serious adverse effects including neuronal cytotoxicity and tumor invasiveness and resistance to therapy. Although it has been suggested that the physical microenvironment has a key role in tumor angiogenesis and progression, the mechanism by which physical properties of extracellular matrix control tumor angiogenesis and glioblastoma progression is not completely understood. Herein we show that physical compaction (the process in which cells gather and pack together and cause associated changes in cell shape and size) of human glioblastoma cell lines U87MG, U251, and LN229 induces expression of collagen types IV and VI and the collagen crosslinking enzyme lysyl oxidase and up-regulates in vitro expression of the angiogenic factor vascular endothelial growth factor. The lysyl oxidase inhibitor beta-aminopropionitrile disrupts collagen structure in the tumor and inhibits tumor angiogenesis and glioblastoma multiforme growth in a mouse orthotopic brain tumor model. Similarly, d-penicillamine, which inhibits lysyl oxidase enzymatic activity by depleting intracerebral copper, also exhibits antiangiogenic effects on brain tumor growth in mice. These findings suggest that tumor microenvironment controlled by collagen structure is important in tumor angiogenesis and brain tumor progression.

[109]

TÍTULO / TITLE: - Expansion of CD133-positive glioma cells in recurrent de novo glioblastomas after radiotherapy and chemotherapy.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug 30.

●● Enlace al texto completo (gratis o de pago) [3171/2013.7.JNS122417](https://doi.org/10.3171/2013.7.JNS122417)

AUTORES / AUTHORS: - Tamura K; Aoyagi M; Ando N; Ogishima T; Wakimoto H; Yamamoto M; Ohno K

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery and.

RESUMEN / SUMMARY: - Object Recent evidence suggests that a glioma stem cell subpopulation may determine the biological behavior of tumors, including resistance to therapy. To investigate this hypothesis, the authors examined varying grades of gliomas for stem cell marker expressions and histopathological changes between primary and recurrent tumors. Methods Tumor samples were collected during surgery from 70 patients with varying grades of gliomas (Grade II in 12 patients, Grade III in 16, and Grade IV in 42) prior to any adjuvant treatment. The samples were subjected to immunohistochemistry for MIB-1, factor VIII, GFAP, and stem cell markers (CD133 and nestin). Histopathological changes were compared between primary and recurrent tumors in 31 patients after radiation treatment and chemotherapy, including high-dose irradiation with additional stereotactic radiosurgery. Results CD133 expression on glioma cells was confined to de novo glioblastomas but was not observed in lower-grade gliomas. In de novo glioblastomas, the mean percentage of CD133-positive glioma cells in sections obtained at recurrence was 12.2% +/- 10.3%, which was significantly higher than that obtained at the primary surgery (1.08% +/- 1.78%). CD133 and Ki 67 dual-positive glioma cells were significantly increased in recurrent de novo glioblastomas as compared with those in primary tumors (14.5% +/- 6.67% vs 2.16% +/- 2.60%, respectively). In contrast, secondary glioblastomas rarely expressed CD133 antigen even after malignant progression following radiotherapy and chemotherapy. Conclusions The authors' results indicate that CD133-positive glioma stem cells could survive, change to a proliferative cancer stem cell phenotype, and cause recurrence in cases with de novo glioblastomas after radiotherapy and chemotherapy.

[110]

TÍTULO / TITLE: - Human brain glioblastoma cells do not induce but do respond to the bleomycin-induced bystander response from lung adenocarcinoma cells.

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

REVISTA / JOURNAL: - Mutat Res. 2013 Jul 29. pii: S1383-5718(13)00205-2. doi: 10.1016/j.mrgentox.2013.07.005.

●● Enlace al texto completo (gratis o de pago) 1016/j.mrgentox.2013.07.005

AUTORES / AUTHORS: - Basheerudeen SA; Mani C; Kulkarni MA; Pillai K; Rajan A; Venkatachalam P

INSTITUCIÓN / INSTITUTION: - Department of Human Genetics, College of Biomedical Science Technology and Research, Sri Ramachandra University, Porur, Chennai 600 116, India.

RESUMEN / SUMMARY: - To determine whether the bleomycin (BLM)-induced bystander response occurs in human brain glioblastoma (BMG-1) cells, the BMG-1 cells were

exposed to two different concentrations of BLM. The co-culture methodology was adopted to study the in vitro bystander effects. DNA damage was measured using the micronucleus (MN) and gamma-H2AX assays. Cytotoxicity was measured using the trypan blue assay. Cell cycle kinetics was analyzed using flow cytometry. The overall results did not show any significant increase in either genotoxicity or cytotoxicity or a delay in the cell cycle kinetics in BMG-1 bystander cells co-cultured with BLM-exposed cells, suggesting that BLM did not induce a bystander response in the BMG-1 cells. Furthermore, the MN results of the BLM-exposed BMG-1 cells co-cultured with unexposed bystander human lung adenocarcinoma (A549 and NCI-H460) cells and vice versa suggested that the BMG-1 cells do not secrete bystander signals but do respond to those signals. Analyzing the underlying mechanism and pathways involved in preventing the cells from secreting bystander signals will provide new insights that can be applied to inhibit these mechanisms in other cell types, thereby preventing and controlling the bystander response and genomic instability and increasing the therapeutic gain in chemotherapy.

[111]

TÍTULO / TITLE: - Primary central neurocytoma of the mesencephalic tectum in a pediatric patient.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Aug 20.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00381-013-2265-7](#)

AUTORES / AUTHORS: - Navas M; Sola RG; Torres CV; Shakur SF; Manzanares R; Gordillo C; Jimenez JA

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, La Princesa University Hospital, Diego de Leon, 62, 28006, Madrid, España, m_navas_garcia@hotmail.com.

RESUMEN / SUMMARY: - **PURPOSE:** Neurocytomas are tumors or neuronal differentiation, typically located within the supratentorial ventricular system. The extraventricular location is uncommon. A limited number of cases involving the brainstem have been reported and may be misdiagnosed as brainstem gliomas. Furthermore, midbrain neurocytomas are extremely rare, and no similar cases in pediatric patients have been reported in the literature to date. Brainstem location of neurocytomas often precludes gross total removal of the lesion, and in these cases, adjuvant therapies may be helpful. **METHODS:** We report a case of a 16-year-old child who presented with signs and symptoms of increased intracranial pressure. The magnetic resonance imaging study demonstrated the presence of a primary mesencephalic tectum lesion causing obstructive hydrocephalus. The patient underwent emergent ventriculoperitoneal shunt implantation, resolving the hydrocephalus and the clinical symptoms. The lesion was partially removed through a suboccipital craniotomy and supracerebellar infratentorial approach to the

mesencephalic tectum, without intraoperative complications. RESULTS: Histological examination of the lesion was consistent with the diagnosis of extraventricular neurocytoma. The patient was referred to the oncology department for additional treatment with Gamma Knife radiosurgery. CONCLUSIONS: Although brainstem neurocytoma is rare, this case demonstrates that it should be included in the differential diagnosis of brainstem gliomas. Because of brainstem tumor location, complete surgical removal may be challenging or not possible, with a high risk of postoperative neurological deficits. Adjuvant therapies may prevent local tumor growth in cases of tumor remnants or recurrences following microsurgery in selected cases.

[112]

TÍTULO / TITLE: - Joint effects between five identified risk variants, allergy, and autoimmune conditions on glioma risk.

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

REVISTA / JOURNAL: - Cancer Causes Control. 2013 Oct;24(10):1885-91. doi: 10.1007/s10552-013-0244-7. Epub 2013 Aug 1.

●● Enlace al texto completo (gratuito o de pago) [1007/s10552-013-0244-7](#)

AUTORES / AUTHORS: - Safaeian M; Rajaraman P; Hartge P; Yeager M; Linet M; Butler MA; Ruder AM; Purdue MP; Hsing A; Beane-Freeman L; Hoppin JA; Albanes D; Weinstein SJ; Inskip PD; Brenner A; Rothman N; Chatterjee N; Gillanders EM; Chanock SJ; Wang SS

INSTITUCIÓN / INSTITUTION: - Division of Cancer Epidemiology and Genetics, National Cancer Institute, Bethesda, MD, USA, safaeianm@mail.nih.gov.

RESUMEN / SUMMARY: - Common variants in two of the five genetic regions recently identified from genome-wide association studies (GWAS) of risk of glioma were reported to interact with a history of allergic symptoms. In a pooled analysis of five epidemiologic studies, we evaluated the association between the five GWAS implicated gene variants and allergies and autoimmune conditions (AIC) on glioma risk (851 adult glioma cases and 3,977 controls). We further evaluated the joint effects between allergies and AIC and these gene variants on glioma risk. Risk estimates were calculated as odds ratios (OR) and 95 % confidence intervals (95 % CI), adjusted for age, gender, and study. Joint effects were evaluated by conducting stratified analyses whereby the risk associations (OR and 95 % CI) with the allergy or autoimmune conditions for glioma were evaluated by the presence or absence of the 'at-risk' variant, and estimated p interaction by fitting models with the main effects of allergy or autoimmune conditions and genotype and an interaction (product) term between them. Four of the five SNPs previously reported by others were statistically significantly associated with increased risk of glioma in our study (rs2736100, rs4295627, rs4977756, and rs6010620); rs498872 was not associated with glioma in

our study. Reporting any allergies or AIC was associated with reduced risks of glioma (allergy: adjusted OR = 0.71, 95 % CI 0.55-0.91; AIC: adjusted OR = 0.65, 95 % CI 0.47-0.90). We did not observe differential association between allergic or autoimmune conditions and glioma by genotype, and there were no statistically significant p interactions. Stratified analysis by glioma grade (low and high grade) did not suggest risk differences by disease grade. Our results do not provide evidence that allergies or AIC modulate the association between the four GWAS-identified SNPs examined and risk of glioma.

[113]

TÍTULO / TITLE: - DNA demethylating agents synergize with oncolytic HSV1 against malignant gliomas.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Sep 20.

●● [Enlace al texto completo \(gratis o de pago\) 1158/1078-0432.CCR-12-3588](#)

AUTORES / AUTHORS: - Okemoto K; Kasai K; Wagner B; Haseley A; Meisen H; Bolyard C; Mo X; Wehr A; Lehman A; Fernandez S; Kaur B; Chiocca EA

INSTITUCIÓN / INSTITUTION: - Cellular and Biochemistry, National Institute of Infectious Disease.

RESUMEN / SUMMARY: - **PURPOSE:** Oncolytic viruses (OV) based on herpes simplex virus type 1 (HSV1) are being utilized in clinical trials for a variety of cancers. The OV, rQNestin34.5, utilizes a nestin promoter/enhancer to selectively drive robust viral replication in malignant glioma cells. We have discovered that this promoter becomes extensively methylated in infected glioma cells, reducing OV efficacy. **EXPERIMENTAL DESIGN:** We utilized demethylating drugs (5-azacytidine), Decitabine or Valproic Acid (VPA) in both in vitro and in vivo malignant glioma models to determine if they improved the efficacy of rQNestin34.5 therapy. **RESULTS:** Utilization of demethylating agents, such as 5-azacytidine (5-Aza), improved OV replication and tumor cell lysis in vitro and, in fact, synergized pharmacologically by Chou-Talalay analysis. In vivo the combination of the demethylating agents, 5-Aza or Decitabine, with rQNestin34.5 significantly prolonged the survivorship of athymic mice harboring intracranial human glioma xenografts over single agent alone. **CONCLUSIONS:** These results thus provide further justification for the exploration of demethylating agents when combined with the OV, rQNestin34.5, in preclinical therapeutics and possibly clinical trials for malignant glioma.

[114]

TÍTULO / TITLE: - Auditory Brainstem Implantation Improves Speech Recognition in Neurofibromatosis Type II Patients.

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

REVISTA / JOURNAL: - ORL J Otorhinolaryngol Relat Spec. 2013 Sep 10;75(5):282-295.

●● Enlace al texto completo (gratis o de pago) [1159/000350568](#)

AUTORES / AUTHORS: - Matthies C; Brill S; Kaga K; Morita A; Kumakawa K; Skarzynski H; Claassen A; Hui Y; Chiong C; Muller J; Behr R

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Wurzburg, Wurzburg, Germany.

RESUMEN / SUMMARY: - This prospective study aimed to determine speech understanding in neurofibromatosis type II (NF2) patients following implantation of a MED-EL COMBI 40+ auditory brainstem implant (ABI). Patients (n = 32) were enrolled postsurgically. Nonauditory side effects were evaluated at fitting and audiological performance was determined using the Sound Effects Recognition Test (SERT), Monosyllable-Trochee-Polysyllable (MTP) test and open-set sentence tests. Subjective benefits were determined by questionnaire. ABI activation was documented in 27 patients, 2 patients were too ill for testing and 3 patients were without any auditory perception. SERT and MTP outcomes under auditory-only conditions improved significantly between first fitting and 12-month follow-up. Open-set sentence recognition improved from 5% at first fitting to 37% after 12 months. The number of active electrodes had no significant effect on performance. All questionnaire respondents were 'satisfied' to 'very satisfied' with their ABI. An ABI is an effective treatment option in NF2 patients with the potential to provide open-set speech recognition and subjective benefits. To our knowledge, the data presented herein is exceptional in terms of the open-set speech perception achieved in NF2 patients. © 2013 S. Karger AG, Basel.

[115]

TÍTULO / TITLE: - Evaluation of patients with intracranial tumors and central diabetes insipidus.

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

REVISTA / JOURNAL: - PEDIATR HEMATOL ONCOL. 2013 OCT;30(7):668-73. doi: 10.3109/08880018.2013.816984. Epub 2013 Aug 29.

●● Enlace al texto completo (gratis o de pago) [3109/08880018.2013.816984](#)

AUTORES / AUTHORS: - Varan A; Atas E; Aydin B; Yalcin B; Akyuz C; Kutluk T; Buyukpamukcu M

INSTITUCIÓN / INSTITUTION: - 1Department of Pediatric Oncology, Hacettepe University Institute of Oncology, Ankara, Turkey.

RESUMEN / SUMMARY: - The aim of the study is to evaluate the etiologic and clinical characteristics, treatment regimens, and outcome of the patients with intracranial tumors presenting with central diabetes insipidus (DI). Sixty-nine patients with intracranial tumors presenting with central DI between 1972 and 2012 were

retrospectively evaluated. Fifty-three out of 69 patients were included in the analysis. Male/female ratio was 1.52, median age was 7.6 years. Of 53 patients, 37 patients (69.8%) were diagnosed with Langerhans cell histiocytosis, 14 patients (26.4%) with germinoma, 1 (1.9%) with astrocytoma, and 1 (1.9%) with optic glioma. 10-year overall survival (OS) rate and disease-free survival rate for all patients were 91.7% and 52%. 10-year OS rate according to diagnostic criteria was 91% for Langerhans cell histiocytosis (LCH) cases, 79% for intracranial germinoma, which was statistically significant ($P = .0001$). Central DI may be very important clinical presentation of serious underlying disease in children. Intracranial tumors are the most frequent cause of DI. Most frequent diagnosis were LCH and germ cell tumors in our series.

[116]

TÍTULO / TITLE: - Long-Term Survival in Primary Glioblastoma With Versus Without Isocitrate Dehydrogenase Mutations.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Sep 15;19(18):5146-5157. Epub 2013 Aug 5.

●● [Enlace al texto completo \(gratis o de pago\) 1158/1078-0432.CCR-13-0017](#)

AUTORES / AUTHORS: - Hartmann C; Hentschel B; Simon M; Westphal M; Schackert G; Tonn JC; Loeffler M; Reifenberger G; Pietsch T; von Deimling A; Weller M

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Department of Neuropathology, Institute of Pathology, Hannover Medical School, Hannover; Department of Neuropathology, and German Cancer Research Center (DKFZ), Clinical Cooperation Unit Neuropathology, University Hospital of Heidelberg, Institute for Pathology, Heidelberg; Institute for Medical Informatics, Statistics and Epidemiology, University Leipzig; Departments of Neurosurgery and Neuropathology, University of Bonn, Bonn; Department of Neurosurgery, University of Hamburg, Hamburg; Department of Neurosurgery, University of Dresden, Dresden; Department of Neurosurgery, University of Munich, Munich; Department of Neuropathology, Heinrich Heine University, Dusseldorf, Germany; and Department of Neurology, University Hospital Zurich, and Neuroscience Center Zurich, University of Zurich, Zurich, Switzerland.

RESUMEN / SUMMARY: - PURPOSE: The determinants of long-term survival in glioblastoma have remained largely obscure. Isocitrate dehydrogenase (IDH) 1 or 2 mutations are common in World Health Organization (WHO) grades II and III gliomas, but rare in primary glioblastomas, and associated with longer survival. EXPERIMENTAL DESIGN: We compared clinical and molecular characteristics of 69 patients with centrally confirmed glioblastoma and survival >36 months (LTS-36), including 33 patients surviving >60 months (LTS-60), with 257 patients surviving <36 months. MGMT promoter methylation, 1p/19q codeletions, EGFR amplification, TP53 mutations, and IDH1/2 mutations were determined by standard techniques. RESULTS: The rate of IDH1/2 mutations in LTS-36 patients was 34% (23 of 67 patients) as

opposed to 4.3% in controls (11 of 257 patients). Long-term survivors with IDH1/2-mutant glioblastomas were younger, had almost no EGFR amplifications, but exhibited more often 1p/19q codeletions and TP53 mutations than LTS patients with IDH1/2 wild-type glioblastomas. Long-term survivors with IDH1/2 wild-type showed no distinguishing features from other patients with IDH1/2 wild-type glioblastomas except for a higher rate of MGMT promoter methylation. Similarly, among 11 patients with IDH1/2-mutant glioblastomas without long-term survival, the only difference to IDH1/2-mutant long-term survivors was less-frequent MGMT promoter methylation. Compared with LTS-36 patients, LTS-60 patients had less frequently TP53 mutations and radiotherapy alone as initial treatment. CONCLUSIONS: IDH1/2 mutations define a subgroup of tumors of LTS patients that exhibit molecular characteristics of WHO grade II/III gliomas and secondary glioblastomas. Determinants of LTS with IDH1/2 wild-type glioblastomas, which exhibit typical molecular features of primary glioblastomas, beyond MGMT promoter methylation, remain to be identified. Clin Cancer Res; 19(18); 5146-57. ©2013 AACR.

[117]

TÍTULO / TITLE: - Preclinical efficacy of the anti-hepatocyte growth factor antibody ficlatuzumab in a mouse brain orthotopic glioma model evaluated by bioluminescence, PET, and MRI.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Aug 27.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-1015](#)

AUTORES / AUTHORS: - Mitra ES; Fan-Minogue H; Lin F; Karamchandani J; Sriram V; Han M; Gambhir SS

INSTITUCIÓN / INSTITUTION: - Radiology / Nuclear Medicine, Stanford Hospital and Clinics.

RESUMEN / SUMMARY: - PURPOSE: Ficluzumab is a therapeutic agent targeting the hepatocyte growth factor (HGF)/c-MET pathway. We summarize preclinical work using this agent in a mouse brain orthotopic model of glioblastoma. EXPERIMENTAL DESIGN: Sequential experiments were done using 8- to 9-week old nude mice injected with 3×10^5 U87 MG (glioblastoma) cells into the brain. Evaluation of ficluzumab dose response for this brain tumor model and comparison of its response to ficluzumab and to temozolamide were performed. Subsequently, various small animal imaging modalities, including bioluminescence imaging (BLI), positron emission tomography (PET), and magnetic resonance imaging (MRI), were used with a U87 MG-Luc 2 stable cell line to evaluate the ability to non-invasively assess tumor growth and response to therapy. ANOVA was performed to evaluate for significant differences in the response. RESULTS: There was a survival benefit with ficluzumab alone or in combination with temozolamide. BLI was more sensitive than PET in detecting tumor cells. Fluoro-L-thymidine (FLT) PET provided a better signal-to-background ratio than

fluorodeoxyglucose (FDG) PET. Additionally, both BLI and FLT PET showed significant changes over time in the control group as well as with response to therapy. MRI does not disclose any time-dependent change. Also, the MRI results showed a temporal delay in comparison to the BLI and FLT PET findings, showing similar results one drug cycle later. CONCLUSIONS: Targeting the (HGF)/c-MET pathway with the ficlatuzumab appears promising for the treatment of glioblastoma. Various clinically applicable imaging modalities including FLT, PET, and MRI provide reliable ways of assessing tumor growth and response to therapy.

[118]

TÍTULO / TITLE: - Genetic and epigenetic mutations of tumor suppressive genes in sporadic pituitary adenoma.

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

REVISTA / JOURNAL: - Mol Cell Endocrinol. 2013 Sep 11. pii: S0303-7207(13)00368-7. doi: 10.1016/j.mce.2013.09.006.

●● Enlace al texto completo (gratis o de pago) 1016/j.mce.2013.09.006

AUTORES / AUTHORS: - Zhou Y; Zhang X; Klibanski A

INSTITUCIÓN / INSTITUTION: - Neuroendocrine Unit, Massachusetts General Hospital and Harvard Medical School, Boston, MA 02114, United States.

RESUMEN / SUMMARY: - Human pituitary adenomas are the most common intracranial neoplasms. Approximately 5% of them are familial adenomas. Patients with familial tumors carry germline mutations in predisposition genes, including AIP, MEN1 and PRKAR1A. These mutations are extremely rare in sporadic pituitary adenomas, which therefore are caused by different mechanisms. Multiple tumor suppressive genes linked to sporadic tumors have been identified. Their inactivation is caused by epigenetic mechanisms, mainly promoter hypermethylation, and can be placed into two groups based on their functional interaction with tumor suppressors RB or p53. The RB group includes CDKN2A, CDKN2B, CDKN2C, RB1, BMP4, CDH1, CDH13, GADD45B and GADD45G; AIP and MEN1 genes also belong to this group. The p53 group includes MEG3, MGMT, PLAGL1, RASSF1, RASSF3 and SOCS1. We propose that the tumor suppression function of these genes is mainly mediated by the RB and p53 pathways. We also discuss possible tumor suppression mechanisms for individual genes.

[119]

TÍTULO / TITLE: - Toenail iron, genetic determinants of iron status, and the risk of glioma.

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

REVISTA / JOURNAL: - Cancer Causes Control. 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) 1007/s10552-013-0281-2

AUTORES / AUTHORS: - Anic GM; Madden MH; Thompson RC; Nabors LB; Olson JJ; Larocca RV; Browning JE; Brockman JD; Forsyth PA; Egan KM

INSTITUCIÓN / INSTITUTION: - Department of Cancer Epidemiology, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL, 33612, USA, gabriella.anic@nih.gov.

RESUMEN / SUMMARY: - PURPOSE: Iron is essential for oxygen transport and oxidative metabolism; however, elevated iron stores can trigger overproduction of reactive oxygen species and induce DNA damage. Little is known about the association between body iron stores and glioma risk. This study examined the associations of iron levels measured in toenails and genetic variants linked to body iron stores with risk of glioma in a clinic-based case-control study. METHODS: Samples were collected a median of 24 days following glioma diagnosis in the cases (10th-90th percentile, range: 10-44 days). Nail iron levels were measured in 300 cases and 300 controls using neutron activation analysis. A total of 24 genetic variants associated with iron status were genotyped in 622 cases and 628 controls. Logistic regression was used to estimate odds ratios (OR) and 95 % confidence intervals (CI) for glioma risk according to toenail iron and the examined genotypes. RESULTS: No association was observed between toenail iron and glioma risk when restricting to cases with nails collected within ~3 weeks of diagnosis (OR = 0.93; 95 % CI 0.46, 1.87 comparing those with high (≥ 14 mug/g) vs. low (< 6 mug/g) iron levels). In contrast, an inverse association with increasing iron was observed after restricting to cases with a delay of 3 weeks or greater (OR = 0.42; 95 % CI 0.19, 0.95), reflecting potentially insidious effects of advancing disease on iron levels among the cases. No associations were observed for any of the examined genetic variants. CONCLUSION: The results do not support a role for body iron stores as a determinant of glioma risk.

[120]

TÍTULO / TITLE: - An integrative characterization of recurrent molecular aberrations in glioblastoma genomes.

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

REVISTA / JOURNAL: - Nucleic Acids Res. 2013 Jul 31.

- [Enlace al texto completo \(gratis o de pago\) 1093/nar/gkt656](#)

AUTORES / AUTHORS: - Sintupisut N; Liu PL; Yeang CH

INSTITUCIÓN / INSTITUTION: - Institute of Statistical Science, Academia Sinica, Taipei, Taiwan, ROC and Institute of Information Science, Academia Sinica, Taipei, Taiwan, ROC.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common and malignant primary brain tumor in adults. Decades of investigations and the recent effort of the Cancer Genome Atlas (TCGA) project have mapped many molecular alterations in GBM cells. Alterations on DNAs may dysregulate gene expressions and drive malignancy of tumors. It is thus important to uncover causal and statistical

dependency between 'effector' molecular aberrations and 'target' gene expressions in GBMs. A rich collection of prior studies attempted to combine copy number variation (CNV) and mRNA expression data. However, systematic methods to integrate multiple types of cancer genomic data-gene mutations, single nucleotide polymorphisms, CNVs, DNA methylations, mRNA and microRNA expressions and clinical information-are relatively scarce. We proposed an algorithm to build 'association modules' linking effector molecular aberrations and target gene expressions and applied the module-finding algorithm to the integrated TCGA GBM data sets. The inferred association modules were validated by six tests using external information and datasets of central nervous system tumors: (i) indication of prognostic effects among patients; (ii) coherence of target gene expressions; (iii) retention of effector-target associations in external data sets; (iv) recurrence of effector molecular aberrations in GBM; (v) functional enrichment of target genes; and (vi) co-citations between effectors and targets. Modules associated with well-known molecular aberrations of GBM-such as chromosome 7 amplifications, chromosome 10 deletions, EGFR and NF1 mutations-passed the majority of the validation tests. Furthermore, several modules associated with less well-reported molecular aberrations-such as chromosome 11 CNVs, CD40, PLXNB1 and GSTM1 methylations, and mir-21 expressions-were also validated by external information. In particular, modules constituting trans-acting effects with chromosome 11 CNVs and cis-acting effects with chromosome 10 CNVs manifested strong negative and positive associations with survival times in brain tumors. By aligning the information of association modules with the established GBM subclasses based on transcription or methylation levels, we found each subclass possessed multiple concurrent molecular aberrations. Furthermore, the joint molecular characteristics derived from 16 association modules had prognostic power not explained away by the strong biomarker of CpG island methylator phenotypes. Functional and survival analyses indicated that immune/inflammatory responses and epithelial-mesenchymal transitions were among the most important determining processes of prognosis. Finally, we demonstrated that certain molecular aberrations uniquely recurred in GBM but were relatively rare in non-GBM glioma cells. These results justify the utility of an integrative analysis on cancer genomes and provide testable characterizations of driver aberration events in GBM.

[121]

TÍTULO / TITLE: - cMYC expression in infiltrating gliomas: associations with IDH1 mutations, clinicopathologic features and outcome.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 11.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1221-4](#)

AUTORES / AUTHORS: - Oda Y; Orr BA; Robert Bell W; Eberhart CG; Rodriguez FJ

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

RESUMEN / SUMMARY: - Gliomas are among the most frequent adult primary brain tumors. Mutations in IDH1, a metabolic enzyme, strongly correlate with secondary glioblastomas and increased survival. cMYC is an oncogene also implicated in aberrant metabolism, but its prognostic impact remains unclear. Recent genotyping studies also showed SNP variants near the cMYC gene locus, associate with an increased risk for development of IDH1/2 mutant gliomas suggesting a possible interaction between cMYC and IDH1. We evaluated nuclear cMYC protein levels and IDH1 (R132H) by immunohistochemistry in patients with oligodendroglioma/oligoastrocytomas (n = 20), astrocytomas (grade II) (n = 19), anaplastic astrocytomas (n = 21) or glioblastomas (n = 111). Of 158 tumors with sufficient tissue, 110 (70 %) showed nuclear cMYC immunopositivity-most frequent (95 %, χ^2 p = 0.0248) and intense (mean 1.33, ANOVA p = 0.0179) in anaplastic astrocytomas versus glioblastomas (63 %) or low grade gliomas (74 %). cMYC expression associated with younger age as well as p53 immunopositivity (OR = 3.6, p = 0.0332) and mutant IDH1 (R132H) (OR = 7.4, p = 0.06) among malignant gliomas in our cohort. Independent analysis of the publically available TCGA glioblastoma dataset confirmed our strong association between cMYC and mutant IDH1 expression. Both IDH1 (R132H) and cMYC protein expression were associated with improved overall survival by univariate analysis. However, cMYC co-expression associated with shortened time to malignant transformation and overall survival among IDH1 (R132H) mutants in both univariate and multivariate analyses. In summary, our findings suggest that cMYC may be associated with a unique clinicopathologic and biologic group of infiltrating gliomas and help mediate the malignant transformation of IDH1 mutant gliomas.

[122]

TÍTULO / TITLE: - Time-Dependent Structural Changes of the Dentatothalamic Pathway in Children Treated for Posterior Fossa Tumor.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Sep 19.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3735](#)

AUTORES / AUTHORS: - Perreault S; Lober RM; Cheshier S; Partap S; Edwards MS; Yeom KW

INSTITUCIÓN / INSTITUTION: - Departments of Neurology, Neurosurgery, and Radiology, Lucile Packard Children's Hospital at Stanford, Palo Alto, California.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Injury to the dentatothalamic pathway that originates in the cerebellum has been suggested as a mechanism for neurologic complications in children treated for posterior fossa tumors. We hypothesized that time-dependent changes occur in the dentatothalamic

pathway. MATERIALS AND METHODS: Diffusion tensor evaluation was performed in 14 children (median age, 4.1 years; age range, 1-20 years) who underwent serial MR imaging at 3T as part of routine follow-up after posterior fossa tumor resection with or without adjuvant therapy. Tensor metrics were obtained in the acute (≤ 1 week), subacute (1 to < 6 months), and chronic (≥ 6 months) periods after surgery. We evaluated the following dentatothalamic constituents: bilateral dentate nuclei, cerebellar white matter, and superior cerebellar peduncles. Serial dentate nuclei volumes were also obtained and compared with the patient's baseline. RESULTS: The most significant tensor changes to the superior cerebellar peduncles and cerebellar white matter occurred in the subacute period, regardless of the tumor pathology or therapy regimen, with signs of recovery in the chronic period. However, chronic volume loss and reduced mean diffusivity were observed in the dentate nuclei and did not reverse. This atrophy was associated with radiation therapy and symptoms of ataxia. CONCLUSIONS: Longitudinal diffusion MR imaging in children treated for posterior fossa tumors showed time-dependent tensor changes in components of the dentatothalamic pathway that suggest evolution of structural damage with inflammation and recovery of tissue directionality. However, the dentate nuclei did not show tensor or volumetric recovery, suggesting that the injury may be chronic.

[123]

TÍTULO / TITLE: - Glioblastoma arising in a patient with Mayer-Rokitansky-Kuster-Hauser syndrome.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Sep 6. pii: S0967-5868(13)00352-4. doi: 10.1016/j.jocn.2013.06.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.06.002](#)

AUTORES / AUTHORS: - Gonzalez EM; Prayson RA

INSTITUCIÓN / INSTITUTION: - Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, OH, USA.

RESUMEN / SUMMARY: - Mayer-Rokitansky-Kuster-Hauser syndrome is a rare developmental disorder marked by the congenital absence of the uterus and vagina. The syndrome has been associated with tumors of the female reproductive system, but rarely in other organ systems and to our knowledge, never in the brain. We report a glioblastoma in a 34-year-old patient with Mayer-Rokitansky-Kuster-Hauser syndrome.

[124]

TÍTULO / TITLE: - Prognostic or predictive value of MGMT promoter methylation in gliomas depends on IDH1 mutation.

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

REVISTA / JOURNAL: - Neurology. 2013 Sep 25.

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

[1212/WNL.0b013e3182a95680](https://doi.org/10.1212/WNL.0b013e3182a95680)

AUTORES / AUTHORS: - Wick W; Meisner C; Hentschel B; Platten M; Schilling A; Wiestler B; Sabel MC; Koepfen S; Ketter R; Weiler M; Tabatabai G; von Deimling A; Gramatzki D; Westphal M; Schackert G; Loeffler M; Simon M; Reifenberger G; Weller M

INSTITUCIÓN / INSTITUTION: - From the Departments of Neuro-oncology (W.W., M.P., A.S., B.W., M. Weiler) and Neuropathology (A.v.D.), University of Heidelberg; German Cancer Consortium (DKTK) (W.W., B.W., M. Weiler), Clinical Cooperation Unit Neuro-oncology and Clinical Cooperation Unit Neuropathology (A.v.D.), German Cancer Research Center, Heidelberg; Department of Medical Biometry (C.M.), University of Tübingen; Institute for Medical Informatics, Statistics and Epidemiology (B.H., M.L.), University Leipzig; Departments of Neurosurgery (M.C.S.) and Neuropathology (G.R.), Heinrich-Heine-University and DKTK (G.R.), Düsseldorf; Department of Neurology (S.K.), University of Essen Medical School; Department of Neurosurgery (R.K.), Saarland University, Homburg, Germany; Department of Neurology (G.T., D.G., M. Weller), University Hospital Zurich, Switzerland; Department of Neurosurgery (M. Westphal), University Clinic Hamburg Eppendorf, Hamburg; Department of Neurosurgery (G.S.) and DKTK (G.S.), Technical University Dresden; and Department of Neurosurgery (M.S.), University of Bonn, Germany.

RESUMEN / SUMMARY: - **OBJECTIVE:** To explore whether the isocitrate dehydrogenase 1 (IDH1) or 1p/19q status determines the prognostic vs predictive role of O6-methylguanine-DNA methyltransferase (MGMT) promoter methylation in the Neuro-Oncology Working Group of the German Cancer Society (NOA)-04 trial anaplastic glioma biomarker cohort. **METHODS:** Patients (n = 183) of the NOA-04 trial with known MGMT and IDH1 status were analyzed for interdependency of the prognostic vs predictive role of MGMT promoter methylation from IDH1 or 1p/19q status and treatment, using progression-free survival (PFS) as an endpoint. An independent validation cohort of the German Glioma Network (n = 75) and the NOA-08 trial (n = 34) served as a confirmation cohort. **RESULTS:** In tumors with IDH1 mutation, MGMT promoter methylation was associated with prolonged PFS with chemotherapy +/- radiotherapy (RT) or RT-only groups, and is thus prognostic. In tumors without IDH1 mutation, MGMT promoter methylation was associated with increased PFS in patients treated with chemotherapy, but not in those who received RT alone as the first-line treatment, and is thus chemotherapy-predictive. In contrast, 1p/19q deletions showed no such association with the prognostic vs predictive value of MGMT. **CONCLUSIONS:** MGMT promoter methylation is a predictive biomarker for benefit from alkylating agent chemotherapy in patients with IDH1-wild-type, but not IDH1-mutant, malignant gliomas of World Health Organization grades III/IV. Combined

IDH1/MGMT assessment may help to individualize clinical decision-making in neuro-oncology.

[125]

TÍTULO / TITLE: - Overcoming the Blood-Brain Barrier in Chemotherapy Treatment of Pediatric Brain Tumors.

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

REVISTA / JOURNAL: - Pharm Res. 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) [1007/s11095-013-1196-z](#)

AUTORES / AUTHORS: - Wu L; Li X; Janagam DR; Lowe TL

INSTITUCIÓN / INSTITUTION: - Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, Tennessee, 38163, USA.

RESUMEN / SUMMARY: - Pediatric brain tumors are most common cancers in childhood and among the leading causes of death in children. Chemotherapy has been used as adjuvant (i.e. after) or neoadjuvant (i.e. before) therapy to surgery and radiotherapy for the management of pediatric brain tumors for more than four decades and gained more attention in the recent two decades. Although chemotherapy has demonstrated its effectiveness in the management of some pediatric brain tumors, failure or inactiveness of chemotherapy is commonly met in the clinics and clinical trials. Some of these failures might be attributed to the blood-brain barrier (BBB), limiting the penetration of systemically administered chemotherapeutics into pediatric brain tumors. Therefore, various strategies have been developed and used to address this issue. Herein, we review different methods reported in the literature to circumvent the BBB for enhancing the present of chemotherapeutics in the brain to treat pediatric brain tumors.

[126]

TÍTULO / TITLE: - Increased expression of glutamate transporter GLT-1 in peritumoral tissue associated with prolonged survival and decreases in tumor growth in a rat model of experimental malignant glioma.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Oct;119(4):878-886. Epub 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [3171/2013.6.JNS122319](#)

AUTORES / AUTHORS: - Sattler R; Tyler B; Hoover B; Coddington LT; Recinos V; Hwang L; Brem H; Rothstein JD

INSTITUCIÓN / INSTITUTION: - Department of Neurology.

RESUMEN / SUMMARY: - Object Gliomas are known to release excessive amounts of glutamate, inducing glutamate excitotoxic cell death in the peritumoral region and allowing the tumor to grow and to expand. Glutamate transporter upregulation has

been shown to be neuroprotective by removing extracellular glutamate in a number of preclinical animal models of neurodegenerative diseases, including amyotrophic lateral sclerosis and Parkinson disease as well as psychiatric disorders such as depression. The authors therefore hypothesized that the protective mechanism of glutamate transporter upregulation would be useful for the treatment of gliomas as well.

Methods In this study 9L gliosarcoma cells were treated with a glutamate transporter upregulating agent, thiamphenicol, an antibiotic approved in Europe, which has been shown previously to increase glutamate transporter expression and has recently been validated in a human Phase I biomarker trial for glutamate transporter upregulation. Cells were monitored in vitro for glutamate transporter levels and cell proliferation. In vivo, rats were injected intracranially with 9L cells and were treated with increasing doses of thiamphenicol. Animals were monitored for survival. In addition, postmortem brain tissue was analyzed for tumor size, glutamate transporter levels, and neuron count. Results Thiamphenicol showed little effects on proliferation of 9L gliosarcoma cells in vitro and did not change glutamate transporter levels in these cells. However, when delivered locally in an experimental glioma model in rats, thiamphenicol dose dependently (10-5000 µM) significantly increased survival up to 7 days and concomitantly decreased tumor size from 46.2 mm² to 10.2 mm² when compared with lesions in nontreated controls. Furthermore, immunohistochemical and biochemical analysis of peritumoral tissue confirmed an 84% increase in levels of glutamate transporter protein and a 72% increase in the number of neuronal cells in the tissue adjacent to the tumor. Conclusions These results show that increasing glutamate transporter expression in peritumoral tissue is neuroprotective. It suggests that glutamate transporter upregulation for the treatment of gliomas should be further investigated and potentially be part of a combination therapy with standard chemotherapeutic agents.

[127]

TÍTULO / TITLE: - Targeted STAT3 disruption in myeloid cells alters immunosuppressor cell abundance in a murine model of spontaneous medulloblastoma.

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

REVISTA / JOURNAL: - J Leukoc Biol. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) [1189/jlb.1012531](https://doi.org/10.1189/jlb.1012531)

AUTORES / AUTHORS: - Abad C; Nobuta H; Li J; Kasai A; Yong WH; Waschek JA

INSTITUCIÓN / INSTITUTION: - *Semel Institute/Department of Psychiatry and Department of Pathology and Laboratory of Medicine, David Geffen School of Medicine, University of California at Los Angeles, California, USA.

RESUMEN / SUMMARY: - Although the immune system may provide early protection against cancer, tumors may exploit the healing arm of the immune system to enhance their growth and metastasis. For example, myeloid derived suppressor cells (MDSCs)

are thought to promote tumor growth by several mechanisms, including the suppression of T cell activity. It has been suggested that STAT3 activation in myeloid cells modulates multiple aspects of MDSC physiology, including their expansion and activity. Whereas most animal studies investigating tumor immunology have used tumor implants, we used transgenic mice (Smo*) that spontaneously develop medulloblastoma brain tumors to investigate the temporal accumulation of MDSCs within tumors and how myeloid STAT3 disruption affects MDSC and other immune cell types. We found distinct populations of MDSC in medulloblastoma tumors, with a high prevalence of CD11b+Ly6G+Ly6Clow/- cells, described previously by others as G-MDSCs. These were found early in tumor development, in premalignant lesions located on the surface of the cerebellum of 28-day-old mice. In fully developed tumors, pSTAT3 was found in the majority of these cells. Conditional STAT3 gene disruption in myeloid cells resulted in an enhanced proinflammatory phenotype of macrophages in Smo* mice. Moreover, a significant reduction in the abundance of G-MDSCs and Tregs was observed within tumors along with an increased presence of CD4+ and CD8+ cells. Despite these alterations in immune cells induced by myeloid STAT3 disruption, we found no effect on tumor incidence in Smo* mice with this deletion mice was observed.

[128]

TÍTULO / TITLE: - Human cytomegalovirus immediate early proteins promote degradation of connexin 43 and disrupt gap junction communication: implications for a role in gliomagenesis.

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

REVISTA / JOURNAL: - Carcinogenesis. 2013 Oct 1.

●● [Enlace al texto completo \(gratis o de pago\) 1093/carcin/bgt292](#)

AUTORES / AUTHORS: - Khan Z; Yaiw KC; Wilhelmi V; Lam H; Rahbar A; Stragliotto G; Soderberg-Naucler C

INSTITUCIÓN / INSTITUTION: - Department of Medicine, Solna, Unit for Experimental Cardiovascular Research, Center for Molecular Medicine, Karolinska Institutet, Stockholm SE-171 76, Sweden and.

RESUMEN / SUMMARY: - A lack of gap junctional intercellular communication (GJIC) is common in cancer. Many oncogenic viruses have been shown to downregulate the junctional protein connexin 43 (Cx43) and reduce GJIC. Human cytomegalovirus (HCMV) is a ubiquitous, species-specific betaherpesvirus that establishes life-long latency after primary infection. It encodes two viral gene products, immediate early (IE) proteins IE1 and IE2, which are crucial in viral replication and pathogenesis of many diseases. Emerging evidence demonstrates that HCMV DNA and proteins are highly prevalent in glioblastoma multiforme (GBM) and in other tumors, but HCMV's role in tumorigenesis remains obscure. In the present study, we examined the effects

of HCMV infection on Cx43 expression and GJIC as well as the viral mechanism mediating the effects in human GBM cells and tissue samples. We found that HCMV downregulated Cx43 protein, resulting in disruption of functional GJIC as assayed by fluorescent dye transfer assay. We show that both HCMV-IE72 and IE86 mediate downregulation of Cx43 by silencing RNA targeting either IE72 or IE86 coupled with ganciclovir. This finding was further validated by transfection with expression vectors encoding IE72 or IE86, and we show that viral-mediated Cx43 depletion involved proteasomal degradation. Importantly, we also observed that the Cx43 protein levels and IE staining correlated inversely in 10 human GBM tissue specimens. Thus, HCMV regulates Cx43 expression and GJIC, which may contribute to gliomagenesis.

[129]

TÍTULO / TITLE: - Genome-wide DNA copy number analysis of desmoplastic infantile astrocytomas and desmoplastic infantile gangliogliomas.

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

REVISTA / JOURNAL: - J Neuropathol Exp Neurol. 2013 Sep;72(9):807-15. doi: 10.1097/NEN.0b013e3182a033a0.

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

[1097/NEN.0b013e3182a033a0](#)

AUTORES / AUTHORS: - Gessi M; Zur Muhlen A; Hammes J; Waha A; Denkhaus D; Pietsch T

INSTITUCIÓN / INSTITUTION: - From the Institute of Neuropathology, University of Bonn Medical Center, Bonn, Germany.

RESUMEN / SUMMARY: - Little is known about the molecular features of desmoplastic infantile ganglioglioma (DIG) and desmoplastic infantile astrocytoma (DIA). We performed a genome-wide DNA copy number analysis in combination with a multiplex ligation-dependent probe amplification-based analysis of copy number changes of candidate genes in 4 DIAs and 10 DIGs. Molecular inversion probe (MIP) assay showed that large chromosomal alterations were rare among DIG and DIA. Focal recurrent genomic losses were observed in chromosome regions such as 5q13.3, 21q22.11, and 10q21.3 in both DIA and DIG. Principal component analysis did not show any significant differences between the molecular profiles of DIG and DIA, and a hierarchical cluster analysis did not clearly separate the 2 tumor groups according to their molecular profiles. In 6 cases, gain of genomic material at 7q31 (corresponding to MET gene) was found in multiplex ligation-dependent probe amplification (MLPA) analysis. Furthermore, two cases showed gain at 4q12, and a single case showed BRAF mutation. In agreement with previous analyses, this study demonstrates the absence of consistent recurrent chromosomal alterations in DIA and DIG and overall rarity of the BRAF mutation in these tumors. Notably, these results suggest that DIA and DIG represent a histologic spectrum of the same tumor rather than 2 separate entities.

[130]

TÍTULO / TITLE: - Glucocorticoid receptor beta regulates injury-mediated astrocyte activation and contributes to glioma pathogenesis via modulation of beta-catenin/TCF transcriptional activity.

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

REVISTA / JOURNAL: - Neurobiol Dis. 2013 Nov;59:165-76. doi: 10.1016/j.nbd.2013.07.013. Epub 2013 Jul 30.

●● Enlace al texto completo (gratuito o de pago) [1016/j.nbd.2013.07.013](#)

AUTORES / AUTHORS: - Yin Y; Zhang X; Li Z; Deng L; Jiao G; Zhang B; Xie P; Mu H; Qiao W; Zou J

INSTITUCIÓN / INSTITUTION: - Department of Clinical Laboratory Science, Wuxi People's Hospital of Nanjing Medical University, Wuxi, PR China; Wuxi Clinical Science Research Institute, Wuxi, PR China.

RESUMEN / SUMMARY: - Astrocytes react to central nervous system (CNS) injury and participate in gliotic responses, imparting negative, as well as positive effects on axonal regeneration. Despite the considerable biochemical and morphological changes astrocytes undergo following insult, and the known influence of steroids on glial activation, details surrounding glucocorticoid receptor expression and activity are lacking. Such mechanistic information is essential for advancing and enhancing therapies in the treatment of CNS injuries. Using an in vitro wound-healing assay, we found glucocorticoid receptor beta (GRbeta), not GRalpha, is upregulated and acts as a regulator of gliosis after injury. In addition, our results suggest that GRbeta interacts with beta-catenin and is a necessary component for proliferation and migration in both injured astrocytes and glioma cells. Further analysis indicated GRbeta/beta-catenin interaction as a key modulator of astrocyte reactivity through sustained Wnt/beta-catenin/TCF signaling in its dominant-negative effect on GRalpha mediated trans-repression by a GSK-3beta-independent manner. These findings expand our knowledge of the mechanism of GRbeta action in promoting astrocyte proliferation and migration following injury and in glioma. This information furthers our understanding the function of glucocorticoid receptor in CNS injury and disease, as well as in the basic biochemical responses astrocytes undergo in response to injury and glioma pathogenesis.

[131]

TÍTULO / TITLE: - Defining and treating leucine-rich glioma inactivated 1 antibody associated autoimmunity.

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

REVISTA / JOURNAL: - Brain. 2013 Oct;136(Pt 10):2933-5. doi: 10.1093/brain/awt256.

●● Enlace al texto completo (gratis o de pago) [1093/brain/awt256](https://doi.org/10.1093/brain/awt256)

AUTORES / AUTHORS: - Zandi MS

INSTITUCIÓN / INSTITUTION: - Department of Clinical Neurosciences, Addenbrooke's Hospital, Cambridge, UK.

[132]

TÍTULO / TITLE: - Isolation of mesenchymal stem-like cells in meningioma specimens.

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

REVISTA / JOURNAL: - Int J Oncol. 2013 Oct;43(4):1260-8. doi: 10.3892/ijo.2013.2053.
Epub 2013 Aug 6.

●● Enlace al texto completo (gratis o de pago) [3892/ijo.2013.2053](https://doi.org/10.3892/ijo.2013.2053)

AUTORES / AUTHORS: - Lim HY; Kim KM; Kim BK; Shim JK; Lee JH; Huh YM; Kim SH; Kim EH; Park EK; Shim KW; Chang JH; Kim DS; Kim SH; Hong YK; Lee SJ; Kang SG

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea.

RESUMEN / SUMMARY: - Cells resembling bone marrow mesenchymal stem cells (BM-MSCs) have been isolated from glioma specimens; however, little is known about the existence of mesenchymal stem-like cells (MSLCs) in meningioma. Here, we hypothesized that cells similar to BM-MSCs exist in meningioma specimens and sought to investigate whether these putative meningioma stroma MSLCs (MS-MSLCs) could be isolated. To this end, we cultured fresh meningioma specimens using the same protocols as used previously to isolate BM-MSC. Cultured cells were analyzed for surface markers associated with BM-MSCs by fluorescence-activated cell sorting (FACS) and candidate cells were exposed to mesenchymal differentiation conditions. Possible locations of MS-MSLCs were determined by immunohistochemical analysis of sections of meningioma specimens. Spindle-shaped and, adherent cells similar to BM-MSCs were isolated in 2 of 20 meningioma specimens. FACS analysis showed that the surface markers of MS-MSLCs were similar to those of BM-MSCs and the chosen cells demonstrated an ability to differentiate into osteogenic, adipogenic and chondrogenic cells. The tumorigenicity of MS-MSLCs was tested by injection of these cells into the brain of athymic nude mice; no tumors were subsequently discovered. Immunohistochemical analyses indicated that CD105+ cells were closely associated with endothelial cells and pericytes in meningioma specimens. Our results established for the first time that cells similar to BM-MSCs exist in meningioma specimens. These cells, termed MS-MSLCs, could be one component of the meningioma cellular microenvironment.

[133]

TÍTULO / TITLE: - Transcranial high intensity focused ultrasound therapy guided by 7 TESLA MRI in a rat brain tumour model: A feasibility study.

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

REVISTA / JOURNAL: - Int J Hyperthermia. 2013 Sep;29(6):598-608. doi: 10.3109/02656736.2013.820357. Epub 2013 Aug 13.

●● Enlace al texto completo (gratis o de pago) [3109/02656736.2013.820357](#)

AUTORES / AUTHORS: - Dervishi E; Larrat B; Pernot M; Adam C; Marie Y; Fink M; Delattre JY; Boch AL; Tanter M; Aubry JF

INSTITUCIÓN / INSTITUTION: - Centre de Recherche de l'Institut du Cerveau et de la Moelle Epiniere, INSERM - UMRS 975, CNRS 7225 , Hopital de la Pitie-Salpetriere , Paris

RESUMEN / SUMMARY: - Abstract Purpose: Transcranial high intensity focused ultrasound (HIFU) therapy guided by magnetic resonance imaging (MRI) is a promising approach for the treatment of brain tumours. Our objective is to validate a dedicated therapy monitoring system for rodents for transcranial HIFU therapy under MRI guidance in an in vivo brain tumour model. Materials and methods: A dedicated MR-compatible ultrasound therapy system and positioning frame was developed. Three MR-compatible prefocused ultrasonic mono-element transducers were designed, operating at 1.5 MHz and 2.5 MHz with different geometries. A full protocol of transcranial HIFU brain therapy under MRI guidance was applied in n = 19 rats without and n = 6 rats with transplanted tumours (RG2). Different heating strategies were tested. After treatment, histological study of the brain was performed in order to confirm thermal lesions. Results: Relying on a larger aperture and a higher frequency, the 2.5 MHz transducer was found to give better results than other ones. This single element transducer optimised the ratio of the temperature elevation at the focus to the one at the skull surface. Using optimised transducer and heating strategies enabled thermal necrosis both in normal and tumour tissues as verified by histology while limiting overheating in the tissues in contact with the skull. Conclusions: In this study, a system for transcranial HIFU therapy guided by MRI was developed and tested in an in vivo rat brain tumour model. The feasibility of this therapy set-up to induce thermal lesions within brain tumours was demonstrated.

[134]

TÍTULO / TITLE: - Evaluation of resveratrol sensitivities and metabolic patterns in human and rat glioblastoma cells.

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

REVISTA / JOURNAL: - Cancer Chemother Pharmacol. 2013 Aug 30.

●● Enlace al texto completo (gratis o de pago) [1007/s00280-013-2274-y](#)

AUTORES / AUTHORS: - Sun Z; Shi S; Li H; Shu XH; Chen XY; Kong QY; Liu J

INSTITUCIÓN / INSTITUTION: - Liaoning Laboratory of Cancer Genomics, Department of Cell Biology, College of Basic Medical Sciences, Dalian Medical University, 9 West Section, Lvshun South Road, Dalian, 116044, China.

RESUMEN / SUMMARY: - PURPOSE: To further elucidate the correlation of resveratrol sensitivities with biotransformation activities of human and rat glioblastoma cells for personalized anti-glioblastoma therapy. METHODS: Resveratrol sensitivity of human U251 and rat RG2 and C6 glioblastoma cells was evaluated by 3-[4,5-dimethylthiazol-2-yl]-2, 5-diphenyltetrazolium bromide/MTT, flow cytometry, and TUNEL assays. The metabolic patterns of those cell lines were analyzed by high-performance liquid chromatography/HPLC coupled with tandem mass spectrum/MS/MS, and high-resolution mass spectrometry/HRMS. Immunocytochemical staining and Western blotting were employed to check resveratrol metabolic enzyme expression. RESULTS: Both rat RG2 and C6 and human U251 glioblastoma cells are sensitive to 100 µM resveratrol in terms of growth arrest and increased apoptotic fraction. The main resveratrol metabolite in U251 cells is monosulfate biotransformed by sulfotransferases/SULTs and in RG2 and C6 cells is monoglucuronide generated by UDP-glucuronosyltransferase/UGT. Both metabolites show lesser therapeutic efficacy. Although brain-associated UGTs (UGT1A6, 2B7, and 8) and SULTs (SULT1A1, 1C2, and 4^a1) are expressed in rat and human glioma cells, the overall level of UGTs is predominant in the rat and SULTs in human glioblastoma cells. In similar to SULT expression pattern, UGT1A6, 2B7, and 8 are frequently downregulated (84.6 %, 82/97; 90.7 %, 88/97; 80.4 %, 78/97) in human glioblastoma tissues. CONCLUSION: Our results suggest (1) the decreased resveratrol biotransforming activity in rat and human resveratrol-sensitive glioblastoma cells; (2) the discrepant resveratrol metabolic patterns between human and rat glioblastoma cells; (3) the more powerful anti-glioblastoma efficacy of trans-resveratrol rather than resveratrol monoglucuronide or monosulfate; and (4) the value of RG2 and C6 cells in establishing resveratrol-based rat in vivo therapeutic model.

[135]

TÍTULO / TITLE: - Surgical strategies and modern therapeutic options in the treatment of craniopharyngiomas.

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

REVISTA / JOURNAL: - Crit Rev Oncol Hematol. 2013 Aug 7. pii: S1040-8428(13)00164-9. doi: 10.1016/j.critrevonc.2013.07.013.

●● Enlace al texto completo (gratuito o de pago) [1016/j.critrevonc.2013.07.013](https://doi.org/10.1016/j.critrevonc.2013.07.013)

AUTORES / AUTHORS: - Mortini P; Gagliardi F; Boari N; Losa M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, San Raffaele Scientific Institute, Vita-Salute University, Milan, Italy.

RESUMEN / SUMMARY: - The optimal treatment of patients with craniopharyngioma remains controversial. In particular, the role of aggressive treatment compared to less aggressive therapeutic options is poorly understood. Radical resection is the therapy of choice at any age, because it is associated with the best outcome in terms of survival. Nevertheless, aggressive behaviour, location, involvement of critical structures, tumour size, calcifications, and patient age may limit the extent of resection. Surgery can also carry significant morbidity in terms of visual, hypothalamic, and endocrinological disturbances. Long term sequelae reduce the quality of life in 50% of long-term survivors, notably obesity and neurobehavioral impairment due to hypothalamic involvement and iatrogenic induced lesions. The quality of life should be considered as a clinically important endpoint in patients, who currently experience good overall survival rates, regardless of the degree of surgical resection. Tendency to recur despite negative postoperative imaging led many authors to advocate a less aggressive surgical treatment followed by radiation therapy. We review the data reported in the literature, especially early outcome after surgical treatment and factors affecting the risk of tumour recurrence, to elucidate the role of attempted radical resection in the treatment of craniopharyngioma and to identify the clinical and morphological characteristics predictive for the best surgical prognosis.

[136]

TÍTULO / TITLE: - BRAF V600E Mutation Is Associated with mTOR Signaling Activation in Glioneuronal Tumors.

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

REVISTA / JOURNAL: - Brain Pathol. 2013 Aug 13. doi: 10.1111/bpa.12081.

●● Enlace al texto completo (gratis o de pago) [1111/bpa.12081](#)

AUTORES / AUTHORS: - Prabowo AS; Iyer AM; Veersema TJ; Anink JJ; Schouten-van Meeteren AY; Spliet WG; van Rijen PC; Ferrier CH; Capper D; Thom M; Aronica E

INSTITUCIÓN / INSTITUTION: - Department of (Neuro)Pathology, University of Amsterdam, Amsterdam, The Netherlands.

RESUMEN / SUMMARY: - BRAF V600E mutations have been recently reported in glioneuronal tumors (GNTs). To evaluate the expression of the BRAF V600E mutated protein and its association with activation of the mammalian target of rapamycin (mTOR) pathway, immunophenotype and clinical characteristics in GNTs, we investigated a cohort of 174 GNTs. The presence of BRAF V600E mutations was detected by direct DNA sequencing and BRAF V600E immunohistochemical detection. Expression of BRAF-mutated protein was detected in 38/93 (40.8%) gangliogliomas (GGs), 2/4 (50%) desmoplastic infantile gangliogliomas (DIGs) and 23/77 (29.8%) dysembryoplastic neuroepithelial tumors (DNTs) by immunohistochemistry. In both GGs and DNTs, the presence of BRAF V600E mutation was significantly associated with the expression of CD34, phosphorylated ribosomal S6 protein (pS6; marker of mTOR

pathway activation) in dysplastic neurons and synaptophysin ($P < 0.05$). In GGs, the presence of lymphocytic cuffs was more frequent in BRAF-mutated cases (31 vs. 15.8%; $P = 0.001$). The expression of both BRAF V600E and pS6 was associated with a worse postoperative seizure outcome in GNT ($P < 0.001$). Immunohistochemical detection of BRAF V600E-mutated protein may be valuable in the diagnostic evaluation of these glioneuronal lesions and the observed association with mTOR activation may aid in the development of targeted treatment involving specific pathogenic pathways.

[137]

TÍTULO / TITLE: - Children <1 year show an inferior outcome when treated according to the traditional LGG treatment strategy: A report from the German multicenter trial HIT-LGG 1996 for children with low grade glioma (LGG).

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

REVISTA / JOURNAL: - *Pediatr Blood Cancer*. 2013 Sep 4. doi: 10.1002/pbc.24729.

●● [Enlace al texto completo \(gratis o de pago\) 1002/pbc.24729](#)

AUTORES / AUTHORS: - Mirow C; Pietsch T; Berkefeld S; Kwicien R; Warmuth-Metz M; Falkenstein F; Diehl B; von Hornstein S; Gnekow AK

INSTITUCIÓN / INSTITUTION: - Children's Hospital of Augsburg, Augsburg, Germany.

RESUMEN / SUMMARY: - **BACKGROUND:** Children diagnosed with LGG at an age <1 year are reported to have an impaired prognosis in comparison to older patients. Analysis of this subgroup could reveal the necessity to develop risk-adapted treatment approaches. **PROCEDURE:** Children <1 year at diagnosis ($n = 66$, median age 7.3 months, 33 female, none NFI) from the HIT-LGG 1996 cohort were analyzed for risk factors for EFS, PFS and OS. Several children suffered from diencephalic syndrome (DS, $n = 22$) and primary dissemination (DLGG, $n = 9$), 50 had a supratentorial midline (SML) location. Extent of resection was complete/subtotal in 12, partial in 15, biopsy in 27. Tumors were pilocytic astrocytoma WHO grade I ($n = 33$), other WHO grade I ($n = 14$), pilomyxoid astrocytomas WHO grade II ($n = 3$), and neuroepithelial tumors WHO grade II ($n = 4$). **RESULTS:** One-year EFS was 34.8%. SML-localisation, minor extent of surgery, pilocytic astrocytoma, DLGG and DS were unfavorable predictive factors. No additional non-surgical therapy was applied in 24, 36 were treated with VCR/carboplatin chemotherapy, 6 with radiotherapy (5/6 brachytherapy). Ten-year-PFS-rate following non-surgical therapy was 16.7%; DS and DLGG were unfavorable factors. Ten-year-OS-rate was 72.8%, lower for children <6 months at diagnosis, with DS, or with DLGG. At last follow up in August 2011, vision in 31 living children was often severely impaired. **CONCLUSIONS:** Children <1 year at diagnosis have a conspicuously impaired survival with current treatment approaches. Age <6 months, diencephalic syndrome and dissemination constitute risk factors for even lower PFS and OS. Treatment adaptations are needed to improve outcome and molecular genetics may explain tumor aggressiveness. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[138]

TÍTULO / TITLE: - Functional Toll-like receptor 4 expressed in lactotrophs mediates LPS-induced proliferation in experimental pituitary hyperplasia.

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

REVISTA / JOURNAL: - Exp Cell Res. 2013 Aug 20. pii: S0014-4827(13)00342-X. doi: 10.1016/j.yexcr.2013.08.012.

●● Enlace al texto completo (gratis o de pago) [1016/j.yexcr.2013.08.012](#)

AUTORES / AUTHORS: - Sabatino ME; Sosa LD; Petiti JP; Mukdsi JH; Mascanfroni ID; Pellizas CG; Gutierrez S; Torres AI; De Paul AL

INSTITUCIÓN / INSTITUTION: - Centro de Microscopia Electronica, Instituto de Investigaciones en Ciencias de la Salud (INICSA-CONICET), Facultad de Ciencias Medicas, Universidad Nacional de Cordoba, Av. Enrique Barros y Enfermera Gordillo, Ciudad Universitaria, CP 5000, Cordoba, Argentina.

RESUMEN / SUMMARY: - Toll like receptor 4 (TLR4) has been characterized for its ability to recognize bacterial endotoxin lipopolysaccharide (LPS). Considering that infections or inflammatory processes might contribute to the progression of pituitary tumors, we analyzed the TLR4 functional role by evaluating the LPS effect on lactotroph proliferation in primary cultures from experimental pituitary tumors, and examined the involvement of PI3K-Akt and NF-kappaB activation in this effect. In addition, the role of 17beta-estradiol as a possible modulator of LPS-induced PRL cell proliferation was further investigated. In estrogen-induced hyperplastic pituitaries, LPS triggered lactotroph cell proliferation. However, endotoxin failed to increase the number of lactotrophs taking up BrdU in normal pituitaries. Moreover, incubation with anti-TLR4 antibody significantly reduced LPS-induced lactotroph proliferation, suggesting a functional role of this receptor. As a sign of TLR4 activation, an LPS challenge increased IL-6 release in normal and tumoral cells. By flow cytometry, TLR4 baseline expression was revealed at the plasma membrane of tumoral lactotrophs, without changes noted in the percentage of double PRL/TLR4 positive cells after LPS stimulus. Increases in TLR4 intracellular expression were detected as well as rises in CD14, p-Akt and NF-kappaB after an LPS challenge, as assessed by western blotting. The TLR4/PRL and PRL/NF-kappaB co-localization was also corroborated by immunofluorescence and the involvement of PI3K/Akt signaling in lactotroph proliferation and IL-6 release was revealed through the PI3K inhibitor Ly-294002. In addition, 17beta-estradiol attenuated the LPS-evoked increase in tumoral lactotroph proliferation and IL-6 release. Collectively these results demonstrate the presence of functional TLR4 in lactotrophs from estrogen-induced hyperplastic pituitaries, which responded to the proliferative stimulation and IL-6 release induced by LPS through TLR4/CD14, with a contribution of the PI3K-Akt and NF-kappaB signaling pathways.

[139]

TÍTULO / TITLE: - Optimization of the route of platinum drugs administration to optimize the concomitant treatment with radiotherapy for glioblastoma implanted in the Fischer rat brain.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 13.

●● Enlace al texto completo (gratis o de pago) 1007/s11060-013-1238-8

AUTORES / AUTHORS: - Charest G; Sanche L; Fortin D; Mathieu D; Paquette B

INSTITUCIÓN / INSTITUTION: - Center for Research in Radiotherapy, Department of Nuclear Medicine and Radiobiology, Faculty of Medicine and Health Science, Université de Sherbrooke, Sherbrooke, QC, J1H 5N4, Canada, Gabriel.Charest@USherbrooke.ca.

RESUMEN / SUMMARY: - Treatment of glioblastoma with platinum compounds modestly improves progression-free survival and may cause toxic effects which prevent use at higher dose that would otherwise improve the antineoplastic effect. To reduce toxicity, we propose to encapsulate the platinum drug in a liposome. We have also tested three methods of drug administration (intra-venous, intra-arterial and intra-arterial combined with blood brain barrier disruption) to determine which one optimizes the tumor cell uptake, limits the toxicity and delivers the best concomitance effect with radiotherapy. Cisplatin, oxaliplatin, their respective liposomal formulations, Lipoplatin and Lipoxal, and carboplatin were assessed in F98 glioma, orthotopically implanted in Fischer rats. We found that the modest accumulation of drugs in tumor cells after intra-venous injection was significantly improved when the intra-arterial route was used and further increased after the transient opening of the blood brain barrier with mannitol. The liposomal formulations have largely reduced the toxicity and have allowed a better exploitation of the anti-cancer activity of platinum agent. Although the liposomes Lipoplatin and Lipoxal have shown a similar ability to that of carboplatin, to accumulate in brain tumors, the highest additive effect with radiotherapy was obtained with carboplatin. We conclude that the intra-arterial infusion of carboplatin or Lipoxal in concomitance with radiation therapy leads to the best tumor control as measured by an increase of mean survival time in Fischer rats implanted with the F98 glioma with a benefit in survival time of 13.4 and 6.5 days respectively compared to intra-venous.

[140]

TÍTULO / TITLE: - Early-Life Manganese Exposure Up-regulates Tumor Associated Genes in the Hypothalamus of Female Rats: Relationship to Manganese-Induced Precocious Puberty.

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

REVISTA / JOURNAL: - Toxicol Sci. 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) [1093/toxsci/kft195](https://doi.org/10.1093/toxsci/kft195)

AUTORES / AUTHORS: - Srivastava VK; Hiney JK; Dees WL

INSTITUCIÓN / INSTITUTION: - Department of Veterinary Integrative Biosciences, College of Veterinary Medicine, Texas A&M University, College Station, TX 77843-4458, United States.

RESUMEN / SUMMARY: - Prepubertal exposure to low, but elevated levels of manganese (Mn) can induce increased secretions of puberty-related hormones resulting in precocious pubertal development in female rats. These events are due to an action of the element within the hypothalamus to induce the secretion of gonadotropin-releasing hormone (GnRH). Because of these prepubertal effects of Mn, and because precocious puberty is a serious neuroendocrine disorder, we have assessed whether early life exposure to this environmental element is capable of precociously up-regulating the expression of a select group of genes previously associated with tumor growth or suppression, and that have more recently been shown to increase at the normal time of puberty. Female rat pups received a daily dose of either 10 mg/kg MnCl₂ or an equal volume of saline by gastric gavage from postnatal day 12 through day 22 or 29. At this time blood was collected for E2 analysis and hypothalamic brain tissue frozen on dry ice until assessed for gene expressions. Rats exposed to the elevated Mn showed a precocious increase in GnRH gene expression in the preoptic area and rostral hypothalamus on day 29, an action associated with precociously increased expressions of specific tumor associated, puberty-related genes. These results demonstrate for the first time that prepubertal Mn exposure is capable of activating specific upstream genes regulating hypothalamic GnRH and suggest that these actions are involved in the mechanism by which this element can induce precocious puberty.

[141]

TÍTULO / TITLE: - Ongoing and prolonged response in adult low-grade gliomas treated with radiotherapy.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 17.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1224-1](https://doi.org/10.1007/s11060-013-1224-1)

AUTORES / AUTHORS: - Ducray F; Kaloshi G; Houillier C; Idhahbi A; Ribba B; Psimaras D; Marie Y; Boisselier B; Alentorn A; Dainese L; Navarro S; Mokhtari K; Hoang-Xuan K; Delattre JY

INSTITUCIÓN / INSTITUTION: - Lyon Neuroscience Research Center, INSERM U1028/CNRS UMR 5292, Université de Lyon - Université Claude Bernard Lyon 1, 69372, Lyon, France, francois.ducray@chu-lyon.fr.

RESUMEN / SUMMARY: - The aim of the present study was to evaluate the impact of first-line radiotherapy on low-grade gliomas (LGGs) growth kinetics. The mean tumor

diameter (MTD) of 39 LGGs was retrospectively measured on serial magnetic resonance images before (n = 16) and after radiotherapy onset (n = 39). After radiotherapy, a decrease of the MTD was observed in 37 patients. Median duration of the MTD decrease was 1.9 years (range 0-8.1 years). According to RANO criteria, the rates of partial and minor responses were 15 and 28 % at the first evaluation after radiotherapy and 36 and 34 % at the time of maximal MTD decrease. The presence of a 1p19q codeletion and the absence of p53 expression were associated with longer durations of MTD decrease (5.3 vs 1 years, p = 0.02 and 2.4 vs 1.8 years, p = 0.05, respectively) while no association was observed between IDH1-R132H expression and duration of MTD decrease. In most patients, MTD decrease after radiotherapy occurred in two phases: an initial phase of rapid MTD decrease followed by a second phase of slower MTD decrease. Patients with a high rate of MTD decrease during the initial phase (>7 mm/year) had both a shorter duration of response (1.9 vs 5.3 years, p = 0.003) and a shorter overall survival (5.5 vs 11.6 years, p = 0.0004). LGGs commonly display a prolonged and ongoing volume decrease after radiotherapy. However, patients who respond rapidly should be carefully monitored because they are at a higher risk of rapid progression.

[142]

TÍTULO / TITLE: - Long-Term Survival following Gross Total Resection of Pediatric Supratentorial Ependymomas without Adjuvant Therapy.

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

REVISTA / JOURNAL: - *Pediatr Neurosurg.* 2012;48(6):379-84. doi: 10.1159/000353685. Epub 2013 Aug 16.

●● Enlace al texto completo (gratis o de pago) [1159/000353685](#)

AUTORES / AUTHORS: - Tanaka T; Kato N; Hasegawa Y; Nonaka Y; Abe T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Jikei University School of Medicine Kashiwa Hospital, Kashiwa, Japan.

RESUMEN / SUMMARY: - Pediatric supratentorial ependymoma is very rare. In pediatric patients with supratentorial ependymoma, surgery alone may be an acceptable treatment when postoperative imaging confirms a gross total resection. Surgical resection is the standard and the most important treatment for ependymoma. The role of radiation therapy and/or chemotherapy following a gross total resection of supratentorial ependymoma has been uncertain. We report 2 cases of pediatric supratentorial ependymomas treated by gross total resection without postoperative adjuvant therapy. The first patient was a 7-year-old girl who presented with motor weakness and a hemiconvulsion of the right leg. Magnetic resonance imaging (MRI) revealed a large heterogeneously enhanced tumor in the left frontal lobe. The second patient was an 8-year-old girl who presented with headache. MRI revealed a huge heterogeneously enhanced tumor in the left frontal lobe. Gross total resection was

achieved in both patients. Postoperative radiotherapy and chemotherapy were avoided following gross total resection. Histologically, the lesions demonstrated grade II ependymoma and anaplastic ependymoma, respectively. After follow-up of 120 months, neither patient had recurrence or dissemination. These results suggest that patients with pediatric supratentorial ependymoma treated by gross total resection alone have a favorable outcome, and postoperative radiotherapy and chemotherapy may be avoided. © 2013 S. Karger AG, Basel.

[143]

TÍTULO / TITLE: - HIF-1alpha inhibition sensitizes pituitary adenoma cells to temozolomide by regulating MGMT expression.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Nov;30(5):2495-501. doi: 10.3892/or.2013.2689. Epub 2013 Aug 22.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2689](#)

AUTORES / AUTHORS: - Chen W; Xiao Z; Zhao Y; Huang L; Du G

INSTITUCIÓN / INSTITUTION: - Department of Neurology, The First Affiliated Hospital of Henan University of Science and Technology, Luoyang, Henan 471003, P.R. China.

RESUMEN / SUMMARY: - Suppression of hypoxia-inducible factor 1alpha (HIF-1alpha) has been shown to sensitize glioblastoma cells to temozolomide (TMZ) treatment via down-modulation of O6-methylguanine-DNA methyltransferase (MGMT) expression. To date, whether the efficacy of TMZ therapy is correlated with MGMT expression and whether HIF-1alpha suppression exerts similar effects in human pituitary adenoma cells have not been defined. In the present study, using an HIF-1alpha knockdown strategy and the HIF-1alpha inhibitor 2-methoxyestradiol (2ME), we demonstrated for the first time that HIF-1alpha suppression increases the efficacy of TMZ in human pituitary adenoma cells in vitro and in vivo. Our mechanistic study showed that HIF-1alpha suppression resulted in down-modulation of MGMT expression and decreased DNA damage repair ability as demonstrated by decreased RAD51 protein expression. These results suggest an HIF-1alpha-dependent regulation of MGMT expression in human pituitary adenoma cells, and HIF-1alpha knockdown or the HIF-1alpha inhibitor 2ME can confer TMZ sensitization in human pituitary adenomas. The clinical application of 2ME as an adjuvant therapy may be a potential approach to improve the efficacy of TMZ therapy for pituitary adenomas.

[144]

TÍTULO / TITLE: - Expression of the Arp2/3 complex in human gliomas and its role in the migration and invasion of glioma cells.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Nov;30(5):2127-36. doi: 10.3892/or.2013.2669. Epub 2013 Aug 20.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2669](https://doi.org/10.3892/or.2013.2669)

AUTORES / AUTHORS: - Liu Z; Yang X; Chen C; Liu B; Ren B; Wang L; Zhao K; Yu S; Ming H

INSTITUCIÓN / INSTITUTION: - Neuro-Oncology Laboratory, Tianjin Neurological Institute, Tianjin 300052, P.R. China.

RESUMEN / SUMMARY: - A hallmark of directional cell migration is localized actin polymerization at the leading protrusions of the cell. The Arp2/3 complex nucleates the formation of the dendritic actin network (lamellipodia) at the leading edge of motile cells. This study was designed to investigate the role of the Arp2/3 complex in the infiltrative behavior of glioma cells. Immunofluorescence and western blotting showed a positive correlation between the expression of Arp2/3 and the malignancy of glioma specimens ($r=0.686$, $P=0.02$) and confocal microscopy demonstrated localization of the Arp2/3 complex in lamellipodia of glioma cells. Furthermore, we examined the effects of Arp2/3 complex inhibition in U251, LN229 and SNB19 glioma cells using CK666, an Arp2/3 complex inhibitor. Glioma cells lost lamellipodia and cell polarity after treatment with CK666. Inhibition of the Arp2/3 complex significantly affected the ability of glioma cells to migrate and invade. In the wound-healing assay, CK666 markedly inhibited cell migration, U251 cell migration was inhibited to $38.73\pm 3.45\%$ of control, LN229 cells to $57.40\pm 2.16\%$ of control and SNB19 cells to $34.17\pm 3.82\%$ of control. Also, CK666 significantly impaired Transwell chamber invasion capability of U251, LN229 and SNB19 cells compared with DMSO control by 72.70 ± 4.86 , 39.12 ± 8.42 and $41.41\pm 4.66\%$, respectively. The Arp2/3 complex is, therefore, likely to be a crucial participant in glioma cell invasion and migration, and may represent a target for therapeutic intervention.

[145]

TÍTULO / TITLE: - The Integrin Inhibitor Cilengitide Affects Meningioma Cell Motility and Invasion.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Oct 1;19(19):5402-5412. Epub 2013 Aug 15.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-0299](https://doi.org/10.1158/1078-0432.CCR-12-0299)

AUTORES / AUTHORS: - Wilisch-Neumann A; Kliese N; Pachow D; Schneider T; Warnke JP; Braunsdorf WE; Bohmer FD; Hass P; Pasemann D; Helbing C; Kirches E; Mawrin C

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Departments of Neuropathology, Neurosurgery and Radiotherapy, Otto vonGuericke University; Neurosurgery, City Hospital; Special Lab for Non-Invasive Brain Imaging, Leibniz Institute for Neurobiology, Magdeburg; Neurosurgery, Paracelsus Hospital, Zwickau; and Institute of Molecular Cell Biology, Center for Molecular Biomedicine, Jena University Hospital, Jena, Germany.

RESUMEN / SUMMARY: - PURPOSE: Meningiomas are frequent intracranial or spinal neoplasms, which recur frequently and can show aggressive clinical behaviour. We elucidated the impact of the integrin inhibitor cilengitide on migration, proliferation, and radiosensitization of meningioma cells. EXPERIMENTAL DESIGN: We analyzed integrin expression in tissue microarrays of human meningiomas and the antimeningioma properties of cilengitide in cell cultures, subcutaneous and intracranial nude mouse models by measuring tumor volumes and survival times. RESULTS: $\alpha 5 \beta 1$ was the predominantly expressed integrin heterodimer in meningiomas, whereas $\alpha 3 \beta 1$ was mainly detected in tumor blood vessels. Application of up to 100 $\mu\text{g}/\text{mL}$ cilengitide resulted in only mildly reduced proliferation/survival of meningioma cell lines. Effects on cell survival could be enhanced by irradiation. One $\mu\text{g}/\text{mL}$ cilengitide was sufficient to significantly inhibit meningioma cell migration and invasion in vitro. A daily dosage of 75 mg/kg did neither affect tumor volumes nor overall survival ($P = 0.813$, log-rank test), but suppressed brain invasion in a significant fraction of treated animals. A combination of 75 mg/kg cilengitide daily and irradiation ($2 \times 5 \text{ Gy}$) led to a 67% reduction of MRI-estimated tumor volumes in the intracranial model ($P < 0.01$), whereas the corresponding reduction reached by irradiation alone was only 55% ($P < 0.05$). CONCLUSIONS: These data show that a monotherapy with cilengitide is not likely to achieve major responses in rapidly growing malignant meningiomas, although brain invasion may be reduced because of the strong antimigratory properties of the drug. The combination with radiotherapy warrants further attention. Clin Cancer Res; 19(19); 5402-12. ©2013 AACR.

[146]

TÍTULO / TITLE: - Tenascin-C is expressed by human glioma in vivo and shows a strong association with tumor blood vessels.

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

REVISTA / JOURNAL: - Cell Tissue Res. 2013 Aug 21.

●● Enlace al texto completo (gratis o de pago) [1007/s00441-013-1704-9](#)

AUTORES / AUTHORS: - Brosicke N; van Landeghem FK; Scheffler B; Faissner A

INSTITUCIÓN / INSTITUTION: - Department of Cell Morphology and Molecular Neurobiology, Ruhr University Bochum, Bochum, Germany.

RESUMEN / SUMMARY: - The extracellular matrix (ECM) protein tenascin-C (TN-C) is upregulated within glioma tissues and cultured glioma cell lines. TN-C possesses a multi-modular structure and a variety of functional properties have been reported for its domains. We describe five novel monoclonal antibodies identifying different domains of TN-C. The epitopes for these antibodies were investigated by using recombinantly expressed fibronectin type III domains of TN-C. The biological effects of TN-C fragments on glioma cell proliferation and adhesion were analyzed. The expression pattern of TN-C in human glioma tissue sections and in glioma cell lines was

studied with the novel library of monoclonal antibodies. The immunocytochemical analyses of the established human glioma cell lines U-251-MG, U-373-MG and U-87-MG revealed distinct staining patterns for each antibody. Robust expression of TN-C was found within the tumor mass of surgery specimens from glioblastoma. In many cases, the expression of this ECM molecule was clearly associated with blood vessels, particularly with microvessels. Three of the new antibodies highlighted individual TN-C-expressing single cells in glioma tissues. The effect of TN-C domains on glioma cells was examined by a BrdU-proliferation assay and an adhesion assay. Short fragments of constitutively expressed TN-C-domains did not exert significant effects on the proliferation of glioma cells, whereas the intact molecule increased cell division rates. In contrast, the long fragment TNfnALL containing all of the FNIII domains of TN-C decreased proliferation. Additionally, we found strong differences between the adhesion-influencing properties of the recombinant fragments on glioma cells.

[147]

TÍTULO / TITLE: - Depression in glioma: a primer for clinicians and researchers.

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

REVISTA / JOURNAL: - J Neurol Neurosurg Psychiatry. 2013 Sep 12. doi: 10.1136/jnnp-2013-306497.

●● Enlace al texto completo (gratis o de pago) [1136/jnnp-2013-306497](#)

AUTORES / AUTHORS: - Rooney AG; Brown PD; Reijneveld JC; Grant R

INSTITUCIÓN / INSTITUTION: - Edinburgh Centre for Neuro-Oncology, Western General Hospital, , Edinburgh, Scotland, UK.

RESUMEN / SUMMARY: - Depression is one of the leading causes of global disability, and a considerable hidden morbidity among patients with glioma. In this narrative review, we summarise what is currently known about depression in glioma, the main unanswered questions and the types of studies that should be prioritised in order to find out. We conclude by calling for a prospective Phase II study of antidepressants in depressed glioma patients, to test methodologies for a multicentre randomised controlled trial.

PTPTPTP - JOURNAL ARTICLE ----- [148]

TÍTULO / TITLE: - What happens to cognitive function following surgery for hypothalamic hamartoma?

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

REVISTA / JOURNAL: - Neurology. 2013 Sep 17;81(12):1028-9. doi: 10.1212/WNL.0b013e3182a4a52c. Epub 2013 Aug 14.

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

[1212/WNL.0b013e3182a4a52c](#)

AUTORES / AUTHORS: - Harvey AS; Rosenfeld JV

INSTITUCIÓN / INSTITUTION: - From the Department of Neurology (A.S.H.), The Royal Children's Hospital, Melbourne; Department of Paediatrics (A.S.H.), The University of Melbourne; Department of Neurosurgery (J.V.R.), The Alfred Hospital, Melbourne; and Department of Surgery (J.V.R.), Monash University, Melbourne, Australia.

RESUMEN / SUMMARY: - Hypothalamic hamartoma (HH) and gelastic epilepsy is a rare but well-recognized, drug-resistant, epileptic syndrome of early life. Cognitive impairments and behavior disturbance occur commonly in patients with HH and gelastic epilepsy, especially those with progressive seizure and EEG evolution during early childhood. Intellectual disability, autism, and episodic rage are commonly encountered in patients who have evolved a generalized epileptic encephalopathy.(1-3.)

[149]

TÍTULO / TITLE: - The mTOR kinase inhibitors, CC214-1 and CC214-2, preferentially block the growth of EGFRvIII-activated glioblastomas.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Sep 12.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-0527](#)

AUTORES / AUTHORS: - Gini B; Zanca C; Guo D; Matsutani T; Masui K; Ikegami S; Yang H; Nathanson D; Villa G; Shackelford D; Zhu S; Tanaka K; Babic I; Akhavan D; Lin K; Assuncao A; Gu Y; Bonetti B; Mortensen DS; Xu S; Raymon H; Cavenee WK; Furnari FB; James CD; Kroemer G; Heath JR; Hege K; Chopra R; Cloughesy TF; Mischel PS

INSTITUCIÓN / INSTITUTION: - Ludwig Institute for Cancer Research, UCSD.

RESUMEN / SUMMARY: - PURPOSE: mTOR pathway hyperactivation occurs in nearly 90% of glioblastomas, but the allosteric mTOR inhibitor rapamycin has failed in the clinic. Here we examine the efficacy of the newly discovered ATP-competitive mTOR kinase inhibitors CC214-1 and CC214-2 in glioblastoma, identifying molecular determinants of response and mechanisms of resistance, and develop a pharmacological strategy to overcome it. EXPERIMENTAL DESIGN: We performed in vitro and in vivo studies in glioblastoma cell lines and an intracranial model to: determine the potential efficacy of the recently reported mTOR kinase inhibitors CC214-1 (in vitro use) and CC214-2 (in vivo use) at inhibiting rapamycin resistant signaling and blocking GBM growth and a novel single cell technology, DNA Encoded Antibody Libraries, was used to identify mechanisms of resistance. RESULTS: Here we demonstrate that CC214-1 and CC214-2 suppress rapamycin-resistant mTORC1 signaling; block mTORC2 signaling and significantly inhibit the growth of glioblastomas in vitro and in vivo. EGFRvIII expression and PTEN loss enhance sensitivity to CC214 compounds, consistent with enhanced efficacy in strongly mTOR-activated tumors. Importantly, CC214 compounds potently induce autophagy, preventing tumor cell death. Genetic or pharmacologic inhibition of autophagy greatly sensitizes GBM cells and orthotopic xenografts to CC214-1 and

CC214-2 induced cell death. CONCLUSIONS: These results identify CC214-1 and CC214-2 as potentially efficacious mTOR kinase inhibitors in GBM and suggest a strategy for identifying patients most likely to benefit from mTOR inhibition. This study also demonstrates a central role for autophagy in preventing mTOR-kinase inhibitor-mediated tumor cell death, and suggests a pharmacological strategy for overcoming it.

[150]

TÍTULO / TITLE: - 2-Aminophenoxazine-3-one-induced apoptosis via generation of reactive oxygen species followed by c-jun N-terminal kinase activation in the human glioblastoma cell line LN229.

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

REVISTA / JOURNAL: - Int J Oncol. 2013 Nov;43(5):1456-66. doi: 10.3892/ijo.2013.2088. Epub 2013 Sep 4.

●● [Enlace al texto completo \(gratis o de pago\) 3892/ijo.2013.2088](#)

AUTORES / AUTHORS: - Che XF; Moriya S; Zheng CL; Abe A; Tomoda A; Miyazawa K

INSTITUCIÓN / INSTITUTION: - Department of Biochemistry, Tokyo Medical University, Shinjuku-ku, Tokyo 160-8402, Japan.

RESUMEN / SUMMARY: - 2-Aminophenoxazine-3-one (Phx-3) induces apoptosis in several types of cancer cell lines. However, the mechanism of apoptosis induction by Phx-3 has not been fully elucidated. In this study, we investigated the anticancer effects of Phx-3 in the glioblastoma cell line LN229 and analyzed its molecular mechanism. The results indicated that 6- and 20-h treatment with Phx-3 significantly induced apoptosis in LN229 cells, with downregulation of survivin and XIAP. Both ERK and JNK, which are the members of the MAPK family, were activated after treatment with Phx-3. Inhibition of ERK using the specific inhibitor U0126 blocked the Phx-3-induced apoptosis only in part. However, inhibition of JNK using the specific inhibitor SP600125 completely prevented Phx-3-induced apoptosis and restored the phosphorylation states of ERK to the control levels. Enhanced generation of reactive oxygen species (ROS) was detected after 3-h treatment with Phx-3. In addition, the ROS scavenger melatonin almost completely blocked Phx-3-induced JNK activation and apoptosis. This suggests that JNK activation was mediated by Phx-3-induced ROS generation. Although SP600125 and melatonin completely blocked the reduction of mitochondrial membrane potential after a 3-h treatment with Phx-3, extension of Phx-3 exposure time to 20 h resulted in no cancelation of mitochondrial depolarization by these reagents. These reagents also had little effect on the decreased expression of survivin and XIAP during a 3-20-h exposure to Phx-3. These results indicate that the production of ROS following JNK activation is the main axis of Phx-3-induced apoptosis in LN229 cells for short-term exposure to Phx-3, whereas alternative mechanism(s) appear to be involved in apoptosis induction during long-term exposure to Phx-3.

[151]

TÍTULO / TITLE: - Cognitive functioning before and after surgical resection for hypothalamic hamartoma and epilepsy.

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

REVISTA / JOURNAL: - Neurology. 2013 Sep 17;81(12):1044-50. doi: 10.1212/WNL.0b013e3182a4a3e3. Epub 2013 Aug 14.

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

[1212/WNL.0b013e3182a4a3e3](#)

AUTORES / AUTHORS: - Wethe JV; Prigatano GP; Gray J; Chapple K; ReKate HL; Kerrigan JF

INSTITUCIÓN / INSTITUTION: - From the Divisions of Neurology and Neurosurgery, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, Phoenix, AZ.

RESUMEN / SUMMARY: - **OBJECTIVE:** To determine whether patients with hypothalamic hamartoma (HH) improve in their cognitive functioning after neurosurgical resection of their HH and explore what variables correlate with cognitive outcome. **METHODS:** Thirty-two patients underwent preoperative and postoperative neuropsychological testing. The age range of patients was between 3.3 and 39.3 years (mean 12.2 years, SD 7.0). The average time interval between surgery and postoperative neuropsychological testing was 23.4 months (range 5.1-47.2 months). Tests administered varied on the basis of the patient's age and clinical condition. **RESULTS:** As a group, measures of overall intelligence showed improvement postsurgery, with associated improvement in processing speed. Memory scores did not demonstrate consistent improvement or decline. Duration of epilepsy, age at surgery, and level of neurocognitive functioning prior to surgery were correlated with postsurgical cognitive status. Patients who had mental retardation but were testable generally showed the greatest gains. **CONCLUSIONS:** Despite the great variability in level of cognitive impairment in patients with HH and refractory epilepsy, level of intelligence may show mild to moderate improvements postsurgery if no surgical complications occur. The variables that predict cognitive outcome are not fully delineated, but testable individuals with the greatest presurgical cognitive impairment and those with the shortest duration of epilepsy appear to make the greatest gains in intellectual functioning. **CLASSIFICATION OF EVIDENCE:** This study provides Class IV evidence that single surgical resection for HH was associated with improvement in some subset measures of intellectual functioning, but not memory. Factors that predict better outcomes cannot be determined.

[152]

TÍTULO / TITLE: - Glial cell line-derived neurotrophic factor (GDNF) induced migration of spermatogonial cells in vitro via MEK and NF-kB pathways.

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

REVISTA / JOURNAL: - Differentiation. 2013 Jul-Sep;86(1-2):38-47. doi: 10.1016/j.diff.2013.06.005. Epub 2013 Aug 10.

●● Enlace al texto completo (gratis o de pago) [1016/j.diff.2013.06.005](https://doi.org/10.1016/j.diff.2013.06.005)

AUTORES / AUTHORS: - Huleihel M; Fadlon E; Abuelhija A; Piltcher Haber E; Lunenfeld E

INSTITUCIÓN / INSTITUTION: - The Shraga Segal Department of Microbiology, Immunology and Genetics, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva 84105, Israel. Electronic address: huleihel@bgu.ac.il.

RESUMEN / SUMMARY: - Glial cell line-derived neurotrophic factor (GDNF) regulates spermatogonial stem cell (SSC) maintenance. In the present study, we examined the levels and the cellular origin of GDNF in mouse testes during age-development, and the capacity of GDNF to induce migration of enriched GFR-alpha1 positive cells in vitro. The involvement of MAP kinase (MEK) and NF-kB signal pathways were examined. Our results show high levels of GDNF in testicular tissue of one-week-old mice which significantly decreased with age when examined by ELISA, real time PCR (qPCR) and immunofluorescence staining (IF) analysis. GDNF receptor (GFR-alpha1) expression was similar to GDNF when examined by qPCR analysis. Only Sertoli cell cultures (SCs) from one-week-old mice produced GDNF compared to SCs from older mice. However, peritubular cells from all the examined ages did not produce GDNF. The addition of recombinant GDNF (rGDNF) or supernatant from SCs from one-week-old mice to GFR-alpha1 positive cells induced their migration in vitro. This effect was significantly reduced by the addition of inhibitors to MEK (PD98059, U0126), NF-kB (PDTC) and Ikb protease inhibitor (TPCK). Our results show for the first time the capacity of rGDNF and supernatant from SCs to induce migration of enriched GFR-alpha1 positive cells, and the possible involvement of MEK, NF-kB and Ikb in this process. This study may suggest a novel role for GDNF in the regulation SSC niches and spermatogenesis.

[153]

TÍTULO / TITLE: - Correlation of Nrf2 and HIF-1alpha in glioblastoma and their relationships to clinicopathologic features and survival.

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

REVISTA / JOURNAL: - Neurol Res. 2013 Aug 16.

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

[1179/1743132813Y.0000000251](https://doi.org/10.1179/1743132813Y.0000000251)

AUTORES / AUTHORS: - Ji X; Wang H; Zhu J; Tang Y; Zhou Y; Zhu L; Gao C; Li W; You W; Yu B; Xia Q

RESUMEN / SUMMARY: - OBJECTIVES: Glioblastoma (GB) is the most common, aggressive, and proliferative among all brain tumors. The prognosis of GB is still far from satisfactory currently, thus demanding great modification and enhancement, which may be acquired by the help of the molecular target therapy. Nuclear factor E2-related

factor 2 (Nrf2), a pivotal transcriptional factor of cellular responses to oxidative stress, was observed to function remarkably in cancer pathobiology. In the current study, we analyzed the correlation between Nrf2 and Hypoxia-inducible factor-1alpha (HIF-1alpha) in GB, together with their association to the features and survival of clinicopathology. METHODS: We examined the expression of Nrf2 and HIF-1alpha in 68 specimens of GB by tissue microarray and immunohistochemistry, and correlated this investigation to the outcome of GB patients. RESULTS: Nrf2 and HIF-1alpha were overexpressed in GB tissues. There was significant correlation between the high level of Nrf2 and tumor necrosis on MRI and 1-year survival. There was significant correlation between HIF-1alpha level and Nrf2 status ($r=0.294$, $P=0.015$). Kaplan-Meier analysis showed that high Nrf2 expression was significantly associated with shorter overall survival (OS) (log-rank test, $P=0.006$), and was identified as an independent prognostic factor in multivariate analysis ($P=0.034$). HIF-1alpha was another independent factor for both OS and progression-free survival by Cox regression analysis ($P=0.048$ and $P=0.032$, respectively). DISCUSSION: Mutual association between Nrf2 and HIF-1alpha was found in GB: higher Nrf2 expression and poorer outcome of GB patients. Nrf2 would therefore be a new molecular marker for the targeted treatment of GB.

[154]

TÍTULO / TITLE: - MGMT-STP27 Methylation Status as Predictive Marker for Response to PCV in Anaplastic Oligodendrogliomas and Oligoastrocytomas. A Report from EORTC Study 26951.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Oct 1;19(19):5513-5522. Epub 2013 Aug 15.

●● [Enlace al texto completo \(gratis o de pago\) 1158/1078-0432.CCR-13-1157](#)

AUTORES / AUTHORS: - van den Bent MJ; Erdem-Eraslan L; Idbah A; de Rooi J; Eilers PH; Spliet WG; den Dunnen WF; Tijssen C; Wesseling P; Sillevs Smitt PA; Kros JM; Gorlia T; French PJ

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Departments of Neurology, Biostatistics, and Pathology, Neuro-Oncology Unit Erasmus MC, Rotterdam; AP-HP, Groupe Hospitalier Pitie Salpetriere, Service de Neurologie 2 Mazarin and Universite Pierre et Marie Curie-Paris 6, Centre de Recherche de l'Institut du Cerveau et de la Moelle Epiniere (CRICM), Paris, France; Department of Pathology, UMCU, Utrecht; Department of Pathology, UMCG, Groningen; Department of Neurology, St. Elisabeth Hospital, Tilburg; Department of Pathology, Radboud University Nijmegen Medical Centre, Nijmegen; Department of Pathology, Free University Medical Center, Amsterdam, the Netherlands; and European Organization for Research and Treatment of Cancer Data Center, Brussels, Belgium.

RESUMEN / SUMMARY: - PURPOSE: The long-term follow-up results from the EORTC-26951 trial showed that the addition of procarbazine, CCNU, and vincristine (PCV) after radiotherapy increases survival in anaplastic oligodendrogliomas/oligoastrocytomas (AOD/AOA). However, some patients appeared to benefit more from PCV treatment than others. EXPERIMENTAL DESIGN: We conducted genome-wide methylation profiling of 115 samples included in the EORTC-26951 trial and extracted the CpG island hypermethylated phenotype (CIMP) and MGMT promoter methylation (MGMT-STP27) status. RESULTS: We first show that methylation profiling can be conducted on archival tissues with a performance that is similar to snap-frozen tissue samples. We then conducted methylation profiling on EORTC-26951 clinical trial samples. Univariate analysis indicated that CIMP+ or MGMT-STP27 methylated tumors had an improved survival compared with CIMP- and/or MGMT-STP27 unmethylated tumors [median overall survival (OS), 1.05 vs. 6.46 years and 1.06 vs. 3.8 years, both $P < 0.0001$ for CIMP and MGMT-STP27 status, respectively]. Multivariable analysis indicates that CIMP and MGMT-STP27 are significant prognostic factors for survival in presence of age, sex, performance score, and review diagnosis in the model. CIMP+ and MGMT-STP27 methylated tumors showed a clear benefit from adjuvant PCV chemotherapy: the median OS of CIMP+ samples in the RT and RT-PCV arms was 3.27 and 9.51 years, respectively ($P = 0.0033$); for MGMT-STP27 methylated samples, it was 1.98 and 8.65 years. There was no such benefit for CIMP- or for MGMT-STP27 unmethylated tumors. MGMT-STP27 status remained significant in an interaction test ($P = 0.003$). Statistical analysis of microarray (SAM) identified 259 novel CpGs associated with treatment response. CONCLUSIONS: MGMT-STP27 may be used to guide treatment decisions in this tumor type. Clin Cancer Res; 19(19); 5513-22. ©2013 AACR.

[155]

TÍTULO / TITLE: - Childhood central nervous system tumors at MAHAK's Pediatric Cancer Treatment and Research Center (MPCTRC), Tehran, Iran.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Aug 14.

- [Enlace al texto completo \(gratis o de pago\) 1007/s00381-013-2256-8](#)

AUTORES / AUTHORS: - Mehrvar A; Farnoush M; Hedayati Asl AA; Tashvighi M; Fazeli MA; Qaddoumi I; Mehrvar N; Sobuti B; Jafarpour A; Ravan Parsa R; Zangoeei R; Alebouyeh M; Vossough P

INSTITUCIÓN / INSTITUTION: - MAHAK's Pediatric Cancer Treatment and Research Center, MAHAK Blv, Oshan Blv, Aghdasieh Ave, Tehran, 1956943512, Iran.

RESUMEN / SUMMARY: - PURPOSE: As central nervous system (CNS) tumors account for second most common childhood malignancies and the first cause of mortality in children with cancer, improving treatment modalities can lead to increase the health care of patients. In this study, we examined the prevalence of childhood brain tumors

in patients who referred to MAHAK's Pediatric Cancer Treatment and Research Center (MPCTRC) for treatment. METHODS: A retrospective review of all children less than 15 years old with a CNS histologically proven tumor, who presented to MPCTRC from April 2007 to April 2010, was performed. Data was analyzed by SPSS version 19 with Kolmogorov-Smirnov and Chi-square tests. RESULTS: There were 198 (124 boys) children eligible for the study. The majority of the tumors were infratentorial (n = 134), and the rest were supratentorial (n = 60) and spinal (n = 4) cases. The median age was 6.11 +/- 3.65 years old. Medulloblastoma (n = 66), low-grade glioma (n = 52), and high-grade glioma (n = 40) were the most common tumors. The mean duration of follow-up was 21 months. At the time of this analysis, there were 105 (53 %) children alive, 82 (41.4 %) deaths, and 11 (5.6 %) lost for follow-up. The survival rate was 51.68 +/- 5.22 %. CONCLUSIONS: In contrast of high rate of death in this study, other general characteristics can serve as benchmark for improving our care for children with brain tumors in Iran.

[156]

TÍTULO / TITLE: - Treatment of children with diffuse intrinsic pontine gliomas with chemoradiotherapy followed by a combination of temozolomide, irinotecan, and bevacizumab.

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

REVISTA / JOURNAL: - *Pediatr Hematol Oncol.* 2013 Oct;30(7):623-32. doi: 10.3109/08880018.2013.829895.

●● [Enlace al texto completo \(gratuito o de pago\) 3109/08880018.2013.829895](#)

AUTORES / AUTHORS: - Zaky W; Wellner M; Brown RJ; Bluml S; Finlay JL; Dhall G

INSTITUCIÓN / INSTITUTION: - 1Department of Pediatrics, Division of Pediatric Hematology and Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA.

RESUMEN / SUMMARY: - Background: Diffuse intrinsic pontine gliomas (DIPG) are inoperable and highly resistant tumors to chemotherapy and irradiation. DIPG has the worst prognosis among all pediatric brain tumors and the overwhelming majority of patients die within 6-18 months after diagnosis. Methods: We retrospectively reviewed the charts of six DIPG patients treated with chemoradiotherapy (daily carboplatin and oral etoposide in five patients and temozolomide in one patient) followed by maintenance chemotherapy consisting of irinotecan, temozolomide, and bevacizumab at our institution between January 2007 until December 2007. Results: Event-free survival (EFS) and overall survival (OS) were 10.4 +/- 3.08 and 14.6 +/- 3.55 months, respectively. Side effects in the patients included hypertension in two, abdominal cramping and diarrhea in four, and neutropenia in five patients. Conclusions: This augmented regimen was associated with increased but tolerable toxicity and a modest increase in EFS and OS when compared with published literature

in patients with DIPG (median EFS and OS of 6.1 and 9.6 months, respectively). More effective therapies are desperately needed.

[157]

TÍTULO / TITLE: - Transferrin modified PEG-PLA-resveratrol conjugates: In vitro and in vivo studies for glioma.

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

REVISTA / JOURNAL: - Eur J Pharmacol. 2013 Sep 23. pii: S0014-2999(13)00687-0. doi: 10.1016/j.ejphar.2013.09.034.

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

AUTORES / AUTHORS: - Guo W; Li A; Jia Z; Yuan Y; Dai H; Li H

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine, The Affiliated Drum Tower Hospital of Nanjing University, Zhongshan Road, Nanjing 210008, China.

RESUMEN / SUMMARY: - Glioblastoma is one of the most malignant brain tumors with a poor prognosis. In this study, we examined the effects of transferrin (Tf)-modified poly ethyleneglycol-poly lactic acid (PEG-PLA) nanoparticles conjugated with resveratrol (Tf-PEG-PLA-RSV) to glioma therapy in vitro and in vivo. The cell viability of Tf-PEG-PLA-RSV on C6 and U87 glioma cells was determined by the MTT assay. In vivo biodistribution and antitumor activity were investigated in Brain glioma bearing rat model of C6 glioma by i.p. administration of RSV-polymer conjugates. We found that the average diameter of each Tf-PEG-PLA-RSV is around 150nm with 32 molecules of Tf on surface. In vitro cytotoxicity of PEG-PLA-RSV against C6 and U87 cells was higher than that of free RSV, and further the modification of Tf enhanced the cytotoxicity of the RSV-polymer conjugates as a result of the increased cellular uptake of the RSV-modified conjugates by glioma cells. In comparison with free RSV, RSV conjugates could significantly decrease tumor volume and accumulate in brain tumor, which resulted in prolonging the survival of C6 glioma-bearing rats. These results suggest that Tf-NP-RSV had a potential of therapeutic effect to glioma both in vitro and in vivo and might be a potential candidate for targeted therapy of glioma and worthy of further investigation.

[158]

TÍTULO / TITLE: - 14-3-3beta regulates the proliferation of glioma cells through the GSK3beta/beta-catenin signaling pathway.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Sep 19. doi: 10.3892/or.2013.2740.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2740](#)

AUTORES / AUTHORS: - Gong F; Wang G; Ye J; Li T; Bai H; Wang W

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Guangzhou General Hospital of Guangzhou Military Command, Guangzhou 510010, P.R. China.

RESUMEN / SUMMARY: - We previously demonstrated that 14-3-3beta is overexpressed in astrocytomas; however, the underlying mechanisms are poorly understood. Based on the reported multiple functions of 14-3-3beta, we hypothesized that it interacts with glycogen synthase kinase 3 beta (GSK3beta), which regulates beta-catenin-mediated oncogene expression and contributes to tumorigenesis and astrocytoma progression. To test these hypotheses, we used 14-3-3beta overexpression vectors and small interfering RNA (siRNA) transfection in the human normal astrocyte cell line SVGp12 and the glioma cell line U87, respectively. The results showed that overexpression of 14-3-3beta promoted the proliferation of SVGp12 cells, while knockdown of 14-3-3beta inhibited the proliferation of U87 cells as analyzed by the 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) and bromodeoxyuridine (BrdU) assays. In Flag-tagged 14-3-3beta-overexpressing cells, GSK3beta was co-immunoprecipitated with 14-3-3beta using a Flag antibody. Knockdown of beta-catenin by siRNA blocked cell proliferation induced by overexpression of 14-3-3beta. Furthermore, overexpression of 14-3-3beta suppressed the phosphorylation of beta-catenin leading to its accumulation and nuclear translocation as revealed by western blot analysis. In addition, beta-catenin nuclear translocation induced by overexpression of 14-3-3beta activated the transcription of oncogenes including c-myc and cyclin D1. Collectively, these results revealed that 14-3-3beta regulates the proliferation of astrocytes and glioma cells through the GSK3beta/beta-catenin signaling pathway. The delineated mechanism of 14-3-3beta may be responsible for the tumorigenesis and progression of human astrocytomas. Thus, new therapeutic strategies or drugs aimed at 14-3-3beta may have potential for the treatment of human astrocytomas.

[159]

TÍTULO / TITLE: - Case 197: malignant paraganglioma manifesting with calvarial metastases.

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

REVISTA / JOURNAL: - Radiology. 2013 Sep;268(3):919-23. doi: 10.1148/radiol.13120843.

●● Enlace al texto completo (gratis o de pago) [1148/radiol.13120843](#)

AUTORES / AUTHORS: - Tan JH; Mafee MF

INSTITUCIÓN / INSTITUTION: - Department of Radiology, University of California San Diego, 200 W Arbor Dr, San Diego, CA 92103-8756.

[160]

TÍTULO / TITLE: - Editorial: Dural detachment and long-term tumor control in unresectable meningiomas.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) [3171/2013.6.JNS131179](#)

AUTORES / AUTHORS: - Heros RC

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Miami, Florida.

[161]

TÍTULO / TITLE: - Nonsteroidal Anti-inflammatory Drugs Diclofenac and Celecoxib Attenuates Wnt/beta-Catenin/Tcf Signaling Pathway in Human Glioblastoma Cells.

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

REVISTA / JOURNAL: - Neurochem Res. 2013 Sep 8.

●● Enlace al texto completo (gratis o de pago) [1007/s11064-013-1142-9](#)

AUTORES / AUTHORS: - Sareddy GR; Kesanakurti D; Kirti PB; Babu PP

INSTITUCIÓN / INSTITUTION: - Department of Biotechnology, School of Life Sciences, University of Hyderabad, Hyderabad, 500046, India.

RESUMEN / SUMMARY: - Glioblastoma, the most common and aggressive primary brain tumors, carry a bleak prognosis and often recur even after standard treatment modalities. Emerging evidence suggests that deregulation of the Wnt/beta-catenin/Tcf signaling pathway contributes to glioblastoma progression. Nonsteroidal anti-inflammatory drugs (NSAIDs) inhibit tumor cell proliferation by suppressing Wnt/beta-catenin/Tcf signaling in various human malignancies. In this study, we sought to inhibit Wnt/beta-catenin/Tcf signaling in glioblastoma cells by the NSAIDs diclofenac and celecoxib. Both diclofenac and celecoxib significantly reduced the proliferation, colony formation and migration of human glioblastoma cells. Diclofenac and celecoxib downregulated beta-catenin/Tcf reporter activity. Western and qRT-PCR analysis showed that diclofenac and celecoxib reduced the expression of beta-catenin target genes Axin2, cyclin D1 and c-Myc. In addition, the cytoplasmic accumulation and nuclear translocation of beta-catenin was significantly reduced following diclofenac and celecoxib treatment. Furthermore, diclofenac and celecoxib significantly increased phosphorylation of beta-catenin and reduced the phosphorylation of GSK3beta. These results clearly indicated that diclofenac and celecoxib are potential therapeutic agents against glioblastoma cells that act by suppressing the activation of Wnt/beta-catenin/Tcf signaling.

[162]

TÍTULO / TITLE: - Extensive subarachnoid venous angiomatosis with hydrocephalus in phacomatosis pigmentovascularis.

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

REVISTA / JOURNAL: - Neurology. 2013 Sep 10;81(11):1020-1. doi: 10.1212/WNL.0b013e3182a43ba6.

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

[1212/WNL.0b013e3182a43ba6](#)

AUTORES / AUTHORS: - Chen LW; Tsai YS; Lee JS; Tu YF; Huang CC

INSTITUCIÓN / INSTITUTION: - From National Cheng Kung University College of Medicine, Tainan, Taiwan.

RESUMEN / SUMMARY: - An 8-month-old boy with cutaneous vascular malformations and dermal melanocytosis (Mongolian spots, figure, A) on the face and trunk was diagnosed with phacomatosis pigmentovascularis type 2. He had normal neurodevelopment, but progressive macrocephaly (figure, B). Linear brain ultrasonography showed extensive venous angiomatosis in the prominent subarachnoid space (figure, C and D). MRI revealed cortical sulcal widening, prominent leptomeningeal vessels in an enlarged subarachnoid space (figure, E and F), and communicating hydrocephalus (figure, F). Neurologic involvement in phacomatosis pigmentovascularis is uncommon except in Sturge-Weber and Klippel-Trenaunay syndromes.(1,2) Communicating hydrocephalus due to subarachnoid angiomatosis may be underdiagnosed in phacomatosis pigmentovascularis, and should be considered in case of progressive macrocephaly.

[163]

TÍTULO / TITLE: - All choked up about the pseudotumor cerebri syndrome.

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

REVISTA / JOURNAL: - Neurology. 2013 Sep 24;81(13):1112-3. doi: 10.1212/WNL.0b013e3182a55ff7. Epub 2013 Aug 14.

●● Enlace al texto completo (gratis o de pago) [1212/WNL.0b013e3182a55ff7](#)

AUTORES / AUTHORS: - Galetta SL; Balcer LJ

INSTITUCIÓN / INSTITUTION: - From the Department of Neurology, Division of Neuro-ophthalmology, NYU School of Medicine, New York, NY.

RESUMEN / SUMMARY: - The diagnosis of pseudotumor cerebri, or idiopathic intracranial hypertension (IIH), is most confidently established in the typical patient with evidence of papilledema, imaging that does not suggest a structural lesion, and a CSF examination that shows both normal composition and elevated intracranial pressure (ICP). Prompted by an increasing number of reports over the past decade, Friedman et al.(1) propose a revised set of diagnostic criteria for IIH, taking into account the most recent observations from neuroimaging studies. Although the patient with IIH is often a young woman who is above ideal body weight or obese, it is well-recognized that the disorder may also occur in obese men and in children, who are less likely to be obese than their adult counterparts. Several advances in the field prompted the

expert authors to provide new guidance. First, a large study of children has redefined normal CSF opening pressure for children.(2) In the obese or sedated child, an opening pressure of 280 mm H₂O has been suggested as the requirement to claim confidently that the ICP is increased. Otherwise, the diagnostic criteria for children and adults continue to rely on a CSF lumbar opening pressure of 250 mm H₂O or greater.

[164]

TÍTULO / TITLE: - Teaching NeuroImages: Diffuse cerebral neurosarcoidosis mimicking gliomatosis cerebri.

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

REVISTA / JOURNAL: - Neurology. 2013 Aug 13;81(7):e46. doi: 10.1212/WNL.0b013e3182a08d47.

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

[1212/WNL.0b013e3182a08d47](#)

AUTORES / AUTHORS: - Ramanathan RS; Malhotra K; Scott T

INSTITUCIÓN / INSTITUTION: - From the Department of Neurology, Drexel University College of Medicine, Allegheny General Hospital, Pittsburgh, PA.

RESUMEN / SUMMARY: - A 30-year-old man with a history of bipolar disease presented with 6 months of cognitive decline, unsteady gait, urinary retention, and bilateral upper extremity tremors. Multiple punctate enhancing lesions were seen on brain MRI (figure). Differential diagnosis included infection (viral, tuberculosis, or cryptococcus), toxic leukoencephalopathy, gliomatosis cerebri, angiocentric lymphoma, and neurosarcoidosis. CT chest scan, CSF studies, HIV testing, hepatitis panel, drug screen, and vasculitis panel were negative. Brain biopsy revealed neurosarcoidosis. The patient responded well to high-dose steroids and IV cyclophosphamide. MRI in neurosarcoidosis often reveals enhancing periventricular white matter lesions, in this case mimicking diffuse gliomatosis cerebri.(1,2.)

[165]

TÍTULO / TITLE: - Post-chemotherapy maturation in supratentorial primitive neuroectodermal tumors.

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

REVISTA / JOURNAL: - Brain Pathol. 2013 Aug 30. doi: 10.1111/bpa.12089.

●● Enlace al texto completo (gratis o de pago) [1111/bpa.12089](#)

AUTORES / AUTHORS: - Lafay-Cousin L; Hader W; Wei X; Nordal R; Strother D; Chan J

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Hematology Oncology and Bone Marrow Transplantation, Alberta Children's Hospital, Calgary, Alberta, Canada.

RESUMEN / SUMMARY: - Maturation in CNS embryonal tumors is an uncommon phenomenon that is mainly reported in the context of specific histological subgroups

of medulloblastoma. In this report we describe 2 cases of histological maturation in patients with supratentorial PNETs with strikingly different outcomes. We discuss the potential impact of such findings on treatment and outcome.

[166]

TÍTULO / TITLE: - Loss of CIC and FUBP1 expressions are potential markers of shorter time to recurrence in oligodendroglial tumors.

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

REVISTA / JOURNAL: - Mod Pathol. 2013 Sep 13. doi: 10.1038/modpathol.2013.165.

●● [Enlace al texto completo \(gratis o de pago\) 1038/modpathol.2013.165](#)

AUTORES / AUTHORS: - Chan AK; Pang JC; Chung NY; Li KK; Poon WS; Chan DT; Shi Z; Chen L; Zhou L; Ng HK

INSTITUCIÓN / INSTITUTION: - 1] Department of Anatomical and Cellular Pathology, Chinese University of Hong Kong, Hong Kong, China [2] The Chinese University of Hong Kong-Shenzhen Research Institute, Shenzhen, China.

RESUMEN / SUMMARY: - Combined deletion of chromosomes 1p and 19q is a prognostic marker in oligodendroglial tumors. Recent studies in oligodendroglial tumors have unveiled recurrent mutations of CIC (homolog of *Drosophila capicua*) and FUBP1 (far upstream element binding protein 1) that are located on 19q13 and 1p31, respectively. However, the impact of CIC and FUBP1 mutations on their protein expressions has not been examined. The aims of this study were to correlate the expression patterns of CIC and FUBP1 with their mutation profiles and to evaluate the clinical relevance of these molecular markers in 55 oligodendroglial tumors diagnosed in 47 adult patients. Using direct sequencing, somatic mutations of CIC and FUBP1 were identified in 47% (22/47) and 16% (7/45) of oligodendroglial tumors, respectively. Immunohistochemical analysis revealed loss of CIC or FUBP1 protein expression in 36% (20/55) and 16% (9/55) of oligodendroglial tumors examined. Somatic mutation was significantly associated with absent protein expression for both genes (CIC, $P=0.01$; FUBP1, $P=0.00001$). Four tumors with undetectable CIC mutations exhibited absent CIC expression, suggesting that CIC inactivation could be mediated by mechanisms other than mutations and genomic loss. Univariate survival analysis revealed that 1p/19q codeletion was significantly associated with overall survival ($P=0.05$). Loss of CIC expression was significantly correlated with shorter progression-free survival ($P=0.03$), whereas CIC alteration (mutation or null expression) with worse overall survival ($P=0.05$). Absent FUBP1 expression was linked with unfavorable progression-free survival ($P=0.02$) and overall survival ($P=0.01$). In 16 tumors with 1p/19q codeletion, CIC mutation was associated with unfavorable survival ($P=0.01$). There was a correlation between lack of CIC or FUBP1 expression and poor progression-free survival ($P=0.004$; $P=0.0003$). No molecular markers showed association with survival in oligodendroglial tumors lacking 1p/19q codeletion. We conclude that absent CIC and

FUBP1 expressions are potential markers of shorter time to recurrence and CIC mutation a potential marker of worse prognosis, especially in tumors carrying 1p/19q codeletion. Modern Pathology advance online publication, 13 September 2013; doi:10.1038/modpathol.2013.165.

[167]

TÍTULO / TITLE: - Automated Detection of Human Brain Tumors Using in Vivo 1H MR Spectra of Healthy Brain Tissue.

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

REVISTA / JOURNAL: - Biomed Tech (Berl). 2013 Sep 7. pii: /j/bmte.2013.58.issue-s1-M/bmt-2013-4308/bmt-2013-4308.xml. doi: 10.1515/bmt-2013-4308.

●● Enlace al texto completo (gratis o de pago) [1515/bmt-2013-4308](#)

AUTORES / AUTHORS: - Hoffmann C; Wille A; Busch M; Winter S

[168]

TÍTULO / TITLE: - Quantitative assessment of the association between +61^a>G polymorphism of epidermal growth factor gene and susceptibility to glioma.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Aug 21.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1052-0](#)

AUTORES / AUTHORS: - Tao Y; Liang G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, General Hospital of Shenyang Military Area Command, Shenyang, 110840, China, yingqun_tao@163.com.

RESUMEN / SUMMARY: - Numerous studies have investigated the risk of cancer associated with the polymorphism of epidermal growth factor (EGF) 61^a>G, but results have been inconsistent. We performed this meta-analysis to drive a more precise estimation of the association between this polymorphism and risk of glioma. A comprehensive search was conducted to identify all case-control studies on the EGF +61^a>G polymorphism and glioma risk. Odds ratios (ORs) and 95 % confidence intervals (95 % CIs) were calculated to assess the strength of the association. Statistical analysis was performed with the software program Stata (version 12.0). A total of ten eligible studies, including 1,888 cases and 2,836 controls were included in this work. Overall, there was a significant association between EGF +61^a>G polymorphism and glioma risk in the allele model (OR = 1.419, 95 % CI = 1.144-1.759, P = 0.001). In the subgroup analysis by ethnicity, significant associations were also found in Asian populations under all different genetic models (homozygote model: OR = 1.727, 95 % CI = 1.310-2.275, P = 0.000; heterozygote model: OR = 1.202, 95 % CI = 1.023-1.413, P = 0.025; dominant model: OR = 1.279, 95 % CI = 1.096-1.491, P = 0.002; recessive model: OR = 1.590, 95 % CI = 1.221-2.070, P = 0.001; and A-allele versus G-allele OR = 1.600, 95 % CI

= 1.145-2.236, P = 0.006). However, no significant associations were found among Caucasians in all comparison models. In conclusion, the results suggest that there is a significant association between EGF +61^a>G polymorphism and glioma risk among Asians.

PTPTPTP - JOURNAL ARTICLE ----- [169]

TÍTULO / TITLE: - Quercetin Increases the Efficacy of Glioblastoma Treatment Compared to Standard Chemoradiotherapy by the Suppression of PI-3-Kinase-Akt Pathway.

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

REVISTA / JOURNAL: - Nutr Cancer. 2013 Sep 13.

●● Enlace al texto completo (gratis o de pago) 1080/01635581.2013.810291

AUTORES / AUTHORS: - Pozsgai E; Bellyei S; Cseh A; Boronkai A; Racz B; Szabo A; Sumegi B; Hocsak E

INSTITUCIÓN / INSTITUTION: - a Department of Biochemistry and Medical Chemistry , University of Pecs , Pecs , Hungary.

RESUMEN / SUMMARY: - The goal of the present study was to compare the efficacy of treatment with irradiation (IR), temozolomide, and quercetin, alone, or in combinations, on 2 glioblastoma cell lines, DBTRG-05 and U-251. Cell viability assay, flow cytometry analysis, colony formation assay, and Western blot analysis were used to compare the effects of treatment on the 2 cell lines. The greatest reduction in cell viability and colony formation was observed when cells were treated with a combination of the agents including quercetin. The treatment of cells with the combination of IR and quercetin was equal to the efficiency of the combination of IR and temozolomide in decreasing cell viability as well as colony formation. Quercetin alone, or in combination with IR, increased the cleavage of caspase-3 and PARP-1 showing an activated apoptosis and significantly reduced the level of phospho-Akt. Moreover, these treatments increased the levels of phospho-ERK, phospho-JNK, phospho-p38, and phospho-RAF1. Our data indicate that the supplementation of standard therapy with quercetin increases efficacy of treatment of experimental glioblastoma through synergism in the induction of apoptosis via the cleavage of caspase-3 and PARP-1 and by the suppression of the activation of Akt pathway.

[170]

TÍTULO / TITLE: - Quantitative assessment of the association between TP53 Arg72Pro polymorphism and risk of glioma.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Sep 18.

●● Enlace al texto completo (gratis o de pago) 1007/s13277-013-1101-8

AUTORES / AUTHORS: - Zhang F; Li D; Li Y; Li H; Sun J; Li X; Li X

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Jinan Central Hospital Affiliated to Shandong University, Jinan, 250013, China.

RESUMEN / SUMMARY: - Many studies have investigated on the association between TP53 Arg72Pro polymorphism and risk of glioma, but the impact of TP53 Arg72Pro polymorphism on glioma risk is unclear owing to the obvious inconsistency among those studies. To shed light on these inconclusive findings and get a quantitative assessment of the association between the TP53 Arg72Pro polymorphism and risk of glioma, we conducted a meta-analysis of eligible studies. We searched PubMed and Embase databases for studies investigating on the association between the TP53 Arg72Pro polymorphism and risk of glioma. The pooled odds ratios (OR) with their 95 % confidence intervals (95 % CI) was calculated to assess the association between the TP53 Arg72Pro polymorphism and risk of glioma. A total of 12 studies were finally included into the meta-analysis. Meta-analysis of the 12 studies showed that TP53 Arg72Pro polymorphism was not associated with the risk of glioma (OR_{Pro vs. Arg} = 1.07, 95 % CI 0.93 approximately 1.22; OR_{ProPro vs. ArgArg} = 1.02, 95 % CI 0.85 approximately 1.22; OR_{ProPro/ArgPro vs. ArgArg} = 1.06, 95 % CI 0.85 approximately 1.34; and OR_{ProPro vs. ArgArg/ArgPro} = 1.07, 95 % CI 0.91 approximately 1.27). Subgroup analyses by ethnicity further identified that TP53 Arg72Pro polymorphism was not associated with the risk of glioma in Caucasians. However, there was a mild association between the TP53 Arg72Pro polymorphism and risk of glioma in Asians (OR_{ProPro vs. ArgArg/ArgPro} = 1.42, 95 % CI 1.00 approximately 2.02). Thus, there is limited evidence for the association between the TP53 Arg72Pro polymorphism and risk of glioma, and more studies are needed to provide a more comprehensive assessment of the association in Asians.

[171]

TÍTULO / TITLE: - Association of the interleukin-4Ralpha rs1801275 and rs1805015 polymorphisms with glioma risk.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Aug 27.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s13277-013-1080-9](#)

AUTORES / AUTHORS: - Guo J; Shi L; Li M; Xu J; Yan S; Zhang C; Sun G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Fourth Affiliated Hospital of Nantong University, First Hospital of Yancheng, Yancheng, 224001, People's Republic of China.

RESUMEN / SUMMARY: - Potential single-nucleotide polymorphisms (SNPs) of interleukin-4 receptor alpha (IL-4Ralpha) rs1801275 and rs1805015 have been implicated in glioma risk; however, the findings of previous published case-control studies are conflicting and inconclusive. We performed the updated meta-analysis with the aim to provide a more precise estimate for the role of interleukin-4Ralpha

SNPs in glioma risk. The pooled odds ratios (ORs) with 95 % confidence intervals (CIs) were used to evaluate the strength of the gene association. Overall, the pooled analysis showed that the IL-4Ralpha rs1801275 polymorphism was associated with a decreased risk of glioma in the comparison of G vs. A (OR = 0.87, 95 % CI = 0.76-0.99, P OR = 0.041). Subgroup analysis by ethnicity revealed that the IL-4Ralpha rs1801275 variant G and GG + AG exerted a decreased risk effect on the development of glioma among Asians, but not Caucasians (G vs. A, OR = 0.81, 95 % CI = 0.69-0.95, P OR = 0.011; GG + AG vs. AA, OR = 0.80, 95 % CI = 0.66-0.96, P OR = 0.018). However, the IL-4Ralpha rs1805015 polymorphism did not modify the risk of glioma. Sensitivity analysis confirmed the reliability for all of the results. Our meta-analysis suggests that the polymorphism of IL-4Ralpha rs1801275 but not IL-4Ralpha rs1805015 plays a protective role in the glioma pathogenesis, particularly among Asians.

[172]

TÍTULO / TITLE: - Antiproliferative Effects of PACAP and VIP in Serum-Starved Glioma Cells.

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

REVISTA / JOURNAL: - J Mol Neurosci. 2013 Oct;51(2):503-13. doi: 10.1007/s12031-013-0076-7. Epub 2013 Jul 31.

●● Enlace al texto completo (gratis o de pago) [1007/s12031-013-0076-7](#)

AUTORES / AUTHORS: - D'Amico AG; Scuderi S; Saccone S; Castorina A; Drago F; D'Agata V

INSTITUCIÓN / INSTITUTION: - Section of Anatomy and Histology, Department of Bio-Medical Sciences, University of Catania, Via S.Sofia, 87, 95123, Catania, Italy.

RESUMEN / SUMMARY: - Emerging evidence have suggested that calorie restriction (CR) is a reliable method to decrease cancer development since it produces changes in tumor microenvironment that interfere with cell proliferation, tissue invasion, and formation of metastases. Studies on the role of pituitary adenylate cyclase-activating polypeptide (PACAP) and vasoactive intestinal peptide (VIP) in cancer cells indicate that their influence on cell growth is either cell type specific or dependent on culture conditions. Evidence showing the effect of PACAP and VIP in glioma cells grown under conditions mimicking CR are currently unavailable. Therefore, we explored the effects of both PACAP and VIP in C6 glioma cells either grown in a normal growth medium or exposed to serum starvation, to resemble an acute condition of CR. Cell viability, expression of proteins related to cell proliferation (cyclin D1), apoptosis (Bcl2, p53, and cleaved caspase-3), and cell malignancy (GFAP and nestin) were assessed by MTT assay, immunoblot, and immunolocalization, respectively. Results demonstrated that CR significantly decreased cell proliferation, reduced levels of cyclin D1 and Bcl2, and increased the expression of p53 and cleaved caspase-3. Surprisingly, all of these CR-

driven effects were further exacerbated by PACAP or VIP treatment. We also found that PACAP or VIP prevented GFAP decrease caused by CR and further reduced the expression of nestin, a prognostic marker of malignancy. In conclusion, these data demonstrate that PACAP and VIP possess antiproliferative properties against glioma cells that depend on the specific culture settings, further supporting the idea that CR might offer new avenues to improve peptide-oriented glioma cancer treatment.

[173]

TÍTULO / TITLE: - Glutathione-sensitive RGD-poly(ethylene glycol)-SS-polyethylenimine for intracranial glioblastoma targeted gene delivery.

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

REVISTA / JOURNAL: - J Gene Med. 2013 Aug;15(8-9):291-305. doi: 10.1002/jgm.2726.

●● Enlace al texto completo (gratis o de pago) [1002/jgm.2726](#)

AUTORES / AUTHORS: - Lei Y; Wang J; Xie C; Wagner E; Lu W; Li Y; Wei X; Dong J; Liu M

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Smart Drug Delivery, Ministry of Education and PLA, Department of Pharmaceutics, School of Pharmacy, Fudan University, Shanghai, China.

RESUMEN / SUMMARY: - BACKGROUND: Reductively reversible and hydrolytically degradable cationic polymers have been used as gene delivery systems. The present study aimed to enhance the low transfection efficiency caused by PEGylation by taking advantage of a nonviral vector containing a disulfide linkage. METHODS: The novel reducible targeted gene vector c(RGDyK)-poly(ethylene glycol)-SS-polyethylenimine (RGD-PEG-SS-PEI), representing a combination of RGD-PEG with PEI through a disulfide linkage, was synthesized and its reduction-sensitivity was tested in the presence of glutathione. The RGD-PEG-SS-PEI/pDNA complexes were formed and their stability was evaluated by agarose gel electrophoresis in both phosphate-buffered saline and Dulbecco's modified Eagle's medium with 10% serum. In vitro transfection efficiency and cell viability assay of the different polymers was performed for U87 cells using pEGFP-N2 and pGL4.2 reporter gene systems. RGD-PEG-SS-PEI/pDsRED-N1 and RGD-PEG-PEI/pDsRED-N1 complexes were injected intravenously into the U87 cell-bearing nude mice via their tail vein to investigate in vivo gene expression. RESULTS: RGD-PEG-SS-PEI has been synthesized successfully and its reduction-sensitivity was confirmed in the presence of glutathione. The RGD-PEG-SS-PEI/pDNA complexes demonstrated good stability in both conditions. In comparison with mPEG-PEI/pDNA for gene delivery, the RGD-PEG-SS-PEI/pDNA complex provided improved levels of transfection efficiency and reduced cytotoxicity when tested in U87 cells in vitro, and also enhanced levels of gene expression in the brains of intracranial U87 glioblastoma-bearing mice as demonstrated using dsRed gene transfer and bioimaging in vivo. CONCLUSIONS: The results of the present study suggest that RGD-PEG-SS-PEI

represents a promising candidate for further study in glioblastoma and combined gene therapies. Copyright © 2013 John Wiley & Sons, Ltd.

[174]

TÍTULO / TITLE: - A high Notch pathway activation predicts response to gamma secretase inhibitors in proneural subtype of glioma tumor initiating cells.

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

REVISTA / JOURNAL: - Stem Cells. 2013 Aug 27. doi: 10.1002/stem.1528.

●● [Enlace al texto completo \(gratis o de pago\) 1002/stem.1528](#)

AUTORES / AUTHORS: - Saito N; Fu J; Zheng S; Yao J; Wang S; Liu DD; Yuan Y; Sulman EP; Lang FF; Colman H; Verhaak RG; Yung WK; Koul D

INSTITUCIÓN / INSTITUTION: - Brain Tumor Center, Department of Neuro-Oncology, The University of Texas MD Anderson Cancer Center, Houston, Texas, USA.

RESUMEN / SUMMARY: - Genomic, transcriptional, and proteomic analyses of brain tumors reveal subtypes that differ in pathway activity, progression, and response to therapy. However, a number of small molecule inhibitors under development vary in strength of subset and pathway-specificity, with molecularly targeted experimental agents tending toward stronger specificity. The Notch signaling pathway is an evolutionarily conserved pathway that plays an important role in multiple cellular and developmental processes. We investigated the effects of Notch pathway inhibition in glioma tumor initiating cell (GIC, hereafter GIC) populations using gamma secretase inhibitors. Drug cytotoxicity testing of 16 GICs showed differential growth responses to the inhibitors, stratifying GICs into responders and non-responders. Responder GICs had an enriched proneural gene signature in comparison to non-responders. Also gene set enrichment analysis revealed 17 genes set representing active Notch signaling components NOTCH1, NOTCH3, HES1, MAML1, DLL-3, JAG2 etc., enriched in responder group. Analysis of TCGA expression data set identified a group (43.9%) of tumors with proneural signature showing high Notch pathway activation suggesting gamma-secretase inhibitors might be of potential value to treat that particular group of proneural GBM. Inhibition of Notch pathway by gamma-secretase inhibitor treatment attenuated proliferation and self-renewal of responder GICs and induces both neuronal and astrocytic differentiation. In vivo evaluation demonstrated prolongation of median survival in an intracranial mouse model. Our results suggest that proneural GBM characterized by high Notch pathway activation may exhibit greater sensitivity to gamma-secretase inhibitor treatment, holding a promise to improve the efficiency of current glioma therapy. Stem Cells 2013.

[175]

TÍTULO / TITLE: - LDLR-mediated peptide-22-conjugated nanoparticles for dual-targeting therapy of brain glioma.

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

REVISTA / JOURNAL: - Biomaterials. 2013 Dec;34(36):9171-82. doi: 10.1016/j.biomaterials.2013.08.039. Epub 2013 Sep 3.

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

[1016/j.biomaterials.2013.08.039](#)

AUTORES / AUTHORS: - Zhang B; Sun X; Mei H; Wang Y; Liao Z; Chen J; Zhang Q; Hu Y; Pang Z; Jiang X

INSTITUCIÓN / INSTITUTION: - Institute of Hematology, Union Hospital, Tongji Medical College, Huazhong University of Science & Technology, Wuhan, Hubei 430022, PR China.

RESUMEN / SUMMARY: - Chemotherapy for brain glioma has been of limited benefit due to the inability of drugs to penetrate the blood-brain barrier (BBB) and non-selective drug accumulation in the entire brain. To obviate these limitations, dual-targeting paclitaxel-loaded nanoparticles were developed by decoration with peptide-22 (PNP-PTX), a peptide with special affinity for low-density lipoprotein receptor (LDLR), to transport the drug across the BBB, and then target brain tumour cells. Enzyme-linked immune sorbent assay (ELISA) revealed that LDLR was over-expressed in C6 cells and brain capillary endothelial cells (BCECs), but low LDLR expression was observed in H92c(2-1) cells. Nanoparticle uptake demonstrated that peptide-22-decorated nanoparticles significantly increased the cellular uptake of nanoparticles by C6 cells and BCECs but not by H92c(2-1) cells, and excess free peptide-22 significantly inhibited the cellular uptake of PNP by C6 cells and BCECs. Cellular uptake mechanism experiments showed that PNP uptake by both BCECs and C6 cells was energy-dependant and caveolae- and clathrin-mediated endocytosis pathway other than macropinocytosis were involved. Dual-targeting effects in an in vitro BBB model showed that peptide-22 decoration on nanoparticles loaded with paclitaxel significantly increased the transport ratio of PTX across the BBB and induced apoptosis of C6 glioma cells below the BBB, and these effects were significantly inhibited by excess free peptide-22. Ex vivo and in vivo fluorescence imaging indicated that PNP labelled with a near-infrared dye could permeate the BBB and accumulate more in the glioma site than unmodified NP. Glioma section observed by fluorescence microscopy further demonstrated PNP distributed more extensively in both glioma bulk and infiltrative region around than unmodified NP. Pharmacodynamics results revealed that the median survival time of glioma-bearing mice administered with dual-targeting PNP-PTX was significantly prolonged compared with that of any other group. TUNEL assay and H&E staining showed that PNP-PTX treatment induced significantly more cell apoptosis and tumour necrosis compared with other treatments. Taken together, these promising results suggested that the dual-targeting drug delivery system might have great potential for glioma therapy in clinical applications.

[176]

TÍTULO / TITLE: - Oncology scan-low-grade gliomas: predicting and changing outcome.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Oct 1;87(2):234-6. doi: 10.1016/j.ijrobp.2013.05.009.

●● Enlace al texto completo (gratis o de pago) [1016/j.ijrobp.2013.05.009](#)

AUTORES / AUTHORS: - Kirkpatrick JP

[177]

TÍTULO / TITLE: - TNF-like weak inducer of apoptosis (TWEAK) promotes glioblastoma cell chemotaxis via Lyn activation.

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

REVISTA / JOURNAL: - Carcinogenesis. 2013 Aug 23.

●● Enlace al texto completo (gratis o de pago) [1093/carcin/bgt289](#)

AUTORES / AUTHORS: - Dhruv HD; Whitsett TG; Jameson NM; Patel F; Winkles JA; Berens ME; Tran NL

INSTITUCIÓN / INSTITUTION: - Cancer and Cell Biology Division, The Translational Genomics Research Institute (TGen), Phoenix, AZ.

RESUMEN / SUMMARY: - The long-term survival of patients with glioblastoma (GB) is compromised by the proclivity for local invasion into the surrounding normal brain, escaping surgical resection and contributing to therapeutic resistance. Tumor necrosis factor-like weak inducer of apoptosis (TWEAK), a member of the tumor necrosis factor superfamily, can stimulate glioma cell invasion via binding to fibroblast growth factor-inducible 14 (Fn14) and subsequent activation of the Rho GTPase family member Rac1. Here, we demonstrate that TWEAK acts as a chemotactic factor for glioma cells, a potential process for driving cell invasion into the surrounding brain tissue. TWEAK exposure induced the activation of Src-family kinases (SFK), and pharmacologic suppression of SFK activity inhibited TWEAK-induced chemotactic migration. We employed a multiplexed Luminex assay and identified Lyn as a candidate SFK activated by TWEAK. Depletion of Lyn suppressed TWEAK-induced chemotaxis and Rac1 activity. Furthermore, Lyn gene expression levels increase with primary glioma tumor grade and inversely correlate with patient survival. These results show that TWEAK-induced glioma cell chemotaxis is dependent upon Lyn kinase function, and thus, provides opportunities for therapeutic targeting of this deadly disease.

[178]

TÍTULO / TITLE: - Adrenal Ganglioneuroma: Features and outcomes of 27 cases at a referral cancer center.

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

REVISTA / JOURNAL: - Clin Endocrinol (Oxf). 2013 Aug 29. doi: 10.1111/cen.12320.

●● Enlace al texto completo (gratis o de pago) [1111/cen.12320](#)

AUTORES / AUTHORS: - Shawa H; Elsayes KM; Javadi S; Morani A; Williams MD; Lee JE; Waguespack SG; Busaidy NL; Vassilopoulou-Sellin R; Jimenez C; Habra MA

INSTITUCIÓN / INSTITUTION: - Departments of Endocrine Neoplasia and Hormonal Disorders, The University of Texas MD Anderson Cancer Center, Houston, Texas, 77030.

RESUMEN / SUMMARY: - BACKGROUND: Adrenal ganglioneuroma (AGN) is a rare neurogenic tumor that can mimic other adrenal neoplasms. Limited information, mostly derived from small cases series, is available for AGN. METHODS: A retrospective review for AGNs seen at a tertiary referral center describing important features to distinguish AGN from other adrenal neoplasms. RESULTS: Out of 53 ganglioneuromas, 27 were AGNs. Median age was 31yr (range, 1.7-64 yr) and median tumor size was 8 cm (range, 1.5-20 cm). Seventeen AGNs (63 %) were detected incidentally and 9 patients (33%) presented with abdominal/ back discomfort. Catecholamine levels, available for 21 patients, were normal. On computed tomography (CT), most AGNs were homogenous and well-circumscribed with a median density of 32.5 Hounsfield Units (HU) on unenhanced CT; 40 HU on post- contrast venous phase; and 66.5 HU on delayed post-contrast phase. On magnetic resonance imaging (MRI), AGNs had hypointense signal on T1-weighted images with heterogeneous hyperintense signal on T2-weighted images. In 4 patients, there was no tumor growth during median follow-up of 48 months (range, 21-60 months). One patient had malignant peripheral nerve sheath tumor arising from AGN. Thirteen patients with resected AGN had no recurrence during a median follow-up of 50 months (range, 2-135 months). CONCLUSIONS: We herein describe the largest AGN series reported to date. Isolated AGNs do not produce catecholamines and have CT imaging characteristics that can help in distinguishing them from other adrenal and para-adrenal neoplasms. The natural history of AGNs is usually benign, although local extra-adrenal extension or malignant transformation can rarely occur. This article is protected by copyright. All rights reserved.

[179]

TÍTULO / TITLE: - Mature BDNF promotes the growth of glioma cells in vitro.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Sep 20. doi: 10.3892/or.2013.2746.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2746](#)

AUTORES / AUTHORS: - Xiong J; Zhou L; Lim Y; Yang M; Zhu YH; Li ZW; Zhou FH; 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, P.R. China.

RESUMEN / SUMMARY: - High-grade glioma is incurable and is associated with a short survival time and a poor prognosis. There are two forms of brain-derived neurotrophic factor (BDNF), proBDNF and mature BDNF, which exert opposite effects. Their diverse actions are mediated through two different transmembrane receptor signalling systems: p75NTR and TrkB. The important roles of the BDNF/TrkB signalling system in tumour cell proliferation and survival have been demonstrated. However, few studies have been able to distinguish mature BDNF from proBDNF due to the limitation of specific antibodies. Using specific proBDNF antibodies, we demonstrated that the proBDNF/p75NTR pathway appears to inhibit malignant glioma cell growth and migration. In the present study using specific mature BDNF antibodies, we found that mature BDNF inhibited C6 glioma cell apoptosis and increased cell growth and migration in vitro. Our data suggest that the counterbalance between mature BDNF and proBDNF may regulate tumour growth.

[180]

TÍTULO / TITLE: - Transferrin-conjugated magnetic silica PLGA nanoparticles loaded with doxorubicin and paclitaxel for brain glioma treatment.

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

REVISTA / JOURNAL: - Biomaterials. 2013 Nov;34(33):8511-20. doi: 10.1016/j.biomaterials.2013.07.075. Epub 2013 Aug 6.

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

1016/j.biomaterials.2013.07.075

AUTORES / AUTHORS: - Cui Y; Xu Q; Chow PK; Wang D; Wang CH

INSTITUCIÓN / INSTITUTION: - School of Materials Science and Engineering, Tongji University, 4800 Caoan Road, Shanghai 201804, PR China; Department of Chemical and Biomolecular Engineering, National University of Singapore, 4 Engineering Drive 4, Singapore 117576, Singapore.

RESUMEN / SUMMARY: - The effective treatment of malignant brain glioma is hindered by the poor transport across the blood-brain barrier (BBB) and the low penetration across the blood-tumor barrier (BTB). In this study, transferrin-conjugated magnetic silica PLGA nanoparticles (MNP-MSN-PLGA-Tf NPs) were formulated to overcome these barriers. These NPs were loaded with doxorubicin (DOX) and paclitaxel (PTX), and their anti-proliferative effect was evaluated in vitro and in vivo. The in vitro cytotoxicity of drug-loaded NPs was evaluated in U-87 cells. The delivery and the subsequent cellular uptake of drug-loaded NPs could be enhanced by the presence of

magnetic field and the usage of Tf as targeting ligand, respectively. In particular, cells treated with DOX-PTX-NPs-Tf with magnetic field showed the highest cytotoxicity as compared to those treated with DOX-PTX-NPs-Tf, DOX-PTX-NPs, DOX-PTX-NPs-Tf with free Tf. The in vivo therapeutic efficacy of drug-loaded NPs was evaluated in intracranial U-87 MG-luc2 xenograft of BALB/c nude mice. In particular, the DOX-PTX-NPs-Tf treatment exhibited the strongest anti-glioma activity as compared to the PTX-NPs-Tf, DOX-NPs-Tf or DOX-PTX-NPs treatment. Mice did not show acute toxicity after administrating with blank MNP-MSN-PLGA-Tf NPs. Overall, MNP-MSN-PLGA-Tf NPs are promising carriers for the delivery of dual drugs for effective treatment of brain glioma.

[181]

TÍTULO / TITLE: - Choline transporter-targeting and co-delivery system for glioma therapy.

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

REVISTA / JOURNAL: - Biomaterials. 2013 Dec;34(36):9142-8. doi: 10.1016/j.biomaterials.2013.08.030. Epub 2013 Aug 28.

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

[1016/j.biomaterials.2013.08.030](#)

AUTORES / AUTHORS: - Li J; Guo Y; Kuang Y; An S; Ma H; Jiang C

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Smart Drug Delivery (Fudan University), Ministry of Education, Department of Pharmaceutics, School of Pharmacy, Fudan University, 826 Zhangheng Road, Shanghai 201203, China.

RESUMEN / SUMMARY: - Combination of gene therapy and chemotherapy is a promising approach for glioma therapy. In this study, a co-delivery system of plasmid encoding human tumor necrosis factor-related apoptosis-inducing ligand (pORF-hTRAIL, Trail) and doxorubicin (DOX) has been simply constructed in two steps. Firstly, DOX was intercalated into Trail to form a stable complex. Secondly, DOX-Trail complex was condensed by Dendrigrft poly-l-lysine (DGL) to form a nanoscaled co-delivery system. Choline transporters are both expressed on blood-brain barrier (BBB) and glioma, Herein, a choline derivate with high choline transporter affinity was chosen as BBB and glioma dual targeting ligand. Choline-derivate modified co-delivery system showed higher cellular uptake efficiency and cytotoxicity than unmodified co-delivery system in U87 MG cells. In comparison with single medication or unmodified delivery system, Choline-derivate modified co-delivery system induced more apoptosis both in vitro and in vivo. The therapeutic efficacy on U87 MG bearing xenografts further confirmed the predominance of this dual targeting and co-delivery system.

[182]

TÍTULO / TITLE: - Anticancer effects of niclosamide in human glioblastoma.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Aug 1;19(15):4124-36. doi: 10.1158/1078-0432.CCR-12-2895.

●● [Enlace al texto completo \(gratis o de pago\) 1158/1078-0432.CCR-12-2895](#)

AUTORES / AUTHORS: - Wieland A; Trageser D; Gogolok S; Reinartz R; Hofer H; Keller M; Leinhaas A; Schelle R; Normann S; Klaas L; Waha A; Koch P; Fimmers R; Pietsch T; Yachnis AT; Pincus DW; Steindler DA; Brustle O; Simon M; Glas M; Scheffler B

INSTITUCIÓN / INSTITUTION: - Stem Cell Pathologies, Institute of Medical Biometry, Informatics and Epidemiology, University of Bonn Medical Center, Bonn, Germany.

RESUMEN / SUMMARY: - **PURPOSE:** Glioblastoma is a highly malignant, invariably fatal brain tumor for which effective pharmacotherapy remains an unmet medical need. **EXPERIMENTAL DESIGN:** Screening of a compound library of 160 synthetic and natural toxic substances identified the antihelminthic niclosamide as a previously unrecognized candidate for clinical development. Considering the cellular and interindividual heterogeneity of glioblastoma, a portfolio of short-term expanded primary human glioblastoma cells (pGBM; n = 21), common glioma lines (n = 5), and noncancer human control cells (n = 3) was applied as a discovery platform and for preclinical validation. Pharmacodynamic analysis, study of cell-cycle progression, apoptosis, cell migration, proliferation, and on the frequency of multipotent/self-renewing pGBM cells were conducted in vitro, and orthotopic xenotransplantation was used to confirm anticancer effects in vivo. **RESULTS:** Niclosamide led to cytostatic, cytotoxic, and antimigratory effects, strongly reduced the frequencies of multipotent/self-renewing cells in vitro, and after exposure significantly diminished the pGBMs' malignant potential in vivo. Mechanism of action analysis revealed that niclosamide simultaneously inhibited intracellular WNT/CTNNB1-, NOTCH-, mTOR-, and NF-kappaB signaling cascades. Furthermore, combinatorial drug testing established that a heterozygous deletion of the NFKBIA locus in glioblastoma samples could serve as a genomic biomarker for predicting a synergistic activity of niclosamide with temozolomide, the current standard in glioblastoma therapy. **CONCLUSIONS:** Together, our data advocate the use of pGBMs for exploration of compound libraries to reveal unexpected leads, for example, niclosamide that might be suited for further development toward personalized clinical application.

[183]

TÍTULO / TITLE: - Galectin-3 expression in pituitary adenomas as a marker of aggressive behavior.

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

REVISTA / JOURNAL: - Hum Pathol. 2013 Sep 2. pii: S0046-8177(13)00237-2. doi: 10.1016/j.humpath.2013.05.020.

●● Enlace al texto completo (gratis o de pago) [1016/j.humpath.2013.05.020](https://doi.org/10.1016/j.humpath.2013.05.020)

AUTORES / AUTHORS: - Righi A; Morandi L; Leonardi E; Farnedi A; Marucci G; Sisto A; Frank G; Faustini-Fustini M; Zoli M; Mazzatenta D; Agati R; Foschini MP

INSTITUCIÓN / INSTITUTION: - Department of Biomedical and Neuromotor Sciences, University of Bologna, Section of Anatomic Pathology "M. Malpighi," Bellaria Hospital, Bologna 40139, Italy; Department Biomedical Sciences and Human Oncology, University of Turin, Turin 10126, Italy.

RESUMEN / SUMMARY: - The purpose of this retrospective study was to investigate the role of galectin-3 (LGALS3) expression in predicting the recurrence and the progression potential of prolactin (PRL) and adrenocorticotrophic hormone (ACTH)-producing pituitary adenomas and its correlation with the RUNX1 and RUNX2 transcription factors involved in the regulation mechanism of LGALS3 expression. Clinical, neuroradiologic, and follow-up data from 92 pituitary adenomas, including 59 PRL cell adenomas and 33 ACTH-functioning pituitary adenomas, were collected. The LGALS3 expression was analyzed by both immunohistochemistry and quantitative real time-polymerase chain reaction, whereas RUNX1 and RUNX2 were analyzed by quantitative real time-polymerase chain reaction only. The data obtained indicated that invasive growth with suprasellar extension, Ki-67 labeling index, and LGALS3 immunohistochemical and/or LGALS3 messenger RNA levels are the most important histologic features for assessing a high risk of progression or recurrence of PRL- and ACTH-functioning pituitary adenomas. Multivariate Cox regression analysis assessed LGALS3 immunohistochemical positivity in at least 30% of neoplastic cells and/or LGALS3 messenger RNA positivity ($P < .001$) as strong predictive factors of recurrence/tumor progression followed by a Ki-67 labeling index greater than 3% ($P = .019$) in the 81 cases in which follow-up data were available. In addition, a significant correlation between LGALS3 and RUNX1 expression levels ($P = .0435$) was found. This retrospective immunohistochemical and molecular study demonstrated that LGALS3 expression appeared to be a predictive factor of the aggressive behavior of PRL- and ACTH-functioning pituitary adenomas, and its expression was correlated with RUNX1 expression levels.

[184]

TÍTULO / TITLE: - Epidemiology of Surgically Treated Primary Spinal Cord Tumors in Miyagi, Japan.

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

REVISTA / JOURNAL: - Neuroepidemiology. 2013 Aug 22;41(3-4):156-160.

●● Enlace al texto completo (gratis o de pago) [1159/000353561](https://doi.org/10.1159/000353561)

AUTORES / AUTHORS: - Ozawa H; Aizawa T; Kanno H; Sano H; Itoi E

INSTITUCIÓN / INSTITUTION: - Department of Orthopedic Surgery, Tohoku University School of Medicine, Sendai, Japan.

RESUMEN / SUMMARY: - Background: Data for spinal cord tumors have not been collected in the past on a population-based level in Japan. The objective of the study was to provide detailed estimates of the population-based incidence of surgically treated primary spinal cord tumors in Japan. Methods: Incidence of primary spinal cord tumors was estimated from patients treated surgically between 2008 and 2010 in Miyagi Prefecture. The overall incidence of spinal cord tumors was calculated, as well as the individual incidence rates according to age group, gender, pathology and tumor location. Results: Of the primary spinal cord tumors identified (n = 112), 98% were nonmalignant. The overall incidence of spinal cord tumors was 1.60/100,000 person-years with an incidence of 1.77/100,000 in males and 1.45/100,000 in females. The incidence rate was highest in the age group of 60-64 years (3.04/100,000). Schwannoma accounted for 56% and meningioma accounted for 13% of the tumors. The histological type with the highest incidence was schwannoma (0.90/100,000), followed by meningioma (0.20/100,000). Conclusions: Due to the high incidence of schwannomas, the overall incidence of spinal cord tumors is higher in Japan than in Western countries, and Japanese males have a higher incidence than females, different from that observed in Western countries.

[185]

TÍTULO / TITLE: - A case of oligodendroglioma with prominent neuronal differentiation.

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

REVISTA / JOURNAL: - Hum Pathol. 2013 Oct;44(10):2353-9. doi: 10.1016/j.humpath.2013.02.013. Epub 2013 May 6.

●● Enlace al texto completo (gratis o de pago) 1016/j.humpath.2013.02.013

AUTORES / AUTHORS: - Hirose T; Nobusawa S; Nakazato Y; Sasaki A

INSTITUCIÓN / INSTITUTION: - Department of Diagnostic Pathology, Tokushima Prefectural Central Hospital, Tokushima 770-8539, Japan. Electronic address: thirose@tph.gr.jp.

RESUMEN / SUMMARY: - We report a case of oligodendroglioma showing marked neuronal differentiation, which arose in the right frontal lobe of a 46-year-old woman. The resected tumor was composed of a mixture of oligodendroglioma, gangliocytoma, and neurocytoma areas with predominance of gangliocytoma-like areas. The oligodendroglioma areas showed immunoreactivity for Olig2 and mutant isocitrate dehydrogenase 1 protein, whereas the gangliocytoma and neurocytoma areas were positive for synaptophysin and NeuN. Ki-67 labeling index was approximately 5% to 10% in the oligodendroglioma areas. Molecular cytogenetic analyses demonstrated chromosomal losses of 1p and 19q and a mutation of isocitrate dehydrogenase 1 (G395A, R132H) in both the oligodendroglioma and gangliocytoma areas. These data suggest that this tumor is an oligodendroglioma associated with prominent neuronal differentiation. There seems to be a close relationship between oligodendroglial progenitor cells and neuronal cells.

[186]

TÍTULO / TITLE: - Methamphetamine inhibits voltage-gated potassium currents in NG108-15 cells: Possible contribution to large-conductance calcium-activated potassium channels.

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

REVISTA / JOURNAL: - Toxicol Lett. 2013 Sep 4. pii: S0378-4274(13)01293-9. doi: 10.1016/j.toxlet.2013.08.021.

●● Enlace al texto completo (gratis o de pago) 1016/j.toxlet.2013.08.021

AUTORES / AUTHORS: - Wang YJ; Chan MH; Chen HH

INSTITUCIÓN / INSTITUTION: - Center for Neuropsychiatric Research, National Health Research Institutes, 35 Keyan Road, Zhunan, Miaoli County 35053, Taiwan.

RESUMEN / SUMMARY: - Methamphetamine (MA), a highly abused amphetamine-like psychostimulant, has surged in popularity worldwide in the last decade. Repeated MA exposure has been shown to affect the alternative splice variant expression of large conductance Ca²⁺-activated K⁺ (BK) channels. It remains unclear whether MA affects BK channel activity. The present study investigated the effects of MA on BK channels in NG108-15 mouse neuroblastoma x rat glioma hybrid cells using whole-cell and cell-attached patch clamp techniques. In whole-cell recordings, the macroscopic K⁺ outward currents were inhibited by MA with an EC₅₀ of 146 μM, but not affected by dopamine (DA). It implies that DA is not involved in the effects of MA on K⁺ outward currents. In cell-attached patches, MA significantly decreased BK channel activity. Moreover, MA significantly decreased the BK channel opener NS1619-evoked whole-cell K⁺ outward currents and BK channel activity. Finally, the effect of MA on membrane potential was examined by current-clamp configuration. MA caused membrane depolarization and application of NS1619 returned the depolarized potential to resting value. These findings suggest that MA might act as an inhibitor of BK channels, and thereby increase the neuronal excitability and enhance neurotransmitter release.

[187]

TÍTULO / TITLE: - LPS induces mediators of neuroinflammation, cell proliferation, and GFAP expression in human astrocytoma cells U373MG: the anti-inflammatory and anti-proliferative effect of guggulipid.

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

REVISTA / JOURNAL: - Neurol Sci. 2013 Sep 7.

●● Enlace al texto completo (gratis o de pago) 1007/s10072-013-1530-6

AUTORES / AUTHORS: - Niranjana R; Nagarajan R; Hanif K; Nath C; Shukla R

INSTITUCIÓN / INSTITUTION: - Division of Pharmacology, CSIR-Central Drug Research Institute, Lucknow, Uttar Pradesh, India.

RESUMEN / SUMMARY: - Neuroinflammation has been considered to be an integrated part of human neurodegenerative diseases. In this study, we examined the effect of guggulipid on cell proliferation, nitrite release, interleukin IL-6 and IL-1 beta release, and expression of COX-2 and glial fibrillary acidic protein (GFAP) in LPS-stimulated U373MG cells. LPS significantly stimulated human astrocytoma cells U373MG by up-regulating these neuroinflammatory mediators. Guggulipid alone had no effect on the cell proliferation of U373MG cells. The up regulation in nitrite release, cell proliferation, and release of IL-6 and IL-1 beta in LPS stimulated human astrocytoma cells were dose-dependently inhibited by co-treatment with guggulipid. The expression level of COX-2 and GFAP proteins was up regulated by LPS but the increased level of COX-2 and GFAP was significantly down regulated by treatment with guggulipid. These data indicate that guggulipid has a modulatory effect on all these parameters, which might explain its beneficial effect in the treatment of neuroinflammation-associated disorders directly relating to human aspects.

[188]

TÍTULO / TITLE: - The relationship between brain tumor cell invasion of engineered neural tissues and in vivo features of glioblastoma.

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

REVISTA / JOURNAL: - Biomaterials. 2013 Nov;34(33):8279-90. doi: 10.1016/j.biomaterials.2013.07.006. Epub 2013 Jul 27.

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

[1016/j.biomaterials.2013.07.006](http://dx.doi.org/10.1016/j.biomaterials.2013.07.006)

AUTORES / AUTHORS: - Nayernia Z; Turchi L; Cosset E; Peterson H; Dutoit V; Dietrich PY; Tirefort D; Chneiweiss H; Lobrinus JA; Krause KH; Virolle T; Preynat-Seauve O

INSTITUCIÓN / INSTITUTION: - Department of Pathology and Immunology, Faculty of Medicine, University of Geneva, CH-1211 Geneva, Switzerland.

RESUMEN / SUMMARY: - Glioblastoma is an aggressive brain tumor characterized by its high propensity for local invasion, formation of secondary foci within the brain, as well as areas of necrosis. This study aims to (i) provide a technical approach to reproduce features of the disease in vitro and (ii) characterize the tumor/host brain tissue interaction at the molecular level. Human engineered neural tissue (ENT) obtained from pluripotent stem cells was generated and co-cultured with human glioblastoma-initiating cells. Within two weeks, glioblastoma cells invaded the nervous tissue. This invasion displayed features of the disease in vivo: a primary tumor mass, diffuse migration of invading single cells into the nervous tissue, secondary foci, as well as peritumoral cell death. Through comparative molecular analyses, this model allowed the identification of more than 100 genes that are specifically induced and up-

regulated by the nervous tissue/tumor interaction. Notably the type I interferon response, extracellular matrix-related genes were most highly represented and showed a significant correlation with patient survival. In conclusion, glioblastoma development within a nervous tissue can be engineered in vitro, providing a relevant model to study the disease and allows the identification of clinically-relevant genes induced by the tumor/host tissue interaction.

[189]

TÍTULO / TITLE: - The short chain cell-permeable ceramide (C6) restores cell apoptosis and perifosine sensitivity in cultured glioblastoma cells.

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

REVISTA / JOURNAL: - Mol Biol Rep. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) 1007/s11033-013-2666-4

AUTORES / AUTHORS: - Qin LS; Yu ZQ; Zhang SM; Sun G; Zhu J; Xu J; Guo J; Fu LS

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of Soochow University, No. 188, Shi-zi Street, Suzhou, 215000, Jiangsu, People's Republic of China.

RESUMEN / SUMMARY: - Primary glioblastoma multiforme is the most malignant form of astrocytic tumor with an average survival of approximately 12-14 months. The combination of novel Akt inhibitors with anti-cancer therapeutics has achieved improved anti-tumor efficiency. In the current study, we examined the synergistic anti-cancer ability of Akt inhibitor perifosine in combination with short-chain ceramide (C6) against glioblastoma cells (U87MG and U251MG), and studied the underlying mechanisms. We found that perifosine, which blocked Akt/mammalian target of rapamycin activation, only induced moderate cell death and few cell apoptosis in cultured glioblastoma cells. On the other hand, perifosine administration induced significant protective autophagy, which inhibited cell apoptosis induction. Inhibition of autophagy by 3-methyladenine or by autophagy-related gene-5 RNA interference significantly enhanced perifosine-induced apoptosis and cytotoxicity. We found that the short chain cell-permeable ceramide (C6) significantly enhanced cytotoxic effects of perifosine in cultured glioblastoma cells. For mechanism study, we observed that ceramide (C6) inhibited autophagy induction to restore cell apoptosis and perifosine sensitivity. In conclusion, our study suggests that autophagy inhibition by ceramide (C6) restores perifosine-induced apoptosis and cytotoxicity in glioblastoma cells.

[190]

TÍTULO / TITLE: - APO010, A Synthetic Hexameric CD95 Ligand, Induces Death of Human Glioblastoma Stem-like Cells.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Sep;33(9):3563-71.

AUTORES / AUTHORS: - Eisele G; Wolpert F; Decrey G; Weller M

INSTITUCIÓN / INSTITUTION: - Department of Neurology, University Hospital Zurich, Frauenklinikstrasse 26, CH-8091 Zurich, Switzerland. guenter.eisele@usz.ch.

RESUMEN / SUMMARY: - The treatment of glioblastoma remains a major challenge in the field of neuro-oncology. There is emerging evidence that glioblastomas consist of heterogeneous cell populations with a small subset of cells with stem cell-like properties which might be resistant to conventional therapy and are thus crucial for tumor recurrence. These glioma-initiating cells (GICs) are therefore an attractive therapeutic target. Death receptor activation is one promising approach of cancer therapy. The synthetic hexameric cluster of differentiation 95 (CD95) agonist APO010 exhibits strong antiglioma activity towards human glioma cell lines, as well as in cell cultures of primary glioblastoma. Here, we investigated the ability of APO010 to induce cell death in a panel of previously well-defined GIC lines. The GIC lines and their derived differentiated cultures expressed CD95 on the cell surface and were sensitive towards APO010-mediated cell death to a variable extent. Temozolomide enhanced sensitivity of GICs to APO010. APO010 warrants being further evaluated as a tool to target GICs.

[191]

TÍTULO / TITLE: - Treatment of recurrent lingual nerve end-neuroma: A case report.

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

REVISTA / JOURNAL: - Microsurgery. 2013 Sep 6. doi: 10.1002/micr.22171.

●● [Enlace al texto completo \(gratis o de pago\) 1002/micr.22171](#)

AUTORES / AUTHORS: - Bellamy JL; Steinbacher DM; Debrux JC; Magarakis M; Rosson GD

INSTITUCIÓN / INSTITUTION: - Department of Plastic and Reconstructive Surgery, The Johns Hopkins University, Baltimore, MD.

RESUMEN / SUMMARY: - A neuroma is a collection of disorganized nerve sprouts emanating from an interruption of axonal continuity, forming within a collagen scar as the nerve attempts to regenerate. Lingual neuroma formation secondary to iatrogenic trauma to the tongue is likely not uncommon; however, we could not find a report in the literature of treatment of a distal tongue end-neuroma treated by resection and implantation into muscle. Here we describe a patient who experienced debilitating chronic tongue pain after excision of a benign mass. After failing conservative management, the patient was taken to the operating room where an end-neuroma of the lingual nerve was identified and successfully treated by excision and burying of the free proximal stump in the mylohyoid muscle. At 17 months postoperatively, she remains pain free without dysesthesias. © 2013 Wiley Periodicals, Inc. Microsurgery, 2013.

[192]

TÍTULO / TITLE: - Adult brain tumors: clinical applications of magnetic resonance spectroscopy.

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

REVISTA / JOURNAL: - Neuroimaging Clin N Am. 2013 Aug;23(3):527-55. doi: 10.1016/j.nic.2013.03.002. Epub 2013 May 10.

●● Enlace al texto completo (gratis o de pago) [1016/j.nic.2013.03.002](#)

AUTORES / AUTHORS: - Brandao LA; Castillo M

INSTITUCIÓN / INSTITUTION: - Clinica Felipe Mattoso, Barra da Tijuca, Rio de Janeiro 30112011, Brazil. larabrandao.rad@terra.com.br

RESUMEN / SUMMARY: - Proton magnetic resonance spectroscopy (H-MRS) may be helpful in suggesting tumor histology and tumor grade and may better define tumor extension and the ideal site for biopsy compared with conventional magnetic resonance (MR) imaging. A multifunctional approach with diffusion-weighted imaging, perfusion-weighted imaging, and permeability maps, along with H-MRS, may enhance the accuracy of the diagnosis and characterization of brain tumors and estimation of therapeutic response. Integration of advanced imaging techniques with conventional MR imaging and the clinical history help to improve the accuracy, sensitivity, and specificity in differentiating tumors and nonneoplastic lesions.

[193]

TÍTULO / TITLE: - Minoxidil sulfate induced the increase in blood-brain tumor barrier permeability through ROS/RhoA/PI3K/PKB signaling pathway.

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

REVISTA / JOURNAL: - Neuropharmacology. 2013 Aug 23;75C:407-415. doi: 10.1016/j.neuropharm.2013.08.004.

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

[1016/j.neuropharm.2013.08.004](#)

AUTORES / AUTHORS: - Gu YT; Xue YX; Wang YF; Wang JH; Chen X; Shangguan QR; Lian Y; Zhong L; Meng YN

INSTITUCIÓN / INSTITUTION: - Department of Physiology, Life Science and Biology Pharmacopedia Institution, Shenyang Pharmaceutical University, Shenyang 110016, Liaoning Province, PR China. Electronic address: yanting-gu@163.com.

RESUMEN / SUMMARY: - Adenosine 5'-triphosphate-sensitive potassium channel (KATP channel) activator, minoxidil sulfate (MS), can selectively increase the permeability of the blood-tumor barrier (BTB); however, the mechanism by which this occurs is still under investigation. Using a rat brain glioma (C6) model, we first examined the expression levels of occludin and claudin-5 at different time points after intracarotid infusion of MS (30 µg/kg/min) by western blotting. Compared to MS treatment for 0

min group, the protein expression levels of occludin and claudin-5 in brain tumor tissue of rats showed no changes within 1 h and began to decrease significantly after 2 h of MS infusion. Based on these findings, we then used an in vitro BTB model and selective inhibitors of diverse signaling pathways to investigate whether reactive oxygen species (ROS)/RhoA/PI3K/PKB pathway play a key role in the process of the increase of BTB permeability induced by MS. The inhibitor of ROS or RhoA or PI3K or PKB significantly attenuated the expression of tight junction (TJ) protein and the increase of the BTB permeability after 2 h of MS treatment. In addition, the significant increases in RhoA activity and PKB phosphorylation after MS administration were observed, which were partly inhibited by N-2-mercaptopropionyl glycine (MPG) or C3 coenzyme or LY294002 pretreatment. The present study indicates that the activation of signaling cascades involving ROS/RhoA/PI3K/PKB in BTB was required for the increase of BTB permeability induced by MS. Taken together, all of these results suggested that MS might increase BTB permeability in a time-dependent manner by down-regulating TJ protein expression and this effect could be related to ROS/RhoA/PI3K/PKB signal pathway.

[194]

TÍTULO / TITLE: - A multi-element interstitial ultrasound applicator for the thermal therapy of brain tumors.

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

REVISTA / JOURNAL: - J Acoust Soc Am. 2013 Aug;134(2):1647-55. doi: 10.1121/1.4812883.

●● Enlace al texto completo (gratis o de pago) [1121/1.4812883](#)

AUTORES / AUTHORS: - Canney MS; Chavier F; Tsyar S; Chapelon JY; Lafon C; Carpentier A

INSTITUCIÓN / INSTITUTION: - CarThera, Brain and Spine Institute, Pitie Salpetriere Hospital, 47-83 Boulevard de l'Hopital, 75013 Paris, France.

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RESUMEN / SUMMARY: - Interstitial thermal therapy is a minimally invasive treatment modality that has been used clinically for ablating both primary and secondary brain tumors. Here a multi-element interstitial ultrasound applicator is described that allows for increased spatial control during thermal ablation of tumors as compared to existing clinical devices. The device consists of an array of 56 ultrasound elements operating at 6 MHz, oriented on the seven faces of a 3.2 mm flexible catheter. The device was first characterized using the acoustic holography method to examine the functioning of the array. Then experiments were performed to measure heating in tissue-mimicking gel phantoms and ex vivo tissue samples using magnetic resonance imaging-based thermometry. Experimental measurements were compared with results obtained using numerical simulations. Last, simulations were performed to study the feasibility

of using the device for thermal ablation in the brain. Experimental results show that the device can be used to induce a temperature rise of greater than 20 degrees C in ex vivo tissue samples and numerical simulations further demonstrate that tumors with diameters of greater than 30-mm could potentially be treated.

[195]

TÍTULO / TITLE: - microRNA-223 promotes the growth and invasion of glioblastoma cells by targeting tumor suppressor PAX6.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Nov;30(5):2263-9. doi: 10.3892/or.2013.2683. Epub 2013 Aug 21.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2683](#)

AUTORES / AUTHORS: - Huang BS; Luo QZ; Han Y; Li XB; Cao LJ; Wu LX

INSTITUCIÓN / INSTITUTION: - Department of Physiology, Xiangya School of Medicine, Central South University, Changsha 410078, P.R. China.

RESUMEN / SUMMARY: - Glioblastoma is the most common primary central nervous system malignancy and its unique invasiveness hinders effective treatment. Its high invasiveness may be controlled partly by microRNAs (miRNAs, miRs) and their target genes. In the present study, we found that increased miR-223 expression and reduced PAX6 expression coexisted in glioblastoma as detected by quantitative PCR or tissue microarrays. We confirmed that miR-223 directly targets PAX6 through binding to its 3'-UTR using dual luciferase reporter assay. In U251 and U373 glioblastoma cells, overexpression of miR-223 decreased PAX6 mRNA and protein expression; however, inhibition of miR-223 increased PAX6 mRNA and protein expression. Moreover, overexpression of miR-223 led to effects similar to those of PAX6 knockdown: increased cell viability, increased percentage of cells in the G1 phase and increased cell invasiveness parallel with increased MMP2, MMP9 and VEGFA expression. In addition, inhibition of miR-223 resulted in effects similar to those of PAX6 overexpression: decreased cell viability, decreased percentage of cells in the G1 phase and decreased cell invasiveness parallel with reduced MMP2, MMP9 and VEGFA expression. The data presented here suggest that miR-223 promotes the growth and invasion of U251 and U373 glioblastoma cells by targeting PAX6, which serves as a tumor suppressor in glioblastoma exerting the functions of inhibition of cell cycle transition, and the expression of MMP2, MMP9 and VEGFA. In conclusion, the present study supports miR-223 and PAX6 as novel therapeutic targets for glioblastoma.

[196]

TÍTULO / TITLE: - Biodegradable Implants Efficiently Deliver Combination of Paclitaxel and Temozolomide to Glioma C6 Cancer Cells In Vitro.

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

REVISTA / JOURNAL: - Ann Biomed Eng. 2013 Sep 10.

●● Enlace al texto completo (gratis o de pago) [1007/s10439-013-0903-6](#)

AUTORES / AUTHORS: - Ni S; Fan X; Wang J; Qi H; Li X

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Qilu Hospital of Shandong University, Wenhua Xi Road 107, Jinan, 250012, People's Republic of China.

RESUMEN / SUMMARY: - The delivery of local chemotherapy using polymeric implants is a promising anti-glioma strategy, but a high drug loading rate can lead to a problematic initial burst of drug and subsequent neurotoxicity. In this study, we designed and fabricated a biodegradable implant for the local delivery of combined paclitaxel and temozolomide (TMZ) with low drug loading rates. Paclitaxel-loaded Ca-alginate microparticles were formed using an emulsifying-solvent evaporation process. Polypropylene carbonate and different weights of TMZ were then added to the emulsion. An electrospinning process was used to form fibers that consisted of a beads-in-string structure. Using this approach, we achieved with the TMZ + paclitaxel fibers a paclitaxel loading rate of 2.1%, with a reduced initial burst of drug and prolonged release time compared to the paclitaxel-loaded microparticles alone. The TMZ loading rates of fibers with TMZ:paclitaxel ratios of 1:2, 1:1, or 2:1 (by manufacturing weight) were 1.2, 2.3, and 4.1%, respectively. A cytotoxicity assay suggested that glioma C6 cells were more sensitive to the TMZ + paclitaxel fibers compared to either agent alone. Cytotoxicity assay also showed that optimal synergistic effect was achieved when the weight ratio of the two drugs was 1:1.

[197]

TÍTULO / TITLE: - The Cdk inhibitor flavopiridol enhances temozolomide-induced cytotoxicity in human glioma cells.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 13.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1220-5](#)

AUTORES / AUTHORS: - Hayashi T; Adachi K; Ohba S; Hirose Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Fujita Health University School of Medicine, 1-98 Kutsukake-cho Dengakugakubo, Toyoake, Aichi, 470-1192, Japan.

RESUMEN / SUMMARY: - The recent progress in chemotherapy for malignant gliomas is attributable to the introduction of the DNA-methylating agent temozolomide (TMZ); however, drug resistance remains a major issue. Previous studies have shown that TMZ induces prolonged arrest of human glioma cells in the G2/M phase of the cell cycle followed by a senescence-like phenomenon or mitotic catastrophe. These findings suggest that the G2 checkpoint is linked to DNA repair mechanisms. We investigated the effect of a cyclin-dependent kinase (Cdk) inhibitor flavopiridol (FP)

that inhibits the action of Cdc2, a key protein in the G2 checkpoint pathway, on TMZ-treated glioma cells. Colony formation efficiency revealed that FP potentiated the cytotoxicity of TMZ in glioma cells in a p53-independent manner. This effect was clearly associated with the suppression of key proteins at the G2-M transition, accumulation of the cells exclusively at the G2 phase, and increase in a double-stranded DNA break marker (seen on performing immunoblotting). TMZ-resistant clones showed activation of the G2 checkpoint in response to TMZ, while FP treatment resensitized these clones to TMZ. FP also enhanced the cytotoxicity of TMZ in U87MG-AktER cells. Moreover, administration of TMZ and/or FP to nude mice with xenografted U87MG cells revealed that FP sensitized xenografted U87MG cells to TMZ in these mice. Our findings suggest that TMZ resistance could be promoted by enhanced DNA repair activity in the G2-M transition and that a Cdk inhibitor could suppress this activity, leading to potentiation of TMZ action on glioma cells.

[198]

TÍTULO / TITLE: - The effect of modafinil on fatigue, cognitive functioning, and mood in primary brain tumor patients: a multicenter randomized controlled trial.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Oct;15(10):1420-8. doi: 10.1093/neuonc/not102. Epub 2013 Aug 7.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not102](#)

AUTORES / AUTHORS: - Boele FW; Douw L; de Groot M; van Thuijl HF; Cleijne W; Heimans JJ; Taphoorn MJ; Reijneveld JC; Klein M

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Florian W. Boele, MSc, Department of Medical Psychology, D-345, VU University Medical Center, Van der Boerhorststraat 7, 1081 BT Amsterdam, the Netherlands. f.boele@vumc.nl.

RESUMEN / SUMMARY: - Background Fatigue, cognitive deficits, and depression are frequently reported but often undertreated symptoms that can profoundly affect daily life in patients with primary brain tumors (PBTs). To evaluate the effects of the psychostimulant modafinil on fatigue, depression, health-related quality of life (HRQOL), and cognitive functioning in PBT patients, we performed a multicenter, double-blind placebo-controlled crossover trial. Methods Patients randomly received either 6 weeks of treatment with modafinil (up to 400 mg/day) or 6 weeks with placebo. After a 1-week washout period, the opposite treatment was provided. Assessments took place at baseline and immediately after the first and second condition. Patients completed self-report questionnaires on fatigue (Checklist Individual Strength [CIS]), depression (Center for Epidemiologic Studies Depression Scale [CES-D]), HRQOL (Short-Form Health Survey [SF-36]), and self-perceived cognitive functioning (Medical Outcomes Study [MOS]). They also underwent comprehensive neurocognitive testing. Results In total, 37 patients participated. Relative to baseline,

patients reported lower fatigue severity (CIS) and better motivation (CIS) in both the modafinil (P = .010 and P = .021, respectively) and the placebo condition (P < .001 and P = .027, respectively). The same held for physical health (SF-36 Physical Component Summary score; P = .001 and P = .008, respectively), working memory (P = .040 and P = .043), and information processing capacity (P = .036 and P = .040). No improvement in depressive symptoms was found in either condition. Conclusions Modafinil did not exceed the effects of placebo with respect to symptom management. Patient accrual was slow, and relatively many patients dropped out during the trial, due mostly to side effects. Other, preferably nonpharmacologic intervention studies should be considered to improve symptom management of PBT patients.

[199]

TÍTULO / TITLE: - Long-term treatment with temozolomide in malignant glioma.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Sep 21. pii: S0967-5868(13)00320-2. doi: 10.1016/j.jocn.2013.03.039.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.03.039](https://doi.org/10.1016/j.jocn.2013.03.039)

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RESUMEN / SUMMARY: - Six months of maintenance temozolomide (TMZ) following concurrent TMZ chemotherapy and radiation therapy has become the standard of care in the treatment of glioblastoma. In addition, TMZ has also been used to treat other forms of glioma although less evidence of efficacy exists. TMZ administration longer than 6 months is common in clinical practice, but it is unusual for the drug to be administered longer than 1 to 2 years. We report five patients who received long-term treatment with TMZ chemotherapy at normal dosing levels. One of these patients was diagnosed with glioblastoma, two with anaplastic astrocytoma, one with gliosarcoma, and one with oligo-astrocytoma. The length of treatment in our group of patients ranged from 45 to 85 cycles of TMZ. Common Terminology Criteria for Adverse Events (CTCAE) developed by The National Cancer Institute was used to classify toxicity. Two patients experienced no toxicity per CTCAE guidelines. One patient experienced grade I thrombocytopenia, one developed grade I leukopenia, and one experienced both grade I thrombocytopenia and grade I nausea, all which resolved with either withholding TMZ for 1 month or supportive treatment. Our report provides evidence that long-term TMZ chemotherapy is a therapeutic option when appropriately monitored.

[200]

TÍTULO / TITLE: - Expression of aquaporin8 in human astrocytomas: Correlation with pathologic grade.

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

REVISTA / JOURNAL: - Biochem Biophys Res Commun. 2013 Sep 18. pii: S0006-291X(13)01538-6. doi: 10.1016/j.bbrc.2013.09.057.

●● Enlace al texto completo (gratis o de pago) [1016/j.bbrc.2013.09.057](#)

AUTORES / AUTHORS: - Zhu SJ; Wang KJ; Gan SW; Xu J; Xu SY; Sun SQ

INSTITUCIÓN / INSTITUTION: - Institute of Neurobiological Sciences, Faculty of Basic Medical Science of Chongqing Medical University, Medical College Road 1, YuanJiaGang, YuZhong District, Chongqing 400016, People's Republic of China.

RESUMEN / SUMMARY: - Aquaporin8 (AQP8), a member of the aquaporin (AQP) protein family, is weakly distributed in mammalian brains. Previous studies on AQP8 have focused mainly on the digestive and the reproductive systems. AQP8 has a pivotal role in keeping the fluid and electrolyte balance. In this study, we investigated the expression changes of AQP8 in 75 cases of human brain astrocytic tumors using immunohistochemistry, Western blotting, and reverse transcription polymerase chain reaction. The results demonstrated that AQP8 was mainly distributed in the cytoplasm of astrocytoma cells. The expression levels and immunoreactive score of AQP8 protein and mRNA increased in low-grade astrocytomas, and further increased in high-grade astrocytomas, especially in glioblastoma. Therefore, AQP8 may contribute to the proliferation of astrocytomas, and may be a biomarker and candidate therapy target for patients with astrocytomas.

[201]

TÍTULO / TITLE: - Blockage of a miR-21/EGFR regulatory feedback loop augments anti-EGFR therapy in glioblastomas.

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

REVISTA / JOURNAL: - Cancer Lett. 2013 Sep 3. pii: S0304-3835(13)00640-X. doi: 10.1016/j.canlet.2013.08.043.

●● Enlace al texto completo (gratis o de pago) [1016/j.canlet.2013.08.043](#)

AUTORES / AUTHORS: - Zhang KL; Han L; Chen LY; Shi ZD; Yang M; Ren Y; Chen LC; Zhang JX; Pu PY; Kang CS

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tianjin Medical University General Hospital, Tianjin 300052, China; Laboratory of Neuro-Oncology, Tianjin Neurological Institute, Tianjin 300052, China; Key Laboratory of Post-trauma Neuro-repair and Regeneration in Central Nervous System, Ministry of Education, Tianjin 300052, China; Tianjin Key Laboratory of Injuries, Variations and Regeneration of Nervous System, Tianjin 300052, China; Chinese Glioma Cooperative Group (CGCG), China.

RESUMEN / SUMMARY: - Epidermal growth factor receptors (EGFR) expression is frequently amplified in human glioblastoma cells. Nimotuzumab, a monoclonal antibody (mAb) against EGFR, has been used globally in clinics as an anti-cancer agent. It is largely unknown whether the blockade of miR-21, a microRNA that is upregulated in glioma cells, could amplify the effects of nimotuzumab. Herein, we have demonstrated that miR-21 directly targets von Hippel-Lindau (VHL) and peroxisome-proliferator-activated receptor alpha (PPARalpha) and that miR-21 regulates EGFR/AKT signaling through VHL/beta-catenin and the PPARalpha/AP-1 axis. Further, the expression of miR-21 is regulated by EGFR via the activation of beta-catenin and AP-1. These data indicate that a feedback loop exists between miR-21 and EGFR. We also show that the combination of nimotuzumab and an inhibitor of miR-21 is superior to single-agent therapy. These results clarify a novel association between miR-21 and EGFR in the regulation of cancer cell progression.

[202]

TÍTULO / TITLE: - Use of optical coherence tomography in predicting post-treatment visual outcome in anterior visual pathway meningiomas.

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

REVISTA / JOURNAL: - Br J Ophthalmol. 2013 Aug 21. doi: 10.1136/bjophthalmol-2013-303449.

●● Enlace al texto completo (gratis o de pago) [1136/bjophthalmol-2013-303449](#)

AUTORES / AUTHORS: - Loo JL; Tian J; Miller NR; Subramanian PS

INSTITUCIÓN / INSTITUTION: - Neuro-Ophthalmology Division, Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA.

RESUMEN / SUMMARY: - **PURPOSE:** To determine the prognostic value of pretreatment optical coherence tomography (OCT) measurement of the peripapillary retinal nerve fibre layer (PRNFL) in final visual outcomes of patients with anterior visual pathway meningioma and optic neuropathy. **METHODS:** Retrospective case series from a tertiary care academic referral centre. Fourteen eyes (12 patients) in which pretreatment and post-treatment OCT, visual field and comprehensive neuro-ophthalmic exam data were available were evaluated for visual acuity, colour vision and visual field change after neurosurgical and/or radiation oncologic treatment. **RESULTS:** Twelve patients and 14 eyes were analysed. Patients had tumours centred at the tuberculum sellae (3), planum sphenoidale (3), anterior clinoid (2), optic nerve sheath (2), sphenoid wing (2) and olfactory groove (1). Nine eyes had normal PRNFL thickness (mean 95.5 $\mu\text{m} \pm 11.0$), whereas five eyes had thin PRNFL (mean 66.0 $\mu\text{m} \pm 14.2$). The mean duration of follow-up was 9.7 months. There was no significant difference in age, duration of symptoms or duration of follow-up between both groups ($p=0.22$). After treatment, the normal PRNFL group experienced

significant improvement in the visual acuity ($p=0.03$), colour vision ($p=0.016$), perimetric mean deviation ($p=0.019$) and foveal threshold ($p=0.016$) but not pattern SD ($p=0.074$) compared with the group with thin PRNFL. On multivariate analysis, duration of symptoms, but neither age nor follow-up duration, predicted final visual outcome. CONCLUSIONS: Patients with compressive optic neuropathy due to anterior pathway meningiomas are more likely to improve post-treatment if they have a normal pretreatment PRNFL and shorter duration of symptoms.

[203]

TÍTULO / TITLE: - Methylation markers of malignant potential in meningiomas.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Oct;119(4):899-906. Epub 2013 Aug 9.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.7.JNS13311](#)

AUTORES / AUTHORS: - Vengoechea J; Sloan AE; Chen Y; Guan X; Ostrom QT; Kerstetter A; Capella D; Cohen ML; Wolinsky Y; Devine K; Selman W; Barnett GH; Warnick RE; McPherson C; Chiocca EA; Elder JB; Barnholtz-Sloan JS

INSTITUCIÓN / INSTITUTION: - Division of Genetics, College of Medicine, University of Arkansas for Medical Sciences, Little Rock, Arkansas;

RESUMEN / SUMMARY: - Object Although most meningiomas are benign, about 20% are atypical (Grade II or III) and have increased mortality and morbidity. Identifying tumors with greater malignant potential can have significant clinical value. This validated genome-wide methylation study comparing Grade I with Grade II and III meningiomas aims to discover genes that are aberrantly methylated in atypical meningiomas. Methods Patients with newly diagnosed meningioma were identified as part of the Ohio Brain Tumor Study. The Infinium HumanMethylation27 BeadChip (Illumina, Inc.) was used to interrogate 27,578 CpG sites in 14,000 genes per sample for a discovery set of 33 samples (3 atypical). To verify the results, the Infinium HumanMethylation450 BeadChip (Illumina, Inc.) was used to interrogate 450,000 cytosines at CpG loci throughout the genome for a verification set containing 7 replicates (3 atypical), as well as 12 independent samples (6 atypical). A nonparametric Wilcoxon exact test was used to test for difference in methylation between benign and atypical meningiomas in both sets. Heat maps were generated for each set. Methylation results were validated for the 2 probes with the largest difference in methylation intensity by performing Western blot analysis on a set of 20 (10 atypical) samples, including 11 replicates. Results The discovery array identified 95 probes with differential methylation between benign and atypical meningiomas, creating 2 distinguishable groups corresponding to tumor grade when visually examined on a heat map. The validation array evaluated 87 different probes and showed that 9 probes were differentially methylated. On heat map examination the results of this array also suggested the existence of 2 major groups that corresponded to histological

grade. IGF2BP1 and PDCD1, 2 proteins that can increase the malignant potential of tumors, were the 2 probes with the largest difference in intensity, and for both of these the atypical meningiomas had a decreased median production of protein, though this was not statistically significant ($p = 0.970$ for IGF2BP1 and $p = 1$ for PDCD1). Conclusions A genome-wide methylation analysis of benign and atypical meningiomas identified 9 genes that were reliably differentially methylated, with the strongest difference in IGF2BP1 and PDCD1. The mechanism why increased methylation of these sites is associated with an aggressive phenotype is not evident. Future research may investigate this mechanism, as well as the utility of IGF2BP1 as a marker for pathogenicity in otherwise benign-appearing meningiomas.

[204]

TÍTULO / TITLE: - Ensemble segmentation for GBM brain tumors on MR images using confidence-based averaging.

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

REVISTA / JOURNAL: - Med Phys. 2013 Sep;40(9):093502. doi: 10.1118/1.4817475.

●● Enlace al texto completo (gratis o de pago) [1118/1.4817475](#)

AUTORES / AUTHORS: - Huo J; Okada K; Kim HJ; Alger JR; Pope WB; Goldin JG; Brown MS

INSTITUCIÓN / INSTITUTION: - TeraRecon Inc., 4000 East 3rd Avenue, Suite 200, Foster City, California 94404.

RESUMEN / SUMMARY: - Purpose: Ensemble segmentation methods combine the segmentation results of individual methods into a final one, with the goal of achieving greater robustness and accuracy. The goal of this study was to develop an ensemble segmentation framework for glioblastoma multiforme tumors on single-channel T1w postcontrast magnetic resonance images. Methods: Three base methods were evaluated in the framework: fuzzy connectedness, GrowCut, and voxel classification using support vector machine. A confidence map averaging (CMA) method was used as the ensemble rule. Results: The performance is evaluated on a comprehensive dataset of 46 cases including different tumor appearances. The accuracy of the segmentation result was evaluated using the F1-measure between the semiautomated segmentation result and the ground truth. Conclusions: The results showed that the CMA ensemble result statistically approximates the best segmentation result of all the base methods for each case.

[205]

TÍTULO / TITLE: - Intracerebral delivery of a third generation EGFRvIII-specific chimeric antigen receptor is efficacious against human glioma.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Sep 17. pii: S0967-5868(13)00242-7. doi: 10.1016/j.jocn.2013.03.012.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.03.012](https://doi.org/10.1016/j.jocn.2013.03.012)

AUTORES / AUTHORS: - Choi BD; Suryadevara CM; Gedeon PC; Herndon Li JE; Sanchez-Perez L; Bigner DD; Sampson JH

INSTITUCIÓN / INSTITUTION: - Duke Brain Tumor Immunotherapy Program, Division of Neurosurgery, Department of Surgery, Duke University Medical Center, Box 3050, Durham, NC 27710, USA; Department of Pathology, Duke University Medical Center, Durham, NC, USA.

RESUMEN / SUMMARY: - Chimeric antigen receptors (CAR)-transduced T cells hold great promise in the treatment of malignant disease. Here, we demonstrate that intracerebral injection with a human, epidermal growth factor receptor variant III (EGFRvIII)-specific, third generation CAR successfully treats glioma in mice. Importantly, these results endorse clinical translation of this CAR in patients with EGFRvIII-expressing brain tumors.

[206]

TÍTULO / TITLE: - Knockdown of NOB1 expression by RNAi inhibits cellular proliferation and migration in human gliomas.

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

REVISTA / JOURNAL: - Gene. 2013 Oct 10;528(2):146-53. doi: 10.1016/j.gene.2013.07.032. Epub 2013 Jul 31.

●● Enlace al texto completo (gratis o de pago) [1016/j.gene.2013.07.032](https://doi.org/10.1016/j.gene.2013.07.032)

AUTORES / AUTHORS: - Wang H; Li P; Zhao B

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, the Second Affiliated Hospital of Anhui Medical University, Hefei 230601, China.

RESUMEN / SUMMARY: - NOB1 (NIN1/RPN12 binding protein 1 homolog), a ribosome assembly factor, is thought to be essential for the processing of the 20S pre-rRNA into the mature 18S rRNA. It is also reported to participate in proteasome biogenesis. However, the contribution of NOB1 gene dysfunction to the pathology of human diseases, such as gliomas, has not been addressed. Here, we detected expression levels of NOB1 mRNA in U251, U87, U373, and A172 cells by quantitative real-time PCR. To analyze the expression levels of NOB1 protein in glioma tissues, we performed immunohistochemistry on 56 pathologically confirmed glioma samples (7 Grade I cases, 19 Grade II cases, 16 Grade III cases, and 14 Grade IV cases). A recombinant lentivirus expressing NOB1 short hairpin RNA (shNOB1) was constructed and infected into U251 and U87-MG human glioma cells. We found that NOB1 mRNA was expressed in all four cell lines. The expression level of the NOB1 protein was significantly higher in high-grade gliomas than in low-grade gliomas. Knockdown of the NOB1 gene resulted in suppression of the proliferation and the colony-forming abilities of U251 and U87-

MG cells, cell cycle arrest during the G0/G1 phase, and a significant enhancement of cell apoptosis. In addition, cell migration was significantly suppressed in U251 and U87-MG cells that were infected with the shNOB1-expressing lentivirus. These results suggest that NOB1 promotes glioma cell growth and migration and could be a candidate for molecular targeting during gene therapy treatments of glioma.

[207]

TÍTULO / TITLE: - The clinical and pathological significance of nitric oxide synthase in human pituitary adenomas: a comparison with MIB-1.

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

REVISTA / JOURNAL: - Endocrine. 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [1007/s12020-013-0046-4](#)

AUTORES / AUTHORS: - Onishi K; Kamida T; Momii Y; Abe T; Fujiki M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Faculty of Medicine, Oita University, 1-1 Idaigaoka, Hasama-machi, Oita, 879-5593, Japan.

RESUMEN / SUMMARY: - The purpose of the present study was to define the clinical and pathological significance of nitric oxide synthase (NOS) in human pituitary adenomas, and to compare these values with those of the MIB-1 labeling index (LI) using an immunohistochemical method. Tissue specimens from 82 cases of surgically-treated pituitary adenomas were immunostained for hormone production for the MIB-1 LI and for the three NOS isoenzymes and five normal pituitary glands were immunostained for the three NOS isoenzymes as a control. The correlation between the clinical variables (age, functional status, tumor size, Hardy's grading, cavernous and/or sphenoid invasiveness, and progression) and mean MIB-1 LI, or between the same clinical variables and NOS immunoreactivity (IR) were analyzed. There was a statistically significant difference in the MIB-1 LI between macroadenomas and microadenomas, and between invasive adenomas and noninvasive adenomas. On the other hand, there was a statistically significant difference in the inducible NOS (iNOS) IR between invasive adenomas and noninvasive adenomas. Furthermore, the iNOS IR had a significant correlation with the MIB-1 LI. Invasive adenomas have a higher iNOS IR, and this correlated with the MIB-1 LI. These findings may be due to the function of iNOS, which plays an important role in tissue injury and repair.

PTPTPTP - JOURNAL ARTICLE ----- [208]

TÍTULO / TITLE: - Epigenetic modifications in cell lines of human astrocytoma differentially regulate expression of apoptotic genes.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Aug 13.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2258-6](#)

AUTORES / AUTHORS: - Solis-Paredes M; Eguia-Aguilar P; Chico-Ponce de Leon F; Sadowinski-Pine S; Perezpena-Diazconti M; Arenas-Huertero F

INSTITUCIÓN / INSTITUTION: - Departamento de Patología, Hospital Infantil de Mexico Federico Gomez, Mexico City, Mexico.

RESUMEN / SUMMARY: - OBJECTS: Epigenetic alterations, known as epimutations, act by deregulating gene expression. These epimutations are reversible through the action of chromatin modifiers such as DNA methylation (DNA-met) and histone deacetylases (HDAC) inhibitors. The present study evaluated the effect of 5-azacitidine (5-aza) and sodium butyrate (NaBu) as inhibitors of DNA-met and HDAC, respectively, in the expression of genes involved in apoptosis. METHODS: D54-MG, U373-MG, and T98G cell lines were exposed to 8 mM of NaBu and 12 μM of 5-aza, as well as a combination of both, for 24 h. The expression of the Bcl-2, Bak-1, Bax, Caspase-3, and Caspase-9 genes was assessed by RT-PCR. RESULTS: They show that the Bcl-2, Caspase-3, and Caspase-9 genes were not expressed by the U373-MG and T98G lines, and that the D54-MG line did not express Bak-1. After treatment, however, these cell lines expressed all of the genes due to the effect of 5-aza on Bak-1 in D54-MG and Caspase-9 in T98G, which suggests repression by DNA-met. Meanwhile, Bcl-2, Caspase-3, and Caspase-9 were in the U373-MG and T98G lines expressed after NaBu treatment. The effect of 5-aza induced an increase in the expression of Bax and Bcl-2, while NaBu produced a similar effect on the Bak-1 and Bax genes. CONCLUSIONS: Results reveal that histone deacetylation is the principle mechanism for repressing these genes and that their basal expression is regulated primarily by this form of histone modification.

[209]

TÍTULO / TITLE: - Low-dose arsenic trioxide enhances 5-aminolevulinic acid-induced PpIX accumulation and efficacy of photodynamic therapy in human glioma.

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

REVISTA / JOURNAL: - J Photochem Photobiol B. 2013 Jun 26;127C:61-67. doi: 10.1016/j.jphotobiol.2013.06.001.

●● Enlace al texto completo (gratis o de pago) [1016/j.jphotobiol.2013.06.001](https://doi.org/10.1016/j.jphotobiol.2013.06.001)

AUTORES / AUTHORS: - Wang C; Chen X; Wu J; Liu H; Ji Z; Shi H; Gao C; Han D; Wang L; Liu Y; Yang G; Fu C; Li H; Zhang D; Liu Z; Li X; Yin F; Zhao S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of Harbin Medical University, Harbin, Heilongjiang Province, People's Republic of China; Institute of Brain Science, Harbin Medical University, Heilongjiang Province, People's Republic of China; The Chinese-German Center of Academic Excellence in Neuroscience, Harbin, Heilongjiang Province, People's Republic of China.

RESUMEN / SUMMARY: - Among glioma treatment strategies, 5-aminolevulinic acid (5-ALA)-based fluorescence-guided resection (FGR) and photodynamic therapy (PDT) have been used as effective novel approaches against malignant glioma. However,

insufficient intracellular protoporphyrin IX (PpIX) accumulation limits the application of FGR and PDT in the marginal areas of gliomas. To overcome these issues, we assessed the intracellular levels of PpIX in human glioma cell lines and rat cortical astrocytes pretreated with 0.1µM arsenic trioxide (ATO). Apoptosis and cell viability after PDT were evaluated using Annexin V-FITC apoptosis detection kit and MTT assay, respectively. In order to find out the possible mechanism, we investigated the expression of the key enzymes in the heme biosynthesis pathway, which regulates porphyrin synthesis in glioma cells. Our findings showed that the 5-ALA-induced PpIX accumulation in glioma cell lines pretreated with 0.1µM ATO was increased relative to the control groups. No changes in fluorescence intensity were detected in the rat cortical astrocytes pretreated using the same ATO concentration. Apoptosis following PDT in glioma cells pretreated with 0.1µM ATO were significantly higher than in control groups, especially late apoptotic cells, while the cell viability was decreased. The expression of CPOX was upregulated in glioma cells after pretreatment with 0.1µM ATO. We concluded that ATO was a potential optional approach in enhancing intracellular PpIX accumulation and improving the benefits of 5-ALA-induced FGR and PDT in glioma.

[210]

TÍTULO / TITLE: - Loss of p53 cooperates with K-ras activation to induce glioma formation in a region-independent manner.

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

REVISTA / JOURNAL: - Glia. 2013 Nov;61(11):1862-72. doi: 10.1002/glia.22563. Epub 2013 Aug 30.

●● [Enlace al texto completo \(gratis o de pago\) 1002/glia.22563](#)

AUTORES / AUTHORS: - Munoz DM; Tung T; Agnihotri S; Singh S; Guha A; Zadeh G; Hawkins C

INSTITUCIÓN / INSTITUTION: - The Arthur and Sonia Labatt Brain Tumor Research Centre, Hospital for Sick Children Research Institute, University of Toronto, Toronto, ON, Canada.

RESUMEN / SUMMARY: - Gliomas are recognized as a heterogeneous group of neoplasms differing in their location and morphological features. These differences, between and within varying grades of gliomas, have not been explained solely on the grounds of an oncogenic stimulus. Interactions with the tumor microenvironment as well as inherent characteristics of the cell of origin are likely a source of this heterogeneity. There is an ongoing debate over the cell of origin of gliomas, where some suggest a progenitor, while others argue for a stem cell origin. Thus, it is presumed that neurogenic regions of the brain such as the subventricular zone (SVZ) containing large numbers of neural stem and progenitor populations are more susceptible to transformation. Our studies demonstrate that K-ras(G12D) cooperates with the loss of p53 to induce gliomas from

both the SVZ and cortical region, suggesting that cells in the SVZ are not uniquely gliomagenic. Using combinations of doxycycline-inducible K-ras(G12D) and p53 loss, we show that tumors induced by the cooperative actions of these genes remain dependent on active K-ras expression, as deinduction of K-ras(G12D) leads to complete tumor regression despite absence of p53. These results suggest that the interplay between specific combinations of genetic alterations and susceptible cell types, rather than the site of origin, are important determinates of gliomagenesis. Additionally, this model supports the view that, although several genetic events may be necessary to confer traits associated with oncogenic transformation, inactivation of a single oncogenic partner can undermine tumor maintenance, leading to regression and disease remission. GLIA 2013;61:1862-1872.

[211]

TÍTULO / TITLE: - FLAIR-Only Progression in Bevacizumab-Treated Relapsing Glioblastoma Does Not Predict Short Survival.

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

REVISTA / JOURNAL: - Oncology. 2013 Sep 5;85(3):191-195.

●● Enlace al texto completo (gratis o de pago) [1159/000354692](#)

AUTORES / AUTHORS: - Schaub C; Greschus S; Seifert M; Waha A; Blasius E; Rasch K; Landwehr C; Mack F; Schafer N; Stuplich M; Kebir S; Vilz B; Scheffler B; Bostrom J; Simon M; Urbach H; Glas M; Herrlinger U

INSTITUCIÓN / INSTITUTION: - Division of Clinical Neurooncology, Department of Neurology, University of Bonn Medical Center, Bonn, Germany.

RESUMEN / SUMMARY: - Objectives: In this study, we analyzed the prognostic value of different MRI progression patterns for survival in patients with recurrent malignant glioma treated with the vascular endothelial growth factor antibody bevacizumab. Patients and Methods: Twenty-six adult patients with recurrent malignant glioma treated with bevacizumab or bevacizumab/irinotecan were retrospectively analyzed for the development of contrast-enhanced (T1-weighted MRI) and T2/FLAIR lesions. According to the progression pattern, patients were divided into 3 subgroups: (1) patients with primarily progressive contrast-enhanced lesions in the first MRI after initiation of therapy ('primary PD group'); (2) patients with stable or regressive enhanced lesions but progressive FLAIR lesions ('FLAIR-only PD group'), and (3) patients with stable or regressive contrast-enhanced T1 and FLAIR lesions ('no PD group'). Results: Overall survival (OS) in the 6 patients in the FLAIR-only PD group was not significantly different from the 11 patients in the no PD group (median 311 vs. 254 days, respectively). In contrast, survival in the FLAIR-only PD group was significantly better ($p = 0.025$) than in the primary PD group. Conclusion: FLAIR-only progression is not an independent prognostic factor negatively influencing OS in recurrent

glioblastoma treated with bevacizumab and should not lead to discontinuation of bevacizumab therapy. © 2013 S. Karger AG, Basel.

[212]

TÍTULO / TITLE: - Heterogeneous reovirus susceptibility in human glioblastoma stem-like cell cultures.

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

REVISTA / JOURNAL: - Cancer Gene Ther. 2013 Sep;20(9):507-13. doi: 10.1038/cgt.2013.47. Epub 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [1038/cgt.2013.47](#)

AUTORES / AUTHORS: - van den Hengel SK; Balvers RK; Dautzenberg IJ; van den Wollenberg DJ; Kloezeman JJ; Lamfers ML; Sillivis-Smit PA; Hoeben RC

INSTITUCIÓN / INSTITUTION: - 1] Department of Molecular Cell Biology, Leiden University Medical Center, Leiden, The Netherlands [2] Department of Neuro-Oncology, Brain Tumor Center, Erasmus Medical Center, Rotterdam, The Netherlands.

RESUMEN / SUMMARY: - Glioblastoma (GB) is a devastating disease for which new treatment modalities are needed. Efficacious therapy requires the removal of stem-cell like cells, these cells drive tumor progression because of their ability to self-renew and differentiate. In glioblastoma, the GB stem-like cells (GSC) form a small population of tumor cells and possess high resistance to chemo and radiation therapies. To assess the sensitivity of GSC to reovirus-mediated cytolysis, a panel of GSC cultures was exposed to wild-type reovirus Type 3 Dearing (T3D) and its junction adhesion molecule-A (JAM-A)-independent mutant, jin-1. Several parameters were evaluated, including the fraction of cells expressing the JAM-A reovirus receptor, the fraction of cells synthesizing reovirus proteins, the number of infectious reovirus particles required to reduce cell viability, the amount of infectious progeny reovirus produced and the capacity of the reoviruses to infect the GSC in 3-dimensional (3D) tumor cell spheroids. Our data demonstrate a marked heterogeneity in the susceptibility of the cultures to reovirus-induced cytolysis. While in monolayer cultures the jin-1 reovirus was generally more cytolytic than the wild-type reovirus T3D, in the 3D GSC spheroids, these viruses were equally effective. Despite the variation in reovirus sensitivity between the different GSC cultures, our data support the use of reovirus as an oncolytic agent. It remains to be established whether the variation in the reovirus sensitivity correlates with a patient's response to reovirus therapy. Moreover, our data show that the expression of the JAM-A receptor is not a major determinant of reovirus sensitivity in 3D GSC cultures.

[213]

TÍTULO / TITLE: - Utility of Proton MR Spectroscopy for Differentiating Typical and Atypical Primary Central Nervous System Lymphomas from Tumefactive Demyelinating Lesions.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Aug 8.

●● [Enlace al texto completo \(gratis o de pago\) 3174/ajnr.A3677](#)

AUTORES / AUTHORS: - Lu SS; Kim SJ; Kim HS; Choi CG; Lim YM; Kim EJ; Kim DY; Cho SH

INSTITUCIÓN / INSTITUTION: - Department of Radiology and Research Institute of Radiology, and Department of Neurology, University of Ulsan College of Medicine, Asan Medical Center, Seoul, Korea; Department of Radiology, The First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu Province, China; and Philips Healthcare, Seoul, Korea.

RESUMEN / SUMMARY: - **BACKGROUND AND PURPOSE:**It may be challenging to differentiate primary CNS lymphomas, especially primary CNS lymphomas with atypical MR features, from tumefactive demyelinating lesions by the use of conventional MR. This study aimed to investigate the usefulness of 1H-MR spectroscopy for making this discrimination. **MATERIALS AND METHODS:**Forty-four patients with primary CNS lymphomas and 21 with tumefactive demyelinating lesions were enrolled. Single-voxel (TE = 144 ms) 1H-MR spectroscopy scans with the use of the point-resolved spectroscopy sequence were retrospectively analyzed. The Cho/Cr and Cho/NAA area ratios were calculated. The lipid and/or lactate peak was visually categorized into 5 grades on the basis of comparison with the height of the Cr peak. The 1H-MR spectroscopy findings were compared in all of the primary CNS lymphomas and the tumefactive demyelinating lesions and in the subgroup of atypical primary CNS lymphomas and tumefactive demyelinating lesions. The thresholds and added value of 1H-MR spectroscopy to conventional MR were calculated by use of receiver operating characteristic curves. **RESULTS:**Discrepancies between all of the primary CNS lymphomas and tumefactive demyelinating lesions were found in the Cho/Cr ratio (P = .000), Cho/NAA ratio (P = .000), and the lipid and/or lactate peak grade (P = .000). Lymphoma rather than tumefactive demyelinating lesions was suggested when the Cho/Cr ratio was >2.58, the Cho/NAA ratio was >1.73, and a high lipid and/or lactate peak grade (grade >3) was seen. Higher Cho/Cr ratios, Cho/NAA ratios, and lipid and/or lactate peak grades were found in atypical primary CNS lymphomas when compared with those of tumefactive demyelinating lesions. The area under the receiver operating characteristic curve of conventional MR was improved from 0.827 to 0.870 when Cho/NAA ratio was added in the uncertain cases. **CONCLUSIONS:**1H-MR spectroscopy may be useful for differentiating primary CNS lymphomas from tumefactive demyelinating lesions. Cho/NAA ratio could provide added value to conventional MR imaging.

[214]

TÍTULO / TITLE: - A case of naturally occurring visual field loss in a chimpanzee with an arachnoid cyst.

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

REVISTA / JOURNAL: - Neuropsychologia. 2013 Sep 11. pii: S0028-3932(13)00295-9. doi: 10.1016/j.neuropsychologia.2013.09.011.

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

1016/j.neuropsychologia.2013.09.011

AUTORES / AUTHORS: - Kaneko T; Sakai T; Miyabe-Nishiwaki T; Tomonaga M

INSTITUCIÓN / INSTITUTION: - Primate Research Institute, Kyoto University, Inuyama, Aichi 484-8506, Japan. Electronic address: kaneko.takaaki.22m@st.kyoto-u.ac.jp.

RESUMEN / SUMMARY: - Deficits in the occipital cortex have varying consequences among mammalian species. Such variations are indicative of evolutionary transitions in the striate cortical contribution to visually guided behavior. However, little is known about the role of the striate cortex in visually guided behavior in chimpanzees due to ethical concerns about invasive experiments and methodological limitations such as the inability to monitor gaze movements. We had the opportunity to study the behavioral consequences of a deficit in the occipital cortex in a chimpanzee with a naturally occurring arachnoid cyst in her right occipital lobe. We assessed the chimpanzee's ability to detect a small light probe (0.5 visual degree, Michelson contrast > 0.9) presented at several locations in the visual field while monitoring gaze direction using an infra-red remote eye-tracker recently introduced to studies of great apes. The results showed the chimpanzee was unable to detect the probe in the lower left quadrant of the visual field, suggesting severe loss of contrast sensitivity in a part of hemivisual field that is retinotopically corresponded to the hemisphere of the cyst. A chimpanzee with a naturally occurring deficit in the right striate cortex and the availability of remote eye-tracking technology presented a unique opportunity to compare the role of the occipital lobe in visually guided behavior among various primate species.

[215]

TÍTULO / TITLE: - Congenital Segmental Lymphedema in Tuberous Sclerosis Complex With Associated Subependymal Giant Cell Astrocytomas Treated with Mammalian Target of Rapamycin Inhibitors.

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

REVISTA / JOURNAL: - J Child Neurol. 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) 1177/0883073813499969

AUTORES / AUTHORS: - Prato G; Mancardi MM; Baglietto MG; Janis S; Vercellino N; Rossi A; Consales A; Raso A; Garre ML

INSTITUCIÓN / INSTITUTION: - 1Child Neuropsychiatry Unit, G. Gaslini Institute, Genova, Italy.

RESUMEN / SUMMARY: - Tuberous sclerosis complex is a genetic, multisystemic disorder characterized by circumscribed benign lesions (hamartomas) in several organs, including brain. This is the result of defects in the TSC1 and/or TSC2 tumor suppressor genes, encoding the hamartin-tuberin complex that inhibits the mammalian target of rapamycin pathway. Specific inhibitors of this pathway have been shown to reduce the volume of subependymal giant cell astrocytomas associated with tuberous sclerosis. Congenital lymphedema is rarely seen in association with tuberous sclerosis, with only a few reported cases. Although this association can be coincidental, the dysgenetic lymphatic system can represent a hamartia as a consequence of gene mutation. We describe a child with congenital lymphedema in tuberous sclerosis and associated subependymal giant cell astrocytoma who experienced lymphangitis under treatment with mammalian target of rapamycin inhibitors. Because our patient did not show worsening of lymphedema, congenital lymphedema does not seem to be a contraindication for this therapy.

[216]

TÍTULO / TITLE: - Surgical strategy in grade II astrocytoma: a population-based analysis of survival and morbidity with a strategy of early resection as compared to watchful waiting.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Sep 17.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00701-013-1869-8](#)

AUTORES / AUTHORS: - Jakola AS; Unsgard G; Myrmel KS; Kloster R; Torp SH; Losvik OK; Lindal S; Solheim O

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, St.Olavs University Hospital, N-7006, Trondheim, Norway, asgeir.s.jakola@ntnu.no.

RESUMEN / SUMMARY: - BACKGROUND: We recently demonstrated a survival benefit of early resection in unselected diffuse low-grade gliomas (LGG). However, heterogeneity within the LGG entity warrants investigation in a homogenous subgroup. Astrocytoma represents the largest subgroup of LGG, and is characterized by diffuse growth and inferior prognosis. We aimed to study the effects of early resection compared to biopsy and watchful waiting in this subgroup. METHODS: Patient data was retrospectively reviewed in two neurosurgical departments with regional referral practice. In one hospital, initial diagnostic biopsies and watchful waiting was favored, while early resections guided with three-dimensional (3D) ultrasound were advocated in the other hospital. This created a natural experiment with patient management heavily influenced by residential address. In the hospitals' histopathology databases, all adult patients diagnosed with supratentorial LGG from 1998 through 2009 were

screened (n = 169) and underwent blinded histopathological review. Histopathological review concluded with 117 patients with grade II astrocytomas that were included in the present study. The primary end-point was overall survival assessed by a regional comparison. RESULTS: Early resections were performed in 51 (82 %) versus 12 (22 %) patients in the respective hospitals (p < 0.001). The two patient populations were otherwise similar. Median survival was 9.7 years (95 % CI 7.5-11.9) if treated in the hospital favoring early resections compared to 5.6 years (95 % CI 3.5-7.6) if treated at the hospital favoring biopsy and watchful waiting (p = 0.047). No difference in surgical-related neurological morbidity was seen (p = 0.843). CONCLUSIONS: Early 3D ultrasound guided resections improve survival, apparently without increased morbidity, compared to biopsy and watchful waiting in patients with diffuse World Health Organization (WHO) grade II astrocytomas.

[217]

TÍTULO / TITLE: - Implication of tumor stem-like cells in the tumorigenesis of sporadic paraganglioma.

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

REVISTA / JOURNAL: - Med Oncol. 2013 Dec;30(4):659. doi: 10.1007/s12032-013-0659-8. Epub 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) [1007/s12032-013-0659-8](#)

AUTORES / AUTHORS: - Yang Y; Guo L; Yang F; Huang Q; Zhang F; Ma H; Li H; Yang K; Lou J; Liu C

INSTITUCIÓN / INSTITUTION: - Developmental & Stem Cell Institute, Department of Gynecology, West China Second University Hospital, Sichuan University, Chengdu, 610041, People's Republic of China.

RESUMEN / SUMMARY: - It is commonly believed that paragangliomas are rare tumors arising from the neural crest-derived chromaffin cells. Although it has been speculated that paraganglioma is related to stem cell origin, there has been lack of direct evidence demonstrating the presence of (neural) stem cells in these tumor tissues. In this study, we found a subgroup of human paraganglioma from ten clinical samples displayed definitive markers of CD133 and/or nestin, the fundamental features of neural stem cell capable of self-renewal and differentiation. A panel of lineage-specific markers was also manifest in some of these tumors, consistent with the hierarchical and heterogeneous nature of these tumors. These observations strongly suggest that at least some forms of paraganglioma maintain tumor stem-like cells (TSCs) that potentially contribute to the histologic complexity of human paraganglioma. Finally, we found that the genomic DNA structure becomes highly unstable in tumor cells of paraganglioma, indicating the loss of tight control of genomic surveillance system be an important transitory event from normal multi-potent tissue stem cells to TSCs.

[218]

TÍTULO / TITLE: - Perfusion Measurement in Brain Gliomas with Intravoxel Incoherent Motion MRI.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Aug 22.

- Enlace al texto completo (gratis o de pago) [3174/ajnr.A3686](#)

AUTORES / AUTHORS: - Federau C; Meuli R; O'Brien K; Maeder P; Hagmann P

INSTITUCIÓN / INSTITUTION: - Department of Diagnostic and Interventional Radiology, Centre Hospitalier Universitaire Vaudois and University of Lausanne, Lausanne, Switzerland; and Center for Biomedical Imaging, University of Geneva, Geneva, Switzerland.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Intravoxel incoherent motion MRI has been proposed as an alternative method to measure brain perfusion. Our aim was to evaluate the utility of intravoxel incoherent motion perfusion parameters (the perfusion fraction, the pseudodiffusion coefficient, and the flow-related parameter) to differentiate high- and low-grade brain gliomas. MATERIALS AND METHODS: The intravoxel incoherent motion perfusion parameters were assessed in 21 brain gliomas (16 high-grade, 5 low-grade). Images were acquired by using a Stejskal-Tanner diffusion pulse sequence, with 16 values of b (0-900 s/mm²) in 3 orthogonal directions on 3T systems equipped with 32 multichannel receiver head coils. The intravoxel incoherent motion perfusion parameters were derived by fitting the intravoxel incoherent motion biexponential model. Regions of interest were drawn in regions of maximum intravoxel incoherent motion perfusion fraction and contralateral control regions. Statistical significance was assessed by using the Student t test. In addition, regions of interest were drawn around all whole tumors and were evaluated with the help of histograms. RESULTS: In the regions of maximum perfusion fraction, perfusion fraction was significantly higher in the high-grade group (0.127 +/- 0.031) than in the low-grade group (0.084 +/- 0.016, P < .001) and in the contralateral control region (0.061 +/- 0.011, P < .001). No statistically significant difference was observed for the pseudodiffusion coefficient. The perfusion fraction correlated moderately with dynamic susceptibility contrast relative CBV (r = 0.59). The histograms of the perfusion fraction showed a "heavy-tailed" distribution for high-grade but not low-grade gliomas. CONCLUSIONS: The intravoxel incoherent motion perfusion fraction is helpful for differentiating high- from low-grade brain gliomas.

[219]

TÍTULO / TITLE: - Glioma-derived galectin-1 regulates innate and adaptive antitumor immunity.

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

REVISTA / JOURNAL: - Int J Cancer. 2013 Aug 9. doi: 10.1002/ijc.28426.

●● Enlace al texto completo (gratis o de pago) [1002/ijc.28426](https://doi.org/10.1002/ijc.28426)

AUTORES / AUTHORS: - Verschuere T; Toelen J; Maes W; Poirier F; Boon L; Tousseyn T; Mathivet T; Gerhardt H; Mathieu V; Kiss R; Lefranc F; Van Gool SW; Vleeschouwer SD

INSTITUCIÓN / INSTITUTION: - Department of Neurosciences, Laboratory of Experimental Neurosurgery and Neuroanatomy, KU Leuven, Leuven, Belgium.

RESUMEN / SUMMARY: - Galectin-1 is a glycan-binding protein, which is involved in the aggressiveness of glioblastoma (GBM) in part by stimulating angiogenesis. In different cancer models, galectin-1 has also been demonstrated to play a pivotal role in tumor-mediated immune evasion especially by modulating cells of the adaptive immune system. It is yet unknown whether the absence or presence of galectin-1 within the glioma microenvironment also causes qualitative or quantitative differences in innate and/or adaptive antitumor immune responses. All experiments were performed in the orthotopic GL261 mouse high-grade glioma model. Stable galectin-1 knockdown was achieved via transduction of parental GL261 tumor cells with a lentiviral vector encoding a galectin-1-targeting miRNA. We demonstrated that the absence of tumor-derived but not of host-derived galectin-1 significantly prolonged the survival of glioma-bearing mice as such and in combination with dendritic cell (DC)-based immunotherapy. Both flow cytometric and pathological analysis revealed that the silencing of glioma-derived galectin-1 significantly decreased the amount of brain-infiltrating macrophages and myeloid-derived suppressor cells (MDSC) in tumor-bearing mice. Additionally, we revealed a pro-angiogenic role for galectin-1 within the glioma microenvironment. The data provided in this study reveal a pivotal role for glioma-derived galectin-1 in the regulation of myeloid cell accumulation within the glioma microenvironment, the most abundant immune cell population in high-grade gliomas. Furthermore, the prolonged survival observed in untreated and DC-vaccinated glioma-bearing mice upon the silencing of tumor-derived galectin-1 strongly suggest that the in vivo targeting of tumor-derived galectin-1 might offer a promising and realistic adjuvant treatment modality in patients diagnosed with GBM.

[220]

TÍTULO / TITLE: - Long-term survival of children less than six years of age enrolled on the CCG-945 phase III trial for newly-diagnosed high-grade glioma: A report from the Children's Oncology Group.

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

REVISTA / JOURNAL: - Pediatr Blood Cancer. 2013 Aug 23. doi: 10.1002/pbc.24718.

●● Enlace al texto completo (gratis o de pago) [1002/pbc.24718](https://doi.org/10.1002/pbc.24718)

AUTORES / AUTHORS: - Batra V; Sands SA; Holmes E; Geyer JR; Yates A; Becker L; Burger P; Gilles F; Wisoff J; Allen JC; Pollack IF; Finlay JL

INSTITUCIÓN / INSTITUTION: - Children's Hospital of Philadelphia, Philadelphia, Pennsylvania.

RESUMEN / SUMMARY: - **BACKGROUND:** We analyzed the long-term survival of children under 6 years of age (<6 years) enrolled upon the Children's Cancer Group (CCG)-945 high-grade glioma (HGG) study to determine the impact of intrinsic biological characteristics as well as treatment upon both survival and quality of life (QOL) in this younger age population. **PROCEDURE:** Analyses were undertaken on patients <6 years with institutionally diagnosed HGG enrolled on the CCG-945 trial. Comparisons of survival were performed for patients <3 years of age (<3 years) (treated with intent to avoid irradiation) versus those between 3 and 6 years of age (3-6 years) (treated with irradiation and chemotherapy) at diagnosis. Discordance between the institutional diagnoses of HGG and consensus-reviewed diagnoses led us to perform further survival analyses for both groups. We compared the two groups of patients for biological markers, and evaluated the neuropsychological and QOL outcomes of long-term survivors. **RESULTS:** Patients <3 years (n = 49, 19.5% of all enrolled patients) at diagnosis had a 10-year EFS and OS of 29 +/- 6.5% and 37.5 +/- 7%, respectively, while for patients 3-6 years (n = 34, 13.5% of all enrolled patients) 10-year EFS and OS were 35 +/- 8% and 36 +/- 8%, respectively. Molecular marker analysis showed that a smaller proportion of patients <3 years harbored TP53 mutations (P = 0.05). Analysis of QOL outcomes with a median length of follow-up of 15.1 years (9.5-19.2) showed comparable results. **CONCLUSIONS:** QOL and survival data were similar for the two groups. A larger prospective study is justified to study the efficacy of chemotherapy only regimens in younger children. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[221]

TÍTULO / TITLE: - The hypothalamic-pituitary-gonadal axis and prostate cancer: implications for androgen deprivation therapy.

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

REVISTA / JOURNAL: - *World J Urol.* 2013 Sep 3.

●● Enlace al texto completo (gratis o de pago) [1007/s00345-013-1157-5](#)

AUTORES / AUTHORS: - Kluth LA; Shariat SF; Kratzik C; Tagawa S; Sonpavde G; Rieken M; Scherr DS; Pummer K

INSTITUCIÓN / INSTITUTION: - Department of Urology, Weill Cornell Medical College, New York, NY, USA, L.Kluth@uke.de.

RESUMEN / SUMMARY: - Luteinizing hormone (LH) and follicle-stimulating hormone (FSH) may play important roles in prostate cancer (PCa) progression. Specifically, LH expression in PCa tissues has been associated with metastatic disease with a poor prognosis, while FSH has been shown to stimulate prostate cell growth in hormone-

refractory PCa cell lines. Gonadotropin-releasing hormone (GnRH) analogues are common agents used for achieving androgen deprivation in the treatment for PCa. GnRH analogues include LH-releasing hormone (LHRH) agonists and GnRH antagonists, both of which exhibit distinct mechanisms of action that may be crucial in terms of their overall clinical efficacy. LHRH agonists are typically used as the primary therapy for most patients and function via a negative-feedback mechanism. This mechanism involves an initial surge in testosterone levels, which may worsen clinical symptoms of PCa. GnRH antagonists provide rapid and consistent hormonal suppression without the initial surge in testosterone levels associated with LHRH agonists, thus representing an important therapeutic alternative for patients with PCa. The concentrations of testosterone and dihydrotestosterone are significantly reduced after treatment with both LHRH agonists and GnRH antagonists. This reduction in testosterone concentrations to castrate levels results in significant, rapid, and consistent reductions in prostatic-specific antigen, a key biomarker for PCa. Evidence suggests that careful maintenance of testosterone levels during androgen deprivation therapy provides a clinical benefit to patients with PCa, emphasizing the need for constant monitoring of testosterone concentrations throughout the course of therapy.

[222]

TÍTULO / TITLE: - Cathepsin L silencing enhances arsenic trioxide mediated in vitro cytotoxicity and apoptosis in glioblastoma U87MG spheroids.

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

REVISTA / JOURNAL: - Exp Cell Res. 2013 Aug 19. pii: S0014-4827(13)00341-8. doi: 10.1016/j.yexcr.2013.08.011.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.yexcr.2013.08.011](#)

AUTORES / AUTHORS: - Primon M; Huszthy PC; Motaln H; Talasila KM; Torkar A; Bjerkvig R; Lah Turnsek T

INSTITUCIÓN / INSTITUTION: - Department of Genetic Toxicology and Cancer Biology, National Institute of Biology, Ljubljana, Slovenia; Bia d.o.o., Ljubljana, Slovenia.

RESUMEN / SUMMARY: - Despite improved treatment options, glioblastoma multiforme (GBM) remains the most aggressive brain tumour with the shortest post-diagnostic survival. Arsenite (As₂O₃) is already being used in the treatment of acute promyelocytic leukaemia (APL), yet its effects on GBM have not been evaluated in detail. In U87MG cell monolayers, we have previously shown that arsenite cytotoxicity significantly increases upon transient inhibition of lysosomal protease Cathepsin L (CatL). As multicellular spheroids more closely represent in vivo tumours, we aimed to evaluate the impact of permanent CatL silencing on arsenite treatment in U87MG spheroids. CatL was stably silenced using shRNA expression plasmid packed lentiviruses. By using metabolic- and cell viability assays, we demonstrated that long-term CatL silencing significantly increased arsenite cytotoxicity in U87MG spheroids.

Silenced CatL also increased arsenite-mediated apoptosis in spheroids via elevated p53 expression, Bax/Bcl2 ratio and caspase 3/7 activity, though with lower efficacy than in monolayers. Arsenite cytotoxicity was enhanced by lower CatL activity, since similar cytotoxicity increase was also observed using the novel CatL inhibitor AT094. The results have significant translational impact, since stable CatL silencing would enable the application of lower systemic doses of arsenite to achieve the desired cytotoxic effects on GBMs in vivo.

[223]

TÍTULO / TITLE: - Proteomic profiling of the hypothalamus in a mouse model of cancer-induced anorexia-cachexia.

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

REVISTA / JOURNAL: - Br J Cancer. 2013 Oct 1;109(7):1867-1875. doi: 10.1038/bjc.2013.525. Epub 2013 Sep 3.

●● Enlace al texto completo (gratis o de pago) [1038/bjc.2013.525](#)

AUTORES / AUTHORS: - Ihnatko R; Post C; Blomqvist A

INSTITUCIÓN / INSTITUTION: - Department of Clinical and Experimental Medicine, Division of Cell Biology, Faculty of Health Sciences, Linköping University, Linköping, S-581 85, Sweden.

RESUMEN / SUMMARY: - Background: Anorexia-cachexia is a common and severe cancer-related complication but the underlying mechanisms are largely unknown. Here, using a mouse model for tumour-induced anorexia-cachexia, we screened for proteins that are differentially expressed in the hypothalamus, the brain's metabolic control centre. Methods: The hypothalamus of tumour-bearing mice with implanted methylcholanthrene-induced sarcoma (MCG 101) displaying anorexia and their sham-implanted pair-fed or free-fed littermates was examined using two-dimensional electrophoresis (2-DE)-based comparative proteomics. Differentially expressed proteins were identified by liquid chromatography-tandem mass spectrometry. Results: The 2-DE data showed an increased expression of dynamin 1, hexokinase, pyruvate carboxylase, oxoglutarate dehydrogenase, and N-ethylmaleimide-sensitive factor in tumour-bearing mice, whereas heat-shock 70 kDa cognate protein, selenium-binding protein 1, and guanine nucleotide-binding protein G α 0 were downregulated. The expression of several of the identified proteins was similarly altered also in the caloric-restricted pair-fed mice, suggesting an involvement of these proteins in brain metabolic adaptation to restricted nutrient availability. However, the expression of dynamin 1, which is required for receptor internalisation, and of hexokinase, and pyruvate carboxylase were specifically changed in tumour-bearing mice with anorexia. Conclusion: The identified differentially expressed proteins may be new candidate molecules involved in the pathophysiology of tumour-induced anorexia-cachexia.

[224]

TÍTULO / TITLE: - Editorial: Radiosurgery for parasagittal and parafalcine meningiomas.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Oct;119(4):869-870. Epub 2013 Aug 9.

●● Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS13574](#)

AUTORES / AUTHORS: - Kondziolka D

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, NYU Langone Medical Center, New York University, New York, New York.

[225]

TÍTULO / TITLE: - Letter to the Editor: Indocyanine green videography and meningioma.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [3171/2013.5.JNS13951](#)

AUTORES / AUTHORS: - Defillo A; Nussbaum ES

INSTITUCIÓN / INSTITUTION: - St. Joseph's Hospital, St. Paul, MN.

[226]

TÍTULO / TITLE: - Stereotactic radiosurgery used to manage a meningioma filling the posterior two-thirds of the superior sagittal sinus.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug 30.

●● Enlace al texto completo (gratis o de pago) [3171/2013.7.JNS13623](#)

AUTORES / AUTHORS: - Deibert CP; Kondziolka D

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania; and.

RESUMEN / SUMMARY: - Intrinsic meningiomas of the superior sagittal sinus pose a significant technical challenge, particularly in the posterior two-thirds of the sinus. Resection is curative but frequently is not possible because of the involvement of critical vascular structures. Here, the authors present the case of a 49-year-old woman with a recurrent meningioma located exclusively in the posterior two-thirds of the sagittal sinus. The patient was treated with a margin dose of 12 Gy and a maximum dose of 24 Gy to the length of the tumor, which measured 16 cm. Five years after treatment, the tumor remains stable and the patient is symptom free. This case demonstrates the unique role that stereotactic radiosurgery can play in the management of meningiomas that are surgically unresectable and have no accepted

form of treatment. To the authors' knowledge, 16 cm also represents the longest segment of tumor treated using stereotactic radiosurgery.

[227]

TÍTULO / TITLE: - Radiosurgery for parasagittal and parafalcine meningiomas.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Oct;119(4):871-877. Epub 2013 Aug 9.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.6.JNS13110](#)

AUTORES / AUTHORS: - Ding D; Xu Z; McNeill IT; Yen CP; Sheehan JP

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, and.

RESUMEN / SUMMARY: - Object Parasagittal and parafalcine (PSPF) meningiomas represent the second most common location for intracranial meningiomas. Involvement of the superior sagittal sinus or deep draining veins may prevent gross-total resection of these tumors without significant morbidity. The authors review their results for treatment of PSPF meningiomas with radiosurgery. Methods The authors retrospectively reviewed the institutional review board-approved University of Virginia Gamma Knife database and identified 65 patients with 90 WHO Grade I parasagittal (59%) and parafalcine (41%) meningiomas who had a mean MRI follow-up of 56.6 months. The patients' mean age was 57 years, the median preradiosurgery Karnofsky Performance Status score was 80, and the median initial tumor and treatment volumes were 3 and 3.7 cm³, respectively. The median prescription dose was 15 Gy, isodose line was 40%, and the number of isocenters was 5. Kaplan-Meier analysis was used to determine progression-free survival (PFS). Univariate and multivariate Cox regression analyses were used to identify factors associated with PFS. Results The median overall PFS was 75.6 months. The actuarial tumor control rate was 85% at 3 years and 70% at 5 years. Parasagittal location, no prior resection, and younger age were found to be independent predictors of tumor PFS. For the 49 patients with clinical follow-up (mean 70.8 months), the median postradiosurgery Karnofsky Performance Status score was 90. Symptomatic postradiosurgery peritumoral edema was observed in 4 patients (8.2%); this group comprised 3 patients (6.1%) with temporary and 1 patient (2%) with permanent clinical sequelae. Two patients (4.1%) died of tumor progression. Conclusions Radiosurgery offers a minimally invasive treatment option for PSPF meningiomas, with a good tumor control rate and an acceptable complication rate comparable to most surgical series.

[228]

TÍTULO / TITLE: - Awake craniotomy may further improve neurological outcome of intraoperative MRI-guided brain tumor surgery.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Oct;155(10):1805-12. doi: 10.1007/s00701-013-1837-3. Epub 2013 Aug 18.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1837-3](https://doi.org/10.1007/s00701-013-1837-3)

AUTORES / AUTHORS: - Tuominen J; Yrjana S; Ukkonen A; Koivukangas J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Oulu University Hospital, University of Oulu, Oulu, Finland, juho.tuominen@ppshp.fi.

RESUMEN / SUMMARY: - BACKGROUND: Results of awake craniotomy are compared to results of resections done under general anesthesia in patients operated with IMRI control. We hypothesized that stimulation of the cortex and white matter during awake surgery supplements IMRI control allowing for safer resection of eloquent brain area tumors. METHODS: The study group consisted of 20 consecutive patients undergoing awake craniotomy with IMRI control. Resection outcome of these patients was compared to a control group of 20 patients operated in the same IMRI suite but under general anesthesia without cortical stimulation. The control group was composed of those patients whose age, sex, tumor location, recurrence and histology best matched to patients in study group. RESULTS: Cortical stimulation identified functional cortex in eight patients (40 %). Postoperatively the neurological condition in 16 patients (80 %) in the study group was unchanged or improved compared with 13 patients (65 %) in the control group. In both groups, three patients (15 %) had transient impairment symptoms. There was one patient (5 %) with permanent neurological impairment in the study group compared to four patients (20 %) in the control group. These differences between groups were not statistically significant. There was no surgical mortality in either group and the overall infection rate was 5 %. Mean operation time was 4 h 45 min in the study group and 3 h 15 min in the control group. CONCLUSIONS: The study consisted of a limited patient series, but it implies that awake craniotomy with bipolar cortical stimulation may help to reduce the risk of postoperative impairment following resection of tumors located in or near speech and motor areas also under IMRI control.

[229]

TÍTULO / TITLE: - Brain tumor response under nimotuzumab treatment evaluated by magnetic resonance.

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

REVISTA / JOURNAL: - Pediatr Int. 2013 Sep 4. doi: 10.1111/ped.12212.

●● Enlace al texto completo (gratis o de pago) [1111/ped.12212](https://doi.org/10.1111/ped.12212)

AUTORES / AUTHORS: - Dalmau ER; Mirabal CC; Martinez GS; Davila AL; Suarez JC;

Armada RC; Cruz GR; Zayas DD; Castillo MR; Garrido LV; Sotolongo LQ; Fernandez MM

INSTITUCIÓN / INSTITUTION: - Images Group Center of Genetic Engineering and Biotechnology. La Habana, Cuba.

[230]

TÍTULO / TITLE: - Case-control study of the association between malignant brain tumours diagnosed between 2007 and 2009 and mobile and cordless phone use.

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

REVISTA / JOURNAL: - Int J Oncol. 2013 Sep 24. doi: 10.3892/ijo.2013.2111.

●● Enlace al texto completo (gratis o de pago) [3892/ijo.2013.2111](#)

AUTORES / AUTHORS: - Hardell L; Carlberg M; Soderqvist F; Mild KH

INSTITUCIÓN / INSTITUTION: - Department of Oncology, University Hospital, SE-701 85 Orebro, Sweden.

RESUMEN / SUMMARY: - Previous studies have shown a consistent association between long-term use of mobile and cordless phones and glioma and acoustic neuroma, but not for meningioma. When used these phones emit radiofrequency electromagnetic fields (RF-EMFs) and the brain is the main target organ for the handheld phone. The International Agency for Research on Cancer (IARC) classified in May, 2011 RF-EMF as a group 2B, i.e. a 'possible' human carcinogen. The aim of this study was to further explore the relationship between especially long-term (>10 years) use of wireless phones and the development of malignant brain tumours. We conducted a new case-control study of brain tumour cases of both genders aged 18-75 years and diagnosed during 2007-2009. One population-based control matched on gender and age (within 5 years) was used to each case. Here, we report on malignant cases including all available controls. Exposures on e.g. use of mobile phones and cordless phones were assessed by a self-administered questionnaire. Unconditional logistic regression analysis was performed, adjusting for age, gender, year of diagnosis and socio-economic index using the whole control sample. Of the cases with a malignant brain tumour, 87% (n=593) participated, and 85% (n=1,368) of controls in the whole study answered the questionnaire. The odds ratio (OR) for mobile phone use of the analogue type was 1.8, 95% confidence interval (CI)=1.043-3, increasing with >25 years of latency (time since first exposure) to an OR=3.3, 95% CI=1.6-6.9. Digital 2G mobile phone use rendered an OR=1.6, 95% CI=0.996-2.7, increasing with latency >15-20 years to an OR=2.1, 95% CI=1.2-3.6. The results for cordless phone use were OR=1.7, 95% CI=1.1-2.9, and, for latency of 15-20 years, the OR=2.1, 95% CI=1.2-3.8. Few participants had used a cordless phone for >20-25 years. Digital type of wireless phones (2G and 3G mobile phones, cordless phones) gave increased risk with latency >1-5 years, then a lower risk in the following latency groups, but again increasing risk with latency >15-20 years. Ipsilateral use resulted in a higher risk than contralateral mobile and cordless phone use. Higher ORs were calculated for tumours in the temporal and overlapping lobes. Using the meningioma cases in the same study as reference entity gave somewhat higher ORs indicating that the results were unlikely to be explained by recall or observational bias. This study confirmed previous results of an association between mobile and cordless phone use and malignant brain tumours.

These findings provide support for the hypothesis that RF-EMFs play a role both in the initiation and promotion stages of carcinogenesis.

[231]

TÍTULO / TITLE: - Are onconeural antibodies a clinical phenomenology in paraneoplastic limbic encephalitis?

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

REVISTA / JOURNAL: - Mediators Inflamm. 2013;2013:172986. doi: 10.1155/2013/172986. Epub 2013 Jul 25.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/172986](#)

AUTORES / AUTHORS: - Zhang H; Zhou C; Wu L; Ni F; Zhu J; Jin T

INSTITUCIÓN / INSTITUTION: - Department of Neurology, The First Bethune Hospital of Jilin University, Jilin University, Xinmin Street 71, Changchun 130021, China ; Department of Neurobiology, Care Sciences and Society, Karolinska Institute, Novum, Plan 5, 141 86 Stockholm, Sweden.

RESUMEN / SUMMARY: - Paraneoplastic neurological syndromes (PNSs) occur in patients with cancer and can cause clinical symptoms and signs of dysfunction of the nervous system that are not due to a local effect of the tumor or its metastases. Most of these clinical syndromes in adults are associated with lung cancer, especially small cell lung cancer (SCLC), lymphoma, and gynecological tumors. The finding of highly specific antibodies directed against onconeural antigens has revolutionized the diagnosis and promoted the understanding of these syndromes and led to the current hypothesis of an autoimmune pathophysiology. Accumulating data strongly suggested direct pathogenicity of these antibodies. The field of PNS has expanded rapidly in the past few years with the discovery of limbic encephalitis associated with glutamic acid decarboxylase (GAD) 65, the voltage (VGKC-gated potassium channel) complex, the methyl (N-NMDA-D-aspartate), alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA), and gamma aminobutyric acid (GABA) (B) receptors, and so forth. Despite this, the clinical spectrum of these diseases has not yet been fully investigated. The clinical importance of these conditions lies in their frequent response to immunotherapies and, less commonly, their association with distinctive tumors. This review provides an overview on the pathogenesis and diagnosis of PNS, with emphasis on the role of antibodies in limbic encephalitis.

[232]

TÍTULO / TITLE: - Identification and expression of a novel MDM4 splice variant in human glioma.

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

REVISTA / JOURNAL: - Brain Res. 2013 Aug 30. pii: S0006-8993(13)01077-9. doi: 10.1016/j.brainres.2013.07.054.

●● Enlace al texto completo (gratis o de pago) 1016/j.brainres.2013.07.054

AUTORES / AUTHORS: - Wang X; Sheng P; Guo X; Wang J; Hou L; Hu G; Luo C; Dong Y; Lu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Shanghai Institute of Neurosurgery, PLA Institute of Neurosurgery, Changzheng Hospital, Second Military Medical University, Shanghai 200003, China.

RESUMEN / SUMMARY: - The product of the MDMX (or MDM4) gene is structurally related to the MDM2 oncoprotein and is also capable of interacting with the tumor suppressor protein p53. The MDM4 gene is overexpressed in several human tumors, while its product can be detected as various isoforms. This study was aimed to find the presence of aberrant mRNA transcripts of MDM4 in human glioma and their association with the clinicopathological characteristics of glioma patients. 42 glioma tissues were examined for MDM4 mRNA splicing variants by RT-PCR. A total of four distinct transcript sizes (full length-MDM4 851bp, MDM4-S 783bp, MDM4-A 701bp, MDM4-B 540bp) were detected. In the present study, we first report the novel alternative splicing form of MDM4, MDM4-B (GenBank accession no.KC479043.1). Expression of MDM4-B was present in various stages of human gliomas, but no significant correlation between presence of MDM4-B and malignancy of glioma was observed. The expression level of MDM4-B mRNA detected by real-time PCR was not only significantly associated with tumor stages, but also with p53 mutation and Ki-67 status which are important clinical molecular markers of glioma. Our data indicate that the novel variant MDM4-B may play a role in glioma tumorigenesis or cancer progression.

[233]

TÍTULO / TITLE: - High-dose methotrexate, high-dose cytarabine and temozolomide for the treatment of primary central nervous system lymphoma (PCNSL).

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

REVISTA / JOURNAL: - Med Oncol. 2013 Dec;30(4):690. doi: 10.1007/s12032-013-0690-9. Epub 2013 Aug 20.

●● Enlace al texto completo (gratis o de pago) 1007/s12032-013-0690-9

AUTORES / AUTHORS: - Salamoun M; Hussein T; Kenj M; Bachour M

INSTITUCIÓN / INSTITUTION: - Department of Hematology and Medical Oncology, Al Bairouni University Hospital, Damascus University, Damascus, Syria, maheroncology@yahoo.com.

RESUMEN / SUMMARY: - Treatment of primary central nervous system lymphoma (PCNSL) associates with low response rates and poor survival using conventional radio and chemotherapy. Due to its favorable toxicity profile, temozolomide has emerged as a new option for treatment of PCNSL in young patients. In this study, we report a

series of PCNSL patients treated with an innovative regimen combining high dose of both cytarabine and methotrexate with temozolomide without radiotherapy or intrathecal chemotherapy. To evaluate a new intensive chemotherapy with temozolomide, trying to assess response and progression-free survival rates and if the results are promising, we are aiming at evaluating the overall survival (OS) taking into consideration the toxicity profile. The study was performed at Al Mowassa Charity Hospital in Damascus (Syria). Forty patients with histologically confirmed PCNSL median age 52 years (range 20-65) years were included. Biopsies were cultured, and a karyotyping was made in 32 patients. An induction chemotherapy was started, and methotrexate 3 gr/m² over 12 h on day 1, cytarabine 3 gr/m² every 12 h on day 1 and temozolomide 150 mg/m² from day 2 through day 6 with a total of 6 cycles were given on a monthly basis. Among the 40 patients included in the study, a complete response was observed in 34 patients (85 %) and a partial response in the remaining 6 patients (15 %). Disease progressed in 8 out of 40 patients (20 %) while 32 patients are still living at 5 years making the OS reaching 77 %. Grade II nephrotoxicity was observed in 2 patients while grade III and IV hematotoxicity was observed in 5 patients. High dose of both Ara-C and MTX combined with temozolomide appears to be a good choice in the treatment of PCNSL, in the light of good response and OS rates, taking into consideration the acceptable toxicity profile. However, a larger trial is needed to make it an acceptable new combination as a first line for PCNSL patients.

[234]

TÍTULO / TITLE: - Comparison of 2 monoclonal antibodies for immunohistochemical detection of BRAF V600E mutation in malignant melanoma, pulmonary carcinoma, gastrointestinal carcinoma, thyroid carcinoma, and gliomas.

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

REVISTA / JOURNAL: - Hum Pathol. 2013 Sep 24. pii: S0046-8177(13)00288-8. doi: 10.1016/j.humpath.2013.06.018.

●● Enlace al texto completo (gratis o de pago) 1016/j.humpath.2013.06.018

AUTORES / AUTHORS: - Routhier CA; Mochel MC; Lynch K; Dias-Santagata D; Louis DN; Hoang MP

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Massachusetts General Hospital and Harvard Medical School, Boston, MA 02114.

RESUMEN / SUMMARY: - BRAF mutation is seen in a variety of human neoplasms including cutaneous malignant melanoma, papillary thyroid carcinoma, colorectal carcinoma, non-small cell lung carcinoma, pleomorphic xanthoastrocytoma, and others. Currently, there are 2 commercially available monoclonal antibodies for the detection of BRAF V600E mutation; however, a full and practical comparison of their performance in various tumor types on an automated staining platform has not been done. We investigated their sensitivity and specificity in detecting the BRAF V600E

mutation in a series of 152 tumors including 31 malignant melanomas, 25 lung carcinomas, 32 gastrointestinal carcinomas, 23 thyroid carcinomas, 35 gliomas, and 6 other malignancies. In this series, the concordance rate between immunohistochemistry (IHC) and mutational analyses was 97% (148/152) for VE1 and 88% (131/149) for anti-B-Raf. The sensitivity and specificity were 98% (60/61) and 97% (88/91) for monoclonal VE1 and 95% (58/61) and 83% (73/88) for anti-B-Raf, respectively. There were 4 cases with discordant IHC and mutational results for monoclonal VE1 in contrast to 18 cases for anti-B-Raf. Our studies showed that IHC with monoclonal VE1 has a better performance compared with anti-B-Raf in an automated staining platform and confirmed that clone VE1 provides excellent sensitivity and specificity for detecting the BRAF V600E mutation in a variety of tumor types in a clinical setting.

[235]

TÍTULO / TITLE: - Extranodal NK/T cell lymphoma, nasal type, presenting with meningeal infiltration in a Caucasian female.

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

REVISTA / JOURNAL: - Br J Haematol. 2013 Sep 4. doi: 10.1111/bjh.12553.

●● Enlace al texto completo (gratis o de pago) [1111/bjh.12553](#)

AUTORES / AUTHORS: - Hildyard C; Sheikh S; Eyre T; Collins G

INSTITUCIÓN / INSTITUTION: - Department of Haematology, Churchill Hospital, Oxford, UK. cathildyard@googlemail.com.

PTPTPTP - JOURNAL ARTICLE ----- [236]

TÍTULO / TITLE: - Calcitriol enhances 5-aminolevulinic acid-induced fluorescence and the effect of photodynamic therapy in human glioma.

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

REVISTA / JOURNAL: - Acta Oncol. 2013 Sep 13.

●● Enlace al texto completo (gratis o de pago) [3109/0284186X.2013.819993](#)

AUTORES / AUTHORS: - Chen X; Wang C; Teng L; Liu Y; Chen X; Yang G; Wang L; Liu H; Liu Z; Zhang D; Zhang Y; Guan H; Li X; Fu C; Zhao B; Yin F; Zhao S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of Harbin Medical University, Harbin, People's Republic of China.

RESUMEN / SUMMARY: - Background. Glioma recurrence frequently occurs close to the marginal area of the surgical cavity as a result of residual infiltrating glioma cells. Fluorescence-guided surgery with 5-aminolevulinic acid (ALA) for resection of gliomas has been used as an effective therapeutic approach to discriminate malignant tissue from brain tissue and to facilitate patient prognosis. ALA-based photodynamic therapy is an effective adjuvant treatment modality for gliomas. However, insufficient protoporphyrin IX (PpIX) accumulation may limit the applicability of fluorescence-

guided resection and photodynamic therapy in the marginal areas of gliomas. Methods. To be able to understand how to overcome these issues, human glioma cells and normal astrocytes were used as the model system. Glioma cells and astrocytes were preconditioned with calcitriol for 48 hours and then incubated with ALA. Changes in ALA-induced PpIX fluorescence and cell survival after light exposure were assessed. Furthermore, expression of porphyrin synthetic enzymes in pretreated glioma cells was analyzed. Results. Calcitriol can be administered prior to ALA as a non-toxic preconditioning regimen to significantly enhance ALA-induced PpIX levels and fluorescence. This increase in PpIX level was detected preferentially in glioma versus normal cells. Also, calcitriol pretreated glioma cells exhibited increased cell death following ALA-based photodynamic therapy. Furthermore, mechanistic studies documented that expression of the porphyrin synthesis enzymes coproporphyrinogen oxidase was increased by calcitriol at the mRNA level. Conclusion. We demonstrated for the first time a simple, non-toxic and highly effective preconditioning regimen to selectively enhance PpIX fluorescence and the response of ALA-PDT in glioma cells. This finding suggests that the combined treatment of glioma cells with calcitriol plus ALA may provide an effective and selective therapeutic modality to enhance ALA-induced PpIX fluorescent quality for improving discrimination of tumor tissue and PDT efficacy.

[237]

TÍTULO / TITLE: - Levetiracetam compared with valproic Acid for the prevention of postoperative seizures after supratentorial tumor surgery: a retrospective chart review.

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

REVISTA / JOURNAL: - CNS Drugs. 2013 Sep;27(9):753-9. doi: 10.1007/s40263-013-0094-6.

●● Enlace al texto completo (gratis o de pago) [1007/s40263-013-0094-6](#)

AUTORES / AUTHORS: - Lee YJ; Kim T; Bae SH; Kim YH; Han JH; Yun CH; Kim CY

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Seoul National University Bundang Hospital, 166 Gumi-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, 463-707, Korea.

RESUMEN / SUMMARY: - INTRODUCTION: Antiepileptic drugs are commonly given for perioperative prophylaxis after brain tumor surgery, and there has been growing interest in levetiracetam, a second-generation antiepileptic drug. This retrospective study compared the seizure outcomes, side effects and durability of levetiracetam with valproic acid after a craniotomy for supratentorial brain tumors. METHODS: Between 2009 and 2012, 282 consecutive patients with a supratentorial brain tumor underwent a craniotomy at Seoul National University Bundang Hospital. Of these patients, 51 (18.1 %) and 231 (81.9 %) were pre-operatively administered levetiracetam and

valproic acid, respectively. The postoperative seizure outcomes (within 1 month after surgery) and the long-term side effects of both drugs were evaluated. RESULTS: Of the 51 patients in the levetiracetam group, 4 (7.8 %) experienced postoperative seizures after brain tumor surgery, and 15 (6.5 %) of the 231 patients in the valproic acid group experienced postoperative seizures ($p = 0.728$). The long-term complication rate of the valproic acid group (26.8 %; 62/231) was significantly higher than that of the levetiracetam group (9.8 %; 5/51) [$p = 0.010$]. In the valproic acid group, 10 hepatotoxicities, 20 hyperammonemias and 10 hematologic abnormalities (6 thrombocytopenias, 3 pancytopenias, and 1 leucopenia) occurred. Moreover, 89 patients (38.5 %) in the valproic acid group changed or added other anticonvulsants because of side effects or uncontrolled seizures, whereas only 9 patients (17.6 %) in the levetiracetam group changed or added other anticonvulsants ($p = 0.005$). CONCLUSIONS: The postoperative seizure control rates of levetiracetam and valproic acid were not statistically significantly different; however, levetiracetam may be superior to valproic acid in terms of its safety and durability after supratentorial tumor surgery.

[238]

TÍTULO / TITLE: - Clinical application of anatomy landmarks for microscopic endonasal transsphenoidal surgery for pituitary adenomas.

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

REVISTA / JOURNAL: - J Craniofac Surg. 2013 Sep;24(5):1785-9. doi: 10.1097/SCS.0b013e3182a210ab.

●● Enlace al texto completo (gratis o de pago) [1097/SCS.0b013e3182a210ab](#)

AUTORES / AUTHORS: - Wang SS; Li JF; Chen HJ; Wang RM

INSTITUCIÓN / INSTITUTION: - From the Department of Neurosurgery, Fuzhou General Hospital, Fujian Medical University, Fuzhou, China.

RESUMEN / SUMMARY: - It is important to identify relevant anatomical landmarks on the route of endonasal transsphenoidal surgery (TSS) for pituitary adenomas to improve the gross total resection and the remission of disease. We therefore retrospectively studied the clinical outcomes of 148 patients who underwent single nostril endonasal TSS for pituitary adenomas. The anatomic basis of these procedures was evaluated. The important landmarks included the mucosal sphenoid ostia, the sphenoid keel, the osseous ostia and the nutrient arteries nearby, the sellar bulge, and the carotid protuberance, which outlined a clear route to the sella turcica with the best view and less tissue damage. Based on these landmarks, 148 cases of endonasal TSS were successfully performed to achieve 70.3% of gross total resection and remission, respectively. The complications were controlled to the least. Therefore, the application of these landmarks will help to prevent complications and improve the long-term outcomes.

[239]

TÍTULO / TITLE: - Radiosurgery for central neurocytoma: long-term outcome and failure pattern.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1253-9](#)

AUTORES / AUTHORS: - Kim JW; Kim DG; Chung HT; Choi SH; Han JH; Park CK; Kim CY; Paek SH; Jung HW

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Seoul National University College of Medicine, 101 Daehangno, Jongno-gu, Seoul, 110-744, Korea.

RESUMEN / SUMMARY: - Despite the favorable outcomes of radiosurgery for central neurocytoma (CN), these results are based on case series that included a limited number of patients and short follow-up periods because of the scarcity of CN. Because CN is a benign tumor with an indolent clinical course, long-term follow-up and analysis of failure pattern are required for the establishment of the role of radiosurgery in the management of CN. Twenty consecutive patients (10 patients who received Gamma Knife radiosurgery (GKRS) as a primary treatment and 10 patients who received GKRS as a secondary treatment) with a radiological follow-up period ≥ 36 months were included in this study. The mean radiological follow-up duration was 100 months (range 43-149 months). The mean tumor volume was 10.4 cm³ (range 0.4-36.4 cm³) and the mean marginal dose was 15.4 Gy (range 9-20 Gy). Local control failure was found in six patients at the last radiological follow-up. Overall actuarial local control rates were 89.5 % at 5 years and 83.1 % at 10 years. The primary GKRS group included two cases with local failure, with cyst formation or local recurrence. In contrast, in the secondary GKRS group, local control failure was found in four cases (including three cases with an "out-of-field recurrence" pattern) and occurred earlier compared with the primary GKRS group. Our study suggests that GKRS could be a primary or secondary treatment option for CN. However, long-term radiological follow-up is mandatory. In particular, more careful consideration during margin delineation and planning procedure is required in the secondary GKRS group.

[240]

TÍTULO / TITLE: - Fat-water interface on susceptibility-weighted imaging and gradient-echo imaging: comparison of phantoms to intracranial lipomas.

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

REVISTA / JOURNAL: - AJR Am J Roentgenol. 2013 Oct;201(4):902-7. doi: 10.2214/AJR.12.10049.

●● Enlace al texto completo (gratis o de pago) [2214/AJR.12.10049](#)

AUTORES / AUTHORS: - Mehemed TM; Yamamoto A; Okada T; Kanagaki M; Fushimi Y; Sawada T; Togashi K

INSTITUCIÓN / INSTITUTION: - 1 All authors: Department of Diagnostic Imaging and Nuclear Medicine, Graduate School of Medicine, Kyoto University, 54 Kawahara-cho, Shogoin, Sakyo-ku, Kyoto-shi, Kyoto 606-8507, Japan.

RESUMEN / SUMMARY: - OBJECTIVE. In a clinical setting, lipoma can sometime show low signal intensity on susceptibility-weighted imaging (SWI) mimicking hemorrhage. The purpose of this study was to evaluate the fat-water interface chemical-shift artifacts between SWI and T2*-weighted imaging with a phantom study and evaluate SWI in lipoma cases. MATERIALS AND METHODS. SWI, magnitude, high-pass filtered phase, and T2*-weighted imaging of a lard-water phantom were evaluated in the in-phase, out-of phase, and standard partially out-of-phase TE settings used for clinical 3-T SWI (19.7, 20.9, and 20.0 ms, respectively) to identify the most prominent fat-water interface low signal. SWI of five cases of CNS lipoma were retrospectively evaluated by two neuroradiologists. RESULTS. TE at 19.7 ms (in-phase) showed the minimum fat-water interface low signal in the phase-encoding direction on magnitude, high-pass filtered phase, and SWI. TE at 20.9 ms (out-of-phase) showed the maximum fat-water interface in the phase-encoding direction on magnitude, high-pass filtered phase, and SWI. TE at 20.0 ms (partially out-of-phase) showed more fat-water interface low signal on SWI than on T2*-weighted imaging, especially in the phase-encoding direction. All lipomas in the five patients showed high signal intensity with surrounding peripheral dark rim on SWI. CONCLUSION. Fat-water interface is more prominent on the standard TE setting used for clinical SWI (20.0 ms) than that of T2*-weighted imaging and shows a characteristic surrounding peripheral low-signal-intensity rim in lipoma. Knowing the fat-water appearance on SWI is important to avoid misinterpreting intracranial lipomas as hemorrhages.

[241]

TÍTULO / TITLE: - Modulation of PPIX synthesis and accumulation in various normal and glioma cell lines by modification of the cellular signaling and temperature.

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

REVISTA / JOURNAL: - Lasers Surg Med. 2013 Sep;45(7):460-8. doi: 10.1002/lsm.22161.

●● Enlace al texto completo (gratis o de pago) [1002/lsm.22161](#)

AUTORES / AUTHORS: - Fisher CJ; Niu CJ; Lai B; Chen Y; Kuta V; Lilge LD

INSTITUCIÓN / INSTITUTION: - Department of Medical Biophysics, University of Toronto, Toronto, Canada.

RESUMEN / SUMMARY: - Effective therapies for malignant gliomas are still elusive and limited survival improvements are provided only by Temozolomide or fluorescence guided resection. The efficacy of photodynamic therapy (PDT) in this indication is limited by the higher sensitivity of normal brain structures compared to glioma

necessitating a modulation of its sensitivity. We evaluate the influence of hypothermia and the tyrosine kinase inhibitor Erlotinib on cell's ability to synthesize PPIX following the administration of ALA which was not previously investigated. We demonstrate that both hypothermia and Erlotinib are favorable in PPIX selectivity as only glioma cell lines demonstrate an increased PPIX synthesis, whereas the neuronal and astrocytic synthesis is remaining unaffected. The results are encouraging to consider hypothermia and Erlotinib as adjuvant therapies to increase the PDT therapeutic index between GBM and normal intracranial tissues, as well as to improve contrast in fluorescence guided resection. *Lasers Surg. Med.* 45:460-468, 2013. © 2013 Wiley Periodicals, Inc.

[242]

TÍTULO / TITLE: - Giant suprasellar arachnoid cyst with head bobbing.

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

REVISTA / JOURNAL: - *Mov Disord.* 2013 Aug;28(9):1216. doi: 10.1002/mds.25511. Epub 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [1002/mds.25511](#)

AUTORES / AUTHORS: - Alexiou GA; Sfakianos G; Prodromou N

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Children's Hospital, "Agia Sofia," Athens, Greece.

[243]

TÍTULO / TITLE: - Investigating brain tumor differentiation with diffusion and perfusion metrics at 3T MRI using pattern recognition techniques.

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

REVISTA / JOURNAL: - *Magn Reson Imaging.* 2013 Jul 29. pii: S0730-725X(13)00227-0. doi: 10.1016/j.mri.2013.06.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.mri.2013.06.010](#)

AUTORES / AUTHORS: - Svolos P; Tsolaki E; Kapsalaki E; Theodorou K; Fountas K; Fezoulidis I; Tsougos I

INSTITUCIÓN / INSTITUTION: - Medical Physics Department, Medical School, University of Thessaly, Biopolis, 41110, Larissa, Greece.

RESUMEN / SUMMARY: - The aim of this study was to evaluate the contribution of diffusion and perfusion MR metrics in the discrimination of intracranial brain lesions at 3T MRI, and to investigate the potential diagnostic and predictive value that pattern recognition techniques may provide in tumor characterization using these metrics as classification features. Conventional MRI, diffusion weighted imaging (DWI), diffusion tensor imaging (DTI) and dynamic-susceptibility contrast imaging (DSCI) were performed on 115 patients with newly diagnosed intracranial tumors (low- and high

grade gliomas, meningiomas, solitary metastases). The Mann-Whitney U test was employed in order to identify statistical differences of the diffusion and perfusion parameters for different tumor comparisons in the intra-and peritumoral region. To assess the diagnostic contribution of these parameters, two different methods were used; the commonly used receiver operating characteristic (ROC) analysis and the more sophisticated SVM classification, and accuracy, sensitivity and specificity levels were obtained for both cases. The combination of all metrics provided the optimum diagnostic outcome. The highest predictive outcome was obtained using the SVM classification, although ROC analysis yielded high accuracies as well. It is evident that DWI/DTI and DSCI are useful techniques for tumor grading. Nevertheless, cellularity and vascularity are factors closely correlated in a non-linear way and thus difficult to evaluate and interpret through conventional methods of analysis. Hence, the combination of diffusion and perfusion metrics into a sophisticated classification scheme may provide the optimum diagnostic outcome. In conclusion, machine learning techniques may be used as an adjunctive diagnostic tool, which can be implemented into the clinical routine to optimize decision making.

[244]

TÍTULO / TITLE: - CLIPPERS: Chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids. Review of an increasingly recognized entity within the spectrum of inflammatory CNS disorders.

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

REVISTA / JOURNAL: - Clin Exp Immunol. 2013 Sep 13. doi: 10.1111/cei.12204.

●● [Enlace al texto completo \(gratis o de pago\) 1111/cei.12204](#)

AUTORES / AUTHORS: - Dudesek A; Rimmele F; Tesar S; Kolbaske S; Rommer PS; Benecke R; Zettl UK

INSTITUCIÓN / INSTITUTION: - Department of Neurology, University of Rostock, Rostock, Germany.

RESUMEN / SUMMARY: - Chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids (CLIPPERS) is a recently defined inflammatory central nervous system (CNS) disorder, prominently involving the brainstem and in particular the pons. The condition features a combination of clinical symptoms essentially referable to brainstem pathology and a characteristic MRI appearance with punctate and curvilinear gadolinium enhancement “peppering” the pons. The radiological distribution is focused in the pons and adjacent rhombencephalic structures such as the cerebellar peduncles, cerebellum, medulla, and the midbrain. While the lesion burden with a perivascular pattern is typically most dense in these pontine and peripontine regions, enhancing lesions may additionally extend into the spinal cord and supratentorial structures such as the thalamus, basal ganglia, capsula interna, corpus callosum, and the cerebral white matter. Another core feature is

clinical and radiological responsiveness to glucocorticosteroid (GCS) based immunosuppression. As withdrawal of GCS treatment results commonly into disease exacerbation, a long-term immunosuppressive therapy appears to be mandatory for sustained improvement. Diagnosis of CLIPPERS is challenging and requires careful exclusion of alternative diagnoses. A specific serum or CSF biomarker for the disorder is currently not known. Pathogenesis of CLIPPERS remains poorly understood and the nosological position of CLIPPERS has still to be established. Whether CLIPPERS represents an independent, actual new disorder or a syndrome that includes etiologically heterogeneous diseases and/or their prestages, remains a debated and not finally clarified issue. Clinicians and radiologists should be aware of this condition and its differential diagnoses, given that CLIPPERS constitutes a treatable condition and that patients may benefit from an early introduction of GCS ensued by a long-term immunosuppression. Based on previous reports in literature - currently encompassing more than 50 reported cases of CLIPPERS - this review addresses clinical features, diagnostic criterias, differential diagnoses and therapeutic management of this peculiar disorder.

[245]

TÍTULO / TITLE: - The differential diagnosis of pilocytic astrocytoma with atypical features and malignant glioma: an analysis of 16 cases with emphasis on distinguishing molecular features.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 21.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1249-5](#)

AUTORES / AUTHORS: - Cykowski MD; Allen RA; Kanaly AC; Fung KM; Marshall R; Perry A; Stolzenberg ED; Dunn ST

INSTITUCIÓN / INSTITUTION: - Department of Pathology, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA.

RESUMEN / SUMMARY: - Rare pilocytic astrocytomas (PA) have atypical histologic and clinicoradiologic features that raise the differential diagnosis of glioblastoma. Whether ancillary studies can supplement histopathologic examination in placing these cases accurately on the spectrum of WHO Grade I PA to higher-grade glioma is not always clear, partly because these cases are not common. Here, ten PAs with atypical clinicoradiologic and histologic features and six pediatric glioblastoma multiforme (pGBMs) were analyzed for BRAF V600E, IDH1, IDH2, and TP53 mutations. Ki-67, p53, and p16 protein expression were also examined by immunohistochemistry. BRAF-KIAA1549 fusion status was assessed in the PA subgroup. The rate of BRAF-KIAA1549 fusion was high in these PAs (5/7 tumors) including four extracerebellar examples. A single BRAF V600E mutation was identified in the fusion-negative extracerebellar PA of a very young child who succumbed to the disease. TP53 mutations were present only

in malignant gliomas, including three pGBMs and one case designated as PA with anaplastic features (with consultation opinion of pGBM). IDH1 and IDH2 were wild type in all cases, consistent with earlier findings that IDH mutations are not typical in high-grade gliomas of patients ≤ 14 years of age. Immunohistochemical studies showed substantial overlap in Ki-67 labeling indices, an imperfect correlation between p53 labeling and TP53 mutation status, and complete p16 loss in only two pGBMs but in no PAs. These results suggest that (a) BRAF-KIAA1549 fusion may be common in PAs with atypical clinicoradiologic and histologic features, including those at extracerebellar sites, (b) BRAF V600E mutation is uncommon in extracerebellar PAs, and (c) TP53 mutation analysis remains a valuable tool in identifying childhood gliomas that will likely behave in a malignant fashion.

[246]

TÍTULO / TITLE: - 13N-Ammonia PET/CT for detection of recurrent glioma: a prospective comparison with contrast-enhanced MRI.

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

REVISTA / JOURNAL: - Nucl Med Commun. 2013 Nov;34(11):1046-54. doi: 10.1097/MNM.0b013e328365bb41.

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

[1097/MNM.0b013e328365bb41](#)

AUTORES / AUTHORS: - Khangembam BC; Sharma P; Karunanithi S; Singhal A; Das CJ; Kumar P; Julka PK; Bandopadhyaya GP; Kumar R; Malhotra A; Bal C

INSTITUCIÓN / INSTITUTION: - Departments of aNuclear Medicine bRadiodiagnosis cRadiation Oncology, All India Institute of Medical Sciences, New Delhi, India.

RESUMEN / SUMMARY: - **PURPOSE:** We assessed the value of N-ammonia PET-computed tomography (PET/CT) in recurrent glioma and compared the results with those of contrast-enhanced MRI (CE MRI). **MATERIALS AND METHODS:** Fifty-two (mean age, 39.8 \pm 11.6 years; male, 33; female, 19) histopathologically proven and previously treated glioma patients with clinical suspicion of recurrence were evaluated with N-ammonia PET/CT and CE MRI. PET/CT images were evaluated qualitatively and quantitatively (maximum standardized uptake value). Tumour to white matter (T/W), tumour to grey matter (T/G) and tumour to pituitary (T/P) ratios were calculated and cutoff levels were derived with receiver operating characteristic curve analysis. Sensitivity, specificity and predictive values were compared. A combination of clinical follow-up, repeat imaging and biopsy (when available) was taken as the reference standard. **RESULTS:** On the basis of the reference standard, 23 out of 52 patients were seen to have recurrence. Overall sensitivity, specificity, positive predictive value, negative predictive value and accuracy of N-ammonia PET/CT were 82.6, 86.2, 82.6, 86.2 and 84.6%, respectively, whereas those of CE MRI were 96.7, 48.3, 59.5, 93.3 and 69.2%, respectively. Overall, N-ammonia PET/CT was statistically superior to CE MRI

(P=0.001). In low-grade tumours, N-ammonia PET/CT performed better than MRI with an accuracy of 86.8 versus 68.4% (P=0.003). In high-grade tumours, both the modalities had comparable performances with accuracies of 78.6% for N-ammonia PET/CT and 71.4% for CE MRI (P=0.250). Among the ratios, T/P was the most useful, with the largest area under the curve (0.825; P=0.0001). CONCLUSION: N-Ammonia PET/CT shows higher accuracy compared with contrast-enhanced MRI for detecting recurrent gliomas, particularly in low-grade tumours.

[247]

TÍTULO / TITLE: - Crush cytology of a primary intraspinal rhabdoid papillary meningioma: a case report.

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

REVISTA / JOURNAL: - Acta Cytol. 2013;57(5):528-33. doi: 10.1159/000353804. Epub 2013 Sep 7.

●● Enlace al texto completo (gratis o de pago) [1159/000353804](#)

AUTORES / AUTHORS: - Jeong J; Kim NR; Lee SG

INSTITUCIÓN / INSTITUTION: - Gachon University School of Medicine, Incheon, Republic of Korea.

RESUMEN / SUMMARY: - Background: Both rhabdoid and papillary meningioma are rare variants of meningioma categorized as WHO grade III. Here, we report a rare case of combined rhabdoid papillary meningioma with discussion of its differential intraoperative cytologic diagnoses. Case: The patient was a 72-year-old female who presented with a huge mass at the cervical spine on MRI. The crush smears showed a radially arranged pattern of elongated tumor cells centered around the vessels, which formed a pseudorosette-like papillary structure, as well as singly scattered large gemistocyte-like rhabdoid cells with distinct cell borders. Rhabdoid cells had eccentrically placed vesicular nuclei with plump, fibrillary-to-hyaline cytoplasm with short broad processes. Nuclei had occasional nuclear inclusions with no nuclear grooves. Conclusion: Rhabdoid papillary meningiomas, encountered less often, should be distinguished from metastatic tumors of rhabdoid or papillary configuration, astrocytomas, ependymomas and atypical teratoid/rhabdoid tumor. Search for eosinophilic hyaline cytoplasm, rather than a fibrillary one, is critical for distinguishing it from other commonly encountered spinal cord tumors in the total absence of meningeal whorls, like the present case. We also emphasize that the present case is the first case of rhabdoid papillary meningioma with primary manifestation in the spinal cord. © 2013 S. Karger AG, Basel.

[248]

TÍTULO / TITLE: - Modeling freedom from progression for standard-risk medulloblastoma: a mathematical tumor control model with multiple modes of failure.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Oct 1;87(2):422-9. doi: 10.1016/j.ijrobp.2013.06.008. Epub 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1016/j.ijrobp.2013.06.008](https://doi.org/10.1016/j.ijrobp.2013.06.008)

AUTORES / AUTHORS: - Brodin NP; Vogelius IR; Bjork-Eriksson T; Munck Af Rosenschold P; Bentzen SM

INSTITUCIÓN / INSTITUTION: - Radiation Medicine Research Center, Department of Radiation Oncology, Rigshospitalet, Copenhagen, Denmark; Niels Bohr Institute, University of Copenhagen, Copenhagen, Denmark. Electronic address: nils.patrik.brodin@rh.dk.

RESUMEN / SUMMARY: - **PURPOSE:** As pediatric medulloblastoma (MB) is a relatively rare disease, it is important to extract the maximum information from trials and cohort studies. Here, a framework was developed for modeling tumor control with multiple modes of failure and time-to-progression for standard-risk MB, using published pattern of failure data. **METHODS AND MATERIALS:** Outcome data for standard-risk MB published after 1990 with pattern of relapse information were used to fit a tumor control dose-response model addressing failures in both the high-dose boost volume and the elective craniospinal volume. Estimates of 5-year event-free survival from 2 large randomized MB trials were used to model the time-to-progression distribution. Uncertainty in freedom from progression (FFP) was estimated by Monte Carlo sampling over the statistical uncertainty in input data. **RESULTS:** The estimated 5-year FFP (95% confidence intervals [CI]) for craniospinal doses of 15, 18, 24, and 36 Gy while maintaining 54 Gy to the posterior fossa was 77% (95% CI, 70%-81%), 78% (95% CI, 73%-81%), 79% (95% CI, 76%-82%), and 80% (95% CI, 77%-84%) respectively. The uncertainty in FFP was considerably larger for craniospinal doses below 18 Gy, reflecting the lack of data in the lower dose range. **CONCLUSIONS:** Estimates of tumor control and time-to-progression for standard-risk MB provides a data-driven setting for hypothesis generation or power calculations for prospective trials, taking the uncertainties into account. The presented methods can also be applied to incorporate further risk-stratification for example based on molecular biomarkers, when the necessary data become available.

[249]

TÍTULO / TITLE: - Subcompartmentalization of extracellular extravascular space (EES) into permeability and leaky space with local arterial input function (AIF) results in improved discrimination between high- and low-grade glioma using dynamic contrast-enhanced (DCE) MRI.

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

REVISTA / JOURNAL: - J Magn Reson Imaging. 2013 Sep;38(3):spcone. doi: 10.1002/jmri.24404.

●● Enlace al texto completo (gratis o de pago) [1002/jmri.24404](https://doi.org/10.1002/jmri.24404)

AUTORES / AUTHORS: - Sahoo P; Rathore RK; Awasthi R; Roy B; Verma S; Rathore D; Behari S; Husain M; Husain N; Pandey CM; Mohakud S; Gupta RK

INSTITUCIÓN / INSTITUTION: - Department of Mathematics & Statistics, Indian Institute of Technology Kanpur, India.

RESUMEN / SUMMARY: - PURPOSE: To modify the generalized tracer kinetic model (GTKM) by introducing an additional tissue uptake leakage compartment in extracellular extravascular space (LTKM). In addition, an implicit determination of voxel-wise local arterial input function (AIF) $C_p(t)$ was performed to see whether these changes help in better discrimination between low- and high-grade glioma using dynamic contrast-enhanced (DCE) magnetic resonance imaging (MRI). MATERIALS AND METHODS: The modified model (LTKM) was explored and fitted to the concentration-time curve $C(t)$ of each voxel, in which the local AIF $C_p(t)$ could be estimated by a time invariant convolution approximation based on a separately measured global AIF $C_a(t)$. A comparative study of tracer kinetic analysis was performed on 184 glioma patients using DCE-MRI data on 1.5T and 3T MRI systems. RESULTS: The LTKM analysis provided more accurate pharmacokinetic parameters as evidenced by their relative constancy with respect to the length of concentration-time curve used. In addition, LTKM with local AIF resulted in improved discrimination between low-grade and high-grade gliomas. CONCLUSION: LTKM with local AIF provides more accurate estimation of physiological parameters and improves discrimination between low-grade and high-grade gliomas as compared with GTKM. J. Magn. Reson. Imaging 2013;38:677-688. © 2013 Wiley Periodicals, Inc.

[250]

TÍTULO / TITLE: - Maxillary-fronto-temporal approach for removal of recurrent malignant infratemporal fossa tumors: Anatomical and clinical study.

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

REVISTA / JOURNAL: - J Craniomaxillofac Surg. 2013 Aug 8. pii: S1010-5182(13)00120-0. doi: 10.1016/j.jcms.2013.05.001.

●● Enlace al texto completo (gratis o de pago) [1016/j.jcms.2013.05.001](https://doi.org/10.1016/j.jcms.2013.05.001)

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INSTITUCIÓN / INSTITUTION: - Department of Oral and Maxillofacial Surgery, Peking University School and Hospital of Stomatology, 22 Zhongguancun Nandajie, Haidian District, Beijing 100081, PR China.

RESUMEN / SUMMARY: - PURPOSE: For recurrent malignant tumors occurring in the infratemporal fossa, it is difficult to select a proper surgical approach. We explore the efficiency of a new approach for removal of recurrent malignant tumors involving the

infratemporal fossa based on the measurement on three-dimension CT, observation of six cadaveric specimens, and our surgical experience. MATERIALS AND METHODS: The distances between the surgical landmarks in the infratemporal fossa were measured using CT data to determine the safe distance. And anatomy observation was examined on 6 formalin-fixed cadaveric specimens. Data from seven patients with recurrent malignant infratemporal fossa tumors were retrospectively analyzed. RESULTS: The mean distance of the medial pterygoid plate from the zygoma was 52.12 mm. The maxillary artery can be found between the deep surface of the condyle and the sphenomandibular ligament, with mean distance of 8.25 +/- 3.22 mm to the inferior border of the capsule of the temporomandibular joint. All tumors got gross resection using the maxillary-fronto-temporal approach with minor complication. CONCLUSIONS: The advantages of the new approach include adequate protection of facial nerve with extended operation field; the exposed temporal muscle could be used to fill the dead space. This technique is especially useful to remove recurrent malignant infratemporal tumors safely.

[251]

TÍTULO / TITLE: - Interaction of brain fatty acid-binding protein with the polyunsaturated fatty acid environment as a potential determinant of poor prognosis in malignant glioma.

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

REVISTA / JOURNAL: - Prog Lipid Res. 2013 Aug 24;52(4):562-570. doi: 10.1016/j.plipres.2013.08.004.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.plipres.2013.08.004](#)

AUTORES / AUTHORS: - Elsherbiny ME; Emara M; Godbout R

INSTITUCIÓN / INSTITUTION: - Department of Oncology, University of Alberta, Cross Cancer Institute, 11560 University Avenue, Edmonton, Alberta T6G 1Z2, Canada.

RESUMEN / SUMMARY: - Malignant gliomas are the most common adult brain cancers. In spite of aggressive treatment, recurrence occurs in the great majority of patients and is invariably fatal. Polyunsaturated fatty acids are abundant in brain, particularly omega-6 arachidonic acid (AA) and omega-3 docosahexaenoic acid (DHA). Although the levels of omega-6 and omega-3 polyunsaturated fatty acids are tightly regulated in brain, the omega-6:omega-3 ratio is dramatically increased in malignant glioma, suggesting deregulation of fundamental lipid homeostasis in brain tumor tissue. The migratory properties of malignant glioma cells can be modified by altering the ratio of AA:DHA in growth medium, with increased migration observed in AA-rich medium. This fatty acid-dependent effect on cell migration is dependent on expression of the brain fatty acid binding protein (FABP7) previously shown to bind DHA and AA. Increased levels of enzymes involved in eicosanoid production in FABP7-positive malignant glioma cells suggest that FABP7 is an important modulator of AA metabolism. We provide evidence

that increased production of eicosanoids in FABP7-positive malignant glioma growing in an AA-rich environment contributes to tumor infiltration in the brain. We discuss pathways and molecules that may underlie FABP7/AA-mediated promotion of cell migration and FABP7/DHA-mediated inhibition of cell migration in malignant glioma.

[252]

TÍTULO / TITLE: - Trends in childhood brain tumor incidence, 1973-2009.

RESUMEN / SUMMARY: -

ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=23925828

●● Enlace al texto completo (gratis o de pago) 1007/s11060-013-1212-5

AUTORES / AUTHORS: - McKean-Cowdin R; Razavi P; Barrington-Trimis J; Baldwin RT; Asgharzadeh S; Cockburn M; Tihan T; Preston-Martin S

INSTITUCIÓN / INSTITUTION: - Department of Preventive Medicine, University of Southern California Keck School of Medicine, 2001 N. Soto St., Los Angeles, CA, 90089, USA, mckeanco@usc.edu.

RESUMEN / SUMMARY: - In the mid-1980s, there was a rise in incidence rates of childhood brain tumors (CBT) in the United States that appeared to stabilize at a higher rate in the early 1990s. An updated analysis of the pattern of CBT over the past 2 decades, with commentary on whether the elevated incidence rate has continued, is past due. We used Surveillance, Epidemiology and End Results (SEER) data to examine trends in incidence of CBT from 1973 through 2009. We examined age-adjusted incidence rates (AAIRs) and secular trends for all malignant brain tumors combined (SEER classification) by histologic tumor type and anatomic site. The incidence of CBT remained stable from 1987 to 2009 [annual percent change (APC) = 0.10; 95 % confidence intervals (CI) -0.39 to 0.61] with an AAIR for all CBT of 3.32 (95 % CI 3.22-3.42). The stability of rates in these two decades contrast the change that occurred in the mid-1980s (1983-1986), when the incidence of CBT increased by 53 % (APC = 14.06; 95 % CI 4.05-25.0). From 1983 to 1986, statistically significant rate increases were observed for pilocytic astrocytoma, PNET/medulloblastoma, and mixed glioma. Further, the rate of increase in pilocytic astrocytoma was similar to the rate of decrease for astrocytomas NOS from 1981 to 2009, suggesting a change from a more general to more specific classification. After the increase in rates in the mid-1980s, rates of CBT over the past two decades have stabilized. Changes in incidence rates of subtypes of tumors over this time period reflect changes both in classification of CBT and in diagnostic techniques.

[253]

TÍTULO / TITLE: - Mitogenic signalling in the absence of epidermal growth factor receptor activation in a human glioblastoma cell line.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 11.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1232-1](#)

AUTORES / AUTHORS: - Wang M; Maier P; Wenz F; Giordano FA; Herskind C

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Universitätsmedizin Mannheim, Medical Faculty Mannheim, Heidelberg University, Theodor-Kutzer Ufer 1-3, 68167, Mannheim, Germany.

RESUMEN / SUMMARY: - Epidermal growth factor receptor (EGFR) gene amplification and overexpression are commonly present in glioblastoma, and confer advantages of growth, invasiveness and radio/chemotherapy-resistance for tumour cells. Here, we assessed the role of EGFR activation for downstream mitogenic signalling in the commonly used glioblastoma cell line U251. Despite the high expression level, activation of EGFR under standard culture conditions was low. Intact EGFR function was verified by the rapid phosphorylation of EGFR and downstream mitogen-activated protein (MAP) kinase ERK1/2 upon addition of exogenous EGF to serum-starved cells. By contrast, addition of fetal bovine serum (FBS) activated downstream ERK1/2 via the MAP kinase kinase without phosphorylating EGFR. A phospho-receptor tyrosine kinase array showed FBS-induced activation of insulin-like growth factor-1 receptor (IGF-1R), and the IGF-1R inhibitor AG1024 inhibited FBS-induced phosphorylation of ERK1/2, implying IGF-1R as the major driver of FBS-associated mitogenic signalling in the absence of exogenous EGF. These findings have important implications for in vitro drug testing in glioblastoma. Moreover, activation of ERK1/2 was also strongly influenced by growth state and cell density of U251 cultures. Re-seeding exponentially growing cultures at high cell density induced p27/CDKN1B expression and suppressed P-ERK1/2 indicating a certain regulation of proliferation by contact inhibition. Strikingly, highly activated ERK1/2 signalling and cell-cycle progression occurred when cells were released from plateau phase regardless of high seeding density. This phenomenon might implicate a proliferation response in the early recurrence observed after clinical therapy in glioblastoma patients. However, whether it will recapitulate in vivo remains to be demonstrated.

[254]

TÍTULO / TITLE: - Cerebellar degeneration associated with mGluR1 autoantibodies as a paraneoplastic manifestation of prostate adenocarcinoma.

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

REVISTA / JOURNAL: - J Neuroimmunol. 2013 Aug 3. pii: S0165-5728(13)00204-X. doi: 10.1016/j.jneuroim.2013.07.015.

●● Enlace al texto completo (gratis o de pago) [1016/j.jneuroim.2013.07.015](#)

AUTORES / AUTHORS: - Iorio R; Damato V; Mirabella M; Vita MG; Hulsboom E; Plantone D; Bizzarro A; Del Grande A; Sillevs Smitt PA

INSTITUCIÓN / INSTITUTION: - Institute of Neurology, Department of Neuroscience, Catholic University, Rome, Italy. Electronic address: iorio.raffaele@gmail.com.

RESUMEN / SUMMARY: - Subacute cerebellar degeneration associated with metabotropic glutamate receptor type 1 (mGluR1) autoantibodies is an uncommon syndrome known to be part of the spectrum of paraneoplastic cerebellar degenerations associated with neuronal autoantibodies. We describe a patient with prostate adenocarcinoma who developed a subacute cerebellar ataxia. Autoantibodies specific to mGluR1 were detected in patient's serum and cerebrospinal fluid (CSF). Immunohistochemistry analyses of patient's prostate adenocarcinoma revealed abundant mGluR1 expression in luminal acinar epithelial cells and binding of patient's IgGs to tumoral mGluR1. These findings suggest that cerebellar degeneration associated with mGluR1 antibodies can be a paraneoplastic accompaniment of prostate adenocarcinoma.

[255]

TÍTULO / TITLE: - A Meta-Analysis on the Diagnostic Performance of 18F-FDG and 11C-Methionine PET for Differentiating Brain Tumors.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Sep 12.

●● [Enlace al texto completo \(gratis o de pago\) 3174/ajnr.A3718](#)

AUTORES / AUTHORS: - Zhao C; Zhang Y; Wang J

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine, Hangzhou First People's Hospital, Hangzhou Cancer Hospital, Hangzhou, China; and Department of Nuclear Medicine, Second Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, China.

RESUMEN / SUMMARY: - SUMMARY:18F-FDG-PET has been widely used in patients with brain tumors. However, the reported sensitivity and specificity of 18F-FDG-PET for brain tumor differentiation varied greatly. We performed this meta-analysis to systematically assess the diagnostic performance of 18F-FDG-PET in differentiating brain tumors. The diagnostic performance of 11C-methionine PET was assessed for comparison. Relevant studies were searched in PubMed/MEDLINE, Scopus, and China National Knowledge Infrastructure (until February 2013). The methodologic quality of eligible studies was evaluated, and a meta-analysis was performed to obtain the combined diagnostic performance of 18F-FDG and 11C-methionine PET with a bivariate model. Thirty eligible studies, including 5 studies with both 18F-FDG and 11C-methionine PET data were enrolled. Pooled sensitivity, pooled specificity, and area under the receiver operating characteristic curve of 18F-FDG-PET (n = 24) for differentiating brain tumors were 0.71 (95% CI, 0.63-0.78), 0.77 (95% CI, 0.67-0.85), and 0.80. Heterogeneity was found among 18F-FDG studies. Subsequent subgroup analysis revealed that the disease status was a statistically significant source of the

heterogeneity and that the sensitivity in the patients with recurrent brain tumor was markedly higher than those with suspected primary brain tumors. Pooled sensitivity, pooled specificity, and area under the receiver operating characteristic of 11C-methionine PET (n = 11) were 0.91 (95% CI, 0.85-0.94), 0.86 (95% CI, 0.78-0.92), and 0.94. No significant statistical heterogeneity was found among 11C-methionine studies. This meta-analysis suggested that 18F-FDG-PET has limited diagnostic performance in brain tumor differentiation, though its performance may vary according to the status of brain tumor, whereas 11C-methionine PET has excellent diagnostic accuracy in brain tumor differentiation.

[256]

TÍTULO / TITLE: - The huge plastic potential of adult brain and the role of connectomics: New insights provided by serial mappings in glioma surgery.

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

REVISTA / JOURNAL: - Cortex. 2013 Aug 19. pii: S0010-9452(13)00207-4. doi: 10.1016/j.cortex.2013.08.005.

●● Enlace al texto completo (gratis o de pago) 1016/j.cortex.2013.08.005

AUTORES / AUTHORS: - Duffau H

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Gui de Chauliac Hospital, Montpellier University Medical Center, Montpellier, France; National Institute for Health and Medical Research (INSERM), U1051 Laboratory, Team “Brain Plasticity, Stem Cells and Glial Tumors”, Institute for Neurosciences of Montpellier, Montpellier University Medical Center, Montpellier, France. Electronic address: h-duffau@chu-montpellier.fr.

RESUMEN / SUMMARY: - While prominent in the traditional literature, the localizationist and static view of brain processing does not explain numerous observations of functional recovery following cerebral damages. Here, the goal is to revisit this classical modular and inflexible model by proposing a dynamic organization of brain circuits, which allows postlesional cerebral adaptive phenomena able to maintain neurological and cognitive functions, even in adults. In this state of mind, recent data provided by serial mappings performed in patients who underwent awake surgery for diffuse glioma infiltrating eloquent structures will be reviewed. Firstly, the use of intraoperative electrical mapping enables the realization of on-line anatomo-functional correlations both at cortical and subcortical levels, supporting a network distribution of the brain, and resulting in the reappraisal of cognitive models - notably regarding language. Secondly, combination of neuropsychological assessments and functional neuroimaging before and after operation demonstrates that it is possible to achieve massive resections of “critical” regions without eliciting permanent sequelae, thanks to reorganization of cerebral circuits. Thirdly, repeated surgeries in cases of tumor relapse show functional remapping in the same patients over time. Taken together,

these findings open the window toward a huge plastic potential of human central nervous system (CNS) in adults. However, a better understanding of cerebral connectomics leads to the conclusion that the white matter connectivity constitutes a main limitation of such brain plasticity, explaining the lack of recovery in patients with extensive subcortical damages.

[257]

TÍTULO / TITLE: - In Reply: Pediatric Arachnoid Cysts and Subdural Hygromas in the Early Infancy: Challenging the Direction of the Causality Paradigm.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Sep 23.

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

[1227/NEU.000000000000174](#)

AUTORES / AUTHORS: - Riva-Cambrin J; Kestle JR

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[258]

TÍTULO / TITLE: - Gliopendymal cyst in children: A case report.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Oct;115(10):2288-90. doi:

10.1016/j.clineuro.2013.07.036. Epub 2013 Aug 6.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.07.036](#)

AUTORES / AUTHORS: - Zheng SP; Ju Y; You C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, West China Hospital of Sichuan University, Chengdu, China.

[259]

TÍTULO / TITLE: - Cerebellopontine angle oligodendroglioma in a child; first case report.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Sep 22.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2282-6](#)

AUTORES / AUTHORS: - Ellenbogen JR; Perez S; Parks C; Crooks D; Mallucci C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Alder Hey Children's NHS Foundation Trust, Eaton Road, West Derby, Liverpool, L12 2AP, UK,

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RESUMEN / SUMMARY: - The reported incidence of oligodendrogliomas in the paediatric population is less than 1 %. The posterior fossa is a rare location, with the vast majority arising in the cerebral hemispheres. We report the first paediatric case of a WHO grade II oligodendroglioma arising in the cerebellopontine angle (CPA). CPA oligodendrogliomas in children appear to behave aggressively and adjuvant therapy must be considered early; especially when complete resection cannot be achieved.

[260]

TÍTULO / TITLE: - Cadherin 13 overexpression as an important factor related to the absence of tumor fluorescence in 5-aminolevulinic acid-guided resection of glioma.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [3171/2013.7.JNS122340](#)

AUTORES / AUTHORS: - Suzuki T; Wada S; Eguchi H; Adachi JI; Mishima K; Matsutani M; Nishikawa R; Nishiyama M

INSTITUCIÓN / INSTITUTION: - Department of Neuro-Oncology/Neurosurgery, International Medical Center, Hidaka;

RESUMEN / SUMMARY: - Object Gliomas contain aggressive malignant cancer, and resection rate remains an important factor in treatment. Currently, fluorescence-guided resection using orally administered 5-aminolevulinic acid (5-ALA) has proved to be beneficial in improving the prognosis of patients with gliomas. 5-ALA is metabolized to protoporphyrin IX (PpIX) that accumulates selectively in the tumor and exhibits strong fluorescence upon excitation, but glioma cells do not always respond to 5-ALA, which can result in incomplete or excessive resection. Several possible mechanisms for this phenomenon have been suggested, but they remain poorly understood. To clarify the probable mechanisms underlying the variable induction of fluorescence and to improve fluorescence-guided surgery, the authors searched for key negative regulators of fluorescent signal induced by 5-ALA. Methods A comprehensive gene expression analysis was performed using microarrays in 11 pairs of tumor specimens, fluorescence-positive and fluorescence-negative tumors, and screened genes overexpressed specifically in fluorescence-negative tumors as the possible candidates for key negative regulators of 5-ALA-induced fluorescence. The most possible candidate was selected through annotation analysis in combination with a comparison of expression levels, and the relevance of expression of the selected gene to 5-ALA-induced fluorescence in tumor tissues was confirmed in the quantified expression levels. The biological significance of an identified gene in PpIX accumulation and 5-ALA-induced fluorescence was evaluated by in vitro PpIX fluorescence intensity analysis and in vitro PpIX fluorescence molecular imaging in 4 human glioblastoma cell lines (A1207, NMCG1, U251, and U373). Knockdown analyses using a specific small interfering RNA in U251 cells was also performed to determine the mechanisms of

action and genes working as partners in the 5-ALA metabolic pathway. Results The authors chose 251 probes that showed remarkably high expression only in fluorescent-negative tumors (median intensity of expression signal > 1.0), and eventually the cadherin 13 gene (CDH13) was selected as the most possible determinant of 5-ALA-induced fluorescent signal in gliomas. The mean expression level of CDH13 in the fluorescence-negative gliomas was statistically higher than that in positive ones ($p = 0.027$), and knockdown of CDH13 expression enhanced the fluorescence image and increased the amount of PpIX 13-fold over controls ($p < 0.001$) in U251 glioma cells treated with 5-ALA. Comprehensive gene expression analysis of the CDH13-knockdown U251 cells demonstrated another two genes possibly involved in the PpIX biosynthesis: ATP-binding cassette transporter (ABCG2) significantly decreased in the CDH13 knockdown, while oligopeptide transporter 1 (PEPT1) increased. Conclusions The cadherin 13 gene might play a role in the PpIX accumulation pathway and act as a negative regulator of 5-ALA-induced fluorescence in glioma cells. Although further studies to clarify the mechanisms of action in the 5-ALA metabolic pathway would be indispensable, the results of this study might lead to a novel fluorescent marker able to overcome the obstacles of existing fluorescence-guided resection and improve the limited resection rate.

[261]

TÍTULO / TITLE: - Tumor Consistency of Pituitary Macroadenomas: Predictive Analysis on the Basis of Imaging Features with Contrast-Enhanced 3D FIESTA at 3T.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Aug 8.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3667](#)

AUTORES / AUTHORS: - Yamamoto J; Kakeda S; Shimajiri S; Takahashi M; Watanabe K; Kai Y; Moriya J; Korogi Y; Nishizawa S

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery, Radiology, and Surgical Pathology, University of Occupational and Environmental Health, Kitakyushu, Japan.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE:Preoperative evaluation of pituitary macroadenoma tumor consistency is important for neurosurgery. Thus, we aimed to retrospectively assess the role of contrast-enhanced FIESTA in predicting the tumor consistency of pituitary macroadenomas.MATERIALS AND METHODS:Twenty-nine patients with pituitary macroadenomas underwent conventional MR imaging sequences and contrast-enhanced FIESTA before surgery. Two neuroradiologists assessed the contrast-enhanced FIESTA, contrast-enhanced T1WI, and T2WI. On the basis of surgical findings, the macroadenomas were classified by the neurosurgeons as either soft or hard. Finally, Fisher exact probability tests and unpaired t tests were used to compare predictions on the basis of the MR imaging findings with the tumor consistency, collagen content, and postoperative tumor size.RESULTS:The 29 pituitary

macroadenomas were classified as either solid or mosaic types. Solid type was characterized by a homogeneous pattern of tumor signal intensity without intratumoral hyperintense dots, whereas the mosaic type was characterized by many intratumoral hyperintense dots on each MR image. Statistical analyses revealed a significant correlation between tumor consistency and contrast-enhanced FIESTA findings. Sensitivity and specificity were higher for contrast-enhanced FIESTA (1.00 and 0.88-0.92, respectively) than for contrast-enhanced T1WI (0.80 and 0.25-0.33, respectively) and T2WI (0.60 and 0.38-0.54, respectively). Compared with mosaic-type adenomas, solid-type adenomas tended to have a hard tumor consistency as well as a significantly higher collagen content and lower postoperative tumor size. CONCLUSIONS: Contrast-enhanced FIESTA may provide preoperative information regarding the consistency of macroadenomas that appears to be related to the tumor collagen content.

[262]

TÍTULO / TITLE: - Comparative evaluation of transport mechanisms of trans-1-amino-3-[F]fluorocyclobutanecarboxylic acid and l-[methyl-C]methionine in human glioma cell lines.

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

REVISTA / JOURNAL: - Brain Res. 2013 Oct 16;1535C:24-37. doi: 10.1016/j.brainres.2013.08.037. Epub 2013 Aug 27.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.brainres.2013.08.037](#)

AUTORES / AUTHORS: - Ono M; Oka S; Okudaira H; Schuster DM; Goodman MM; Kawai K; Shirakami Y

INSTITUCIÓN / INSTITUTION: - Research Center, Nihon Medi-Physics Co., Ltd., Chiba 299-0266, Japan; Division of Health Sciences, Graduate School of Medical Science, Kanazawa University, Ishikawa 920-0942, Japan.

RESUMEN / SUMMARY: - Positron emission tomography (PET) with amino acid tracers is useful for the visualization and assessment of therapeutic effects on gliomas. Our purpose is to elucidate the transport mechanisms of trans-1-amino-3-[18F]fluorocyclobutanecarboxylic acid (anti-[18F]FACBC) and l-[methyl-11C]methionine ([11C]Met) in normal human astrocytes (NHA), low-grade (Hs683, SW1088), and high-grade (U87MG, T98G) human glioma cell lines. Because the short half-lives of fluorine-18 and carbon-11 are inconvenient for in vitro experiments, trans-1-amino-3-fluoro[1-14C]cyclobutanecarboxylic acid (anti-[14C]FACBC) and l-[methyl-14C]methionine ([14C]Met) were used instead of the PET tracers. Time-course uptake experiments showed that uptake of anti-[14C]FACBC was 1.4-2.6 times higher than that of [14C]Met in NHA and low-grade glioma cells, and was almost equal to that of [14C]Met in high-grade glioma cells. To identify the amino acid transporters (AATs) involved in the transport of anti-[14C]FACBC and [14C]Met, we carried out competitive inhibition

experiments using synthetic/naturally-occurring amino acids as inhibitors. We found that anti-[14C]FACBC uptake in the presence of Na⁺ was strongly inhibited by l-glutamine and l-serine (the substrates for ASC system AATs), whereas l-phenylalanine and 2-amino-bicyclo[2,2,1]heptane-2-carboxylic acid (BCH, the substrates for L system AATs) robustly inhibited Na⁺-independent anti-[14C]FACBC uptake. Regardless of Na⁺, [14C]Met uptake was inhibited strongly by l-phenylalanine and BCH. Moreover, the exchange transport activity of l-glutamine for anti-[14C]FACBC was stronger than that of BCH in the presence of Na⁺, whereas that for [14C]Met was almost equal to BCH. These results demonstrate that ASC and L are important transport systems for anti-[18F]FACBC uptake, while system L is predominantly involved in [11C]Met transport in human astrocytes and glioma cells.

[263]

TÍTULO / TITLE: - De Novo B-Cell Prolymphocytic Leukemia with Central Nervous System Involvement.

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

REVISTA / JOURNAL: - Leuk Lymphoma. 2013 Sep 18.

●● Enlace al texto completo (gratis o de pago) [3109/10428194.2013.842991](https://doi.org/10.1182/10428194.2013.842991)

AUTORES / AUTHORS: - Tatarczuch M; Blombery P; Seymour JF

RESUMEN / SUMMARY: - Abstract We report an 82 year old male with de novo B-cell prolymphocytic leukemia (B-PLL) and central nervous system (CNS) involvement. This is only the third definite, reported case of de novo B-PLL with CNS disease; other cases have involved patients with either chronic lymphocytic leukemia (CLL) transformed to PLL or intermediate CLL/PLL. Regardless of the underlying disease process, prolymphocytes predominate on CNS morphology. This suggests that B-PLL exhibits tropism for the CNS. The burden of disease characteristic of B-PLL may partly explain this tropism, but the role of prolymphocyte CNS-specific binding markers warrants further investigation in animal models.

[264]

TÍTULO / TITLE: - Plexiform schwannoma of the clitoris in a young girl: a case report.

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

REVISTA / JOURNAL: - J Reprod Med. 2013 Jul-Aug;58(7-8):365-8.

AUTORES / AUTHORS: - Azurah AG; Grover S; McGregor D

INSTITUCIÓN / INSTITUTION: - Department of Obstetrics and Gynecology, Pusat Perubatan UKM, Jalan Yaakob Latif, Kuala Lumpur 56100, Wilayah Persekutuan, Malaysia.

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RESUMEN / SUMMARY: - BACKGROUND: Schwannoma (neurilemoma) is a benign, slow-growing tumor of the nerve sheath. These tumors are rarely found in the female

genitalia and to date only 1 case of clitoral schwannoma has been reported in a young girl. We report here the second case of schwannoma of the clitoris. CASE: A 6-year-old girl presented with an enlarging clitoris. An alteration in her clitoral appearance had first been noted at 2 years of age. However, the size had further increased in the year prior to presentation. On examination her clitoris was normal in size but beneath the clitoral hood, predominantly on the left, there was a 3 x 2 cm irregular mobile mass. Her karyotype revealed normal 46XX female genotype. Magnetic resonance imaging of the abdomen and pelvis showed an isolated finding of diffuse enlargement of the clitoris with edema of the mons pubis. Surgical excision of the paraclitoral mass was performed. Intraoperatively the clitoral tip and shaft did not appear to be involved. However, the mass was found to be more diffuse, less well-defined, and more extensive than the clinical findings had suggested. On histology long spindle cells with nuclear palisading and focal Verocay body-like structures were found. There was mild to moderate pleomorphism. No mitotic figures were identified. There was diffuse staining of interweaving bundles for S100 protein and glial fibrillary acidic protein without staining for actin, desmin, or neurofilament. These features are consistent with a plexiform schwannoma. CONCLUSION: Although benign schwannomas rarely occur in the clitoris, we suggest that it should be considered as differential diagnosis for any young girl with clitoral or paraclitoral asymmetrical irregular mass.

[265]

TÍTULO / TITLE: - Hypertensive slit ventricle syndrome: pseudotumor cerebri with a malfunctioning shunt?

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug 30.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.7.JNS13390](#)

AUTORES / AUTHORS: - Bateman GA

INSTITUCIÓN / INSTITUTION: - Department of Medical Imaging, John Hunter Hospital, and Newcastle University Faculty of Health, Callaghan Campus, Newcastle, Australia.

RESUMEN / SUMMARY: - Symptomatic shunt malfunction without ventricular enlargement is known as slit ventricle syndrome (SVS). Patients presenting with this syndrome are not a homogeneous group. Of the 5 different types classified by Rekaté, Type 1 is caused by CSF overdrainage and is associated with low pressures; Types 2 and 3 are associated with shunt blockage and elevated CSF pressures; Type 4 is cephalocranial disproportion that increases brain parenchymal pressure but not CSF pressure; and Type 5 is headache unrelated to shunt function. The low and normal CSF pressure types are relatively well understood, but the high-pressure forms are more problematic. In the high-pressure forms of SVS it is said that the lack of ventricular dilation is related to a reduction in brain compliance analogous to idiopathic intracranial hypertension or pseudotumor cerebri. Despite this, there is little evidence

in the literature to support this conjecture. With this in mind, 3 cases of SVS associated with elevated CSF pressure are presented. The MR venogram findings and hemodynamics of these 3 cases are shown to be identical to those of pseudotumor cerebri. A literature review indicates that an underlying venous impairment may be functioning in the patients who re-present with small ventricles following shunt malfunction.

[266]

TÍTULO / TITLE: - Letter to the Editor: Craniopharyngiomas and the hypothalamus.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) [3171/2013.5.JNS131047](#)

AUTORES / AUTHORS: - Steno J; Bizik I; Steno A; Matejcek V

INSTITUCIÓN / INSTITUTION: - Comenius University, Bratislava, Slovakia.

[267]

TÍTULO / TITLE: - Letter to the Editor: Recurrent glioma.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Oct;119(4):1078-1079. Epub 2013 Aug 9.

●● Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS13559](#)

AUTORES / AUTHORS: - Chang CP; Chang YM; Huang CY; Fang HS; Lin CH; Hueng DY

INSTITUCIÓN / INSTITUTION: - Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan.

[268]

TÍTULO / TITLE: - Letter to the Editor: Glioblastoma.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug 23.

●● Enlace al texto completo (gratis o de pago) [3171/2013.5.JNS13929](#)

AUTORES / AUTHORS: - Cheng CH; Hong CW; Yang CH; Wu YJ; Sytwu HK; Hueng DY

INSTITUCIÓN / INSTITUTION: - Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan.

PTPTPTP - JOURNAL ARTICLE ----- [269]

TÍTULO / TITLE: - Letter to the Editor: Diffuse low-grade gliomas.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug 23.

●● Enlace al texto completo (gratis o de pago) [3171/2013.4.JNS13859](#)

AUTORES / AUTHORS: - Jakola AS; Unsgard G; Kloster R

INSTITUCIÓN / INSTITUTION: - St. Olavs University Hospital, Trondheim, Norway.

[270]

TÍTULO / TITLE: - MR-based hypoxia measures in human glioma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 7.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1210-7](#)

AUTORES / AUTHORS: - Toth V; Forschler A; Hirsch NM; den Hollander J; Kooijman H; Gempt J; Ringel F; Schlegel J; Zimmer C; Preibisch C

INSTITUCIÓN / INSTITUTION: - Department of Neuroradiology, Klinikum rechts der Isar der TU Munchen, Technische Universitat Munchen, Ismaninger Str. 22, 81675, Munich, Germany, vivien.toth@tum.de.

RESUMEN / SUMMARY: - Hypoxia plays a central role in tumor stem cell genesis and is related to a more malignant tumor phenotype, therapy resistance (e.g. in anti-angiogenic therapies) and radio-insensitivity. Reliable hypoxia imaging would provide crucial metabolic information in the diagnostic work-up of brain tumors. In this study, we applied a novel BOLD-based MRI method for the measurement of relative oxygen extraction fraction (rOEF) in glioma patients and investigated potential benefits and drawbacks. Forty-five glioma patients were examined preoperatively in a pilot study on a 3T MR scanner. rOEF was calculated from quantitative transverse relaxation rates (T2, T2*) and cerebral blood volume (CBV) using a quantitative BOLD approach. rOEF maps were assessed visually and by means of a volume of interest (VOI) analysis. In six cases, MRI-targeted biopsy samples were analyzed using HIF-1alpha-immunohistochemistry. rOEF maps could be obtained with a diagnostic quality. Focal spots with high rOEF values were observed in the majority of high-grade tumors but in none of the low-grade tumors. VOI analysis revealed potentially hypoxic tumor regions with high rOEF in contrast-enhancing tumor regions as well as in the non-enhancing infiltration zone. Systematic bias was found as a result of non-BOLD susceptibility effects (T2*) and contrast agent leakage affecting CBV. Histological samples demonstrated reasonable correspondence between MRI characteristics and HIF-1alpha-staining. The presented method of rOEF imaging is a promising tool for the metabolic characterization of human glioma. For the interpretation of rOEF maps, confounding factors must be considered, with a special focus on CBV measurements in the presence of contrast agent leakage. Further validation involving a bigger cohort and extended immuno-histochemical correlation is required.

[271]

TÍTULO / TITLE: - Meningioma surgery in the very old-validating prognostic scoring systems.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Sep 13.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1872-0](#)

AUTORES / AUTHORS: - Konglund A; Rogne SG; Helseth E; Meling TR

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Rikshospitalet, Oslo University Hospital, P. O. Box 4950, Nydalen, 0424, Oslo, Norway, anekonglund@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND: Several studies acknowledge a higher risk of morbidity and mortality following intracranial meningioma surgery in the elderly, yet there is no consensus with regards to risk factors. Four prognostic scoring systems have been proposed. To evaluate their usefulness, we assess the very old meningioma patients in our neuro-oncological database according to the four methods, and correlate the findings with mortality and morbidity. METHODS: We retrospectively calculated scores according to the Clinical-Radiological Grading System (CRGS), the Sex, Karnofsky Performance Scale, American Society of Anesthesiology Class, Location of Tumor, and Peritumoral Edema grading system (SKALE), the Geriatric Scoring System (GSS) and the Charlson Comorbidity Index (CCI) from all patients aged 80-90 years who had primary surgery for intracranial meningiomas 2003-2013 (n = 51), and related our findings to morbidity and mortality. RESULTS: The mortality rates were 3.9 %, 5.9 % and 15.7 % at 30-days, 3-months and 1-year post-surgery. The rate of complications requiring surgery was 13.7 %, 5.9 % had evacuation of intracerebral hematomas and two patients (3.9 %) had surgery for intracranial infection/osteitis. 15.7 % of the patients were neurologically worsened on discharge. The patients with SKALE scores ≤ 8 had significantly increased mortality rates. The GSS, the CRGS and the CCI were not found to correlate with mortality. CONCLUSIONS: Retrospectively evaluating four proposed scoring systems, we find that the SKALE score reflects the mortality at 1 month and 1 year following primary surgery for intracranial meningiomas in our very old patients. It may represent a helpful adjunct to their preoperative assessment.

[272]

TÍTULO / TITLE: - Review: Molecular mechanism of microglia stimulated glioblastoma invasion.

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

REVISTA / JOURNAL: - Matrix Biol. 2013 Aug 7. pii: S0945-053X(13)00103-0. doi: 10.1016/j.matbio.2013.07.008.

●● Enlace al texto completo (gratis o de pago) [1016/j.matbio.2013.07.008](#)

AUTORES / AUTHORS: - Coniglio SJ; Segall JE

INSTITUCIÓN / INSTITUTION: - Albert Einstein College of Medicine, Department of Anatomy and Structural Biology, Bronx, NY 10461, United States. Electronic address: salvatore.coniglio@einstein.yu.edu.

RESUMEN / SUMMARY: - Glioblastoma multiforme is one of the deadliest human cancers and is characterized by a high degree of microglia and macrophage infiltration. The role of these glioma infiltrating macrophages (GIMs) in disease progression has been the subject of recent investigation. While initially thought to reflect an immune response to the tumor, the balance of evidence clearly suggests GIMs can have potent tumor-tropic functions and assist in glioma cell growth and infiltration into normal brain. In this review, we focus on the evidence for GIMs aiding mediating glioblastoma motility and invasion. We survey the literature for molecular pathways that are involved in paracrine interaction between glioma cells and GIMs and assess which of these might serve as attractive targets for therapeutic intervention.

[273]

TÍTULO / TITLE: - Hes3 regulates cell number in cultures from glioblastoma multiforme with stem cell characteristics.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Oct;73(4):N15-6. doi: 10.1227/01.neu.0000435115.10898.7f.

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

[1227/01.neu.0000435115.10898.7f](https://doi.org/10.1227/01.neu.0000435115.10898.7f)

AUTORES / AUTHORS: - Parry PV; Engh JA

[274]

TÍTULO / TITLE: - Emerging roles of microRNA in modulating cell-death processes in malignant glioma.

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

REVISTA / JOURNAL: - J Cell Physiol. 2013 Aug 8. doi: 10.1002/jcp.24446.

●● Enlace al texto completo (gratis o de pago) [1002/jcp.24446](https://doi.org/10.1002/jcp.24446)

AUTORES / AUTHORS: - Palumbo S; Miracco C; Pirtoli L; Comincini S

INSTITUCIÓN / INSTITUTION: - Department of Biology and Biotechnology, via Ferrata 1, University of Pavia, Pavia, 27100, Italy.

RESUMEN / SUMMARY: - MicroRNAs (miRNAs) are small noncoding RNA molecules that regulate protein expression by cleaving or repressing the translation of target mRNAs. In mammals, their function mainly represses the mRNA transcripts via imperfect complementary sequences in the 3'UTR of target mRNAs. Several miRNAs have been recently reported to be involved in modulation of different genes in tumors, including glioblastoma, the most frequent brain tumor in adults. Despite the improvements in

treatments, survival of patients remains poor, and glioblastoma is one of the most lethal form of human cancer. To define novel strategies against this tumor, emerging research investigated miRNAs involvement in glioblastoma. In particular, this review is focused on miRNAs involved on the two principal programmed cell-death, apoptosis and autophagy, recently described from the literature. Moreover, the discovery of miRNAs role in glioma cell-death pathways has also revealed a new category of therapeutic targets, fundamental for this kind of tumor. J. Cell. Physiol. © 2013 Wiley Periodicals, Inc.

[275]

TÍTULO / TITLE: - Magnetic Targeting of Novel Heparinized Iron Oxide Nanoparticles Evaluated in a 9L-glioma Mouse Model.

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

REVISTA / JOURNAL: - Pharm Res. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) 1007/s11095-013-1182-5

AUTORES / AUTHORS: - Zhang J; Shin MC; Yang VC

INSTITUCIÓN / INSTITUTION: - Tianjin Key Laboratory on Technologies Enabling Development of Clinical Therapeutics and Diagnosis School of Pharmacy, Tianjin Medical University, Tianjin, 300070, China.

RESUMEN / SUMMARY: - PURPOSE: A novel PEGylated and heparinized magnetic iron oxide nano-platform (DNPH) was synthesized for simultaneous magnetic resonance imaging (MRI) and tumor targeting. METHODS: Starch-coated magnetic iron oxide nanoparticles ("D") were crosslinked, aminated (DN) and then simultaneously PEGylated and heparinized with different feed ratios of PEG and heparin (DNPH1-4). DNPH products were characterized by Fourier transform infrared spectroscopy (FTIR), transmission electron microscopy (TEM) and superconducting quantum interference device (SQUID). The magnetic targeting of DNPH3, with appropriate amounts of conjugated PEG and heparin, in a mouse 9L-glioma subcutaneous tumor model was confirmed by magnetic resonance imaging (MRI)/electron spin resonance (ESR). RESULTS: DNPH3 showed long circulating properties in vivo (half-life >8 h, more than 60-fold longer than that of parent D) and low reticuloendothelial system (RES) recognition in liver and spleen. Protamine, a model cationic protein, was efficiently loaded onto DNPH3 with a maximum loading content of 26.4 µg/mg Fe. Magnetic capture of DNPH3 in tumor site with optimized conditions (I.D. of 12 mg/kg, targeting time of 45 min) was up to 29.42 µg Fe/g tissue (12.26% I.D./g tissue). CONCLUSION: DNPH3 showed the potential to be used as a platform for cationic proteins for simultaneous tumor targeting and imaging.

[276]

TÍTULO / TITLE: - Association of polymorphisms in FLT3, EGFR, ALOX5, and NEIL3 with glioblastoma in the Han Chinese population.

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

REVISTA / JOURNAL: - Med Oncol. 2013 Dec;30(4):718. doi: 10.1007/s12032-013-0718-1. Epub 2013 Sep 5.

●● Enlace al texto completo (gratis o de pago) [1007/s12032-013-0718-1](#)

AUTORES / AUTHORS: - Jin TB; Li XL; Yang H; Jiri M; Shi XG; Yuan DY; Kang LL; Li SQ

INSTITUCIÓN / INSTITUTION: - Key Laboratory of High Altitude Environment and Genes Related to Diseases of Tibet Autonomous Region, School of Medicine, Tibet University for Nationalities, #6 East Wenhui Road, Xiayang, 712082, Shaanxi, China.

RESUMEN / SUMMARY: - Glioblastoma (GBM) is the highest-grade glioma in astrocytoma. Patients often have poor prognosis due to therapeutic resistance and tumor recurrence. Identification of the genetic factors of GBM could be important contribution to early prevention of this disease. We genotyped 17 tag single-nucleotide polymorphisms (tSNPs) from nine genes in this study, including 72 cases and 302 controls. SNP genotyping was conducted using Sequenom MassARRAY RS1000. Statistical analysis of the association between tSNPs and GBM was performed using the chi (2) test and SNPStats software. The rs3829382 in FLT3 was associated with increased odds of developing GBM using the chi (2) test. When we analyzed tSNPs under different inheritance models, we found rs9642393 in EGFR increased odds of developing GBM in the dominant model. After stratification by gender, we found that rs12645561 in NEIL3 and rs2291427 in ALOX5 were associated with developing GBM. Polymorphisms within FLT3, EGFR, NEIL3, and ALOX5 may contribute to the occurrence of GBM in the Han Chinese population. However, the functional significance of these polymorphisms needs further investigation.

[277]

TÍTULO / TITLE: - Transience of dysexecutive syndrome but permanence of motor deficits in the course of recurrent subfrontal meningioma.

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

REVISTA / JOURNAL: - J Neuropsychiatry Clin Neurosci. 2013 Jul 1;25(3):E19. doi: 10.1176/appi.neuropsych.12060141.

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

[1176/appi.neuropsych.12060141](#)

AUTORES / AUTHORS: - Aydin EF; Ozan E

[278]

TÍTULO / TITLE: - Esophageal-subarachnoid fistula: A case of spontaneous tension pneumocephalus in the setting of esophageal cancer.

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

REVISTA / JOURNAL: - Head Neck. 2013 Aug 22. doi: 10.1002/hed.23459.

●● Enlace al texto completo (gratis o de pago) [1002/hed.23459](#)

AUTORES / AUTHORS: - Patel MR; Idicula W; Carrau RL; Prevedello DM

INSTITUCIÓN / INSTITUTION: - Department of Otolaryngology - Head & Neck Surgery, University of North Carolina - Chapel Hill, Chapel Hill, NC.

RESUMEN / SUMMARY: - Background: Pneumocephalus occur as a result of traumatic or iatrogenic violation of the dura. Tension pneumocephalus, whereby air continues to accumulate with no mechanism for escape, can cause significant morbidity and mortality. Objective: This case report reviews the underlying pathophysiology, clinical presentation, diagnosis, and management of tension pneumocephalus. Case Report: We present the case of a 68-year-old man who presented to the Emergency Department with headache thought to be the result of a newfound intracranial mass. After admission, he became obtunded and found to have tension pneumocephalus requiring emergent evacuation. A cervical esophagus carcinoma caused a esophageal-subarachnoid fistula that resulted in tension pneumocephalus after a retching episode. Conclusion: This case illustrates the importance of considering alternative sources of pneumocephalus in the absence of more typical differential diagnosis. Head Neck, 2013.

[279]

TÍTULO / TITLE: - Irradiated normal brain promotes invasion of glioblastoma through vascular endothelial growth and stromal cell-derived factor 1alpha.

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

REVISTA / JOURNAL: - Neuroreport. 2013 Sep 11;24(13):730-4. doi: 10.1097/WNR.0b013e32836459ac.

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

[1097/WNR.0b013e32836459ac](#)

AUTORES / AUTHORS: - Zhou W; Xu Y; Gao G; Jiang Z; Li X

INSTITUCIÓN / INSTITUTION: - Department of Radiotherapy, Qilu Hospital, Shandong University, 44 Wenhua Road, Jinan, Shandong, China.

RESUMEN / SUMMARY: - The significance of irradiated normal brain volume in glioma recurrence is usually ignored by radiotherapists. The whole-brain irradiation (WBI) of 15 Gy in three fractions was delivered to C57BL/6 mice before implantation of GL261 glioma cells. The changes in vascular endothelial growth (VEGF) and stromal cell-derived factor 1alpha (SDF-1alpha) after WBI were evaluated by real-time RT-PCR and immunohistochemistry. Cell invasion assays were performed to study the effects of VEGF and SDF-1alpha. The levels of VEGF and SDF-1alpha in normal brain tissues increased after 15 Gy WBI. The WBI before tumor implantation significantly increased the invasive ability of GL261 cells. VEGF and SDF-1alpha could promote invasion of

GL261 cells even after high-dose irradiation. The combination of irradiation and inhibitors such as AMD3100 may prevent irradiation-stimulated dissemination of glioma cells.

[280]

TÍTULO / TITLE: - Perigestational dietary folic acid deficiency protects against medulloblastoma formation in a mouse model of nevoid basal cell carcinoma syndrome.

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

REVISTA / JOURNAL: - Nutr Cancer. 2013;65(6):857-65. doi: 10.1080/01635581.2013.804940.

●● Enlace al texto completo (gratis o de pago) [1080/01635581.2013.804940](https://doi.org/10.1080/01635581.2013.804940)

AUTORES / AUTHORS: - Been RA; Ross JA; Nagel CW; Hooten AJ; Langer EK; DeCoursin KJ; Marek CA; Janik CL; Linden MA; Reed RC; Schutten MM; Largaespada DA; Johnson KJ

INSTITUCIÓN / INSTITUTION: - Masonic Cancer Center and Brain Tumor Program, University of Minnesota, Minneapolis, Minnesota 55455, USA.

RESUMEN / SUMMARY: - Hereditary nevoid basal cell carcinoma syndrome (NBCCS) is caused by PTCH1 gene mutations that result in diverse neoplasms including medulloblastoma (MB). Epidemiological studies report reduced pediatric brain tumor risks associated with maternal intake of prenatal vitamins containing folic acid (FA) and FA supplements specifically. We hypothesized that low maternal FA intake during the perigestational period would increase MB incidence in a transgenic NBCCS mouse model, which carries an autosomal dominant mutation in the Ptch1 gene. Female wild-type C57BL/6 mice (n = 126) were randomized to 1 of 3 diets with differing FA amounts: 0.3 mg/kg (low), 2.0 mg/kg (control), and 8.0 mg/kg (high) 1 mo prior to mating with Ptch1 (+/-) C57BL/6 males. Females were maintained on the diet until pup weaning; the pups were then aged for tumor development. Compared to the control group, offspring MB incidence was significantly lower in the low FA group (Hazard Ratio = 0.47; 95% confidence interval 0.27-0.80) at 1 yr. No significant difference in incidence was observed between the control and high FA groups. Low maternal perigestational FA levels may decrease MB incidence in mice genetically predisposed to tumor development. Our results could have implications for prenatal FA intake recommendations in the presence of cancer syndromes.

[281]

TÍTULO / TITLE: - Aquaporin-4 antibody-positive myelitis initially biopsied for suspected spinal cord tumors: Diagnostic considerations.

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

REVISTA / JOURNAL: - Mult Scler. 2013 Sep 12.

●● Enlace al texto completo (gratuito o de pago) [1177/1352458513505350](https://doi.org/10.1177/1352458513505350)

AUTORES / AUTHORS: - Sato DK; Misu T; Rocha CF; Callegaro D; Nakashima I; Aoki M; Fujihara K; Lana-Peixoto MA

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Tohoku University Graduate School of Medicine, Japan.

RESUMEN / SUMMARY: - Two patients with longitudinally extensive myelopathy were initially biopsied for suspected spinal cord tumors. Both patients were later diagnosed with neuromyelitis optica spectrum disorders (NMOSD) supported by their AQP4-seropositivity. Pathological review of both biopsies revealed demyelinated lesions with thickened vessel walls and tissue rarefaction. Immunohistochemical staining demonstrated findings compatible with acute NMOSD lesions in one case while the other case exhibited findings consistent with chronic NMOSD lesions. A pre-biopsy differential diagnosis of longitudinally extensive spinal cord tumors should include NMOSD. Specific biopsy features, such as cystic changes with vascular wall thickening and astrocyte injury, should raise suspicion for NMOSD.

[282]

TÍTULO / TITLE: - Cutaneous meningioma: a potential diagnostic pitfall in p63 positive cutaneous neoplasms.

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

REVISTA / JOURNAL: - J Cutan Pathol. 2013 Oct;40(10):891-5. doi: 10.1111/cup.12198. Epub 2013 Aug 7.

●● Enlace al texto completo (gratuito o de pago) [1111/cup.12198](https://doi.org/10.1111/cup.12198)

AUTORES / AUTHORS: - Fox MD; Billings SD; Gleason BC; Thomas AB; Cibull TL

INSTITUCIÓN / INSTITUTION: - Department of Pathology, NorthShore University HealthSystem, Evanston, IL, USA.

RESUMEN / SUMMARY: - Cutaneous meningiomas are divided into three groups. Type I lesions present at birth and are derived from ectopic arachnoid cells. Type II lesions usually present in adults and are derived from arachnoid cells surrounding nerve bundles. Type III lesions are due to direct extension or metastasis from dural-based neoplasms. Dural-based meningiomas are known to express p63. The aim of our study is to examine the expression of p63 in type II and type III meningioma. Two cases of cutaneous meningioma (type II and type III) were evaluated for the expression of p63, EMA, CK 5/6, S100 and CD31. The cells of interest were spindle to epithelioid and arranged in a whorling pattern. Immunohistochemical staining showed expression of EMA and p63 in both cases, while stains for CK 5/6, S100 and CD31 were negative. Among cutaneous tumors, p63 is considered a marker of epithelial derivation, as it is positive in epidermal and adnexal neoplasms. It is important to be aware of p63 expression in the context of cutaneous meningioma to avoid misinterpretation as an epithelial tumor. On the basis of our small study, it is unlikely that p63 expression

would be helpful in distinguishing between type II and type III meningioma, as both may be p63-positive.

[283]

TÍTULO / TITLE: - Focal cortical dysplasia type IIIc associates with multiple cerebral cavernomas.

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

REVISTA / JOURNAL: - Epilepsy Res. 2013 Aug 5. pii: S0920-1211(13)00191-5. doi: 10.1016/j.eplepsyres.2013.07.006.

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

[1016/j.eplepsyres.2013.07.006](#)

AUTORES / AUTHORS: - Niehusmann P; Becker AJ; Malter MP; Raabe A; Bostrom A; von der Bröle C

INSTITUCIÓN / INSTITUTION: - Dept. of Neuropathology, University of Bonn Medical Center, Bonn, Germany. Electronic address: pittniehusmann@uni-bonn.de.

RESUMEN / SUMMARY: - The distinction of isolated malformations and combined lesions constitutes a major novelty in the 2011 consensus classification of the International League against Epilepsy (ILAE) for focal cortical dysplasias (FCD). Cortical lamination abnormalities together with vascular lesions are subsumed as FCD IIIc. Little is known regarding frequency and etiology of this entity. Here, we systematically evaluated biopsy specimens from 72 drug-refractory epilepsy patients with cerebral cavernous malformations (CCM) regarding presence of associated FCD. Due to a non-perpendicular orientation of the cortical structures or absence of sufficient cortical tissue adjacent to the vascular lesion 25 samples were not classifiable. In the remaining 47 cases FCD IIIc was rare (4.3%), but significantly increased in patients with multiple CCM (28.6%; $p < 0.05$ vs. single CCM). Association of FCD IIIc with multiple CCM may argue against FCD IIIc as an acquired lesion.

[284]

TÍTULO / TITLE: - Arterial Spin-Labeled Perfusion of Pediatric Brain Tumors.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3670](#)

AUTORES / AUTHORS: - Yeom KW; Mitchell LA; Lober RM; Barnes PD; Vogel H; Fisher PG; Edwards MS

INSTITUCIÓN / INSTITUTION: - Departments of Radiology Neurosurgery, Pathology, and Neurology, Lucile Packard Children's Hospital, Stanford University, Palo Alto, California.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Pediatric brain tumors have diverse pathologic features, which poses diagnostic challenges. Although perfusion

evaluation of adult tumors is well established, hemodynamic properties are not well characterized in children. Our goal was to apply arterial spin-labeling perfusion for various pathologic types of pediatric brain tumors and evaluate the role of arterial spin-labeling in the prediction of tumor grade. MATERIALS AND METHODS: Arterial spin-labeling perfusion of 54 children (mean age, 7.5 years; 33 boys and 21 girls) with treatment-naive brain tumors was retrospectively evaluated. The 3D pseudocontinuous spin-echo arterial spin-labeling technique was acquired at 3T MR imaging. Maximal relative tumor blood flow was obtained by use of the ROI method and was compared with tumor histologic features and grade. RESULTS: Tumors consisted of astrocytic (20), embryonal (11), ependymal (3), mixed neuronal-glia (8), choroid plexus (5), craniopharyngioma (4), and other pathologic types (3). The maximal relative tumor blood flow of high-grade tumors (grades III and IV) was significantly higher than that of low-grade tumors (grades I and II) ($P < .001$). There was a wider relative tumor blood flow range among high-grade tumors (2.14 ± 1.78) compared with low-grade tumors (0.60 ± 0.29) ($P < .001$). Across the cohort, relative tumor blood flow did not distinguish individual histology; however, among posterior fossa tumors, relative tumor blood flow was significantly higher for medulloblastoma compared with pilocytic astrocytoma ($P = .014$). CONCLUSIONS: Characteristic arterial spin-labeling perfusion patterns were seen among diverse pathologic types of brain tumors in children. Arterial spin-labeling perfusion can be used to distinguish high-grade and low-grade tumors.

[285]

TÍTULO / TITLE: - Potential role of advanced MRI techniques for the peritumoural region in differentiating glioblastoma multiforme and solitary metastatic lesions.

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

REVISTA / JOURNAL: - Clin Radiol. 2013 Aug 19. pii: S0009-9260(13)00351-6. doi: 10.1016/j.crad.2013.06.021.

●● Enlace al texto completo (gratis o de pago) [1016/j.crad.2013.06.021](#)

AUTORES / AUTHORS: - Lee EJ; Ahn KJ; Lee EK; Lee YS; Kim DB

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Dongguk University Ilsan Hospital, Goyang, Republic of Korea. Electronic address: ejl1048@hanmail.net.

RESUMEN / SUMMARY: - Differentiation between solitary metastatic lesions and glioblastomas, two of the most common malignant brain neoplasms, is often a diagnostic challenge. The purpose of this review is to emphasize the potential roles of advanced magnetic resonance imaging (MRI) techniques, including diffusion-based techniques, such as diffusion-weighted imaging (DWI), exponential DWI, and diffusion tensor imaging, MR perfusion, and MR spectroscopy, as well as conventional MRI, in making a distinction between glioblastomas and solitary metastases in peritumoural

regions. Integration of advanced MRI features with conventional MRI, may provide valuable information for differentiating glioblastoma from solitary metastatic lesions.

[286]

TÍTULO / TITLE: - Differentiation between Intramedullary spinal ependymoma and astrocytoma: Comparative MRI analysis.

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

REVISTA / JOURNAL: - Clin Radiol. 2013 Sep 10. pii: S0009-9260(13)00392-9. doi: 10.1016/j.crad.2013.07.017.

●● Enlace al texto completo (gratis o de pago) [1016/j.crad.2013.07.017](#)

AUTORES / AUTHORS: - Kim DH; Kim JH; Choi SH; Sohn CH; Yun TJ; Kim CH; Chang KH

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Seoul National University Hospital, Seoul, Republic of Korea.

RESUMEN / SUMMARY: - AIM: To investigate magnetic resonance imaging (MRI) findings that could be used to differentiate intramedullary spinal ependymoma from astrocytoma, and to determine predictors for this differentiation. MATERIALS AND METHODS: MRI images of 43 consecutive patients with pathologically proven intramedullary spinal ependymoma (n = 24) and astrocytoma (n = 19) were comparatively evaluated with regard to size, location, margin, signal intensity, contrast enhancement, presence of syringohydromyelia, tumoural cyst, non-tumoural cyst, and haemorrhage. MRI findings and demographic data were compared between the two tumour groups using univariate and multivariate logistic regression analyses. RESULTS: In patients with ependymoma, older age and a larger solid component were more often observed than in astrocytoma. Central location, presence of enhancement, diffuse enhancement, syringohydromyelia, haemorrhage, and cap sign were more frequently observed in ependymoma. However, multivariate analysis revealed that syringohydromyelia was the only variable able to independently differentiate ependymoma from astrocytoma, with an odds ratio of 62.9 (95% CI: 4.38-903.22; p = 0.002). CONCLUSION: Among the various findings, the presence of syringohydromyelia is the main factor distinguishing ependymoma from astrocytoma.

[287]

TÍTULO / TITLE: - Gliomas of the posterior fossa in adults.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 27.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1231-2](#)

AUTORES / AUTHORS: - Strauss I; Jonas-Kimchi T; Bokstein F; Blumenthal D; Roth J; Sitt R; Wilson J; Ram Z

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tel Aviv Medical Center, 6 Weizman Street, 64239, Tel Aviv, Israel.

RESUMEN / SUMMARY: - Infratentorial gliomas are relatively rare tumors compared to their supratentorial counterparts. As such they have not been extensively characterized as a group and are usually excluded from clinical studies. Using our database we aimed to characterize adult gliomas involving the posterior fossa with respect to their clinical behavior and prognostic factors. We reviewed our neurosurgical and neuro-oncological data bases for adult patients diagnosed with gliomas involving the posterior fossa between 1996 and 2010. Of 1,283 glioma patients, 57 patients with gliomas involving the posterior fossa were identified (4.4 %). Tumors were further classified by location as primary brainstem (n = 21) and primary cerebellar (n = 18) tumors. On univariate analysis survival was correlated to tumor grade and KPS. In addition we have identified a unique group of patients (n = 18) with previously diagnosed supratentorial gliomas who subsequently developed noncontiguous secondary infratentorial extension of their tumors with subsequent rapid clinical deterioration. Gliomas of the posterior fossa comprise a heterogeneous group of tumors. Histological grade of the tumor was found to be the main prognostic factor. Survival of primary cerebellar gliomas is comparable to supra-tentorial gliomas, while brainstem gliomas in adults fare better than in the pediatric population. Secondary extension of supratentorial gliomas to the posterior fossa signifies a grave prognosis.

[288]

TÍTULO / TITLE: - Surgical outcomes in spinal cord subependymomas: an institutional experience.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 24.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1256-6](#)

AUTORES / AUTHORS: - Wu L; Deng X; Yang C; Zhao L; Fang J; Wang G; Yang J; Xu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, No. 6 Tiantan Xili, Dongcheng District, Beijing, 100050, China.

RESUMEN / SUMMARY: - Spinal cord subependymomas are very rare. Most studies on spinal cord subependymomas have been case reports with literature reviews. This study presented a surgical series of 13 patients with histologically proven spinal cord subependymomas. Their clinical data, radiological findings, operative records, and follow-up outcomes were reviewed. There were 5 male and 8 female patients with a mean age of 39.5 years. The mean follow-up period was 67.8 months. Four tumors were located in the cervical spine, 5 in the cervicothoracic spine, and 4 in the thoracic spine. Gross total resection (GTR) of the tumor with a well-demarcated dissection

plane was achieved in 9 cases, and subtotal resection was achieved in 4 cases. The symptoms present before the surgery were improved in 11 cases at last follow-up and the current status of 2 patients had no change compared to the preoperative presentation at last follow-up. The postoperative follow-up magnetic resonance imaging showed no recurrence in the 9 GTR cases during the mean follow-up period of 70.3 months. No recurrence/regrowth of the residual tumors was observed in the 4 STR cases during the mean follow-up period of 62.0 months. Spinal cord subependymomas are amenable to surgical resection. It is possible to achieve GTR of intramedullary subependymomas that have a well-demarcated dissection plane. When GTR cannot be achieved, STR of the lesion for decompression is advised, and follow-up imaging is needed. A good clinical outcome after GTR or STR can be expected.

[289]

TÍTULO / TITLE: - Paraneoplastic cerebellar degeneration associated with an onconeural antibody against creatine kinase, brain-type.

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

REVISTA / JOURNAL: - J Neurol Sci. 2013 Aug 24. pii: S0022-510X(13)02871-2. doi: 10.1016/j.jns.2013.08.022.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.jns.2013.08.022](#)

AUTORES / AUTHORS: - Tetsuka S; Tominaga K; Ohta E; Kuroiwa K; Sakashita E; Kasashima K; Hamamoto T; Namekawa M; Morita M; Natsui S; Morita T; Tanaka K; Takiyama Y; Nakano I; Endo H

INSTITUCIÓN / INSTITUTION: - Division of Neurology, Department of Internal Medicine, Jichi Medical University, 3311-1 Yakushiji, Shimotsuke, Tochigi 329-0498 Japan; Department of Biochemistry, Jichi Medical University, 3311-1 Yakushiji, Shimotsuke, Tochigi 329-0498 Japan.

RESUMEN / SUMMARY: - Onconeural immunity, a cancer-stimulated immune reaction that cross-reacts with neural tissues, is considered to be the principal pathological mechanism for paraneoplastic neurological syndromes (PNS). A common PNS is paraneoplastic cerebellar degeneration (PCD). We had encountered a PCD patient with urothelial carcinomas (UC) of the urinary bladder who was negative for the well-characterized PNS-related onconeural antibodies. In the present study, we aimed to identify a new PCD-related onconeural antibody, capable of recognizing both cerebellar neurons and cancer tissues from the patient, and applied a proteomic approach using mass spectrometry. We identified anti-creatine kinase, brain-type (CKB) antibody as a new autoantibody in the serum and cerebrospinal fluid from the patient. Immunohistochemistry indicated that anti-CKB antibody reacted with both cerebellar neurons and UC of the urinary bladder tissues. However, anti-CKB antibody was not detected in sera from over 30 donors, including bladder cancer patients without PCD, indicating that anti-CKB antibody is required for onset of PCD. We also

detected anti-CKB antibody in sera from three other PCD patients. Our study demonstrated that anti-CKB antibody may be added to the list of PCD-related autoantibodies and may be useful for diagnosis of PCD.

[290]

TÍTULO / TITLE: - The role of adjuvant radiotherapy in atypical meningioma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 15.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1219-y](#)

AUTORES / AUTHORS: - Park HJ; Kang HC; Kim IH; Park SH; Kim DG; Park CK; Paek SH; Jung HW

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Seoul National University Hospital, Seoul National University College of Medicine, 101 Daehak-ro, Jongno-gu, Seoul, 110-799, Korea.

RESUMEN / SUMMARY: - The object of this study was to analyze treatment outcomes and to identify the prognostic factors, with a focus on the role of adjuvant radiotherapy (ART), predicting disease progression in atypical meningiomas. From 1997 to 2011, 83 patients with meningioma were included in this study. All patients were histologically confirmed as atypical meningioma and were treated with surgical resection with or without ART. As primary therapy, 27 patients received surgical resection followed by ART, and 56 received no adjuvant therapy. Of 83 evaluable patients, 55 (66.3 %) patients underwent complete resection. The median ART dose was 61.2 Gy and their median age was 52 years. The 5- and 10-year actuarial overall survival rates were 90.2 and 62.0 %, and the 5- and 10-year progression-free survival (PFS) rates were both 48.0 %, with a median follow-up of 43.0 months. Addition of ART ($p = 0.016$) and complete tumor resection ($p = 0.002$) were associated with superior PFS. When stratified to four groups according to resection status and ART, the groups of patient with incomplete resection without ART showed significantly worse PFS compared to other three groups ($p < 0.001$). In conclusion, surgical resection followed by ART led to lower local tumor progression in patients with atypical meningioma defined by the updated 2000/2007 WHO classification. Our results may contribute to the routine use of ART, especially after incomplete resection, until the outcomes of ongoing prospective trials are available.

[291]

TÍTULO / TITLE: - MicroRNA-9 inhibits vasculogenic mimicry of glioma cell lines by suppressing Stathmin expression.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 17.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1245-9](https://doi.org/10.1007/s11060-013-1245-9)

AUTORES / AUTHORS: - Song Y; Mu L; Han X; Li Q; Dong B; Li H; Liu X

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Fourth Affiliated Hospital of Harbin Medical University, No. 37, Yiyuan street, Harbin, 150001, People's Republic of China.

RESUMEN / SUMMARY: - The purpose of this study was to investigate the functions of microRNA-9, which is a tissue-specific microRNA in central nervous system, in the vasculogenic mimicry (VM) of glioma cell lines in vitro and in vivo. Glioma cell lines U87MG, U251 and SHG44 were transfected with microRNA-9 mimic, microRNA-9 inhibitor or scramble sequences. The amount of microRNA-9 and Stathmin (STMN1) mRNA was determined by quantitative real-time PCR, and the protein expression of STMN1 was determined by western blot. Cell proliferation and apoptosis were assessed. The interactions between the 3'UTR of STMN1 and miR-9 was determined by luciferase reporter assay. The VM capacity in vitro was evaluated using VM formation assay, and the rescue experiment of STMN1 was carried out in U251 cells. The in vivo experiment was applied with animal models implanted with U87MG cells. MicroRNA-9 mimic transfection reduced proliferation and increased apoptosis in glioma cell lines ($p < 0.05$). MicroRNA-9 mimic up-regulated STMN1 mRNA levels but reduced its protein levels ($p < 0.05$), and luciferase activity of STMN1 was suppressed by microRNA-9 mimic transfection ($p < 0.05$). Furthermore, microRNA-9 mimic transfection suppressed tumor volume growth, as well as VM both in vitro and in vivo. The cell viability and microtubule density were upregulated in U251 cells after STMN1 up-regulation ($p < 0.05$). STMN1 is a target of microRNA-9, and microRNA-9 could modulate cell proliferation, VM and tumor volume growth through controlling STMN1 expression. MicroRNA-9 and its targets may represent a novel panel of molecules for the development of glioma treatment.

[292]

TÍTULO / TITLE: - Rhabdoid meningioma: analysis of one case.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Aug 23.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2247-9](https://doi.org/10.1007/s00381-013-2247-9)

AUTORES / AUTHORS: - Tian Q; Zhang F; Bi L; Wang Y

INSTITUCIÓN / INSTITUTION: - Department of Radiotherapy, The General Hospital of Jinan Military Command, 25 Shifan Road, Jinan, Shandong Province, 250031, China.

RESUMEN / SUMMARY: - INTRODUCTION: Rhabdoid meningioma (RM) is rare, and it occurs mainly in children. We report the clinical and pathological features of rhabdoid meningioma in a 9-year-old child. MATERIAL AND METHODS: A 9-year-old child with RM presented to our hospital with headache that had persisted for 3 days. Magnetic resonance imaging of his brain demonstrated supratentorial lesions of the right

temporal petrous bone and cisterna magna cyst. He underwent surgery on January 13, 2010. The pathological diagnosis was rhabdoid meningioma (grade III). The patient underwent radiotherapy with 30 Gy/16 fractions delivered to the recurrent tumor after surgery. The patient died in December as a result of complications of recurrent meningioma. CONCLUSION: The accumulated data, including this current case, demonstrate the difficulties in reaching the diagnosis and providing treatment for this disease as a consequence of its low incidence, aggressive nature, and poor treatment options for children with rhabdoid meningioma.

[293]

TÍTULO / TITLE: - Persistent multifocal atrial tachycardia in infant with encephalocraniocutaneous lipomatosis: a case report.

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

REVISTA / JOURNAL: - Eur J Pediatr. 2013 Aug 14.

●● Enlace al texto completo (gratis o de pago) [1007/s00431-013-2103-7](#)

AUTORES / AUTHORS: - Pregowska K; Jurkiewicz E; Mischak-Knecht M; Turska-Kmiec A; Bieganowska K

INSTITUCIÓN / INSTITUTION: - Department of Cardiology, The Children's Memorial Health Institute, Dzieci Polskich 20, 04-730, Warsaw, Poland, kasiulapl@yahoo.com.

RESUMEN / SUMMARY: - Encephalocraniocutaneous lipomatosis (ECCL, Haberland syndrome, Fishman syndrome) is a very rare congenital disorder, involving skin, eye, bone and central nervous system malformations. In this paper we present a case of a 2-month-old boy with encephalocraniocutaneous lipomatosis diagnosed on the basis of characteristic clinical manifestations and neuroimaging findings. Neurologically, the child presented only with mild physical and mental retardation. 24-h Holter monitoring revealed asymptomatic multifocal atrial tachycardia. Initial therapy with digoxin and metoprolol was not effective. Introduction of propafenone resulted in suppression of supraventricular arrhythmia. During the 3- years follow-up, sinus rhythm persisted, but neurological status deteriorated. Conclusion: Supraventricular arrhythmia may be associated with Haberland syndrome. It seems that propafenone is most effective in this condition.

[294]

TÍTULO / TITLE: - miR-125b Inhibits Connexin43 and Promotes Glioma Growth.

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

REVISTA / JOURNAL: - Cell Mol Neurobiol. 2013 Sep 18.

●● Enlace al texto completo (gratis o de pago) [1007/s10571-013-9980-1](#)

AUTORES / AUTHORS: - Jin Z; Xu S; Yu H; Yang B; Zhao H; Zhao G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Hospital, Jilin University, Jilin, China.

RESUMEN / SUMMARY: - MicroRNA is strongly associated with tumor growth and development. This study examined the potential roles of miR-125b in glioma growth. We found that miR-125b promotes glioma cell line growth and clone formation, and protects the glioma cells from apoptosis in vitro. The miR-125b-transfected glioma cells also demonstrated increased growth after in vivo transplantation. We further identified that miR-125b inhibits Connexin43 expression, and the overexpression of Connexin43 antagonizes the effects of miR-125b in cell growth and anti-apoptosis. We conclude that miR-125b regulates glioma growth partly through Connexin43 protein.

[295]

TÍTULO / TITLE: - Glioblastoma management in the temozolomide era: have we improved outcome?

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 25.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1230-3](#)

AUTORES / AUTHORS: - Lwin Z; Macfadden D; Al-Zahrani A; Atenafu E; Miller BA; Sahgal A; Menard C; Laperriere N; Mason WP

INSTITUCIÓN / INSTITUTION: - Princess Margaret Hospital, 610 University Avenue, Suite 18-717, Toronto, ON, M5G 2M9, Canada.

RESUMEN / SUMMARY: - Temozolomide (TMZ) during and after radiotherapy (RT) is recommended for patients with newly diagnosed glioblastoma (GBM). We analyzed the adoption of this new standard of care for GBM in an academic cancer centre in Canada and assessed its impact on survival. GBM patients registered with Cancer Care Ontario between 2004 and 2008 were identified. Those ≥ 16 years age, newly diagnosed, treated at our institution, had confirmed pathology and complete records were included. Demographics, treatments, toxicity and outcome were captured. For survival analysis patients were stratified by age, ECOG, and treatment modalities including total cycles of TMZ. Descriptive statistics were used for early progressors and long term survivors. Kaplan-Meier curves, log-rank test and Cox proportional hazards model were used for survival analyses. At a median follow-up of 28 months, we compared our outcome to updated EORTC-NCIC CE 3 results. Of 517 patients 433 were included for analysis. Majority were male (63 %), ECOG 0-1 (66 %), and ≤ 65 years (55 %). 44 % received CRT followed by TMZ, 13 % had CRT only, 30 % had RT only and 13 % had best supportive care. 10 % were early progressors and 9 % survived beyond 2 years. Comparison of our results to NCIC CTG CE.3 study data showed median survival was 15.8 versus 14.6 months, 2 year survival rate for CRT plus TMZ was 35 versus 26 %, and for RT alone 0 versus 10 %, respectively. < 50 % of GBM

patients complete CRT with TMZ in the real-world setting. Prognosis for most patients with GBM remains dismal particularly if they are not suitable for RT and CRT.

[296]

TÍTULO / TITLE: - Chronic epilepsy due to low grade temporal lobe tumors and due to hippocampal sclerosis: Do they differ in post-surgical outcome?

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 17.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1217-0](#)

AUTORES / AUTHORS: - Vannemreddy PS; Kanner AM; Smith MC; Rossi M; Wallace D; Vannemreddy SN; Byrne RW

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Rush University Medical Center, 1725 W Harrison Street, Chicago, IL, USA, Prasad4458@hotmail.com.

RESUMEN / SUMMARY: - Chronic seizures as a presenting feature of low grade temporal lobe gliomas and hippocampal sclerosis (HS) are reported to have similar outcomes although the prognostic indicators may not be the same. This study seeks to identify the variables that are associated with poor surgical outcome in both conditions. A retrospective analysis from our epilepsy data base was performed. All low-grade temporal lobe gliomas were selected and relevant variables were compared to the same variables in HS patients. There were 34 tumors (out of 233 cases of chronic temporal lobe epilepsy = 14.6 %) with a mean age of onset of 19 years, and the preoperative duration was 12.3 years. When compared to 120 HS patients both of these factors were significantly different ($p < 0.001$). Age at the time of surgery for tumors was 31.08 ($p = 0.5$). Tumors were left sided in 20 patients. In tumor cases amygdala resection was complete in 75 %, for hippocampus 24 % were complete and 39 % partial. Astrocytoma, ganglioglioma and oligodendroglioma constituted 80 % of tumor cases. Good outcome (Engel's Class I) was achieved in 88.2 % of tumor cases and 71 % of HS cases while poor outcome (Class III + IV) was seen in 5.9 and 16.7 % respectively. The follow up period for the two groups was not significantly different. In multivariate logistic regression analysis, the groups differed significantly in preoperative delay (between diagnosis and surgery) and in epilepsy outcome. Chronic temporal lobe epilepsy due to low-grade tumors had significantly better surgical outcome with considerably less preoperative delay. The age of onset of seizures was younger in HS patients but a delay in surgical treatment was significantly longer. Given that the diagnosis of treatment-resistant TLE secondary to HS can be established after two failed AED trials at optimal doses, shortening the interval between diagnosis and surgery may improve epilepsy outcome.

[297]

TÍTULO / TITLE: - The tumor suppressor microRNA, miR-124^a, is regulated by epigenetic silencing and by the transcriptional factor, REST in glioblastoma.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1200-6](#)

AUTORES / AUTHORS: - Tivnan A; Zhao J; Johns TG; Day BW; Stringer BW; Boyd AW; Tiwari S; Giles KM; Teo C; McDonald KL

INSTITUCIÓN / INSTITUTION: - Prince of Wales Clinical School, Adult Cancer Program, Cure For Life Neuro-Oncology Group, Lowy Cancer Research Centre, University of New South Wales, Sydney, Australia.

RESUMEN / SUMMARY: - Reduced levels of specific microRNA in cancer are frequently reported and associated with attenuated cancer genes and associated pathways. We previously reported a loss of miR-124^a in glioblastoma (GBM) patient specimens; however, the upstream causes of this loss are largely unknown. Loss of miR-124^a has been attributed to hypermethylation while other studies have shown miR-124^a to be regulated by the repressor-element-1-silencing transcription factor (REST, also known as neuron-restrictive silencing factor). This current study looked at both epigenetic and transcription factor regulation as potential mechanisms resulting in the loss of miR-124^a expression in GBM patient specimens and cell lines. Hypermethylation of miR-124^a was observed in 82 % of GBM patient specimens (n = 56). In vitro miR-124^a expression levels also increased after treatment of several patient-derived cell lines with 5-aza-2'-deoxycytidine. Additionally, we also demonstrated a positive interaction between REST activity and miR-124^a using a luciferase-binding assay and we correlated the reciprocal expression of REST and miR-124^a in our clinical cohort. This result indicates that miR-124^a expression may also be modulated through the upstream targeting of REST. Preclinical studies involving inhibitors of REST and treatment with demethylating agents with the intent to increase miR-124^a levels could be interesting.

[298]

TÍTULO / TITLE: - First evidence of the interaction between deleted in malignant brain tumor 1 and galectin-3 in the mammalian oviduct.

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

REVISTA / JOURNAL: - Histochem Cell Biol. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) [1007/s00418-013-1145-2](#)

AUTORES / AUTHORS: - Roldan ML; Marini PE

INSTITUCIÓN / INSTITUTION: - Instituto de Biología Molecular y Celular de Rosario (IBR-CONICET), Rosario, Argentina.

RESUMEN / SUMMARY: - The oviduct supports the transport and final maturation of gametes, and harbors fertilization and early embryo development. The oviductal epithelium is responsible for providing the correct environment for these processes.

Deleted in malignant brain tumor 1 (DMBT1) is expressed by multiple organisms and several cell types, and the interaction of the rabbit ortholog of DMBT1 with galectin-3 (gal-3) modulates the polarity of epithelial cells. This interaction has not yet been shown in locations other than rabbit kidney and human-cultured endothelial cells. DMBT1 and gal-3 also protect epithelial layers from pathogens and trauma, and are innate immunity components. DMBT1 has been detected in the porcine oviduct, and gal-3 has been reported in the Fallopian tube and in the cow oviduct. Interaction between both proteins would show a probable physiological function in the female reproductive tract. This work describes the presence and co-localization of DMBT1 and gal-3 mainly in the apical region of the epithelial cells of the Fallopian tube and the porcine oviduct, and co-immunoprecipitation in membrane-enriched epithelial cell extracts from the porcine oviduct. The findings strongly support a functional interaction in the mammalian oviduct, suggestive of a role on epithelial protection and homeostasis, which might be related to epithelium-gamete interaction.

[299]

TÍTULO / TITLE: - Inhibition of FOXM1 by thiostrepton sensitizes medulloblastoma to the effects of chemotherapy.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Oct;30(4):1739-44. doi: 10.3892/or.2013.2654. Epub 2013 Aug 2.

●● [Enlace al texto completo \(gratis o de pago\) 3892/or.2013.2654](#)

AUTORES / AUTHORS: - Lin J; Zheng Y; Chen K; Huang Z; Wu X; Zhang N

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, Guangdong 510080, P.R. China.

RESUMEN / SUMMARY: - Medulloblastoma (MB) is the most common malignant brain tumor in children and is highly invasive and metastatic. Despite recent advances, most MB patients suffer significant therapy-related morbidity, and the survival rate for patients with metastatic MB remains unsatisfactory. Altered expression of FOXM1 has been detected in many types of cancers, and the inhibition of FOXM1 has been studied as a cancer therapy. In the present study, we evaluated the impact of the inhibition of FOXM1 by thiostrepton in Daoy MB cells. Cells were treated with different concentrations of thiostrepton alone or in combination with cisplatin. Cell viability was measured with CCK-8 assays, and cell cycle distribution and apoptosis were assessed by flow cytometric analysis. Changes in protein expression were examined by western blotting. RNAi experiments were performed using siRNA oligonucleotides. The invasion and migration studies were performed using 8-microm Transwell plates. Inhibition of FOXM1 by thiostrepton significantly decreased MB cell proliferation. Cell arrest at the G2/M phase and apoptosis were significantly increased in MB cell lines that were treated with thiostrepton or transfected with siRNA. Thiostrepton decreased the IC50

value of cisplatin for MB treatment by enhancing cisplatin-induced apoptosis. Thiostrepton also decreased cell invasion and migration, which are crucial steps for tumor progression. Our data suggest that targeting FOXM1 with small-molecule inhibitors results in potent antitumor activity and chemosensitizing effects in human medulloblastoma cells.

[300]

TÍTULO / TITLE: - The temozolomide derivative 2T-P400 inhibits glioma growth via administration route of intravenous injection.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 25.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1255-7](#)

AUTORES / AUTHORS: - Li R; Tang D; Zhang J; Wu J; Wang L; Dong J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Second Affiliated Hospital of Soochow University, 1055 Sanxiang Road, Suzhou, 215004, Jiangsu, China.

RESUMEN / SUMMARY: - The aim of this study is to investigate the inhibitory effects of 2T-P400, a derivative of temozolomide (TMZ), on glioma growth. SHG-44 and U373 human glioblastoma cell lines and SHG-44 cell subcutaneous and intracranial xenograft mouse models were used as the model system for these studies. Cell growth was analyzed using MTT assay. For intracranial glioma xenograft model, mouse brains were obtained and made as paraffin section for immunohistochemical staining. Tumor volume was calculated with this formula: tumor volume = length x width²/2. The results showed that 2T-P400 or TMZ significantly inhibits cell growth in a concentration dependent manner with the IC50 values of 12.90 +/- 1.05 or 9.73 +/- 2.12 mug/ml on SHG-44 cell line and 13.12 +/- 0.86 or 10.13 +/- 1.02 mug/ml on U373 cell line respectively. In SHG-44 cell subcutaneous xenograft model, the tumor volume of 2T-P400 or TMZ treated group was 1,062.12 +/- 204.76 or 803.59 +/- 110.32 mm³ respectively, which was significantly smaller than that in physiological saline (with volume of 1,968.85 +/- 348.37 mm³) treated group. In intracranial xenograft model, the tumor volume of 2T-P400 or TMZ group was 6.12 +/- 1.69 or 5.58 +/- 1.45 mm³ respectively, significantly smaller than that in physiological saline group of 33.08 +/- 6.88 mm³. Moreover, polyethylene glycol 400 (PEG400) exhibited no significant tumor growth inhibition. Our results indicated that 2T-P400 possesses the same growth inhibitory effect as TMZ on glioblastoma cell lines and the subcutaneously and intracranially transplanted gliomas in xenograft mouse models. It may be a suitable alternate of TMZ for the treatment of glioma via intravenous administration route.

[301]

TÍTULO / TITLE: - Radiation-induced primary cerebral atypical teratoid/rhabdoid tumour in an adult.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Sep 7. pii: S0967-5868(13)00351-2. doi: 10.1016/j.jocn.2013.03.041.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.03.041](#)

AUTORES / AUTHORS: - Gorayski P; Boros S; Ong B; Olson S; Foote M

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Princess Alexandra Hospital, 199 Ipswich Road, Woolloongabba, QLD 4102, Australia. Electronic address: peter.gorayski@gmail.com.

RESUMEN / SUMMARY: - Atypical teratoid/rhabdoid tumours (ATRT) of the central nervous system are uncommon embryonal carcinomas that predominantly affect infants and young children, and less commonly adults. We report a 58 year old woman who presented with ATRT involving the right parietal lobe which was treated with surgery and adjuvant radiotherapy. Her history was significant for soft tissue sarcoma of the right ear treated with surgery and adjuvant radiotherapy at age 3, thus raising the possibility of radiation-induced aetiology.

[302]

TÍTULO / TITLE: - ⁶²Cu-Diacetyl-Bis (N4-Methylthiosemicarbazone) PET in Human Gliomas: Comparative Study with [¹⁸F]Fluorodeoxyglucose and L-Methyl-¹¹C]Methionine PET.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Aug 14.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3679](#)

AUTORES / AUTHORS: - Tateishi K; Tateishi U; Nakanowatari S; Ohtake M; Minamimoto R; Suenaga J; Murata H; Kubota K; Inoue T; Kawahara N

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery and Radiology, Graduate School of Medicine, Yokohama City University, Yokohama, Japan; and Division of Nuclear Medicine, Department of Radiology, National Center for Global Health and Medicine, Tokyo, Japan.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: ⁶²Cu-diacetyl-bis(N4-methylthiosemicarbazone) was developed as a hypoxic radiotracer in PET. We compared imaging features among MR imaging and ⁶²Cu-diacetyl-bis(N4-methylthiosemicarbazone)-PET, FDG-PET, and L-methyl-¹¹C]methionine)-PET in gliomas. MATERIALS AND METHODS: We enrolled 23 patients who underwent ⁶²Cu-diacetyl-bis(N4-methylthiosemicarbazone)-PET and FDG-PET and 19 (82.6%) who underwent L-methyl-¹¹C]methionine)-PET, with all 23 patients undergoing surgery and their diagnosis being then confirmed by histologic examination as a glioma. Semiquantitative and volumetric analysis were used for the

comparison. RESULTS: There were 10 newly diagnosed glioblastoma multiforme and 13 nonglioblastoma multiforme (grades II and III), including 4 recurrences without any adjuvant treatment. The maximum standardized uptake value and tumor/background ratios of ^{62}Cu -diacetyl-bis(N4-methylthiosemicarbazone), as well as L-methyl-[^{11}C]methionine, were significantly higher in glioblastoma multiforme than in nonglioblastoma multiforme ($P = .03$ and $P = .03$, respectively); no significant differences were observed on FDG. At a tumor/background ratio cutoff threshold of 1.9, ^{62}Cu -diacetyl-bis(N4-methylthiosemicarbazone) was most predictive of glioblastoma multiforme, with 90.0% sensitivity and 76.9% specificity. The positive and negative predictive values, respectively, for glioblastoma multiforme were 75.0% and 85.7% on ^{62}Cu -diacetyl-bis(N4-methylthiosemicarbazone), 83.3% and 60.0% on L-methyl-[^{11}C]methionine, and 72.7% and 75.0% on MR imaging. In glioblastoma multiforme, volumetric analysis demonstrated that ^{62}Cu -diacetyl-bis(N4-methylthiosemicarbazone) uptake had significant correlations with FDG ($r = 0.68$, $P = .03$) and L-methyl-[^{11}C]methionine ($r = 0.87$, $P = .03$). However, the ^{62}Cu -diacetyl-bis(N4-methylthiosemicarbazone)-active region was heterogeneously distributed in 50.0% (5/10) of FDG-active and 0% (0/6) of L-methyl-[^{11}C]methionine)-active regions. CONCLUSIONS: ^{62}Cu -diacetyl-bis(N4-methylthiosemicarbazone) may be a practical radiotracer in the prediction of glioblastoma multiforme. In addition to FDG-PET, L-methyl-[^{11}C]methionine)-PET, and MR imaging, ^{62}Cu -diacetyl-bis(N4-methylthiosemicarbazone)-PET may provide intratumoral hypoxic information useful in establishing targeted therapeutic strategies for patients with glioblastoma multiforme.

[303]

TÍTULO / TITLE: - Arterial Spin-Labeling Assessment of Normalized Vascular Intratumoral Signal Intensity as a Predictor of Histologic Grade of Astrocytic Neoplasms.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Aug 14.

●● [Enlace al texto completo \(gratis o de pago\) 3174/ajnr.A3705](#)

AUTORES / AUTHORS: - Furtner J; Schopf V; Schewzow K; Kasprian G; Weber M; Woitek R; Asenbaum U; Preusser M; Marosi C; Hainfellner JA; Widhalm G; Wolfsberger S; Prayer D

INSTITUCIÓN / INSTITUTION: - Department of Biomedical Imaging and Image-Guided Therapy, Department of Medicine I, Institute of Neurology, Department of Neurosurgery, Comprehensive Cancer Center-Central Nervous System Tumors Unit, Centre of Medical Physics and Biomedical Engineering, and MR Centre of Excellence, Medical University of Vienna, Vienna, Austria.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Pulsed arterial spin-labeling is a noninvasive MR imaging perfusion method performed with the use of water in the arterial blood as an endogenous contrast agent. The purpose of this study was to

determine the inversion time with the largest difference in normalized intratumoral signal intensity between high-grade and low-grade astrocytomas. MATERIALS AND METHODS: Thirty-three patients with gliomas, histologically classified as low-grade (n = 7) or high-grade astrocytomas (n = 26) according to the World Health Organization brain tumor classification, were included. A 3T MR scanner was used to perform pulsed arterial spin-labeling measurements at 8 different inversion times (370 ms, 614 ms, 864 ms, 1114 ms, 1364 ms, 1614 ms, 1864 ms, and 2114 ms). Normalized intratumoral signal intensity was calculated, which was defined by the signal intensity ratio of the tumor and the contralateral normal brain tissue for all fixed inversion times. A 3-way mixed ANOVA was used to reveal potential differences in the normalized vascular intratumoral signal intensity between high-grade and low-grade astrocytomas. RESULTS: The difference in normalized vascular intratumoral signal intensity between high-grade and low-grade astrocytomas obtained the most statistically significant results at 370 ms (P = .003, other P values ranged from .012-.955). CONCLUSIONS: The inversion time by which to differentiate high-grade and low-grade astrocytomas by use of normalized vascular intratumoral signal intensity was 370 ms in our study. The normalized vascular intratumoral signal intensity values at this inversion time mainly reflect the labeled intra-arterial blood bolus and therefore could be referred to as normalized vascular intratumoral signal intensity. Our data indicate that the use of normalized vascular intratumoral signal intensity values allows differentiation between low-grade and high-grade astrocytomas and thus may serve as a new, noninvasive marker for astrocytoma grading.

[304]

TÍTULO / TITLE: - Upregulation of tumor suppressor WWOX promotes immune response in glioma.

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

REVISTA / JOURNAL: - Cell Immunol. 2013 Aug 6;285(1-2):1-5. doi: 10.1016/j.cellimm.2013.07.015.

●● Enlace al texto completo (gratis o de pago) [1016/j.cellimm.2013.07.015](#)

AUTORES / AUTHORS: - Yang Z; Zhao T; Liu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Xinqiao Hospital, Third Military Medical University, Chongqing 400037, China.

RESUMEN / SUMMARY: - Previous studies demonstrate that human glioma cells could evade the host's immune surveillance system, result in aggressive proliferation. WWOX, a tumor suppressor gene affected in multiple cancers, induces tumor apoptosis and suppresses growth in vitro and in vivo. However, the effect of WWOX expression in glioma cells to immune cells is still unknown. In the present study, we transduced WWOX into human glioma cell line U251, and cocultured with Jurkat T cells together. We demonstrated that upregulation of WWOX could increase proliferation

of Jurkat T cells and decrease the FasL and TGF-beta expression of U251 cells, result in inhibiting apoptosis of Jurkat T cells. Therefore, our results suggested that loss of WWOX expression not only resulted in glioma carcinogenesis, but also suppressed immune cell attack by inducing Fas/FasL mediated apoptotic signaling.

[305]

TÍTULO / TITLE: - Low-dose Fotemustine as Second-line Chemotherapy for Recurrent Glioblastoma Multiforme.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Sep;33(9):4013-6.

AUTORES / AUTHORS: - Bulzonetti N; Musio D; D'Elia A; Salvati M; Tombolini V

INSTITUCIÓN / INSTITUTION: - Viale Regina Elena 155, 00161 Rome, Italy.

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RESUMEN / SUMMARY: - Aim: To test if fotemustine administrated at low doses during the maintenance phase of glioblastoma therapy could improve the toxicity profile, without reducing progression-free survival at six months (PFS-6). **PATIENTS AND METHODS:** Patients enrolled were affected by recurrent glioblastoma multiforme, proven by magnetic resonance imaging (MRI), at least six months after radiochemotherapy completion. Fotemustine was administered at an induction dose of 100 mg/m² followed by a maintenance dose of 75 mg/m². **RESULTS:** All 15 patients completed the induction phase. Eight patients began maintenance-phase therapy and received a median of three cycles (range=2-6). Grade 3 or more haematological toxicity was not documented. The PFS-6 was 5/15 and the median overall survival was 7.5 months. **CONCLUSION:** Haematological toxicity compares favourably with trials using the conventional scheme: no grade 3-4 adverse effects were recorded. This low-dose approach could be considered a compromise treatment whilst waiting for definitive standardization of second-line therapy, in order to reduce severe hematological toxicity.

[306]

TÍTULO / TITLE: - RAB38 confers a poor prognosis, associated with malignant progression and subtype preference in glioma.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Nov;30(5):2350-6. doi: 10.3892/or.2013.2730. Epub 2013 Sep 10.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2730](#)

AUTORES / AUTHORS: - Wang H; Jiang C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, the Second Affiliated Hospital of Harbin Medical University, Harbin, Heilongjiang 150086, P.R. China.

RESUMEN / SUMMARY: - RAB38 is a new member of the RAB small G protein family that regulates intracellular vesicle trafficking. RAB38 is expressed in melanocytes and it has been shown that a point mutation in the postulated GTP-binding domain of RAB38 is the gene responsible for human Hermansky-Pudlak syndrome. However, the prognostic and molecular features of tumors with RAB38 expression is still unclear, as well as glioma. Whole genome mRNA expression microarray data on 220 glioma samples from the Chinese glioma genome atlas (CGGA) database (cgga.org.cn) was applied as discovery set. Each grade of glioma patients was analyzed by the Kaplan-Meier method. To determine the protein expression levels of RAB38, further 82 glioma tissues were stained by immunohistochemistry. Three additional datasets (TCGA, GSE16011 and Rembrandt) were obtained as validation sets. The functional annotation of RAB38 was analyzed by Gene ontology (GO) analysis and Gene set variation analysis (GSVA) in 89 glioblastomas (GBMs). High RAB38 expression was mainly increased in high-grade gliomas, and high RAB38 expression also conferred high mortality of glioma in the CGGA cohort. RAB38 showed a mesenchymal subtype, G3 subtype and isocitrate dehydrogenase 1 (IDH1) wild-type preference. GO and GSVA analysis showed that RAB38 was significantly correlated with migration. These results were validated in other 3 datasets. The expression levels of RAB38 were significantly associated with grade progression as well as prognosis in gliomas. RAB38 is an important prognostic biomarker and potential therapeutic target in gliomas.

[307]

TÍTULO / TITLE: - Epigenetic silencing of KAZALD1 confers a better prognosis and is associated with malignant transformation/progression in glioma.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Nov;30(5):2089-96. doi: 10.3892/or.2013.2706. Epub 2013 Aug 29.

●● Enlace al texto completo (gratis o de pago) 3892/or.2013.2706

AUTORES / AUTHORS: - Wang H; Feng Y; Bao Z; Jiang C; Yan W; Wang Y; Zhang C; Liu Y; Zhang Q; Zhang W; Jiang C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Second Affiliated Hospital of Harbin Medical University, Harbin, Heilongjiang 150086, P.R. China.

RESUMEN / SUMMARY: - In order to more thoroughly analyze aberrant DNA methylation in glioma, we applied a large cohort methylation microarray including 119 glioma samples. Six genes, ADCY1, KAZALD1, KLF4, SLMAP, TETRA and TP53INP1, were screened out through significance analysis of microarray (SAM), survival Cox-regression and certain other pre-set conditions. We focused on the KAZALD1 oncogene. KAZALD1, also known as IGF1BP4, belongs to the IGF1BP family. We found that KAZALD1 was hypomethylated in high-grade glioma (anaplastic gliomas and glioblastomas) compared to low-grade glioma (astrocytoma, oligodendrocytoma and

oligoastrocytoma) using methylation microarrays ($p < 0.001$). Immunohistochemistry (IHC) of 91 glioma samples showed that the KAZALD1 expression scores of high-grade glioma samples were higher compared to the scores of low-grade gliomas ($p < 0.001$). In high-grade gliomas, overall survival (OS) was shorter for patients with KAZALD1 hypomethylation or overexpression compared to those without. Decreased KAZALD1 expression in glioma inhibited cell proliferation and invasion both in vitro and in vivo. On the basis of these observations and the results from subset analysis, it is reasonable to conclude that KAZALD1 promoter hypomethylation is an important prognostic biomarker in glioma. KAZALD1 promotes glioma malignant progression through invasion and proliferation.

[308]

TÍTULO / TITLE: - Anatomical variation of superior petrosal vein and its management during surgery for cerebellopontine angle meningiomas.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Oct;155(10):1871-8. doi: 10.1007/s00701-013-1840-8. Epub 2013 Aug 30.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1840-8](#)

AUTORES / AUTHORS: - Watanabe T; Igarashi T; Fukushima T; Yoshino A; Katayama Y

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, Nihon University School of Medicine, 30-1 Oyaguchi-kamimachi, Itabashi-ku, Tokyo, 173-8610, Japan, takao@med.nihon-u.ac.jp.

RESUMEN / SUMMARY: - No systematic study is yet available that focuses on the surgical anatomy of the superior petrosal vein and its significance during surgery for cerebellopontine angle meningiomas. The aim of the present study was to examine the variation of the superior petrosal vein via the retrosigmoid suboccipital approach in relation to the tumor attachment of cerebellopontine angle meningiomas as well as postoperative complications related to venous occlusion. Forty-three patients with cerebellopontine angle meningiomas were analyzed retrospectively. Based on the operative findings, the tumors were classified into four subtypes: the petroclival type, tentorial type, anterior petrous type, and posterior petrous type. According to a previous anatomical report, the superior petrosal veins were divided into three groups: Type I which emptied into the superior petrosal sinus above and lateral to the internal acoustic meatus, Type II which emptied between the lateral limit of the trigeminal nerve at Meckel's cave and the medial limit of the facial nerve at the internal acoustic meatus, and Type III which emptied into the superior petrosal sinus above and medial to Meckel's cave. In both the petroclival and anterior petrous types, the most common vein was Type III which is the ideal vein for a retrosigmoid approach. In contrast, the Type II vein which is at high risk of being sacrificed during a suprameatal approach procedure was most frequent in posterior petrous type, in which the superior petrosal

vein was not largely an obstacle. Intraoperative sacrificing of veins was associated with a significantly higher rate of venous-related phenomena, while venous complications occurred even in cases where the superior petrosal vein was absent or compressed by the tumor. The variation in the superior petrosal vein appeared to differ among the tumor attachment subtypes, which could permit a satisfactory surgical exposure without dividing the superior petrosal vein. In cases where the superior petrosal vein was previously occluded, other bridging veins could correspond with implications for the crucial venous drainage system, and should thus be identified and protected whenever possible.

[309]

TÍTULO / TITLE: - Massively calcified low-grade glioma - a rare and distinctive entity.

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

REVISTA / JOURNAL: - Neuropathol Appl Neurobiol. 2013 Aug 8. doi: 10.1111/nan.12080.

●● Enlace al texto completo (gratis o de pago) [1111/nan.12080](#)

AUTORES / AUTHORS: - Gupta K; Harreld JH; Sabin ND; Qaddoumi I; Kurian K; Ellison DW

INSTITUCIÓN / INSTITUTION: - Dept. of Pathology, St. Jude Children's Research Hospital, Memphis, TN 38105, USA.

[310]

TÍTULO / TITLE: - Biological assays on the effects of Acra3 peptide from Turkish scorpion *Androctonus crassicauda* venom on a mouse brain tumor cell line (BC3H1) and production of specific monoclonal antibodies.

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

REVISTA / JOURNAL: - Toxicon. 2013 Sep 19. pii: S0041-0101(13)00359-0. doi: 10.1016/j.toxicon.2013.09.009.

●● Enlace al texto completo (gratis o de pago) [1016/j.toxicon.2013.09.009](#)

AUTORES / AUTHORS: - Caliskan F; Ergene E; Sogut I; Hatipoglu I; Basalp A; Sivas H; Kanbak G

INSTITUCIÓN / INSTITUTION: - Department of Biology, Faculty of Science and Art, Eskisehir Osmangazi University, Eskisehir, Turkey. Electronic address: fcalis@ogu.edu.tr.

RESUMEN / SUMMARY: - Constituents of the venom scorpion are a rich source of low molecular mass peptides which are toxic to various organisms, including man. *Androctonus crassicauda* is one of the scorpions from the Southeastern Anatolia of Turkey with public health importance. This work is focused on the investigation of biological effects of Acra3 peptide from *Androctonus crassicauda*. For this purpose, Acra3 isolated from crude venoms was tested for its cytotoxicity on BC3H1 mouse brain tumor cells using tetrazolium salt cleavage and lactate dehydrogenase activity assays. To determine whether the cytotoxic effects of Acra3 was related to the

induction of apoptosis, the morphology of the cells and the nuclear fragmentation was examined by using Acridin Orange staining and DNA fragmentation assay, respectively. Caspase 3 and caspase 9 activities were measured spectrophotometrically and flow cytometric assay performed using Annexin-V FITC and Propidium Iodide staining. Furthermore toxic peptide Acra3 was used as an antigen for immunological studies. Results showed that Acra3 exerted very strong cytotoxic effect on BC3H1 cells with an IC50 value of 5 mug/ml. Exposure of the cells to 0.1 and 0.5 mug/ml was resulted in very strong appearance of the apoptotic morphology in a dose dependent manner. On the other side, not any DNA fragmentation was observed after treatment of the cells. Caspase 3 and 9 activities were slightly decreased with Acra3. Results from flow cytometry and lactate dehydrogenase activity assays indicate that Acra3 exerts its effects by inducing a stronger necrosis than apoptosis in BC3H1 cells. To evaluate its immunogenicity, monoclonal antibody (MAb) specific for Acra3 antigen (5B9) was developed by hybridoma technology using spleen and lymph nodes of mice and immunoglobulin type of antibody was found to be IgM. We suggest that Acra3 may exert its effects by inducing both necrotic and apoptotic pathway in some way on mouse brain tumor cells. These findings will be useful for understanding the mechanism of cell death caused by venom in vitro. Anti-Acra3 monoclonal antibody can be further used as a bioactive tools for exploring the structure/function relationship and the pharmacological mechanism of scorpion peptide neurotoxins.

[311]

TÍTULO / TITLE: - Prognostic value of Musashi-1 in gliomas.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 21.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1246-8](#)

AUTORES / AUTHORS: - Dahlrot RH; Hansen S; Herrstedt J; Schroder HD; Hjelmberg J; Kristensen BW

INSTITUCIÓN / INSTITUTION: - Department of Oncology, Odense University Hospital, Sdr. Boulevard 29, 5000, Odense, Denmark, rikke.dahlrot@ouh.rsyd.dk.

RESUMEN / SUMMARY: - The aim of this study was to investigate the prognostic value of the RNA-binding protein Musashi-1 in adult patients with primary gliomas. Musashi-1 has been suggested to be a cancer stem cell-related marker in gliomas, and high levels of Musashi-1 have been associated with high tumor grades and hence poor prognosis. Samples of 241 gliomas diagnosed between 2005 and 2009 were stained with an anti-Musashi-1 antibody using a fluorescent staining protocol followed by automated image acquisition and processing. Musashi-1 area fraction and intensity in cytoplasm and in nuclei were quantified by systematic random sampling in 2 % of the vital tumor area. In WHO grade III tumors high levels of Musashi-1 were associated with poor survival in multivariate analysis (HR 3.39, p = 0.02). We identified a sub-population of

glioblastoma (GBM) patients with high levels of Musashi-1 and a superior prognosis (HR 0.65, $p = 0.038$). In addition patients with high levels of Musashi-1 benefitted most from post-surgical treatment, indicating that Musashi-1 may be a predictive marker in GBMs. In conclusion, our results suggest that high levels of Musashi-1 are associated with poor survival in patients with WHO grade III tumors and that Musashi-1 may be a predictive marker in GBMs, although further validation is needed. We find the combination of immunofluorescence and automated quantitation to be a feasible, robust, and reproducible approach for quantitative biomarker studies.

[312]

TÍTULO / TITLE: - Growth and weight of children with craniopharyngiomas based on the tumour location and growth pattern.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Sep 19. pii: S0967-5868(13)00158-6. doi: 10.1016/j.jocn.2012.12.030.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2012.12.030

AUTORES / AUTHORS: - Qi S; Peng J; Pan J; Zhang X; Lu Y; Fan J; Huang G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Nanfang Hospital, Southern Medical University, Guangzhou Street North 1838, Guangzhou 510515, Guangdong, China. Electronic address: sjwkqisongtao@126.com.

RESUMEN / SUMMARY: - This study aimed to characterise the weight and growth of children with craniopharyngiomas and to analyse the role of the tumour location and growth pattern in the development of obesity and growth retardation in these children. We retrospectively analysed the records of 109 consecutive children with primary craniopharyngiomas. The patients were divided into two subgroups according to the location of the tumour: intrasellar (Group A); and the floor of the third ventricle (Group B). Height and body mass index were measured at standardised ages and at time points before, after, and at the time of diagnosis. Endocrinological and hypothalamic measurements before and after surgery were compared. Reduced growth rates occurred in early infancy and persisted until diagnosis in Group A, but were only present from age 5-6 in Group B. Therefore, reduced growth rates occur early in the history of intrasellar tumours, whereas rapid postoperative weight gain invariably occurs in patients with third ventricle tumours, which is a significant predictive factor for severe long term obesity in patients with childhood craniopharyngiomas.

[313]

TÍTULO / TITLE: - Saponin B, a novel cytostatic compound purified from *Anemone taipaiensis*, induces apoptosis in a human glioblastoma cell line.

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

REVISTA / JOURNAL: - Int J Mol Med. 2013 Nov;32(5):1077-84. doi: 10.3892/ijmm.2013.1500. Epub 2013 Sep 18.

●● Enlace al texto completo (gratuito o de pago) [3892/ijmm.2013.1500](#)

AUTORES / AUTHORS: - Wang Y; Tang H; Zhang Y; Li J; Li B; Gao Z; Wang X; Cheng G; Fei Z

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Xijing Institute of Clinical Neuroscience, Xijing Hospital, Fourth Military Medical University, Xi'an, Shannxi, P.R. China.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is one of the most common malignant brain tumors. Saponin B, a novel compound isolated from the medicinal plant, *Anemone taipaiensis*, has been found to have a strong time- and dose-dependent cytostatic effect on human glioma cells and to suppress the growth of U87MG GBM cells. In this study, we investigated whether saponin B induces the apoptosis of glioblastoma cells and examined the underlying mechanism(s) of action of saponin B. Saponin B significantly suppressed U87MG cell proliferation. Flow cytometric analysis of DNA in the U87MG cells confirmed that saponin B blocked the cell cycle at the S phase. Furthermore, treatment of the U87MG cells with saponin B induced chromatin condensation and led to the formation of apoptotic bodies, as observed under a fluorescence microscope, and Annexin V/PI assay further suggested that phosphatidylserine (PS) externalization was apparent at higher drug concentrations. Treatment with saponin B activated the receptor-mediated pathway of apoptosis, as western blot analysis revealed the activation of Fas-I. Saponin B increased the Bax and caspase-3 ratio and decreased the protein expression of Bcl-2. The results from the present study demonstrate that the novel compound, saponin B, effectively induces the apoptosis of GBM cells and inhibits glioma cell growth and survival. Therefore, saponin B may be a potential candidate for the development of novel cancer therapeutics with antitumor activity against gliomas.

[314]

TÍTULO / TITLE: - Dilated intracranial translucency and Blake's pouch cyst: First-trimester ultrasound markers of occipital cephalocele diagnosed using novel three-dimensional reslicing technique.

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

REVISTA / JOURNAL: - J Clin Ultrasound. 2013 Aug 16. doi: 10.1002/jcu.22073.

●● Enlace al texto completo (gratuito o de pago) [1002/jcu.22073](#)

AUTORES / AUTHORS: - Tonni G; Grisolia G

INSTITUCIÓN / INSTITUTION: - Department of Obstetrics and Gynecology, Prenatal Diagnostic Service, Guastalla Civil Hospital, AUSL Reggio Emilia, Italy.

RESUMEN / SUMMARY: - Abnormal intracranial translucency (IT) (fourth ventricle) and a Blake's pouch cyst with normal brain stem cavity may be valuable first-trimester call

signs of defects in the skull base. Here, we report a case of presumptive two-dimensional sonographic diagnosis of occipital cephalocele that was posed at the time of 11-13 weeks aneuploidy scan. The two-dimensional sonographic finding elicited a detailed fetal neuroscan that was performed using either multiplanar mode or a novel three-dimensional reslicing and lightening technique. The use of three-dimensional sonographic software and offline "navigation" within the volume of interest enabled operators to capture a diagnostic snapshot of the condition, enhancing quality imaging and early detection of the encephalic lesion. © 2013 Wiley Periodicals, Inc. J Clin Ultrasound, 2013.

[315]

TÍTULO / TITLE: - Torticollis as a first sign of posterior fossa and cervical spinal cord tumors in children.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Aug 18.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00381-013-2255-9](#)

AUTORES / AUTHORS: - Fafara-Les A; Kwiatkowski S; Marynczak L; Kawecki Z; Adamek D; Herman-Sucharska I; Kobylarz K

INSTITUCIÓN / INSTITUTION: - Department of Pediatric Neurosurgery, University Children's Hospital of Cracow, Jagiellonian University Medical College, Krakow, Poland, alicja.fafara@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND: Torticollis, despite being well-known neurological manifestation, is often underestimated as a first symptom of the abnormalities of posterior cranial cavity and cervical spinal cord. OBJECTIVES: The purpose of this study is to analyze the occurrence of acquired torticollis in children as a herald sign of the tumors of the cervical spinal cord or of the posterior fossa. METHODS: Clinical records of 54 cases treated for the tumor of the cervical spinal cord or posterior fossa (including congenital ones) were retrospectively reviewed. The following data were calculated: the occurrence of the torticollis as a first sign of tumors, the duration time from the onset of the symptoms to diagnosis, the concurrence of other pathological symptoms, and the diminishing of symptoms of the torticollis following treatment. RESULTS: In 12/54 (22.2 %) torticollis was first sign of central nervous system tumor and in all of them preceded other neurological symptoms. The time from the onset of torticollis to establishing diagnosis ranged from 2 to 52 weeks (9.6 weeks on average). Eleven of twelve patients were treated surgically-in 10 of them, torticollis disappeared in the postoperative course. CONCLUSIONS: Torticollis may be a herald sign of the tumor of the cervical spinal cord or the posterior fossa. Those pathologies should be considered in the differential diagnosis of the torticollis, particularly if accompanied by other symptoms of the focal pathology of central nervous system. Awareness of this fact may shorten the time to

establish the proper diagnosis. Torticollis necessitates exclusion of the posterior fossa and spinal cord tumor.

[316]

TÍTULO / TITLE: - Cauda equina syndrome caused by spontaneous bleeding in the filum terminale myxopapillary ependymoma: a rare pediatric case.

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

REVISTA / JOURNAL: - *Pediatr Neurosurg.* 2012;48(6):385-8. doi: 10.1159/000354216. Epub 2013 Aug 24.

●● Enlace al texto completo (gratis o de pago) [1159/000354216](#)

AUTORES / AUTHORS: - Becco de Souza R; Brasileiro de Aguiar G; Saade N; Esteves Veiga JC

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Department of Surgery, Santa Casa Medical School, Sao Paulo, Brazil.

RESUMEN / SUMMARY: - The majority of the filum terminale ependymomas are of the myxopapillary type, which most commonly present as lumbago or sciatic pain, an insidious clinical condition, at times accompanied by paraparesis, bladder paresis and vesical alterations. We report the case of a 13-year-old patient who presented with acute cauda equina. He underwent total resection of the lesion, which resulted in progressive improvement. The clinical conditions, diagnoses and treatments of the medullary cone and cauda equina myxopapillary ependymomas are also discussed. © 2013 S. Karger AG, Basel.

[317]

TÍTULO / TITLE: - Resection of glioma in an fMRI-defined "split" Broca's area.

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

REVISTA / JOURNAL: - *Neurocase.* 2013 Aug 13.

●● Enlace al texto completo (gratis o de pago) [1080/13554794.2013.826678](#)

AUTORES / AUTHORS: - Kim JH; Amankulor NM; Peck KK; Brennan N; Gutin PH; Holodny AI

INSTITUCIÓN / INSTITUTION: - a Department of Neurosurgery, Memorial Sloan-Kettering Cancer Center, New York, NY, USA.

RESUMEN / SUMMARY: - Gross total resection of gliomas can be limited by the involvement of tumor in eloquent areas. Moreover, lesions can impart cortical reorganization and make the precise determination of hemispheric dominance and localization of language function even more difficult. Preoperative mapping with functional magnetic resonance imaging (fMRI), intraoperative imaging modalities, and intraoperative direct cortical stimulation enable surgeons to map the functional topography of the brain in relation to the tumor and perform a safe maximal resection.

In this report, we present a patient with left frontal glioma of complex morphology, wherein the tumor was enveloped by Broca's area on fMRI. Intraoperative mapping and intraoperative magnetic resonance imaging (iMRI) allowed gross total resection of the tumor with preservation of language function and illustrate the utility of multiple contemporary modalities in the surgical management of low-grade gliomas located in eloquent cortices.

[318]

TÍTULO / TITLE: - Crkl Efficiently Mediates Cell Proliferation, Migration, and Invasion Induced by TGF-beta Pathway in Glioblastoma.

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

REVISTA / JOURNAL: - J Mol Neurosci. 2013 Aug 20.

●● Enlace al texto completo (gratis o de pago) [1007/s12031-013-0096-3](#)

AUTORES / AUTHORS: - Lv S; Qin J; Yi R; Coreman M; Shi R; Kang H; Yao C

INSTITUCIÓN / INSTITUTION: - Department of Medicine, Shandong University, Jinan Shandong, China.

RESUMEN / SUMMARY: - Crk-like (CrkL) is an adapter protein that has crucial roles in cell proliferation, adhesion, and migration. However, the expression pattern and potential mechanism of CrkL protein in glioblastoma multiforme (GBM) have not been fully elucidated. To determine roles of CrkL in cell signaling, proliferation, and migration, small interfering RNAs and plasmids transfection were used to suppress or overexpress CrkL in U87 and U251; soft-agar assay and wound-healing assay were used to observe cell invasiveness, migration, and proliferation. Erk1/2, Smad2, and matrix metalloproteinase 9 (MMP9) were also analyzed by western blot. CrkL was expressed in U87 and U251 cell lines and can be activated by transforming growth factor-beta 1 (TGF-beta1) in vitro; CrkL knockdown significantly suppressed the expression of phosph-ERK1/2 and MMP9 but enhanced phosph-Smad2 expression compared with control ($p < 0.001$). Overexpression of CrkL against control upregulated phosph-ERK1/2 and MMP9 and, at the same time, downregulated phosph-Smad2 ($p < 0.01$). On the other hand, CrkL knockdown could significantly affect U87 and U251 invasiveness ($p < 0.01$) and wound closure ($p < 0.01$) using soft-agar assay and wound-healing assay. These studies suggest that CrkL efficiently mediates cell proliferation, migration, and invasion induced by TGF-beta pathway in glioblastoma. Furthermore, CrkL can be used as a potential and efficient therapeutic target of GBM and may also mediate other signaling pathway.

[319]

TÍTULO / TITLE: - Primitive Neuroectodermal Tumour in a Striped Dolphin (*Stenella coeruleoalba*) with Features of Ependymoma and Neural Tube Differentiation (Medulloepithelioma).

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

REVISTA / JOURNAL: - J Comp Pathol. 2013 Nov;149(4):514-519. doi: 10.1016/j.jcpa.2013.06.003. Epub 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [1016/j.jcpa.2013.06.003](https://doi.org/10.1016/j.jcpa.2013.06.003)

AUTORES / AUTHORS: - Baily JL; Morrison LR; Patterson IA; Underwood C; Dagleish MP

INSTITUCIÓN / INSTITUTION: - Moredun Research Institute, Pentlands Science Park, Bush Loan, Penicuik, Near Edinburgh EH26 0PZ, Northern Ireland, UK. Electronic address: johanna.baily@moredun.ac.uk.

RESUMEN / SUMMARY: - Primary brain tumours in cetaceans are rare with only four reported cases of intracranial tumours in the scientific literature. A juvenile female, striped dolphin live-stranded at Whitepark Bay, Co Antrim, Northern Ireland, UK, and died after an unsuccessful attempt at refloatation. Necropsy examination revealed a large, soft, non-encapsulated friable mass, which expanded and replaced the frontal lobes, corpus callosum and caudate nucleus of the brain and extended into the lateral ventricles, displacing the thalamus caudally. Microscopically, this comprised moderately pleomorphic neoplastic cells arranged variably in dense monotonous sheets, irregular streams, ependymal rosettes, 'ependymoblastomatous rosettes' and multilayered to pseudostratified tubules. Liquefactive necrosis, palisading glial cells, haemorrhage and mineralization were also observed. Immunohistochemically, the neoplastic cells expressed vimentin but not S100, glial fibrillary acidic protein, cytokeratin, neuron-specific enolase or synaptophysin. Based on these findings a diagnosis of primitive neuroectodermal tumour was made. Monitoring and recording such cases is crucial as neoplasia may be related to viral, carcinogenic or immunosuppressive chemical exposure and can ultimately contribute to assessing the ocean health.

[320]

TÍTULO / TITLE: - Synergistic effect of cisplatin and synchrotron irradiation on F98 gliomas growing in nude mice.

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

REVISTA / JOURNAL: - J Synchrotron Radiat. 2013 Sep;20(Pt 5):777-84. doi: 10.1107/S0909049513016567. Epub 2013 Jul 3.

●● Enlace al texto completo (gratis o de pago) [1107/S0909049513016567](https://doi.org/10.1107/S0909049513016567)

AUTORES / AUTHORS: - Ricard C; Fernandez M; Requardt H; Wion D; Vial JC; Segebarth C; van der Sanden B

INSTITUCIÓN / INSTITUTION: - INSERM U836, Grenoble Institut des Neurosciences, Grenoble, France.

RESUMEN / SUMMARY: - Among brain tumors, glioblastoma multiforme appears as one of the most aggressive forms of cancer with poor prognosis and no curative treatment available. Recently, a new kind of radio-chemotherapy has been developed using synchrotron irradiation for the photoactivation of molecules with high-Z elements such as cisplatin (PAT-Plat). This protocol showed a cure of 33% of rats bearing the F98 glioma but the efficiency of the treatment was only measured in terms of overall survival. Here, characterization of the effects of the PAT-Plat on tumor volume and tumor blood perfusion are proposed. Changes in these parameters may predict the overall survival. Firstly, changes in tumor growth of the F98 glioma implanted in the hindlimb of nude mice after the PAT-Plat treatment and its different modalities have been characterized. Secondly, the effects of the treatment on tumor blood perfusion have been observed by intravital two-photon microscopy. Cisplatin alone had no detectable effect on the tumor volume. A reduction of tumor growth was measured after a 15 Gy synchrotron irradiation, but the whole therapy (15 Gy irradiation + cisplatin) showed the largest decrease in tumor growth, indicating a synergistic effect of both synchrotron irradiation and cisplatin treatment. A high number of unperfused vessels (52%) were observed in the peritumoral area in comparison with untreated controls. In the PAT-Plat protocol the transient tumor growth reduction may be due to synergistic interactions of tumor-cell-killing effects and reduction of the tumor blood perfusion.

[321]

TÍTULO / TITLE: - Personal experience in transnasal endoscopic resection of the olfactory groove meningiomas. What can an otolaryngologist offer to a neurosurgeon?

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

REVISTA / JOURNAL: - Eur Arch Otorhinolaryngol. 2013 Aug 2.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00405-013-2645-3](#)

AUTORES / AUTHORS: - Skorek A; Liczbik W; Stankiewicz C; Kloc W; Plichta L

INSTITUCIÓN / INSTITUTION: - Otolaryngology Department, Medical University in Gdansk, Gdansk, Poland, askorek@gumed.edu.pl.

RESUMEN / SUMMARY: - Olfactory groove meningioma is a demanding therapeutic problem involving two medical specialties, otolaryngology and neurosurgery. The use of transnasal endoscopic (TNE) approach to the tumour has been proved effective in many publications. Three patients with meningiomas localized in olfactory groove were treated in 2011 and 2012 by the otolaryngologist-neurosurgeon team using TNE approach and neuronavigation. The diagnosis was based on MR and CT images. In all patients after tumour removal an endoscopic anterior cranial fossa floor reconstruction was performed using homogeneous cartilage or titanium mesh and Hadad-Bassagasteguy flap. During postoperative period in all patients lumbar drainage was used. There were no cerebrospinal fluid leakage episodes. No recurrence was

observed in 22, 12 and 8 months of follow-up, respectively. The authors describe otolaryngological and neurosurgical aspects of TNE approach to anterior cranial fossa with special regard to possible radical resection (according to Simpson) and reconstruction of the bony postoperative defect. TNE is a feasible operative method in olfactory groove meningioma management due to good tumour visibility, lack of brain traction, limited neurovascular structure manipulation and acceptable risk of neurological deficiencies when compared to open approach. Cosmetic aspect and short hospitalization is also of great importance.

[322]

TÍTULO / TITLE: - Forced downregulation of RACK1 inhibits glioma development by suppressing Src/Akt signaling activity.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Nov;30(5):2195-202. doi: 10.3892/or.2013.2723. Epub 2013 Sep 6.

●● [Enlace al texto completo \(gratis o de pago\) 3892/or.2013.2723](#)

AUTORES / AUTHORS: - Peng R; Jiang B; Ma J; Ma Z; Wan X; Liu H; Chen Z; Cheng Q; Chen R

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Xiangya Hospital of Central South University, Changsha, Hunan 410078, P.R. China.

RESUMEN / SUMMARY: - Glioma is the most common primary brain malignant tumor. Receptor for activated C-kinase 1 (RACK1) is widely expressed in the central nervous system, and regulates multiple cellular processes including cell survival, proliferation, migration and metastasis. However, the role of RACK1 in glioma has never been revealed. The present study, for the first time, showed that RACK1 expression was significantly higher in glioma tissues and cell lines when compared with that in normal brain tissues, and was positively associated with the malignancy of glioma. siRNA-induced RACK1 downregulation significantly suppressed the proliferation and invasion of human glioma U87 and CHG-5 cells, while it promoted their apoptosis by upregulating Bax expression and reducing Bcl-2 expression. Furthermore, forced downregulation of RACK1 notably inhibited tumor xenograft growth in nude mice. These findings suggest that RACK1 plays a critical role in the development and progression of glioma in vitro and in vivo. Moreover, siRNA-induced RACK1 downregulation markedly reduced the activity of Src/Akt signaling pathway, which plays an important role in the growth and behavior of human malignancies, indicating that siRNA-mediated RACK1 downregulation inhibited glioma probably via suppressing Src/Akt signaling activity. The present study highlighted the role of RACK1 in glioma, and demonstrated that RACK1 is a novel promising therapeutic target for glioma treatment.

[323]

TÍTULO / TITLE: - Plastic reshaping of cortical language areas evaluated by navigated transcranial magnetic stimulation in a surgical case of glioblastoma multiforme.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Oct;115(10):2226-9. doi: 10.1016/j.clineuro.2013.07.012. Epub 2013 Jul 30.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.07.012](https://doi.org/10.1016/j.clineuro.2013.07.012)

AUTORES / AUTHORS: - Kawashima A; Krieg SM; Faust K; Schneider H; Vajkoczy P; Picht T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tokyo Women's Medical University, Tokyo, Japan.

[324]

TÍTULO / TITLE: - Low-cost media formulation for culture of brain tumor spheroids (neurospheres).

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

REVISTA / JOURNAL: - Biotechniques. 2013 Aug;55(2):83-8. doi: 10.2144/000114066.

●● Enlace al texto completo (gratis o de pago) [2144/000114066](https://doi.org/10.2144/000114066)

AUTORES / AUTHORS: - Monterey MD; Szerlip NJ; Mathupala SP

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery and Karmanos Cancer Institute, Wayne State University School of Medicine, Detroit, MI, USA.

RESUMEN / SUMMARY: - Recent studies have found that the biological features of primary tumors are faithfully recapitulated when a patient's tumor is processed and then maintained as a 3-D spheroid in specialized cell culture media. However, a major drawback for maintenance and routine passage of primary tumors as spheroids has been the high cost of custom-formulated media compared to regular serum-supplemented media. Here we report the formulation of a cost-effective, serum-free medium in which high-grade primary brain tumor (glioblastoma) explants can be established and maintained as spheroids. Based on DMEM, this formulation requires only supplementation with several amino acids, vitamins, synthetic EGF, and bFGF, with most of the cost being associated with the growth factors. A simple addition of BSA (fraction V) obviated the need for numerous other components (or human serum) commonly used in the specialized commercial media formulations.

[325]

TÍTULO / TITLE: - Neuropilin-2 contributes to tumorigenicity in a mouse model of Hedgehog pathway medulloblastoma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Sep 12.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1216-1](https://doi.org/10.1007/s11060-013-1216-1)

AUTORES / AUTHORS: - Hayden Gephart MG; Su YS; Bandara S; Tsai FC; Hong J; Conley N; Rayburn H; Milenkovic L; Meyer T; Scott MP

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Stanford University School of Medicine, Stanford, CA, USA, mghayden@gmail.com.

RESUMEN / SUMMARY: - The Hedgehog (Hh) signaling pathway has been implicated in the most common childhood brain tumor, medulloblastoma (MB). Given the toxicity of post-surgical treatments for MB, continued need exists for new, targeted therapies. Based upon our finding that Neuropilin (Nrp) transmembrane proteins are required for Hh signal transduction, we investigated the role of Nrp in MB cells. Cultured cells derived from a mouse Ptch +/- ;LacZ MB (Med1-MB), effectively modeled the Hh pathway-related subcategory of human MBs in vitro. Med1-MB cells maintained constitutively active Hh target gene transcription, and consistently formed tumors within one month after injection into mouse cerebella. The proliferation rate of Med1-MBs in culture was dependent upon Nrp2, while reducing Nrp1 function had little effect. Knockdown of Nrp2 prior to cell implantation significantly increased mouse survival, compared to transfection with a non-targeting siRNA. Knocking down Nrp2 specifically in MB cells avoided any direct effect on tumor vascularization. Nrp2 should be further investigated as a potential target for adjuvant therapy in patients with MB.

[326]

TÍTULO / TITLE: - Histopathological and immunohistochemical profile in anaplastic gangliogliomas.

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

REVISTA / JOURNAL: - Neurocirugia (Astur). 2013 Sep 9. pii: S1130-1473(13)00108-5. doi: 10.1016/j.neucir.2013.07.001.

●● Enlace al texto completo (gratis o de pago) [1016/j.neucir.2013.07.001](https://doi.org/10.1016/j.neucir.2013.07.001)

AUTORES / AUTHORS: - Romero-Rojas AE; Diaz-Perez JA; Chinchilla-Olaya SI; Amaro D; Lozano-Castillo A; Restrepo-Escobar LI

INSTITUCIÓN / INSTITUTION: - Division of Neuropathology, National Cancer Institute, Bogota, Colombia.

RESUMEN / SUMMARY: - **BACKGROUND:** The anaplastic ganglioglioma (AG) is the high-grade counterpart of ganglioglioma, a rare mixed tumor composed of neuronal/ganglion and glial cells. **MATERIALS AND METHODS:** We describe the histopathology and immunohistochemistry in 7 cases of AG and correlate them with the clinical and radiological features. **RESULTS:** Our AG patients correspond to 2.5% of the central nervous system tumor patients evaluated in our institution. The mean age at presentation was 25.7 years, with a male predominance. The most common clinical presentation was generalized tonic-clonic seizures (3/7 cases), in correlation with frequent cortical/subcortical location (6/7 cases). Histopathologically, all our cases

showed high-grade features in glial (glial fibrillary acid protein-positive) and neuron-ganglion cells (synaptophysin, PGP-9.5, neurofilament, NSE and CD56-positive), as well as moderate cellularity, frequent mitotic figures and a Ki-67 labeling index >5%. All our patients had poor survival. CONCLUSION: We found that a typical histopathological and immunohistochemical profile is constant and can be useful in early diagnosis of these aggressive neoplasms.

[327]

TÍTULO / TITLE: - The Role of Aryl Hydrocarbon Receptor-Regulated Cytochrome P450 Enzymes in Glioma.

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

REVISTA / JOURNAL: - Curr Pharm Des. 2013 Jul 30.

AUTORES / AUTHORS: - Korashy HM; Abou-Hasheesh H; Maayah ZH

INSTITUCIÓN / INSTITUTION: - Department of Pharmacology and Toxicology, College of Pharmacy, King Saud University, P.O. Box 2529, Riyadh 11461, Kingdom of Saudi Arabia. hkorashy@ksu.edu.sa.

RESUMEN / SUMMARY: - Glioma is still one of the most aggressive forms of brain tumors. Understanding of the biological and pathophysiological mechanisms of survival can help the researchers to develop new management modalities. Industrial toxins could be one of the most important causes for brain tumors, such as dioxin and other aryl hydrocarbon receptor (AhR) ligands. Toxicity of these compounds includes a series of cellular events starting from binding with AhR and ending with the increased expression of a group of xenobiotic metabolizing enzymes (XME) such as the cytochrome P450 (CYPs), CYP1A1, CYP1A2, and CYP1B1. Therefore, identification of the localizations and expressions of the AhR and its regulated CYPs in the central nervous system (CNS) and neuronal cells is of major importance in understanding their physiological and pathological roles. Generally, low but significant level of CYPs expression is demonstrated in the brain in a tissue- and species-specific manner. Moreover, most, but not all, AhR-regulated CYPs are expressed differently in most of the neuronal and glial cells. Although the exact mechanisms of AhR-mediated glioma and neurotoxicity are not fully understood, the present review proposes several mechanisms which include generating reactive oxygen species, activating glutamate receptors, peroxisome proliferator-activated receptors, histone acetylation, and signal transducer and activator of transcription 3.

[328]

TÍTULO / TITLE: - Cytopathologic characteristics and differential diagnostic considerations of osteolytic myxopapillary ependymoma.

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

REVISTA / JOURNAL: - Diagn Cytopathol. 2013 Aug 1. doi: 10.1002/dc.23033.

●● Enlace al texto completo (gratis o de pago) [1002/dc.23033](https://doi.org/10.1002/dc.23033)

AUTORES / AUTHORS: - Hayashi T; Haba R; Kushida Y; Kadota K; Katsuki N; Bando K; Shibuya S; Matsunaga T

INSTITUCIÓN / INSTITUTION: - Department of Diagnostic Pathology, Faculty of Medicine, Kagawa University, Kagawa, Japan.

RESUMEN / SUMMARY: - Myxopapillary ependymoma (MPE) is a rare variant of conventional ependymoma found predominantly in the sacrococcygeal region in young adults and characterized by its distinct epithelial and stromal components (WHO grade I designation). MPE with extensive osteolysis is extremely uncommon and only up to 40 cases have been documented. A case is presented here in which imprint smears of a sacral tumor in an 18-year-old man revealed complex papillary structures, small loose clusters, or cord-like structures of bland tumor cells embedded in a myxoid or mucinous background. The tumor cells possessed uniformly round nuclei with a smooth nuclear outline, fine granular chromatin, and small nucleoli. Slender cytoplasmic fibrillary processes and occasional intracytoplasmic vacuoles were observed. A cytologic diagnosis of a MPE was suggested and histochemical and immunohistochemical studies were conducted on formalin-fixed, paraffin-embedded material. Immunohistochemically, the tumor cells showed diffuse and strong membranous and cytoplasmic staining for cytokeratin AE1/AE3, glial fibrillary protein, and S-100 protein, but negative for epithelial membrane antigen, pan-neuroendocrine markers (i.e., NSE, chromogranin A, synaptophysin), or brachyury. The proliferative index with MIB-1 was around 10%. The diagnosis of osteolytic MPE was confirmed based on cytopathologic, histopathological, immunohistochemical results, radiologic findings, and the location of the tumor. We demonstrated here the cytopathological features of osteolytic MPE with emphasis on differential diagnostic considerations. Diagn. Cytopathol. 2013. © 2013 Wiley Periodicals, Inc.

[329]

TÍTULO / TITLE: - The GLI1 splice variant TGLI1 promotes glioblastoma angiogenesis and growth.

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

REVISTA / JOURNAL: - Cancer Lett. 2013 Sep 15. pii: S0304-3835(13)00668-X. doi: 10.1016/j.canlet.2013.09.014.

●● Enlace al texto completo (gratis o de pago) [1016/j.canlet.2013.09.014](https://doi.org/10.1016/j.canlet.2013.09.014)

AUTORES / AUTHORS: - Zhu H; Carpenter RL; Han W; Lo HW

INSTITUCIÓN / INSTITUTION: - Department of Surgery, Divisions of Surgical Sciences, Durham, NC 27710, USA.

RESUMEN / SUMMARY: - We investigated truncated glioma-associated oncogene homolog 1 (TGLI1) that behaves as gain-of-function GLI1 and promotes tumor cell

migration and invasion. Herein, we report that TGLI1 had a higher propensity than GLI1 to enhance glioblastoma angiogenesis and growth, both in vivo and in vitro. TGLI1 has gained the ability to enhance expression of pro-angiogenic heparanase. In patient glioblastomas, TGLI1 levels are correlated with heparanase expression. Together, we report that TGLI1 is a novel mediator of glioblastoma angiogenesis and that heparanase is a novel transcriptional target of TGLI1, shedding new light on the molecular pathways that support tumor angiogenesis and aggressive growth.

[330]

TÍTULO / TITLE: - Neurolymphomatosis Associated with Erythrodermic Mycosis Fungoides.

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

REVISTA / JOURNAL: - Acta Derm Venereol. 2013 Aug 27. doi: 10.2340/00015555-1684.

●● Enlace al texto completo (gratis o de pago) [2340/00015555-1684](#)

AUTORES / AUTHORS: - Ogawa S; Fukunaga A; Kanata M; Kikuzawa A; Bito T; Otsuka Y; Sekiguchi K; Oka N; Nishigori C

INSTITUCIÓN / INSTITUTION: - Division of Dermatology, Department of Internal Related, Kobe University Graduate School of Medicine, 650-0017 Kobe, Japan.

RESUMEN / SUMMARY: - Abstract is missing (Short).

[331]

TÍTULO / TITLE: - Targeted delivery of a phosphopeptide prodrug inhibits the proliferation of a human glioma cell line.

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

REVISTA / JOURNAL: - Amino Acids. 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [1007/s00726-013-1570-5](#)

AUTORES / AUTHORS: - Kim SM; Yoon SM; Yim MS; Cho G; Ryu EK

INSTITUCIÓN / INSTITUTION: - Division of Magnetic Resonance Research, Korea Basic Science Institute (KBSI), Chungbuk, Republic of Korea.

RESUMEN / SUMMARY: - Peptides are ideal candidates for developing therapeutics. Polo-like kinase 1 is an important regulatory protein in the cell cycle and contains a C-terminal polo-box domain, which is the hallmark of this protein family. We developed a peptide inhibitor of polo-like kinase 1 that targets its polo-box domain. This new phosphopeptide, cRGDyK-S-S-CPLHSpT, preferentially penetrates the cancer cell membrane mediated by the integrin receptor, which is expressed at high levels by cancer cells. In the present study, using high performance liquid chromatography and mass spectroscopy, we determined the stability of cRGDyK-S-S-CPLHSpT and its cleavage by glutathione under typical conditions for cell culture. We further assessed

the ability of the peptide to inhibit the proliferation of the U87MG glioma cell line. The phosphorylated peptide was stable, and the disulfide bond of cRGDyK-S-S-CPLHSpT was cleaved in 50 mM glutathione. This peptide inhibited the growth of cancer cells and changed their morphology. Therefore, we conclude that the phosphopeptide shows promise as a prodrug and has a high potential to act as an anticancer agent by inhibiting polo-like kinase 1 by binding its polo-box domain. These findings indicate the therapeutic potential of PLHSpT and peptides similarly targeted to surface receptors of cancer cells and to the functional domains of regulatory proteins.

[332]

TÍTULO / TITLE: - Role of intraoperative neurophysiological monitoring during fluorescence-guided resection surgery : Aiming at seemingly complete resection of diffuse gliomas under 5-ALA guidance-Is it safe?

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Sep 10.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1865-z](#)

AUTORES / AUTHORS: - Jaaskelainen JE

INSTITUCIÓN / INSTITUTION: - Neurosurgery, Kuopio University Hospital, P.O. Box 1777, Kuopio, 70211, Finland, juha.e.jaaskelainen@kuh.fi.

[333]

TÍTULO / TITLE: - Goldenhar syndrome and medulloblastoma: A coincidental association? The first case report.

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

REVISTA / JOURNAL: - J Craniomaxillofac Surg. 2013 Aug 13. pii: S1010-5182(13)00189-3. doi: 10.1016/j.jcms.2013.07.003.

●● Enlace al texto completo (gratis o de pago) [1016/j.jcms.2013.07.003](#)

AUTORES / AUTHORS: - Aizenbud D; Constantini S; Nevo N; Ben Arush M; Raz M; Rachmiel A; Goldsher D

INSTITUCIÓN / INSTITUTION: - Orthodontic and Craniofacial Department, School of Graduate Dentistry, Rambam Health Care Campus, P.O. Box 9602, Haifa 31096, Israel. Electronic address: aizenbud@ortho.co.il.

RESUMEN / SUMMARY: - BACKGROUND: Features of Goldenhar syndrome include several craniofacial anomalies of structures derived from the first and second pharyngeal arches, as well as vertebral, cardiac and renal systems abnormalities. In addition, Goldenhar patients were reported to manifest a variety of central nervous system anomalies and several types of neoplasias. CASE HISTORY AND DISCUSSION: The first case of medulloblastoma in a patient with Goldenhar syndrome is presented here. There is no clear association between these two pathologies. We speculate that

aberrant events during the migration of neural crest cells in early stages of development could be the basis of an association between medulloblastoma and Goldenhar syndrome. The case history suggests other possible etiological contributing factors to the development of medulloblastoma, such as patient's history of trauma and/or early childhood exposure to ionizing radiation.

[334]

TÍTULO / TITLE: - Management and outcome of primary spinal ependymomas: A single center experience from Taiwan.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Oct;115(10):2130-5. doi: 10.1016/j.clineuro.2013.08.007. Epub 2013 Aug 13.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.clineuro.2013.08.007](#)

AUTORES / AUTHORS: - Huang YH; Lin JW

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan. Electronic address: newlupin2001@yahoo.com.tw.

RESUMEN / SUMMARY: - BACKGROUND: Surgical treatment of spinal ependymomas requires careful consideration of the relative risks of neurological worsening from surgery. Our aim was to determine the risk factors of neurological deterioration after surgery for spinal ependymomas. MATERIAL AND METHODS: This 20-year study included 17 patients (seven men and 10 women; 44.65±13.62 years) with histologically confirmed spinal ependymomas. The basic features were reviewed and the functional status was assessed by using the modified McCormick classification. We subdivided the patient population into two groups according to whether neurological deterioration occurred after primary tumor resection (N=5) or not (N=12), and compared their clinical characteristics. RESULTS: The average duration of presenting symptoms in the 17 patients was 23.53±21.45 months. Three (17.6%) patients underwent subtotal or partial resection and 14 (82.4%) patients underwent gross total resection. The incidence of neurological deterioration after primary resection of spinal ependymomas was 29.4%. There were five (100%) and two (16.7%) male patients in the neurological-deterioration and no-deterioration groups, respectively (p=0.003). The duration of presenting symptoms was 24 months or over in all the patients with neurological deterioration and five of the 12 patients with improved or stabilized function (p=0.044). CONCLUSION: The risk associated with surgical resection of spinal ependymomas should not be overlooked because of the significant incidence of neurological deterioration. The male gender and long-standing symptom (>=24 months) are risk factors of postoperative neurological worsening. Early diagnosis and surgery are therefore critical for successful treatment of spinal ependymomas.

[335]

TÍTULO / TITLE: - Relapse patterns in pediatric embryonal central nervous system tumors.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 7.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1213-4](#)

AUTORES / AUTHORS: - Perreault S; Lober RM; Carret AS; Zhang G; Hershon L; Decarie JC; Yeom K; Vogel H; Fisher PG; Partap S

INSTITUCIÓN / INSTITUTION: - Division of Child Neurology, Department of Neurology, Lucile Packard Children's Hospital at Stanford, Stanford University, 750 Welch Road, Suite 317, Palo Alto, CA, 94304, USA, sebperreault@hotmail.com.

RESUMEN / SUMMARY: - Embryonal tumors of the central nervous system (CNS) share histological features and were therefore initially grouped as primitive neuroectodermal tumors (PNET) and treated similarly. We sought to determine the relapse patterns of specific embryonal CNS tumors. We conducted a historical cohort study of children diagnosed with CNS embryonal tumors from January 2000 to December 2011 in two pediatric neuro-oncology centers. Patients of 21 years of age or younger at time of presentation with a diagnosis of medulloblastoma, supratentorial PNET, pineoblastoma or atypical teratoid/rhabdoid tumor (ATRT) and at least one surveillance MRI were included. A total of 133 patients met inclusion criteria and 49 (37 %) patients relapsed during the observation period. The majority (79 %) of sPNET relapses were local, whereas all (100 %) PB relapses were associated with diffuse leptomeningeal disease. Relapse patterns for MB were more diverse with local recurrence in 27 %, distant recurrence in 35 % and diffuse leptomeningeal disease in 38 %. The frequency of relapses involving the spine differed ($p < 0.001$) between tumor types (MB 28/55 [51 %], sPNET 3/33 [9 %], ATRT 3/7 [43 %] and PB 12/12 [100 %]). No sPNET patients had isolated spinal relapse (0/14). Embryonal tumors were found to have divergent patterns of recurrence. While medulloblastoma has variable relapse presentations, sPNET relapses locally and pineoblastoma recurs with diffuse leptomeningeal disease involving the spine. These results point toward possibly new upfront treatment stratification among embryonal tumors in accordance with relapse pattern.

[336]

TÍTULO / TITLE: - microRNA-155 regulates cell proliferation and invasion by targeting FOXO3a in glioma.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Nov;30(5):2111-8. doi: 10.3892/or.2013.2685. Epub 2013 Aug 22.

- Enlace al texto completo (gratis o de pago) [3892/or.2013.2685](#)

AUTORES / AUTHORS: - Ling N; Gu J; Lei Z; Li M; Zhao J; Zhang HT; Li X

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of Soochow University, Suzhou 215006, P.R. China.

RESUMEN / SUMMARY: - microRNAs (miRNAs) are short noncoding RNAs, which modulate the expression of numerous genes by targeting mRNAs. Numerous abnormal miRNA expression patterns are found in various human malignancies, and certain miRNAs act as oncogenes or tumor suppressors. microRNA-155 (miR155) may not only function as an oncogene but also as a tumor suppressor in various types of cancer cells, such as melanoma. Although miR-155 has been found to be upregulated in glioma, its role has not yet been elucidated in glioma tumorigenesis. Based on the prediction of the target genes of miR-155, we hypothesized that there is a significant association between miR-155 and FOXO3a, a negative regulator of Akt signaling. In the present study, we found that FOXO3a expression was significantly downregulated and miR-155 was upregulated in a panel of glioma cells and tissue specimens. Furthermore, we demonstrated that miR-155 induced cell proliferation by inhibiting apoptosis and promoted the migration and invasiveness of glioma cells, while miR-155 had no effect on the cell cycle as determined by gain-of-function and loss-of-function experiments. Moreover, we confirmed that miR-155 downregulated the expression of FOXO3a by directly targeting its 3'-UTR. These findings indicate that miR-155 may function as an oncogene by targeting FOXO3a in the development and progression of glioma.

[337]

TÍTULO / TITLE: - A case of cauda equina cavernous angioma coexisting with multiple cerebral cavernous angiomas.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Sep 25.

- Enlace al texto completo (gratis o de pago) [3109/02688697.2013.841856](#)

AUTORES / AUTHORS: - Takeshima Y; Marutani A; Tamura K; Park YS; Nakase H

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Nara Medical University School of Medicine, Nara, Japan.

RESUMEN / SUMMARY: - The simultaneous presence of cavernous angiomas in both the brain and spinal cord is a very rare finding, as is the location of a cavernous angioma in the cauda equina. We reported a unique case of coexisting with multiple cerebral cavernous angiomas in the brain and cauda equina.

[338]

TÍTULO / TITLE: - The nature of double concomitant myxopapillary ependymoma: report of a case.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2251-0](#)

AUTORES / AUTHORS: - Salomao JF; de Andrade CV; Bellas AR; Cervante TP

INSTITUCIÓN / INSTITUTION: - Section of Pediatric Neurosurgery, Department of Pediatric Surgery, Fernandes Figueira National Institute for Health of Woman, Child and Adolescent, Oswaldo Cruz Foundation (IFF-Fiocruz), Av. Rui Barbosa, 716, 22250-020, Rio de Janeiro, Brazil, jfsalomao@terra.com.br.

RESUMEN / SUMMARY: - Myxopapillary ependymomas are almost exclusively seen at the conus medullaris/filum terminale/cauda equina region, usually as solitary space-occupying lesions. The authors report the case of a 14-year-old boy with double concomitant myxopapillary ependymoma, proximal and caudal on the filum terminale in which a totally gross removal was achieved in two stages. This presentation is rare and, so far, we have known just three similar cases that were previously reported in children. The true nature of these lesions is controversial, and while some argue that they are related to metastatic seeding, others consider them independent lesions developing synchronously. A review on dissemination of spinal myxopapillary ependymomas was done.

[339]

TÍTULO / TITLE: - MiR-29c inhibits glioma cell proliferation, migration, invasion and angiogenesis.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug 13.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1223-2](#)

AUTORES / AUTHORS: - Fan YC; Mei PJ; Chen C; Miao FA; Zhang H; Li ZL

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Affiliated Hospital of Xuzhou Medical College, 99 West Huai-hai Road, Xuzhou, 221002, Jiangsu, China, fanyuechaoxyfy@163.com.

RESUMEN / SUMMARY: - Previous studies reported that miR-29c is significantly downregulated in several tumors. However, little is known about the effect and molecular mechanisms of action of miR-29c in human glioma. Using quantitative RT-PCR, we demonstrated that miR-29c was significantly downregulated in glioma cell lines and human primary glioma tissues, compared to normal human astrocytes and matched non-tumor associated tissues ($P < 0.05$, chi2 test). Overexpression of miR-29c dramatically reduced the proliferation and caused cessation of cell cycle. The reduced cell proliferation is due to G1 phase arrest as cyclin D1 and cyclin E are diminished whereas p27 and p21 are upregulated. We further demonstrated that miR-29c overexpression suppressed the glioma cell migration and invasion abilities by targeting MMP-2. In addition, we also found that overexpression of miR-29c sharply inhibited

angiogenesis, which correlated with down-regulation of VEGF. The data indicate that miR-29c may be a tumor suppressor involved in the progression of glioma.

[340]

TÍTULO / TITLE: - Prolactinoma.

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

REVISTA / JOURNAL: - Am Fam Physician. 2013 Sep 1;88(5):Online.

[341]

TÍTULO / TITLE: - Pituitary adenomas: an overview.

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

REVISTA / JOURNAL: - Am Fam Physician. 2013 Sep 1;88(5):319-27.

AUTORES / AUTHORS: - Lake MG; Krook LS; Cruz SV

INSTITUCIÓN / INSTITUTION: - U.S. Naval Hospital, Sigonella, Italy.

RESUMEN / SUMMARY: - Prolactinomas and nonfunctioning adenomas are the most common types of pituitary adenomas. Patients with pituitary adenomas may present initially with symptoms of endocrine dysfunction such as infertility, decreased libido, and galactorrhea, or with neurologic symptoms such as headache and visual changes. The diagnosis may also be made following imaging done for an unrelated issue in an asymptomatic patient; this is termed a pituitary incidentaloma. Oversecretion of hormones from a dysfunctional pituitary gland may result in classic clinical syndromes, the most common of which are hyperprolactinemia (from oversecretion of prolactin), acromegaly (from excess growth hormone), and Cushing disease (from overproduction of adrenocorticotrophic hormone). In the diagnostic approach to a suspected pituitary adenoma, it is important to evaluate complete pituitary function, because hypopituitarism is common. Therapy for pituitary adenomas depends on the specific type of tumor, and should be managed with a team approach to include endocrinology and neurosurgery when indicated. Dopamine agonists are the primary treatment for prolactinomas. Small nonfunctioning adenomas and prolactinomas in asymptomatic patients do not require immediate intervention and can be observed.

[342]

TÍTULO / TITLE: - Bilateral secondary neurolymphomatosis of the internal auditory canal nerves: A case report.

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

REVISTA / JOURNAL: - Am J Otolaryngol. 2013 Sep-Oct;34(5):556-8. doi: 10.1016/j.amjoto.2013.04.002. Epub 2013 May 8.

●● Enlace al texto completo (gratis o de pago) 1016/j.amjoto.2013.04.002

AUTORES / AUTHORS: - Blioskas S; Tsaligopoulos M; Kyriafinis G; Psillas G; Markou K; Perifanis V; Kouskouras K; Vital V

INSTITUCIÓN / INSTITUTION: - 1st Department of Otorhinolaryngology - Head and Neck Surgery, Aristotle University of Thessaloniki, AHEPA Hospital, 54636 Thessaloniki, Greece.

RESUMEN / SUMMARY: - **BACKGROUND:** Neurolymphomatosis describes the malignant lymphomatous infiltration of nerves. **METHODS:** We encountered a unique case of a 47-year-old patient with non-Hodgkin's lymphoma presenting with bilateral sensorineural hearing loss, vestibular dysfunction and bilateral facial nerve palsy. **RESULTS:** Magnetic resonance imaging demonstrated enhancement and thickening of internal auditory canal nerves bilaterally consistent with neurolymphomatosis. Patient was treated with combined intrathecal chemotherapy and total brain irradiation. **CONCLUSIONS:** One must always remain vigilant for metastatic disease in patients with sensorineural hearing loss and/or vestibular dysfunction and facial nerve palsy in the context of known malignancy.

[343]

TÍTULO / TITLE: - TFAM is directly regulated by miR-23b in glioma.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Nov;30(5):2105-10. doi: 10.3892/or.2013.2712. Epub 2013 Aug 30.

●● [Enlace al texto completo \(gratis o de pago\) 3892/or.2013.2712](#)

AUTORES / AUTHORS: - Jiang J; Yang J; Wang Z; Wu G; Liu F

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Third Xiangya Hospital of Central South University, Changsha, Hunan 410013, P.R. China.

RESUMEN / SUMMARY: - Mitochondrial transcription factor A (TFAM), a high-mobility group (HMG) protein, plays a central role in mitochondrial DNA (mtDNA) replication, transcription and inheritance. It has been shown that TFAM is associated with tumorigenesis. However, little is known regarding the posttranscriptional regulation of TFAM in glioma. In the present study, we found that the protein levels of TFAM were gradually increased, while the expression of miRNA-23b was gradually downregulated with the malignancy of glioma. Luciferase assay data demonstrated that miRNA-23b directly regulated TFAM. Furthermore, forced overexpression of miRNA-23b in U251 cells markedly inhibited the proliferation, cell cycle progression, migration and colony formation, while overexpression of TFAM significantly enhanced these biological processes. We further examined the related molecular mechanism, and found that the activity of the PI3K/Akt signaling pathway, critical for cell proliferation and migration, was suppressed in miRNA-23b-overexpressing U251 cells but was upregulated in TFAM-overexpressing cells. In addition, the expression levels of invasion-related MMP2 and MMP9 were decreased in miRNA-23b-overexpressing U251 cells but were

increased in TFAM-overexpressing cells. Taken together, the present study provides a new regulatory mechanism as well as a promising therapy target for glioma.

[344]

TÍTULO / TITLE: - Tuberous sclerosis complex without tubers and subependymal nodules: a phenotype-genotype study.

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

REVISTA / JOURNAL: - Clin Genet. 2013 Jul 31. doi: 10.1111/cge.12245.

●● [Enlace al texto completo \(gratis o de pago\) 1111/cge.12245](#)

AUTORES / AUTHORS: - Boronat S; Shaaya E; Doherty C; Caruso P; Thiele E

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Herscot Center for TSC, Massachusetts General Hospital, Boston, MA, USA; Department of Pediatric Neurology, Vall d' Hebron Hospital, Universitat Autònoma de Barcelona, Barcelona, España.

RESUMEN / SUMMARY: - Tuberous sclerosis complex (TSC) is caused by a mutation in the TSC1 or TSC2 genes. However, 15% of patients have no mutation identified. Tubers and subependymal nodules (SENs) are the typical brain lesions in TSC and are present in 90-95% of patients. The objective of this study is to characterize the specific genotype-phenotype of patients without these lesions. We analyzed the features of 11 patients without typical TSC neuroanatomic features. Ten had TSC1/TSC2 mutational analysis, which was negative. Clinically they had lesions thought to be of neural crest (NC) origin, such as hypomelanotic macules, facial angiofibromas, cardiac rhabdomyomas, angiomyolipomas, and lymphangioleiomyomatosis. We hypothesize that patients without tubers and SENs reflect mosaicism caused by a mutation in TSC1 or TSC2 in a NC cell during embryonic development. This may explain the negative results in TSC1 and TSC2 testing in DNA from peripheral leukocytes.

[345]

TÍTULO / TITLE: - Vascular Endothelial Growth Inhibitor (VEGI) Is an Independent Indicator for Invasion in Human Pituitary Adenomas.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Sep;33(9):3815-22.

AUTORES / AUTHORS: - Jia W; Sander AJ; Jia G; Ni M; Liu X; Lu R; Jiang WG

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing P. R. China. E-mail: jwttty@sina.com or Professor Wen G. Jiang, Cardiff University-Capital Medical University Joint Centre for Biomedical Research, Cardiff University School of Medicine, Cardiff, U.K. jiangw@cf.ac.uk.

RESUMEN / SUMMARY: - Pituitary adenomas are benign tumours from the pituitary gland but may have an invasive and destructive growth pattern. There is little understanding

of the growth and progression control of pituitary tumours. In the present study, we investigated the expression of vascular endothelial growth inhibitor (VEGI), a vascular endothelial growth and apoptosis regulator and VEGI receptor Death Receptor-3 (DR3), in clinical pituitary tumours. Pituitary tumours from 95 patients were included in the study. Fresh pituitary tumours were obtained immediately after surgery and processed for histological and molecular-based analyses. Histopathological and clinical information including tumour size, tumour invasion and endocrine status were analyzed against the gene transcript expression of VEGI, DR3 and VEGF. VEGI and VEGF family and VEGF receptors were quantitatively determined for their gene transcript expression. The expression levels of VEGI were significantly lower in pituitary tumours which invaded the sella floor, and with suprasellar extension than in non-invasive tumours ($p=0.0073$). VEGI levels were also negatively correlated with cavernous sinus invasion stage ($p<0.0001$), in that a high level of VEGI was associated with low tumour grade. Multivariate analysis indicated that VEGI is an independent factor predictive of invasion ($p=0.05$). It was further demonstrated that the relationship between VEGI and pituitary tumour invasion were independent of the expression of VEGF and its receptors. Low levels of VEGI transcripts were associated with the intratumoural haemorrhage ($p=0.05$). Out of all the pituitary tumours, 59 were non-functional. Out of the functional tumours, it was found that follicle stimulating hormone (FSH)-expressing and gonadotrophic tumours tended to have markedly low levels of VEGI transcripts, compared with non-functional tumours ($p=0.0026$ and $p=0.003$, respectively). The opposite was seen with thyroid-stimulating hormone (TSH)-secreting tumours. Levels of DR3 in tumours with sella destruction were also lower than in those without destruction. VEGI, possibly via DR3, suppresses the aggressive nature of pituitary tumours and its expression level is closely linked to the invasion and destruction of the suprasellar and sella regions. It also has implications for the endocrine nature of these tumours. VEGI thus has an important predictive and prognostic value in patients with pituitary tumours.

[346]

TÍTULO / TITLE: - Ki-67 overexpression in WHO grade II gliomas is associated with poor postoperative seizure control.

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

REVISTA / JOURNAL: - Seizure. 2013 Aug 12. pii: S1059-1311(13)00227-6. doi: 10.1016/j.seizure.2013.08.004.

●● Enlace al texto completo (gratis o de pago) [1016/j.seizure.2013.08.004](#)

AUTORES / AUTHORS: - Yuan Y; Xiang W; Yanhui L; Ruofei L; Shuang L; Yingjun F; Qiao Z; Yanwu Y; Qing M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, West China Hospital of Sichuan university, 610041 Chengdu, China.

RESUMEN / SUMMARY: - PURPOSE: Seizures are the most common initial symptom in patients with low-grade gliomas, and approximately 30% of these patients still suffer from epilepsy after gross-total resection of the tumour. We examined the relationship between the overexpression of ki-67 in WHO grade II gliomas and seizure control. METHODS: A series of 93 histologically confirmed WHO grade II glioma tissues were analysed through immunohistochemical staining for ki-67 expression. Follow-up visits regarding seizure control were scheduled at 12 months. The Engel classification was used to categorise patients' seizure status. RESULTS: Of the 93 patients analysed, 65 (66.3%) patients initially presented with seizures. A total of 36 patients were diagnosed with WHO grade II oligodendrogliomas, 29 patients had oligoastrocytomas and 28 patients had astrocytomas. Ki-67 was over-expressed in 15 patients. One year after surgery poor seizure control was observed in 11 of these patients. In contrast, low ki-67 expression (<10%) was found in 78 patients. Poor seizure control was observed in 36 patients (difference between ki-67 over- and low expression groups P=0.002). Logistic regression analysis revealed that patients with gross-total resection achieved better seizure control while ki-67 overexpression and age below 38 years were poor seizure control factors explained of the variance of seizure outcome (OR: 0.382, 4.354 and 1.822, respectively). CONCLUSIONS: In WHO grade II gliomas, Ki-67 is a molecular marker which predicts poor seizure control of glioma patients after the resection of the tumour. Gross-total resection, ki-67 overexpression and age below 38 years significantly affect seizure prognosis.

[347]

TÍTULO / TITLE: - Functional Pituitary Tumors Masquerading as Primary Glaucoma and Effect of Hypophysectomy on Intraocular Tension.

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

REVISTA / JOURNAL: - J Glaucoma. 2013 Aug 21.

●● Enlace al texto completo (gratis o de pago) [1097/IJG.0b013e31829521f2](#)

AUTORES / AUTHORS: - Gupta S; Sihota R; Gupta V; Dada T; Gogia V; Sharma A

INSTITUCIÓN / INSTITUTION: - Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, India.

RESUMEN / SUMMARY: - We report 2 bilateral cases that presented as primary ocular hypertension and primary angle-closure glaucoma, respectively; however, they were subsequently discovered to be harboring secretory pituitary tumors. After transsphenoidal tumor resection, intraocular pressures (IOPs) in all 4 eyes returned to normal levels. Sudden rise in IOP then again served as a primary manifestation of relapse in the second patient with growth hormone secreting pituitary tumor. It was not found feasible for resurgery; thus, patient needed trabeculectomy in both eyes to achieve an optimum control of intraocular tension. We conclude that pituitary adenomas may mimic primary glaucoma without producing vertical hemianopia and

cause a reversible rise in IOP. Furthermore, a careful ongoing expert ophthalmologic assessment may serve as a useful clinical marker for early relapse in these tumors.

[348]

TÍTULO / TITLE: - Ketoprofen-loaded polymeric nanocapsules selectively inhibit cancer cell growth in vitro and in preclinical model of glioblastoma multiforme.

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

REVISTA / JOURNAL: - Invest New Drugs. 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [1007/s10637-013-0016-y](#)

AUTORES / AUTHORS: - da Silveira EF; Chassot JM; Teixeira FC; Azambuja JH; Debom G; Beira FT; Del Pino FA; Lourenco A; Horn AP; Cruz L; Spanevello RM; Braganhol E

INSTITUCIÓN / INSTITUTION: - Programa de Pos-Graduacao em Bioquimica e Bioprospeccao, Centro de Ciencias Quimicas, Farmaceuticas e de Alimentos, Universidade Federal de Pelotas, Pelotas, RS, Brazil.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the worst and most common brain tumor, characterized by high proliferation and invasion rates. Nanoparticles of biodegradable polymers for anticancer drug delivery have attracted interest in recent years since they provide targeted delivery and may overcome the obstacle imposed by blood-brain barrier. Here we investigated the antitumoral effect of ketoprofen-loaded nanocapsules (Keto-NC) treatment on in vitro and in vivo glioma progression. We observed that Keto-NC treatment decreased selectively the cell viability of a panel of glioma cell lines, while did not exhibit toxicity to astrocytes. We further demonstrate that the treatment with sub-therapeutic dose of Keto-NC reduced the in vivo glioma growth as well as reduced the malignancy characteristics of implanted tumors. Keto-NC treatment improved the weight, the locomotion/exploration behavior of glioma-bearing rats. Importantly, Keto-NC treatment neither induced mortality or peripheral damage. Finally, Ketoprofen also altered the extracellular nucleotide metabolism of peripheral lymphocytes, suggesting that antiinflammatory effects of ketoprofen could also be associated with the modulation of the adenine nucleotide metabolism in lymphocytes. Data indicate at first time the potential of Keto-NC as a promising therapeutic alternative to GBM treatment.

[349]

TÍTULO / TITLE: - The Fruits of Maclura pomifera Extracts Inhibits Glioma Stem-Like Cell Growth and Invasion.

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

REVISTA / JOURNAL: - Neurochem Res. 2013 Oct;38(10):2105-13. doi: 10.1007/s11064-013-1119-8. Epub 2013 Aug 9.

●● Enlace al texto completo (gratis o de pago) [1007/s11064-013-1119-8](#)

AUTORES / AUTHORS: - Zhao D; Yao C; Chen X; Xia H; Zhang L; Liu H; Jiang X; Dai Y; Liu J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Zhangjiagang Hospital, Suzhou University, Zhangjiagang, 215600, China.

RESUMEN / SUMMARY: - Glioma is the most common primary intracranial tumour. Recently, growing evidence showed that glioma possesses stem-like cells, which are thought to be chemo- and radio-resistant and believed to contribute to the poor clinical outcomes of these tumours. In this study, we found that stem-like glioma cells (CD133+) were significantly increased in neurosphere cells, which are highly invasive and resistant to multiple chemotherapeutic agents. From our natural products library, we screened 48 natural products and found one compound, Pomiferin, which was of particular interest. Our results showed that Pomiferin could inhibit cell viability, CD133+ cell population, sphere formation, and invasion ability of glioma neurosphere cells. We also found that multiple stemness-associated genes (BIM1, Nestin, and Nanog) were down-regulated by Pomiferin treatment of glioma neurosphere cells. Taken together, our results suggest that Pomiferin could kill the cancer stem-like cells in glioma and may serve as a potential therapeutic agent in the future.

[350]

TÍTULO / TITLE: - Proton and carbon ion radiotherapy for primary brain tumors and tumors of the skull base.

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

REVISTA / JOURNAL: - Acta Oncol. 2013 Oct;52(7):1504-9. doi: 10.3109/0284186X.2013.818255. Epub 2013 Aug 21.

●● [Enlace al texto completo \(gratis o de pago\) 3109/0284186X.2013.818255](#)

AUTORES / AUTHORS: - Combs SE; Kessel K; Habermehl D; Haberer T; Jakel O; Debus J

INSTITUCIÓN / INSTITUTION: - University Hospital of Heidelberg, Department of Radiation Oncology, Heidelberg, Germany.

RESUMEN / SUMMARY: - Abstract To analyze clinical concepts, toxicity and treatment outcome in patients with brain and skull base tumors treated with photons and particle therapy. Material and methods. In total 260 patients with brain tumors and tumors of the skull base were treated at the Heidelberg Ion Therapy Center (HIT). Patients enrolled in and randomized within prospective clinical trials as well as bony or soft tissue tumors are not included in this analysis. Treatment was delivered as protons, carbon ions, or combinations of photons and a carbon ion boost. All patients are included in a tight follow-up program. The median follow-up time is 12 months (range 2-39 months). Results. Main histologies included meningioma (n = 107) for skull base lesions, pituitary adenomas (n = 14), low-grade gliomas (n = 51) as well as high-grade gliomas (n = 55) for brain tumors. In all patients treatment could be completed without any unexpected severe toxicities. No side effects > CTC Grade III were observed. To date, no severe late toxicities were observed, however, for endpoints

such as secondary malignancies or neurocognitive side effects follow-up time still remains too short. Local recurrences were mainly seen in the group of high-grade gliomas or atypical meningiomas; for benign skull base meningiomas, to date, no recurrences were observed during follow-up. Conclusion. The specific benefit of particle therapy will potentially reduce the risk of secondary malignancies as well as improve neurocognitive outcome and quality of life (QOL); thus, longer follow-up will be necessary to confirm these endpoints. Indication-specific trials on meningiomas and gliomas are underway to elucidate the role of protons and carbon ions in these indications.

[351]

TÍTULO / TITLE: - Intracranial Arteriopathy in Tuberous Sclerosis Complex.

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

REVISTA / JOURNAL: - J Child Neurol. 2013 Sep 20.

- Enlace al texto completo (gratis o de pago) 1177/0883073813492386

AUTORES / AUTHORS: - Boronat S; Shaaya EA; Auladell M; Thiele EA; Caruso P

INSTITUCIÓN / INSTITUTION: - 1Department of Neurology, Massachusetts General Hospital, Boston, MA, USA.

RESUMEN / SUMMARY: - Arterial aneurysms, mostly aortic and intracranial, have been occasionally reported in patients with tuberous sclerosis complex. Brain magnetic resonance imaging reports of 404 patients with definite and 16 patients with either probable or possible tuberous sclerosis complex were revised for intracranial aneurysms. Among these patients, brain images of 220 patients with definite and 16 with probable or possible tuberous sclerosis complex were reviewed. Intracranial aneurysms were reported in 3 of 404 patients with a definite diagnosis (0.74%) (general population: 0.35%), including 2 children. A fourth intracranial aneurysm was found in a patient with probable tuberous sclerosis complex, who did not have tubers or subependymal nodules but had clinical manifestations related to neural crest derivatives, including lymphangiomyomatosis and extrarenal angiomyolipomas. The authors hypothesize that neural crest dysfunction can have a major role in intracranial arteriopathy in tuberous sclerosis complex, as smooth muscle cells in the forebrain vessels are of neural crest origin.

[352]

TÍTULO / TITLE: - "I'm just waiting..": an exploration of the experience of living and dying with primary malignant glioma.

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

REVISTA / JOURNAL: - Support Care Cancer. 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [1007/s00520-013-1986-1](https://doi.org/10.1007/s00520-013-1986-1)

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

INSTITUCIÓN / INSTITUTION: - Centre for Palliative Care, St Vincent's Hospital Melbourne, Fitzroy, Victoria, 3065, Australia.

RESUMEN / SUMMARY: - **PURPOSE:** Referral to supportive and palliative care services for people with high-grade primary malignant glioma (PMG) often occurs late in the illness course, despite significant care needs and overall poor prognosis. This study aimed to understand patient experience at the end of life and document supportive and palliative care needs. **METHODS:** A qualitative study was conducted involving ten PMG patients who were at different stages in the illness course including the end of life and had varying levels of physical and cognitive function. Consecutive, eligible patients attending neurosurgery, oncology, and palliative care services of two metropolitan hospitals were recruited. In-depth interviews explored supportive and palliative care needs across the disease trajectory. Interviews were analysed independently by three investigators consistent with a grounded theory approach, and emerging ideas were compared and refined to define key patient experiences. **RESULTS:** Despite the medical treatment and supportive care available, there remains a gap in services addressing complex existential and psychosocial needs that were markedly valued by patients. Patient experience was characterised by a pervasive loss of all that encompassed their former sense of self and a focus on immediate needs. **CONCLUSIONS:** Patients in this study had substantial needs, which were often not shared and not addressed by the current medical system of care. An improved multidisciplinary care model is indicated, which proactively (1) engages care coordination and advocacy; (2) minimises patients' sense of waiting and uncertainty through mapping out a plan, including involvement of palliative care in a timely fashion; and (3) actively invites discussion around goals and preferences for care to promote patients' sense of self.

[353]

TÍTULO / TITLE: - Overexpression of S100A9 in human glioma and in-vitro inhibition by aspirin.

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

REVISTA / JOURNAL: - Eur J Cancer Prev. 2013 Nov;22(6):585-95. doi: 10.1097/CEJ.0b013e328364f1c9.

●● Enlace al texto completo (gratis o de pago) [1097/CEJ.0b013e328364f1c9](https://doi.org/10.1097/CEJ.0b013e328364f1c9)

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Engineering Institute of Life Sciences, Chongqing Medical University, Chongqing, China.

RESUMEN / SUMMARY: - Our previous work has shown that S100A9 promotes the growth of glioma cells. The aim of this study was to investigate S100A9 expression in glioma cells and to explore the potential of NSAIDs in the inhibition of S100A9. The levels of S100A9 were analyzed in five normal human brain tissues and 109 astrocytomas by immunohistochemical analysis. In addition, S100A9 levels were detected in normal human astrocytes, glioma cell lines, and six pairs of matched astrocytoma tissues by reverse transcription-PCR or western blotting analysis. After treatment with 4, 8, and 16 mmol/l aspirin, cell viability, early apoptosis rate, and S100A9 levels were quantified. Cell viability and the changes in S100A9 levels were also examined in glioma cells exposed to a cyclooxygenase-2 inhibitor, NS-398, alone and in combination with prostaglandin E2. We found that S100A9 was upregulated in astrocytomas and was significantly ($P < 0.05$) correlated with histologic grades. S100A9 protein levels were also elevated in six astrocytomas compared with matched adjacent noncancerous tissues. Both S100A9 mRNA and protein levels were higher in glioma cell lines than in normal human astrocytes ($P < 0.05$). Aspirin treatment inhibited cell proliferation and caused early apoptosis in glioma, coupled with reduced S100A9 levels. Treatment with NS-398 decreased cell growth and expression of S100A9 in glioma cells; these effects were partially reversed by exogenous prostaglandin E2. These results suggest overexpression of S100A9 in glioma cells. Aspirin may be a novel candidate for targeted prevention of S100A9 overexpression in glioma cells.

[354]

TÍTULO / TITLE: - Usefulness of three-dimensional navigable intraoperative ultrasound in resection of brain tumors with a special emphasis on malignant gliomas.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Sep 14.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00701-013-1881-z](#)

AUTORES / AUTHORS: - Moiyadi AV; Shetty PM; Mahajan A; Udare A; Sridhar E

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, PS 245, ACTREC and TMH, Tata Memorial Centre, Kharghar, Navi Mumbai, 410210, India, aliasgar.moiyadi@gmail.com.

RESUMEN / SUMMARY: - **BACKGROUND:** Intraoperative imaging is increasingly being used in resection of brain tumors. Navigable three-dimensional (3D)-ultrasound is a novel tool for planning and guiding such resections. We review our experience with this system and analyze our initial results, especially with respect to malignant gliomas. **METHODS:** A prospective database for all patients undergoing sononavigation-guided surgery at our center since this surgery's introduction in June 2011 was queried to retrieve clinical data and technical parameters. Imaging was reviewed to categorize

tumors based on enhancement and resectability. Extent of resection was also assessed. RESULTS: Ninety cases were operated and included in this analysis, 75 % being gliomas. The 3D ultrasound mode was used in 87 % cases (alone in 40, and combined in 38 cases). Use of combined mode function [ultrasound (US) with magnetic resonance (MR) images] facilitated orientation of anatomical data. Intraoperative power Doppler angiography was used in one-third of the cases, and was extremely beneficial in delineating the vascular anatomy in real-time. Mean duration of surgery was 4.4 hours. Image resolution was good or moderate in about 88 % cases. The use of the intraoperative imaging prompted further resection in 59 % cases. In the malignant gliomas (51 cases), gross-total resection was achieved in 47 % cases, increasing to 88 % in the “resectable” subgroup. CONCLUSIONS: Navigable 3D US is a versatile, useful and reliable intraoperative imaging tool in resection of brain tumors, especially in resource-constrained settings where Intraoperative MR (IOMR) is not available. It has multiple functionalities that can be tailored to suit the procedure and the experience of the surgeon.

[355]

TÍTULO / TITLE: - Localization and prediction of malignant potential in recurrent pheochromocytoma/paraganglioma (PCC/PGL) using 18F-FDG PET/CT.

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

REVISTA / JOURNAL: - Acta Radiol. 2013 Sep 14.

●● Enlace al texto completo (gratis o de pago) 1177/0284185113504330

AUTORES / AUTHORS: - Saad FF; Kroiss A; Ahmad Z; Zanariah H; Lau W; Uprimny C; Donnemiller E; Kendler D; Nordin A; Virgolini I

INSTITUCIÓN / INSTITUTION: - Centre for Diagnostic Nuclear Imaging, Faculty of Medicine and Health Science, University Putra Malaysia, Serdang, Selangor, Malaysia.

RESUMEN / SUMMARY: - BACKGROUND: To our knowledge, data are lacking on the role of 18F-FDG PET/CT in the localization and prediction of neuroendocrine tumors, in particular the pheochromocytoma/paraganglioma (PCC/PGL) group. PURPOSE: To evaluate the role of 18F-FDG PET/CT in localizing and predicting the malignant potential of PCC/PGL. MATERIAL AND METHODS: Twenty-three consecutive patients with a history of PCC/PGL, presenting with symptoms related to catecholamine excess, underwent 18F-FDG PET/CT. Final confirmation of the diagnosis was made using the composite references. PET/CT findings were analyzed on a per-lesion basis and a per-patient basis. Tumor SUVmax was analyzed to predict the dichotomization of patient endpoints for the local disease and metastatic groups. RESULTS: We investigated 23 patients (10 men, 13 women) with a mean age of 46.43 +/- 3.70 years. Serum catecholamine levels were elevated in 82.60% of these patients. There were 136 sites (mean SUVmax: 16.39 +/- 3.47) of validated disease recurrence. The overall sensitivities for diagnostic CT, FDG PET, and FDG PET/CT were 86.02%, 87.50%, and

98.59%, respectively. Based on the composite references, 39.10% of patients had local disease. There were significant differences in the SUVmax distribution between the local disease and metastatic groups; a significant correlation was noted when a SUVmax cut-off was set at 9.2 ($P < 0.05$). CONCLUSION: In recurrent PCC/PGL, diagnostic 18F-FDG PET/CT is a superior tool in the localization of recurrent tumors. Tumor SUVmax is a potentially useful predictor of malignant tumor potential.

[356]

TÍTULO / TITLE: - The endoscopic intraventricular management of pineal cysts: a minimally invasive modus operandi.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Oct;155(10):1901-5. doi: 10.1007/s00701-013-1849-z. Epub 2013 Aug 22.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1849-z](#)

AUTORES / AUTHORS: - Berhouma M; Ni H; Vallee B

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Pierre Wertheimer Neurological and Neurosurgical Hospital, Hospices Civils de Lyon, University Claude Bernard, Lyon, France, berhouma.moncef@yahoo.fr.

RESUMEN / SUMMARY: - BACKGROUND: The management of pineal cysts is still debatable, especially for asymptomatic incidental ones. For symptomatic cysts associated with hydrocephalus, the surgical management is mandatory and may include either classical microsurgical approaches to the pineal region or endoscopic trans-ventricular approaches in a minimally invasive philosophy. METHOD: The authors expose a stepwise technique to treat a pineal cyst associated with an obstructive hydrocephalus in one procedure gathering a third ventriculostomy followed by an intraventricular marsupialisation of the pineal cyst. CONCLUSION: This endoscopic approach allows the treatment of the hydrocephalus and the pineal cyst in one short minimally invasive procedure.

[357]

TÍTULO / TITLE: - Is there still a need for specific central nervous system directed prophylaxis for diffuse large B-cell lymphoma in the rituximab era?

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

REVISTA / JOURNAL: - Leuk Lymphoma. 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [3109/10428194.2013.830306](#)

AUTORES / AUTHORS: - Cheah CY; Seymour JF

[358]

TÍTULO / TITLE: - SynCAM, a novel putative tumor suppressor, suppresses growth and invasiveness of glioblastoma.

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

REVISTA / JOURNAL: - Mol Biol Rep. 2013 Sep;40(9):5469-75. doi: 10.1007/s11033-013-2645-9. Epub 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11033-013-2645-9](#)

AUTORES / AUTHORS: - Zhang X; Li W; Kang Y; Zhang J; Yuan H

INSTITUCIÓN / INSTITUTION: - The People's Hospital of Zhengzhou University, Zhengzhou, 450003, China, zhangxi321660@yahoo.com.cn.

RESUMEN / SUMMARY: - SynCAM, also named by TSLC1, SgIGSF and IGSF4, was identified as a neural tissue-specific immunoglobulin-like cell-cell adhesion molecule. However, the role of SynCAM in tumorigenesis remains elusive. We aimed to clarify its epigenetic regulation and biological functions in glioblastoma. SynCAM was silenced in 72 % (5/7) glioblastoma cell lines. A significant downregulation was also detected in paired glioblastoma tumors compared with adjacent non-cancerous tissues. In contrast, SynCAM was readily expressed in various normal adult brain tissues. Ectopic expression of SynCAM in the silenced cancer cell line T98G significantly reduced colony formation and cell proliferation, induced cell cycle arrests and repressed cell invasive ability. Nude mice were subcutaneously injected into the flank with T98G cells and treated with normal saline, pcDNA3.1 (vector) or pcDNA3.1-SynCAM, respectively. Treatment with pcDNA3.1-SynCAM retarded growth in the xenografts, which contributed to a 58 % decrease in tumor volume compared to controls. In conclusion, our results suggest that SynCAM suppresses growth of glioblastoma and may serve as a novel functional tumor-suppressor gene.

[359]

TÍTULO / TITLE: - The preoperative use of navigated transcranial magnetic stimulation facilitates early resection of suspected low-grade gliomas in the motor cortex.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Oct;155(10):1813-21. doi: 10.1007/s00701-013-1839-1. Epub 2013 Sep 3.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1839-1](#)

AUTORES / AUTHORS: - Picht T; Schulz J; Vajkoczy P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Charite University Hospital, Berlin, Germany, thomas.picht@charite.de.

RESUMEN / SUMMARY: - BACKGROUND: Resection is recommended for low-grade gliomas, but often it is not performed if the tumor is suspected of invading the primary motor cortex. The study aim is to assess what influence preoperative navigated transcranial magnetic stimulation (nTMS) has on the treatment strategy and clinical outcome for suspected low-grade gliomas in presumed motor eloquent location.

METHODS: This paper reports on all our patients with gliomas in the primary motor cortex that were non-enhancing on MRI, since we began using nTMS (n = 11). For the comparison group, we identified the 11 most recent such patients just before we started using nTMS. **RESULTS:** Exact delineation of motor functional versus non-functional cortical tissue was provided by nTMS in all cases, also within the area of altered FLAIR signal. In 6 out of 11 cases, the nTMS mapping result changed the treatment plan towards early and more extensive resection. Only one nTMS patient had another seizure within the follow-up period, whereas four patients in the comparison group had further seizures. In the nTMS group, 1 of 4 patients with pre-op neurological deficits improved by one year; whereas the comparison group had increased neurological deficits in 3 of the 8 patients not having surgery. The median (range) change of tumor volume from baseline to 1 year was -83 % (-67 % to -100 %) in the nTMS group, but +12 % (+40 % to -56 %) in the comparison group (p < 0.001). **CONCLUSIONS:** nTMS provides accurate motor mapping results also in infiltrative gliomas and enables more frequent and more extensive surgical resection of non-enhancing gliomas in or near the primary motor cortex. The substantial differences observed here in neurological and oncological outcomes suggest that further comparative research is warranted.

[360]

TÍTULO / TITLE: - Postoperative complications of central neurocytoma.

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

REVISTA / JOURNAL: - J Craniofac Surg. 2013 Sep;24(5):e533-7. doi: 10.1097/SCS.0b013e3182a23794.

●● Enlace al texto completo (gratis o de pago) [1097/SCS.0b013e3182a23794](#)

AUTORES / AUTHORS: - Jin Y; Qiu Y; Zhang X

INSTITUCIÓN / INSTITUTION: - From the Department of Neurosurgery, Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China.

RESUMEN / SUMMARY: - Six patients with central neurocytoma were retrospectively examined, including diagnosis and treatment process as well as postoperative complications. Clinical follow-ups were performed through telephone calls or outpatient service. Of the 6 patients, a total of 5 patients had 1 or more postoperative complications. The postoperative complications included hydrocephalus, basal ganglia edema, epidural hematoma of the operated region and the remote region, and intracranial infection; 5 patients underwent the cortical fistulization approach and 1 underwent the longitudinal fissure-corporum callosum approach. The neoplasms of 3 patients were totally resected and those of the other 3 patients were subtotally resected. Preoperative accurate diagnosis of central neurocytoma is of great importance for the drawing up of the operation strategy; in addition to magnetic resonance imaging and computed tomography, digital subtraction angiography and

magnetic resonance spectroscopy could be helpful for the preoperative diagnosis of central neurocytoma. Subtotal resection of the lesion and the longitudinal fissure-corpus callosum approach may be useful for the reduction of postoperative complications.

[361]

TÍTULO / TITLE: - Erratum to: Endoscopic endonasal trans-sphenoidal approach for pituitary adenomas: Is one nostril enough?

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Sep 24.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1888-5](#)

AUTORES / AUTHORS: - Han S; Ding X; Tie X; Liu Y; Xia J; Yan A; Wu A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Hospital of China, Medical University, Nanjing Street 155, Heping District, Shenyang, 110001, China.

[362]

TÍTULO / TITLE: - Immunological challenges for peptide-based immunotherapy in glioblastoma.

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

REVISTA / JOURNAL: - Cancer Treat Rev. 2013 Sep 8. pii: S0305-7372(13)00189-8. doi: 10.1016/j.ctrv.2013.08.008.

●● Enlace al texto completo (gratis o de pago) [1016/j.ctrv.2013.08.008](#)

AUTORES / AUTHORS: - Mohme M; Neidert MC; Regli L; Weller M; Martin R

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RESUMEN / SUMMARY: - Glioblastoma is the most aggressive primary tumor of the central nervous system with a medium overall survival of 7-15 months after diagnosis. Since tumor cells penetrate the surrounding brain tissue, complete surgical resection is impossible and tumor recurrence is almost a certainty. New treatment modalities are therefore needed, and these should be able to trace, identify, and kill dispersed tumor cells with great accuracy. Immunological approaches in principle meet these needs. Unfortunately, due to profound tumor-associated mechanisms of immunosuppression and -evasion, immunotherapeutic strategies like peptide vaccination have so far not been translated into clinical success. If future, peptide-based vaccination approaches shall be successful in glioblastoma therapy, multiple questions need to be solved including identification of suitable antigens, route and mode of vaccination, preparation of the tumor-bearing "host" and antagonizing, as much as this is possible,

glioblastoma-associated mechanisms of immune evasion and poor vaccination response. In this review we will address the immunological challenges of glioblastoma and discuss key aspects that have rendered successful immunotherapy difficult in the past.

[363]

TÍTULO / TITLE: - Perfusion Model Approximation in Cerebral Tumours: Feature Images and Computation Times.

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

REVISTA / JOURNAL: - Biomed Tech (Berl). 2013 Sep 7. pii: /j/bmte.2013.58.issue-s1-L/bmt-2013-4280/bmt-2013-4280.xml. doi: 10.1515/bmt-2013-4280.

●● Enlace al texto completo (gratis o de pago) [1515/bmt-2013-4280](#)

AUTORES / AUTHORS: - Ritschel K; Pechlivanis I; Kesy C; Risse R; Winter S

[364]

TÍTULO / TITLE: - Aquaporin-4 in glioma and metastatic tissues harboring 5-aminolevulinic acid-induced porphyrin fluorescence.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Oct;115(10):2075-81. doi: 10.1016/j.clineuro.2013.07.016. Epub 2013 Jul 31.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.07.016](#)

AUTORES / AUTHORS: - Suero Molina EJ; Ardon H; Schroeteler J; Klingenhofer M; Holling M; Wolfer J; Fischer B; Stummer W; Ewelt C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital of Munster, Munster, Germany. Electronic address: eric.suero@ukmuenster.de.

RESUMEN / SUMMARY: - INTRODUCTION: Aquaporin channels (AQPs) are a group of integral membrane proteins that regulate the transport of water through cell membranes. Previous studies have shown that up-regulation of AQP1 and AQP4, two of the predominant AQPs in the human brain, in high grade glial tumors contribute to cerebral edema. Others link AQPs to the regulation of human glioma cell migration and invasion. The aim of this study was to determine AQPs expression in tumor tissue harboring 5-aminolevulinic acid (ALA)-induced porphyrin fluorescence with flow cytometry and compare it to the expression in normal brain tissue. METHODS: Tissue samples were obtained from fluorescing brain tumors of 26 patients treated with ALA prior to surgery (20mg/kg b.w.). Expression levels of aquaporin channels were measured in primary tissue cultures using a FACS CANTO I flow cytometer. A control group consisted of four non-fluorescing tissue samples, the C6 and the U87 cell line. RESULTS: Nineteen gliomas (14 high grade, 5 low grade) and 7 metastases were analyzed. On the 4th post-operative day, expression levels of AQP4 channels, but not

of AQP1 channels, were significantly increased in samples from fluorescing tissue compared to non-fluorescing tissue. In addition we could see how ALA induces fluorescence in metastases. CONCLUSION: Flow cytometry appears to be an auspicious method for the analysis of porphyrins and AQPs in primary brain cell tumor cultures. ALA fluorescing tissue showed higher AQP4 expression compared to normal brain tissue. The demonstrated expression in a context with ALA could open a targeted therapeutic spectrum, for example to selectively target AQP4.

[365]

TÍTULO / TITLE: - Management of malignant middle cerebral artery infarction following a cardiac stab wound - the role of early decompressive craniectomy.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.841855](#)

AUTORES / AUTHORS: - Scotter J; Iorga R; Stefanou D; Wilson MH

INSTITUCIÓN / INSTITUTION: - Department of Neurotrauma, St Mary's Hospital, Imperial Healthcare NHS Trust, London, UK.

RESUMEN / SUMMARY: - We report the presentation, investigation and management of a 22-year-old male who developed a right malignant middle cerebral artery infarct following a cardiac stab wound. This case exemplifies that early identification and timely decompression of young patients with embolic infarcts as a result of penetrating trauma can lead to a favourable clinical outcome.

[366]

TÍTULO / TITLE: - Intravascular papillary endothelial hyperplasia of the skull base and intracranial compartment.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Oct;115(10):2264-7. doi:

10.1016/j.clineuro.2013.07.021. Epub 2013 Aug 6.

●● Enlace al texto completo (gratis o de pago) [1016/j.clineuro.2013.07.021](#)

AUTORES / AUTHORS: - Miller TR; Mohan S; Tondon R; Montone KT; Palmer JN; Zager EL; Loevner LA

INSTITUCIÓN / INSTITUTION: - University of Pennsylvania, Department of Radiology, Neuroradiology Division. Philadelphia 19104, USA. Electronic address: trmiller12@gmail.com.

[367]

TÍTULO / TITLE: - Stupp-treated glioblastoma accompanied by EBV-positive primary CNS lymphoma.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Aug 19.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.829554](#)

AUTORES / AUTHORS: - Zakaria Z; Fenton E; Khalil A; Sattar MT; Molnar P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beaumont Hospital , Dublin , Ireland.

RESUMEN / SUMMARY: - We describe a patient who within 2 months of undergoing radio-chemotherapy for glioblastoma developed an Epstein-Barr virus-positive primary diffuse large B-cell CNS lymphoma. To our knowledge, this is the first such case reported in the literature showing that new tumefactions following aggressive treatment for glioblastomata might represent secondary malignancies.

[368]

TÍTULO / TITLE: - Glioblastoma occurring after the surgical resection of a craniopharyngioma.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.835381](#)

AUTORES / AUTHORS: - Zairi F; Aboukais R; Maurage CA; Assaker R

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Lille University Hospital , Lille , France.

RESUMEN / SUMMARY: - The authors report the case of a man who underwent cranial surgery for the removal of a craniopharyngioma using a right pterional approach. Three months later, he developed a right-sided temporal glioblastoma. The presentation is suggestive of a causal relationship between surgery and the development of a malignant glial tumor.

[369]

TÍTULO / TITLE: - Reorganization of left primary (face) motor cortex due to a low-grade glioma.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) [3109/02688697.2013.841853](#)

AUTORES / AUTHORS: - Rutten GJ; Verheul J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, St Elisabeth Hospital , Tilburg , The Netherlands.

RESUMEN / SUMMARY: - We present a patient with a low-grade glioma restricted to the 'face area' of the left primary motor cortex. Little is known about functional consequences of surgery within this specific part of the brain. After surgery there were only mild and transient deficits. We suggest that original functions had already reorganized to direct perilesional areas.

[370]

TÍTULO / TITLE: - Shunt dependency syndrome after cystoperitoneal shunting of arachnoid cysts.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Aug 29.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2248-8](#)

AUTORES / AUTHORS: - Li C; Yin L; Jiang T; Ma Z; Jia G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Tiantan Xili 6, Chongwen District, Beijing, 100050, China.

RESUMEN / SUMMARY: - PURPOSE: The goal of this study was to investigate the mechanisms, diagnosis, and treatment of shunt dependency syndrome in patients with temporal lobe arachnoid cysts who were initially treated with cystoperitoneal (CP) shunting. METHODS: Thirteen patients with temporal lobe arachnoid cysts who had initially been treated with CP shunt placement and had developed shunt dependency syndrome were treated by the senior author at Tiantan Hospital between April 2010 and January 2012. The clinical manifestations, neuroimaging findings, intracranial pressure (ICP) data, treatment methods, and therapeutic results were reviewed retrospectively. RESULTS: The study included ten males and three females. The mean age at the time of development of shunt dependency syndrome was 12.3 years (range 5.5-24 years). In most patients, neuroimaging findings showed a collapsed cyst (the cyst appeared almost unchanged in only one patient) and normal or small ventricles (only one patient had enlarged ventricles). Three patients underwent simple replacement of the shunt, four underwent ventriculoperitoneal shunt placement, and the other six underwent lumboperitoneal shunt placement. All patients experienced resolution of their symptoms postoperatively. The mean duration of follow-up was 20 months. CONCLUSIONS: Shunt dependency syndrome is a rare but serious complication of shunting an arachnoid cyst. This condition is similar to the slit ventricle syndrome, but also has some differences. ICP monitoring may confirm the diagnosis when there are no significant radiological findings. Achievement of a shunt-free state might be the ultimate goal for all shunted patients.

[371]

TÍTULO / TITLE: - Acromegaly: A single centre's experience of stereotactic radiosurgery and radiotherapy for growth hormone secreting pituitary tumours with the linear accelerator.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 30. pii: S0967-5868(13)00128-8. doi: 10.1016/j.jocn.2012.11.026.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.11.026](#)

AUTORES / AUTHORS: - Wilson PJ; De-Loyde KJ; Williams JR; Smee RI

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, The Prince of Wales Cancer Centre, Level 2, High Street, Randwick, NSW 2031, Australia.

RESUMEN / SUMMARY: - Primary treatment for growth-hormone secreting pituitary adenomas usually involves surgery, with treatment options for recurrent and persistent disease including repeat surgery, medication and radiation therapy. The majority of previously published series for radiation therapy in acromegaly in the past 20years have been based on Gamma-Knife (Elekta, Stockholm, Sweden) surgery. To our knowledge, we present the largest series of linear accelerator-based treatment for this disease, with a review of 121 patients treated at our institution; since 1990, 86 patients underwent stereotactic radiosurgery (SRS), 10 patients underwent fractionated stereotactic radiotherapy (FSRT), and for the purposes of comparison we also reviewed 25 patients who underwent conventional radiotherapy prior to 1990. Tumour volume control in all three groups was excellent and consistent with previously reported literature - only three of 86 (4%) patients undergoing SRS had a documented increase in tumour size, and none of the patients undergoing FSRT had a documented increase in size following a median follow-up of 5.5 and 5.1years for SRS and FSRT, respectively. Target growth hormone levels of <2.5ng/mL were met by 12 of 86 (14%) of the SRS group, and by two of 10 (20%) in the FSRT group. Target insulin-like growth factor-1 levels of age and sex matched controls were achieved in 16 of 86 patients (18.6%) post-SRS and five of 10 patients (50%) post-FSRT. New hormonal deficits requiring replacement therapy were identified in 17 of 86 (19.8%) patients post-SRS which is consistent with previously published radiosurgical series. Identified non-hormonal morbidity was low (<5%).

[372]

TÍTULO / TITLE: - Pediatric brain tumors.

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

REVISTA / JOURNAL: - Neuroimaging Clin N Am. 2013 Aug;23(3):499-525. doi: 10.1016/j.nic.2013.03.003. Epub 2013 May 18.

●● Enlace al texto completo (gratis o de pago) [1016/j.nic.2013.03.003](#)

AUTORES / AUTHORS: - Brandao LA; Poussaint TY

INSTITUCIÓN / INSTITUTION: - Clinica Felipe Mattoso, Barra Da Tijuca, Rio De Janeiro, Brazil. larabrandao.rad@terra.com.br

RESUMEN / SUMMARY: - Pediatric brain tumors are the most common solid tumor of childhood. This article focuses on the metabolic signature of common pediatric brain tumors using MR spectroscopic analyses.

[373]

TÍTULO / TITLE: - Endobronchial Gangliocytic Paraganglioma: Not All Keratin-Positive Endobronchial Neuroendocrine Neoplasms are Pulmonary Carcinoids.

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

REVISTA / JOURNAL: - Endocr Pathol. 2013 Aug 4.

●● Enlace al texto completo (gratis o de pago) 1007/s12022-013-9258-7

AUTORES / AUTHORS: - Gucer H; Mete O

INSTITUCIÓN / INSTITUTION: - Department of Pathology, University Health Network, 200 Elizabeth Street, 11th floor, Toronto, ON, M5G 2C4, Canada.

[374]

TÍTULO / TITLE: - Brain tumors and the area postrema.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Sep 10. pii: S0967-5868(13)00230-0. doi: 10.1016/j.jocn.2013.01.028.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2013.01.028

AUTORES / AUTHORS: - Abecassis IJ; Smith T; Chandler JP

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

RESUMEN / SUMMARY: - Brain tumors can rarely present with symptoms mistaken for anorexia nervosa. We report a patient with a long-standing history of anorexia who developed headaches and was found on brain MRI to have a brain tumor in the area of the fourth ventricle. On admission, the patient presented with a 4month history of headaches and a 10year history of "anorexia nervosa". Interestingly, the patient did not endorse the classic sense of an altered self-body image. Her body weight on admission was 37kg. The patient underwent surgical resection of the tumor. On postoperative day (POD) 1, the patient subjectively reported an increased appetite. On POD 2, we documented that she finished her entire food tray for the first time during her hospital stay. Her peri-operative course was without any complications. She presented for a follow-up clinic visit 2weeks postoperatively and was noted to have a new body weight of 47kg (10kg gain). To our knowledge, this is the first reported occurrence of a sporadic, and third overall occurrence, of a hemangioblastoma that presented with an anorexia nervosa-like syndrome that was ultimately cured with

surgical resection. In patients presenting with a history of psychiatric illness, it is important to consider the possibility of underlying, organic pathologies in the central nervous system affecting the relevant neuro-anatomical domains.

[375]

TÍTULO / TITLE: - Operative management of brainstem hemangioblastomas.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Sep 19. pii: S0967-5868(13)00229-4. doi: 10.1016/j.jocn.2013.01.027.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.01.027](#)

AUTORES / AUTHORS: - Chen LF; Yang Y; Yu XG; Bu B; Xu BN; Zhou DB

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Chinese People's Liberation Army General Hospital, 28 Fuxing Road, Haidian District, Beijing 100853, China.

RESUMEN / SUMMARY: - Brainstem hemangioblastomas are technically challenging lesions. The authors retrospectively analyzed their experience in 24 patients with brainstem hemangioblastomas to evaluate the management strategies used over time and the results of microsurgical treatment. All patients were operated on between 2007 and 2012. The patients received postoperative follow-up by neuroradiological and neurological examinations. The maximum diameter of the tumors ranged from 2.0 to 4.5cm (mean 3.6cm). Gross total resection was achieved in 24 patients (100%). Two patients (8%) had new neurological deficits or worsening of pre-existing deficits. One patient (4%) died because of brain stem dysfunction after the operation. Radical en bloc surgical resection of brainstem hemangioblastomas in symptomatic patients is a safe and effective primary treatment. Preoperative embolization is not necessary. It is very important and necessary to differentiate and dissect precisely at the interface of the tumor surface and the brainstem with a meticulous microsurgical technique until the tumor is removed en bloc. The preoperative neurological status of the patient predicts the postoperative functional outcome. Asymptomatic patients with hemangioblastoma may be followed clinically with MRI surveillance at regular intervals.

[376]

TÍTULO / TITLE: - Pseudotumor Cerebri Syndrome Associated With Giant Arachnoid Granulation.

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

REVISTA / JOURNAL: - J Neuroophthalmol. 2013 Sep 18.

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

[1097/WNO.0b013e3182a5943b](#)

AUTORES / AUTHORS: - Rosenberg KI; Banik R

INSTITUCIÓN / INSTITUTION: - Department of Ophthalmology, The New York Eye and Ear Infirmary, New York, New York.

[377]

TÍTULO / TITLE: - Isolated primary malignant lymphoma arising from the optic chiasm.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Aug 7. pii: S0967-5868(13)00157-4. doi: 10.1016/j.jocn.2012.12.029.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.12.029](http://dx.doi.org/10.1016/j.jocn.2012.12.029)

AUTORES / AUTHORS: - Tsutsumi K; Horiuchi T; Aoyama T; Hongo K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Shinshu University School of Medicine, 3-1-1 Asahi, Matsumoto 390-8621, Japan. Electronic address: keiji99m0058h@gmail.com.

RESUMEN / SUMMARY: - Isolated primary malignant lymphoma rarely arises from the anterior visual pathway. A 59-year-old previously healthy man presented with progressive, painless, bilateral visual disturbance. Neurological imaging revealed an enhancing mass arising from the optic chiasm. Open biopsy was carried out under monitoring of visual evoked potentials and a histopathological diagnosis of diffuse large B-cell lymphoma was made. As systemic examination did not show any evidence of systemic lymphoma, we concluded that this patient had an isolated primary malignant lymphoma at the anterior visual pathway.

[378]

TÍTULO / TITLE: - Primary large B-cell lymphoma of the fourth ventricle.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Sep 5. pii: S0967-5868(13)00256-7. doi: 10.1016/j.jocn.2013.02.036.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.02.036](http://dx.doi.org/10.1016/j.jocn.2013.02.036)

AUTORES / AUTHORS: - Liao CH; Lin SC; Hung SC; Hsu SP; Ho DM; Shih YH

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Neurological Institute, Taipei Veterans General Hospital, 201, Section 2, Shih-Pai Road, Taipei 112, Taiwan, ROC.

RESUMEN / SUMMARY: - We present a patient with an isolated primary central nervous system lymphoma (PCNSL) of the fourth ventricle. A 77-year-old man had a 1week history of intermittent vertigo, nausea, vomiting, and progressively unsteady gait. CT scans of the brain showed a fourth ventricle tumor. MRI revealed a 2.5cm dumbbell-shaped avidly-enhancing tumor in the fourth ventricle. Metastasis or high-grade glioma was suspected. The neuropathological findings were compatible with a diffuse large B-cell lymphoma. A slit lamp examination, bone marrow biopsy, and imaging

studies for extracranial lesions were unremarkable. We suggest that PCNSL be listed in the differential diagnosis of fourth ventricle tumors with well-circumscribed margins and homogenous contrast enhancement.

[379]

TÍTULO / TITLE: - Neuroborreliosis and CNS lymphoma: what is the nexus?

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

REVISTA / JOURNAL: - Neurol Sci. 2013 Aug 10.

●● Enlace al texto completo (gratis o de pago) [1007/s10072-013-1492-8](#)

AUTORES / AUTHORS: - Saggese CE; Cecotti L; Lazzarino de Lorenzo LG

INSTITUCIÓN / INSTITUTION: - SOC Neurologia, Ospedale di Gorizia, Via Fatebenefratelli, 34170, Gorizia, Italy, emanuelesaggese555@hotmail.com.

[380]

TÍTULO / TITLE: - Primary central nervous system lymphoma mimicking Bickerstaff's encephalitis.

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

REVISTA / JOURNAL: - Neurol Sci. 2013 Sep 7.

●● Enlace al texto completo (gratis o de pago) [1007/s10072-013-1533-3](#)

AUTORES / AUTHORS: - Miki Y; Tomiyama M; Kurotaki H; Wakabayashi K; Baba M

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Aomori Prefectural Central Hospital, Higashitsukurimichi 2-1-1, Aomori, 030-8553, Japan, yasuomiki@hotmail.com.

[381]

TÍTULO / TITLE: - Enzastaurin before and concomitant with radiation therapy, followed by enzastaurin maintenance therapy, in patients with newly diagnosed glioblastoma without MGMT promoter hypermethylation.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Oct;15(10):1405-12. doi: 10.1093/neuonc/not100. Epub 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not100](#)

AUTORES / AUTHORS: - Wick W; Steinbach JP; Platten M; Hartmann C; Wenz F; von Deimling A; Shei P; Moreau-Donnet V; Stoffregen C; Combs SE

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Wolfgang Wick, MD, Department of Neurooncology, National Center for Tumor Diseases and Neurology Clinic, University Clinic Heidelberg and German Cancer Research Centre, Im Neuenheimer Feld 400, 69120-Heidelberg, Germany. wolfgang.wick@med.uni-heidelberg.de.

RESUMEN / SUMMARY: - Background This study's primary objective was evaluation of the progression-free survival rate at 6 months (PFS-6) in patients with newly diagnosed glioblastoma without O(6)-methylguanine-DNA-methyltransferase (MGMT) promoter hypermethylation postsurgically treated with enzastaurin before and concomitantly with radiation therapy, followed by enzastaurin maintenance therapy. PFS-6 of at least 55% was set to be relevant compared with the data of the EORTC 26981/22981 NCIC CE.3 trial. Methods Adult patients with a life expectancy of at least 12 weeks who were newly diagnosed with a histologically proven supratentorial glioblastoma without MGMT promoter hypermethylation were eligible. Patients were treated with enzastaurin prior to, concomitantly with, and after standard partial brain radiotherapy. Here we report on a multicenter, open-label, uncontrolled phase II study of patients with newly diagnosed glioblastoma without MGMT promoter hypermethylation treated with enzastaurin and radiation therapy within 4 study periods. Results PFS-6 was 53.6% (95% confidence interval [CI]: 39.8-65.6). The median overall survival was 15.0 months (95% CI: 11.9-17.9) for all patients, 3.9 months (95% CI: 0.8-9.0) for patients with biopsy, 15.4 months (95% CI: 10.1-17.9) for patients with partial resection, and 18.9 months (95% CI: 13.9-28.5) for patients with complete resection. The safety profile in this study was as expected from previous trials, and the therapy was well tolerated. Conclusions PFS-6 missed the primary planned outcome of 55%. The secondary exploratory analysis according to resection status of the different subgroups of patients with biopsies, partial resection, and complete resection demonstrates the strong prognostic influence of resection on overall survival.

[382]

TÍTULO / TITLE: - A female patient with depression and conversion disorder following brain tumor surgery.

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

REVISTA / JOURNAL: - Aust N Z J Psychiatry. 2013 Aug 23.

●● Enlace al texto completo (gratis o de pago) [1177/0004867413503048](https://doi.org/10.1177/0004867413503048)

AUTORES / AUTHORS: - Szota A; Oglodek E; Araszkiwicz A

INSTITUCIÓN / INSTITUTION: - Department of Psychiatry, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun, Torun, Poland.

[383]

TÍTULO / TITLE: - Clinical characteristics and effects of GH replacement therapy in adults with childhood-onset craniopharyngioma compared with those in adults with other causes of childhood-onset hypothalamic-pituitary dysfunction.

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

REVISTA / JOURNAL: - Eur J Endocrinol. 2013 Sep 17;169(4):511-9. doi: 10.1530/EJE-13-0280. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1530/EJE-13-0280](https://doi.org/10.1530/EJE-13-0280)

AUTORES / AUTHORS: - Yuen KC; Koltowska-Haggstrom M; Cook DM; Fox JL; Jonsson PJ; Geffner ME; Abs R

INSTITUCIÓN / INSTITUTION: - Division of Endocrinology, Diabetes and Clinical Nutrition, Department of Medicine, Oregon Health and Science University, 3181 SW Sam Jackson Park Road, Mailcode: L607, Portland, Oregon 97239-3098, USA.

RESUMEN / SUMMARY: - **OBJECTIVE:** Adults with childhood-onset (CO) craniopharyngioma (COCP) have poor quality of life (QoL) and clinical outcomes, but few studies have compared these patients with adults with other causes of CO hypothalamic-pituitary dysfunction. In this study, we compared baseline clinical characteristics and patient-reported outcomes before starting GH replacement therapy in adults with GH deficiency (GHD) due to COCP with those of adults either with CO idiopathic/congenital hypopituitarism (COH) or with CO extrasellar (COE) tumours, and evaluated the 1- and 5-year effects of GH replacement therapy. **SUBJECTS AND METHODS:** Retrospective analysis of the data recorded in KIMS (Pfizer International Metabolic Database) was carried out. Patients with COCP, COH and COE tumours were evaluated at baseline, and after 1 and 5 years of therapy. **RESULTS:** Compared with COH and COE patients, more COCP patients underwent surgery, had greater abnormalities of body composition and higher prevalence of pituitary hormone deficits (all $P < 0.001$), but comparable fasting glucose, HbA1c, total cholesterol and LDL-cholesterol levels, marital status, parenthood, living arrangements, education, employment and annual sick-leave days. After 1 and 5 years of GH replacement therapy, similar changes were evident with regard to body composition, fasting glucose and HbA1c levels, QoL, and the level of and satisfaction with physical activity across the three groups. **CONCLUSIONS:** Adults with untreated COCP with GHD at baseline demonstrated more co-morbidities including greater abnormalities of body composition, pituitary hormone deficits and visual field defects. Overall, adults with COCP, COH and COE tumours responded comparably to short- and long-term GH replacement therapy, suggesting that patients with GHD due to COCP benefited from GH replacement therapy to a similar degree as those with other causes of CO hypothalamic-pituitary dysfunction did.

[384]

TÍTULO / TITLE: - Invasion of histiocytic sarcoma into the spinal cord of HTLV-1 tax transgenic mice with HTLV-1-associated myelopathy/tropical spastic paraparesis-like disease.

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

REVISTA / JOURNAL: - Oncol Res. 2013;20(9):403-10. doi:
10.3727/096504013X13657689383058.

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

[3727/096504013X13657689383058](https://doi.org/10.3727/096504013X13657689383058)

AUTORES / AUTHORS: - Ohsugi T; Wakamiya M; Morikawa S; Matsuura K; Kumar JM;
Kumasaka T; Yamaguchi K

INSTITUCIÓN / INSTITUTION: - Division of Microbiology and Genetics, Institute of Resource
Development and Analysis, Kumamoto University, Kumamoto, Japan.

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RESUMEN / SUMMARY: - Human T-cell leukemia virus type 1 (HTLV-1) can cause an
aggressive malignancy known as adult T-cell leukemia/lymphoma (ATLL) as well as
inflammatory diseases such as HTLV-1-associated myelopathy/tropical spastic
paraparesis (HAM/TSP). Transgenic (Tg) mice expressing HTLV-1 Tax also develop T-cell
leukemia/lymphoma and an inflammatory arthropathy that resembles rheumatoid
arthritis. We found that 8 of 297 Tax-Tg mice developed HAM/TSP-like disease with
symmetrical paraparesis of the hind limbs, but these symptoms were absent in non-Tg
littermates and in other mice strains at our animal facilities. We could perform
detailed evaluations for five of these mice. These evaluations showed that the disease
was not inflammatory, unlike that in HAM/TSP patients, but instead involved the
invasion of histiocytic sarcoma cells into the lumbar spinal cord from the bone marrow
where they had undergone extensive proliferation.

[385]

TÍTULO / TITLE: - Cumulative cisplatin dose is not associated with event-free or overall
survival in children with newly diagnosed average-risk medulloblastoma treated with
cisplatin based adjuvant chemotherapy: Report from the Children's Oncology Group.

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

REVISTA / JOURNAL: - Pediatr Blood Cancer. 2013 Aug 19. doi: 10.1002/ptbc.24670.

●● Enlace al texto completo (gratis o de pago) [1002/ptbc.24670](https://doi.org/10.1002/ptbc.24670)

AUTORES / AUTHORS: - Rao AA; Wallace DJ; Billups C; Boyett JM; Gajjar A; Packer RJ

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Hematology/Oncology, Department of
Pediatrics and Adolescent Medicine, Mayo Clinic, Rochester, Minnesota.

RESUMEN / SUMMARY: - BACKGROUND: Survival rates for children with medulloblastoma
have risen over the past decade, in part due to the addition of cisplatin-containing
adjuvant chemotherapy. Total dose of cisplatin required for optimal treatment is
unknown. The purpose of this study was to evaluate the survival outcomes based on
cumulative cisplatin doses (CCD) in children with newly diagnosed average-risk
medulloblastoma. PROCEDURE: CCD data were reviewed for 363 patients in a
prospective study evaluating patients between 3 and 21 years with a newly diagnosed
average-risk medulloblastoma and treated with craniospinal radiation and post-

radiation cisplatin based adjuvant chemotherapy. RESULTS: Eight-year event-free survival (EFS) and overall survival (OS) estimates were 78.2 +/- 2.6% and 83.9 +/- 2.4%, respectively. Only 73 patients received the protocol specified CCD of 600 mg/m², primarily due to mandated cisplatin toxicity-related dose reductions. The median CCD given to those without relapse or death on treatment was 487.5 mg/m². CCD, as a time-dependent covariate, was not associated with EFS (P = 0.54) or OS (P = 0.11). The 343 patients who completed chemotherapy failure-free were categorized into four groups according to CCD (n = 10; 75-150 mg/m²), (n = 26; 151-300 mg/m²), (n = 113; 301-450 mg/m²), and (n = 194; 451-600 mg/m²). There were no statistically significant differences in distributions of EFS (P = 0.53) or OS (P = 0.49) among these four groups. CONCLUSION: CCD is not associated with EFS or OS suggesting that lower doses of cisplatin may be incorporated into future medulloblastoma trials, thereby limiting its toxicity profile without affecting survival. If ototoxicity is encountered, more stringent cisplatin dose modification/cessation rules seem warranted. *Pediatr Blood Cancer*. © 2013 Wiley Periodicals, Inc.

[386]

TÍTULO / TITLE: - Histone deacetylase inhibitors restore toxic BH3 domain protein expression in anoikis resistant mammary and brain cancer stem cells thereby enhancing the response to anti-ERBB1/ERBB2 therapy.

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

REVISTA / JOURNAL: - *Cancer Biol Ther*. 2013 Aug 22;14(10).

AUTORES / AUTHORS: - Cruickshanks N; Hamed HA; Booth L; Tavallai S; Syed J; Sajithlal GB; Grant S; Poklepovic A; Dent P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery; Virginia Commonwealth University; Richmond, VA USA.

RESUMEN / SUMMARY: - The present studies focused on defining the mechanisms by which anoikis resistant (AR) mammary carcinoma cells can be reverted to a therapy-sensitive phenotype. AR mammary carcinoma cells had reduced expression of the toxic BH3 domain proteins BAX, BAK, NOXA, and PUMA. In AR cells expression of the protective BCL-2 family proteins BCL-XL and MCL-1 was increased. AR cells were resistant to cell killing by multiple anti-tumor cell therapies, including ERBB1/2 inhibitor + MCL-1 inhibitor treatment, and had a reduced autophagic flux response to these therapies, despite similarly exhibiting increased levels of LC3II processing. Knock down of MCL-1 and BCL-XL caused necro-apoptosis in AR cells to a greater extent than in parental cells. Pre-treatment of anoikis-resistant cells with histone deacetylase inhibitors (HDACIs) for 24 h increased the levels of toxic BH3 domain proteins, reduced MCL-1 levels, and restored/re-sensitized the cell death response of AR tumor cells to multiple toxic therapies. In vivo, pre-treatment of AR breast tumors in the brain with valproate restored the chemo-sensitivity of the tumors and prolonged animal survival.

These data argue that one mechanism to enhance the anti-tumor effect of chemotherapy could be HDACI pre-treatment.

[387]

TÍTULO / TITLE: - Prevalence of obstructive sleep apnea in patients with prolactinoma before and after treatment with dopamine agonists.

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

REVISTA / JOURNAL: - Pituitary. 2013 Sep 26.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11102-013-0524-y](#)

AUTORES / AUTHORS: - Barbosa FR; Dos Santos Silva CM; Lima GA; Warszawski L; Domingues RC; Dominic M; Fontes R; Neto LV; 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, Rua Prof. Rodolpho Paulo Rocco, 255, 9th Floor, Ilha do Fundao, Rio de Janeiro, 21941-913, Brazil.

RESUMEN / SUMMARY: - **OBJECTIVES:** Obesity is the main risk factor for the development of obstructive sleep apnea (OSA). Hyperprolactinemia has also been related to obesity. To determine the OSA prevalence in patients with prolactinoma before and after dopamine agonist (DA) and to evaluate the correlation between the apnea-hypopnea index (AHI) and prolactin levels, body mass index (BMI), waist circumference (WC), visceral fat volume (VFV), subcutaneous fat volume, and other metabolic parameters. **METHODS:** Thirty-five patients with prolactinoma at baseline and twenty-one who completed the 6-month DA treatment were submitted to clinical/laboratorial evaluations, polysomnography and abdominal imaging. **RESULTS:** Before treatment, the prevalence of obesity/overweight and OSA were, respectively, 68.5 and 34.2 %. We found a positive correlation between AHI and weight ($r = 0.57$; $p < 0.001$), BMI ($r = 0.56$; $p < 0.001$), WC ($r = 0.61$; $p < 0.001$), VFV ($r = 0.55$; $p = 0.002$), insulin levels ($r = 0.57$; $p < 0.001$), and HOMA-IR index ($r = 0.57$; $p < 0.001$); and a negative correlation between AHI and HDL-cholesterol ($r = -0.47$; $p = 0.005$). After multivariate analysis, VFV and insulin levels were the most important predictors for AHI ($p = 0.001$ and $p = 0.02$, respectively). After DA, the obesity/overweight and OSA prevalence did not change. **CONCLUSIONS:** The OSA prevalence in patients with prolactinoma is similar to the obese subjects and did not change after treatment. Higher BMI and visceral obesity, but not prolactin levels, seem to be the major factor involved in the occurrence of OSA in these patients.

[388]

TÍTULO / TITLE: - Validation of the Korean version of the European Organization for Research and Treatment of Cancer brain cancer module (EORTC QLQ-BN20) in patients with brain tumors.

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

REVISTA / JOURNAL: - Health Qual Life Outcomes. 2013 Aug 27;11(1):145.

●● Enlace al texto completo (gratis o de pago) [1186/1477-7525-11-145](#)

AUTORES / AUTHORS: - Shin YS; Kim JH

RESUMEN / SUMMARY: - BACKGROUND: The European Organization for Research and Treatment of Cancer Quality of Life Brain Cancer Module has been translated into Korean, but to date, its reliability and validity have been evaluated in a pilot study alone. The European Organization for Research and Treatment of Cancer Quality of Life Core Questionnaire is, overall, a valid instrument to assess the health-related quality of life in Korean cancer patients, although its reliability and validity have not yet been evaluated in patients with brain tumors. This study aimed at evaluating the psychometric properties of these instruments in patients with brain tumors. FINDINGS: The 2 instruments were used for 307 Korean patients with brain tumors. Multi-trait scaling confirmed the scale structure of the instruments with good item convergent and discriminant validity. The reliability was acceptable for all scales except for cognitive functioning and nausea and vomiting. The instruments could be used to distinguish between clinically distinct groups of patients. CONCLUSIONS: The study findings indicate that the instruments are valid and suitable for the assessment of the health-related quality of life in patients with brain tumors as well as in those with primary brain cancer.

[389]

TÍTULO / TITLE: - Cerebral hyperaemia after isoflurane anaesthesia for craniotomy of patients with supratentorial brain tumour.

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

REVISTA / JOURNAL: - Acta Anaesthesiol Scand. 2013 Aug 23. doi: 10.1111/aas.12176.

●● Enlace al texto completo (gratis o de pago) [1111/aas.12176](#)

AUTORES / AUTHORS: - Yang XY; Zhou SJ; Yu YF; Shen YF; Xu HZ

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

RESUMEN / SUMMARY: - BACKGROUND: Few studies look into cerebral blood flow (CBF) changes during emergence from general anaesthesia for craniotomy. The purpose of this study was to assess CBF changes during emergence from general anaesthesia for craniotomy, through monitoring blood oxygen saturation of jugular vein bulb (SjvO₂) and transcranial Doppler (TCD). METHODS: We enrolled 30 patients undergoing selective craniotomy (group C) for supratentorial brain tumour resection and 30 patients undergoing selective abdominal surgery (group A). Mean velocity of middle

cerebral artery (Vmca), mean arterial pressure (MAP), S_{iv}O₂ (only measured in group C), and arterial CO₂ partial pressure were measured before anaesthesia, at tracheal extubation, and 30, 60, 90, 120 min after extubation. RESULTS: Vmca of the same side of tumour was significantly higher than contralateral Vmca before anaesthesia and at all times after extubation in group C. The ipsilateral Vmca increased significantly (95.7 +/- 16.9 cm/s vs. 63.7 +/- 6.7 cm/s, P < 0.01) at extubation in group C, then declined but still above baseline significantly in the first 2 h after extubation. While Vmca of the right side changed only slightly (63.6 +/- 7.7 cm/s vs. 61.8 +/- 8.1 cm/s, P < 0.01) but significantly at extubation in group A. S_{iv}O₂ increased significantly (81.4% +/- 7.4% vs. 60.9% +/- 3.7%, P < 0.01) at extubation in group C, and remained above baseline significantly for 2 h. There was no significant correlation between Vmca and MAP at any time. CONCLUSIONS: Cerebral hyperaemia occurs after supratentorial brain tumour resection surgery. The hyperaemia is more pronounced on the same side as the tumour.

[390]

- CASTELLANO -

TÍTULO / TITLE: Gleichzeitige und adjuvante Temozolomid-basierte Chemoradiotherapie zur Glioblastombehandlung : Hypothesen aus zwei prospektiven Phase-II-Studien.

TÍTULO / TITLE: - Concurrent and adjuvant temozolomide-based chemoradiotherapy schedules for glioblastoma : Hypotheses based on two prospective phase II trials.

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

REVISTA / JOURNAL: - Strahlenther Onkol. 2013 Aug 24.

●● Enlace al texto completo (gratis o de pago) 1007/s00066-013-0410-6

AUTORES / AUTHORS: - Balducci M; Fiorentino A; De Bonis P; Chiesa S; Mangiola A; Mattiucci GC; D'Agostino GR; Frascino V; Mantini G; Alitto AR; Colosimo C; Anile C; Valentini V

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Catholic University of the Sacred Heart, Largo A. Gemelli, 00135, Rome, Italy.

RESUMEN / SUMMARY: - AIM: To investigate the impact of nonstandard concomitant temozolomide (TMZ) administration in two prospective phase II studies for glioblastoma (GBM). PATIENTS AND METHODS: From October 2000 to June 2008, 104 patients were enrolled in two studies: 25 in RT-TMZ-10.00 and 79 in RT-TMZ-01.04. Adjuvant radiotherapy (RT) was used with a total dose of 59.4 Gy (1.8 Gy/day). Patients received concomitant TMZ (75 mg/m²/day) from Monday to Friday during the first and last weeks of RT in the RT-TMZ-10.00 study and from Monday to Friday during all weeks of RT in the RT-TMZ-01.04 trial. Adjuvant TMZ (200 mg/m²) was administered for 5 days every 28 days. RESULTS: Median progression-free (PFS) and overall survival (OS) were 9 and 16 months, respectively, with no significant difference between the two groups (p = 0.5 and 0.14, respectively). The 2- and 5-year OS rates

were 32 and 3 %, respectively, and similar to those observed with standard treatment regimens. CONCLUSION: Our data support the hypothesis that adjuvant TMZ is more important than concomitant chemotherapy (CH) and that RT is the more important element of the concomitant treatment schedule.

[391]

TÍTULO / TITLE: - The relationship between thyroid dose and diagnosis of primary hypothyroidism in pediatric brain tumor patients receiving craniospinal irradiation.

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

REVISTA / JOURNAL: - J Pediatr Endocrinol Metab. 2013 Sep 20:1-5. doi: 10.1515/jpem-2013-0063.

●● Enlace al texto completo (gratis o de pago) [1515/jpem-2013-0063](#)

AUTORES / AUTHORS: - Lauro C; Macy ME; Zeitler P; Backus J; Mettler P; Foreman N; Liu AK

RESUMEN / SUMMARY: - Abstract Purpose: The aim of this work is to determine if a relationship exists between thyroid dose and incidence of primary hypothyroidism (PH) in children undergoing craniospinal irradiation (CSI). Methods: A total of 22 patients received CSI with evaluable thyroid dose information. All patients received concurrent chemotherapy and 21 patients (95%) received adjuvant chemotherapy. Median follow-up was 42.9 months. Results: The incidence of PH in our cohort was 59% at a median time after radiotherapy of 3.5 years (range: 8 months to 7.5 years). Mean thyroid dose appeared to best predict for PH, with a median of 2080 cGy for patients with PH versus 1736 cGy for children without PH (p=0.057). There was no association between the rate of PH and sex, age, CSI dose, minimum thyroid dose and maximum thyroid dose. Conclusions: A relationship may exist between the mean thyroid dose and incidence of PH in patients undergoing CSI. Thus, new strategies to protect the thyroid gland may be warranted.

[392]

TÍTULO / TITLE: - Phase II study of cilengitide in the treatment of refractory or relapsed high-grade gliomas in children: A report from the Children's Oncology Group.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Oct;15(10):1438-44. doi: 10.1093/neuonc/not058. Epub 2013 Sep 5.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not058](#)

AUTORES / AUTHORS: - Macdonald TJ; Vezina G; Stewart CF; Turner D; Pierson CR; Chen L; Pollack IF; Gajjar A; Kieran MW

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Tobey J. MacDonald, MD, Emory Children's Center, Aflac Cancer and Blood Disorders Center, 2015 Uppergate Drive NE, Suite 442, Atlanta, GA 30322. tobey.macdonald@emory.edu.

RESUMEN / SUMMARY: - Background Cilengitide, an alphav integrin antagonist, has demonstrated activity in recurrent adult glioblastoma (GBM). The Children's Oncology Group ACNS0621 study thus evaluated whether cilengitide is active as a single agent in the treatment of children with refractory high-grade glioma (HGG). Secondary objectives were to investigate the pharmacokinetics and pharmacogenomics of cilengitide in this population. Methods Cilengitide (1800 mg/m²/dose intravenous) was administered twice weekly until evidence of disease progression or unacceptable toxicity. Thirty patients (age range, 1.1-20.3 years) were enrolled, of whom 24 were evaluable for the primary response end point. Results Toxicity was infrequent and mild, with the exception of one episode of grade 2 pain possibly related to cilengitide. Two intratumoral hemorrhages were reported, but only one (grade 2) was deemed to be possibly related to cilengitide and was in the context of disease progression. One patient with GBM received cilengitide for 20 months and remains alive with continuous stable disease. There were no other responders, with median time to tumor progression of 28 days (range, 11-114 days). Twenty-one of the 24 evaluable patients died, with a median time from enrollment to death of 172 days (range, 28-325 days). The 3 patients alive at the time of this report had a follow-up time of 37, 223, and 1068 days, respectively. Conclusions We conclude that cilengitide is not effective as a single agent for refractory pediatric HGG. However, further study evaluating combination therapy with cilengitide is warranted before a role for cilengitide in the treatment of pediatric HGG can be excluded.

[393]

TÍTULO / TITLE: - Conventional magnetic resonance imaging in the differentiation between high and low-grade brain tumours in paediatric patients.

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

REVISTA / JOURNAL: - Eur J Paediatr Neurol. 2013 Aug 24. pii: S1090-3798(13)00127-X. doi: 10.1016/j.ejpn.2013.07.004.

●● Enlace al texto completo (gratis o de pago) 1016/j.ejpn.2013.07.004

AUTORES / AUTHORS: - Porto L; Jurcoane A; Schwabe D; Hattingen E

INSTITUCIÓN / INSTITUTION: - Department of Neuroradiology of the Johann Wolfgang Goethe University, Frankfurt/Main, Germany. Electronic address: luciana.porto@kgu.de.

RESUMEN / SUMMARY: - OBJECTIVE: It has been described that hyperintensity in diffusion-weighted imaging (DWI) correlates with high-grade tumours, and high signal-intensity in T2-weighted (T2w) images identifies low-grade tumours. We aimed to investigate the potential of routine conventional MRI sequences, such as DWI and T2-

w, to pre-operatively distinguish between low-grade and high-grade brain tumours in paediatric patients. MATERIAL AND METHODS: Two raters, blinded to the histological diagnosis, rated the aspect and signal intensity of MR images (T2w and DWI) from 37 children with newly diagnosed brain tumours. Histological diagnoses included 18 low-grade and 19 high-grade brain tumours. RESULTS: The inter-rater agreement was 81-95%. High-grade tumours were never hypointense on DWI and low-grade tumours were usually hyperintense on T2w. Specificity was 100% for low-grade tumours and 90% for high-grade tumours. About 95% of the high-grade tumours and about 70% of the low-grade tumours were correctly diagnosed. CONCLUSION: The combination of general morphological aspect of the tumours and signals on T2-w and DWI yield a high accuracy of pre-operative differentiation between low-grade and high-grade paediatric tumours.

[394]

TÍTULO / TITLE: - Primary CNS lymphoma arising in the region of the optic nerve presenting as loss of vision: 2 case reports, including a patient with a massive intracerebral hemorrhage.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Sep 3.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10014-013-0159-8](#)

AUTORES / AUTHORS: - Matsuyama J; Ichikawa M; Oikawa T; Sato T; Kishida Y; Oda K; Maeda T; Yamada M; Kuromi Y; Matsumoto Y; Ando H; Sakuma J; Saito K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Fukushima Medical University, 1 Hikarigaoka, Fukushima, 960-1295, Japan, junko9106@hotmail.com.

RESUMEN / SUMMARY: - We report 2 cases of primary central nervous system (CNS) lymphoma arising in the region of the optic nerve. For both patients, diagnosis of lymphoma was impossible without histological examination because of the rarity of the lymphoma location. The first case involved an 84-year-old woman who developed loss of vision and hypopituitarism. Intraoperative finding was optic glioma; histological diagnosis was diffuse large B cell lymphoma, however. The second case involved a 67-year-old man who developed loss of vision. The pre-surgical diagnosis was optic nerve neuritis; this was then revised to granuloma. The tumor arose in the optic nerve. Methotrexate and rituximab were administered and the patient remained in complete remission for 3 years. However, a sudden intratumoral hemorrhage occurred. Although most of the lymphoma cells obtained from the initial surgery were negative for vascular endothelial growth factor (VEGF) immunoreactivity, high levels of VEGF immunoreactivity in lymphoma cells was detected in the specimen obtained after intratumoral bleeding at recurrence, and correlation between VEGF reactivity and tumor recurrence was suggested. To date, primary CNS lymphomas with intracerebral hemorrhage have been reported in 3 cases only, and a correlation between

intratumoral hemorrhage and the degree of VEGF expression has been suggested. VEGF also might have predictive significance for recurrence.

[395]

TÍTULO / TITLE: - Inpatient palliative care consultation for patients with glioblastoma in a tertiary hospital.

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

REVISTA / JOURNAL: - Intern Med J. 2013 Aug;43(8):942-5. doi: 10.1111/imj.12211.

●● Enlace al texto completo (gratis o de pago) [1111/imj.12211](#)

AUTORES / AUTHORS: - Lin E; Rosenthal MA; Eastman P; Le BH

INSTITUCIÓN / INSTITUTION: - Department of Palliative Care, Royal Melbourne Hospital, Melbourne, Victoria, Australia. esther.lin@ocv.net.au

RESUMEN / SUMMARY: - Glioblastoma (GBM) is an uncommon disease with significant mortality and morbidity, but there is a lack of published evidence on palliative care involvement with this population. This audit highlights the heavy symptom burden, extensive allied health involvement and discharge outcomes of GBM inpatients referred to the palliative care service at The Royal Melbourne Hospital. This information can provide an important framework for further research and also supports the role of multidisciplinary palliative care in the care of patients with GBM.

[396]

TÍTULO / TITLE: - Variability in Quantitative Expression of Receptors in Non - Functioning Pituitary Macroadenomas - An Opportunity for Targeted Medical Therapy.

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

REVISTA / JOURNAL: - Endocr Pract. 2013 Sep 6:1-28.

●● Enlace al texto completo (gratis o de pago) [4158/EP12411.OR](#)

AUTORES / AUTHORS: - Babu A; Luque R; Glick R; Utset M; Fogelfeld L

INSTITUCIÓN / INSTITUTION: - Department of Internal Medicine, Division of Endocrinology, John Stroger Hospital of Cook County, Chicago, Illinois Rush University Medical Center, Chicago, IL.

RESUMEN / SUMMARY: - Objective: The surgical removal of non-functioning pituitary macroadenoma (NFP-Mac) is often incomplete. The appropriate treatment of recurrent/residual NFP-Mac is not well established. Our objective was to detect and quantify receptors that may serve as potential targets for medical therapy in NFP-Mac with post-surgical residuals. Methods: Seventeen adult patients with NFP-Mac who underwent surgery had quantitative analysis of several classes of pituitary receptors by Quantitative Reverse Transcriptase-Polymerase Chain Reaction. Results: The median age was 50 years (76% males). On MRI, the mean diameter was 3.3±1.02 cm. Somatostatin receptors (SSTR) and dopamine receptor (DR) subtypes were found in

almost all tumors. Based on previous studies, we postulated a cutoff of $\geq 2,000$ receptors copies at which a response to therapy may occur. This cutoff was found in: SSTR3 in 3 patients, SSTR2 in 2, SSTR1 and SSTR5 in one patient each, DR2total in 13, DR2short considered being the most responsive to dopamine agonists in 10, DR2 long, DR5, DR4 and DR1 in 7, 3, 2 and one, respectively. Tumor size, invasiveness score, immunochemistry, gender, age, clinical symptoms and post-operative residual tumor growth did not correlate with the type or copy number of receptors mRNA. Conclusion: NFP-Mac with significant post surgical tumor residuals contained several subtypes of dopamine and somatostatin receptors, some with high copy numbers. Receptor composition of NFP-Mac may guide future clinical research of targeted treatment strategies to reduce residual tumor volume. Such studies would determine potential threshold of receptor levels for response to therapy for existing dopaminergic agonists and somatostatin analogs.

[397]

TÍTULO / TITLE: - An Overview of the Management of Adult Ependymomas with Emphasis on Relapsed Disease.

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

REVISTA / JOURNAL: - Clin Oncol (R Coll Radiol). 2013 Aug 20. pii: S0936-6555(13)00299-9. doi: 10.1016/j.clon.2013.07.009.

●● Enlace al texto completo (gratis o de pago) [1016/j.clon.2013.07.009](#)

AUTORES / AUTHORS: - Iqbal MS; Lewis J

INSTITUCIÓN / INSTITUTION: - Northern Centre for Cancer Care, Freeman Hospital, Newcastle upon Tyne, UK. Electronic address: shahid.iqbal@nhs.net.

[398]

TÍTULO / TITLE: - A dosimetric comparison of intensity-modulated proton therapy optimization techniques for pediatric craniopharyngiomas: A clinical case study.

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

REVISTA / JOURNAL: - Pediatr Blood Cancer. 2013 Sep 2. doi: 10.1002/pbc.24593.

●● Enlace al texto completo (gratis o de pago) [1002/pbc.24593](#)

AUTORES / AUTHORS: - Yeung D; McKenzie C; Indelicato DJ

INSTITUCIÓN / INSTITUTION: - University of Florida Proton Therapy Institute, Jacksonville, Florida.

RESUMEN / SUMMARY: - BACKGROUND: To evaluate the dosimetric characteristics of intensity-modulated proton therapy (IMPT) optimization techniques and pencil-beam scanning (PBS) nozzle designs on pediatric craniopharyngiomas. PROCEDURE: We compared a double-scatter (DS) plan with IMPT plans using single-field uniform dose (SFUD) optimization or multi-field optimization (MFO) and different PBS nozzles. The

clinical impacts of SFUD versus MFO, range shifters, and two different PBS nozzles were compared. For target coverage assessment, the conformity index and inhomogeneity coefficient were evaluated. RESULTS: Although both proton therapy techniques achieved adequate target coverage, IMPT achieved a better conformity index of 0.78 versus 0.60 for DS. For the inhomogeneity coefficient, IMPT with MFO performed better than using SFUD or DS. MFO with the dedicated nozzle (MFO-DN) achieved the best result of 0.023, as compared to values of 0.03 or higher for the other plans. IMPT achieved lower doses to the normal tissues, as compared to DS; MFO-DN had the best results. The DN provided the best beam-spot characteristics and the sharpest lateral penumbra. MFO reduced the need for range shifters. CONCLUSIONS: As compared to DS proton therapy for pediatric craniopharyngiomas, IMPT achieved significantly better target coverage and dose sparing of normal tissue. Nozzle designs that provided small beam spots and sharp lateral penumbra allowed for better target coverage and reduced dose to normal tissue. In the case of shallow targets, MFO, in contrast to SFUD, required minimal use of range shifters, which preserved the penumbra and the dosimetric advantage. MFO-DN proved to be the optimal technique for IMPT. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[399]

TÍTULO / TITLE: - Psychological distress symptoms' clusters in brain tumor patients: factor analysis of depression and anxiety scales.

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

REVISTA / JOURNAL: - *Psychooncology*. 2013 Aug 3. doi: 10.1002/pon.3354.

●● Enlace al texto completo (gratis o de pago) [1002/pon.3354](#)

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

INSTITUCIÓN / INSTITUTION: - Behavioral Medicine Institute, Lithuanian University of Health Sciences, Palanga, Lithuania; Department of Neurosurgery, Lithuanian University of Health Sciences, Kaunas, Lithuania; Department of Neurology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA.

[400]

TÍTULO / TITLE: - A pediatric patient with Cushing syndrome caused by ectopic ACTH syndrome and concomitant pituitary incidentalomas.

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

REVISTA / JOURNAL: - *J Pediatr Endocrinol Metab*. 2013 Aug 14:1-6. doi: 10.1515/jpem-2013-0070.

●● Enlace al texto completo (gratis o de pago) [1515/jpem-2013-0070](#)

AUTORES / AUTHORS: - Goldberg AS; Stein R; Merritt NH; Inculet R; Van Uum S

RESUMEN / SUMMARY: - Abstract Ectopic ACTH syndrome is a rare but important cause of pediatric Cushing syndrome, for which management by a multidisciplinary team is required. Although diagnostic evaluation is similar to that in adults, the variation in epidemiology may sway investigations, leading to inappropriate and/or incomplete diagnostic interventions. We present a case of 15-year-old girl with symptoms of severe ACTH-dependent Cushing syndrome and two pituitary adenomas. The ectopic source of ACTH production was confirmed after petrosal venous sampling was performed. Diagnostics and perioperative management of a pulmonary carcinoid tumor producing ectopic ACTH is reviewed. In pediatric patients, as in adult patients, a pituitary lesion <6 mm on MRI is not sufficient confirmation of Cushing's disease, and appropriate diagnostic work-up should be performed to assess the source of the ACTH overproduction.

[401]

TÍTULO / TITLE: - Endoscopic endonasal approach for pituitary adenomas: a series of 555 patients.

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

REVISTA / JOURNAL: - Pituitary. 2013 Aug 2.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11102-013-0502-4](#)

AUTORES / AUTHORS: - Paluzzi A; Fernandez-Miranda JC; Tonya Stefko S; Challinor S; Snyderman CH; Gardner PA

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, UPMC Presbyterian Hospital, University of Pittsburgh School of Medicine, 200 Lothrop Street, Suite B-400, Pittsburgh, PA, 15213, USA.

RESUMEN / SUMMARY: - **PURPOSE:** To report the results of a consecutive series of patients who underwent an endoscopic endonasal approach (EEA) for resection of a pituitary adenoma and compare them to previous series of microscopic and endoscopic approaches. **METHODS:** A retrospective review of clinical and radiographic outcomes of a consecutive series of patients operated at our center between 2002 and 2011 was performed. **RESULTS:** 555 patients underwent an EEA for removal of a pituitary adenoma. The mean follow up was 3.1 years (range 3 months to 9.5 years); 36 were lost to follow up. Ninety-one (17.5 %) harbored recurrent adenomas. An expanded approach to reach the supra-, para- and infra-sellar spaces was employed in 290 patients (55.9 %). Reconstruction with a nasal septal flap was used in 238 cases (65.6 %). The rate of gross total resection was 65.3 % in the 359 patients with non-functioning adenomas. The remission rates with EEA alone were 82.5 % in the 57 ACTH-secreting adenomas, 65.3 % in the 49 GH-secreting adenomas and 54.7 % in the 53 prolactinomas. Of the 237 patients presenting with visual loss, 190 (80.2 %) improved or normalized, 41 (17.3 %) remained unchanged and 4 (1.7 %) experienced transient visual deterioration due to postoperative apoplexy. In addition, no patient

without preexisting visual loss suffered new visual decline. The overall post-operative CSF leak rate was 5 % and this decreased to 2.9 % after the introduction of reconstruction with the naso-septal flap. Two patients (0.3 %) had an ICA injury. CONCLUSIONS: The EEA is a safe and effective way to surgically approach pituitary adenomas, particularly in recurrent tumors, those with supra-sellar extension or cavernous sinus invasion. The remission and complication rates are comparable or favorable compared with those reported in previous series of microscopic and endoscopic approaches.

[402]

TÍTULO / TITLE: - Bilateral Fallopian Canal Arachnoid Cysts in a Patient With Spontaneous Cerebrospinal Fluid Otorrhea.

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

REVISTA / JOURNAL: - Otol Neurotol. 2013 Aug 7.

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

[1097/MAO.0b013e318292fcd7](#)

AUTORES / AUTHORS: - Allen KP; Roland PS

INSTITUCIÓN / INSTITUTION: - University of Texas Southwestern Medical Center, 5303 Harry Hines Blvd, Dallas, TX, U.S.A.

[403]

TÍTULO / TITLE: - A retrospective comparison between Ga-DOTA-TOC PET/CT and F-DOPA PET/CT in patients with extra-adrenal paraganglioma.

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

REVISTA / JOURNAL: - Eur J Nucl Med Mol Imaging. 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [1007/s00259-013-2548-y](#)

AUTORES / AUTHORS: - Kroiss A; Putzer D; Frech A; Decristoforo C; Uprimny C; Gasser RW; Shulkin BL; Url C; Widmann G; Prommegger R; Sprinzl GM; Fraedrich G; Virgolini IJ

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine, Innsbruck Medical University, Anichstrasse 35, 6020, Innsbruck, Austria, alexander.kroiss@i-med.ac.at.

RESUMEN / SUMMARY: - PURPOSE: 18F-Fluoro-L-dihydroxyphenylalanine (18F-DOPA) PET offers high sensitivity and specificity in the imaging of nonmetastatic extra-adrenal paragangliomas (PGL) but lower sensitivity in metastatic or multifocal disease. These tumours are of neuroendocrine origin and can be detected by 68Ga-DOTA-Tyr3-octreotide (68Ga-DOTA-TOC) PET. Therefore, we compared 68Ga-DOTA-TOC and 18F-DOPA as radiolabels for PET/CT imaging for the diagnosis and staging of extra-adrenal PGL. Combined cross-sectional imaging was the reference standard. METHODS: A total of 5 men and 15 women (age range 22 to 73 years) with anatomical and/or histologically proven extra-adrenal PGL were included in this study. Of these patients,

5 had metastatic or multifocal lesions and 15 had single sites of disease. Comparative evaluation included morphological imaging with CT and functional imaging with 68Ga-DOTA-TOC PET and 18F-DOPA PET. The imaging results were analysed on a per-patient and a per-lesion basis. The maximum standardized uptake value (SUVmax) of each functional imaging modality in concordant tumour lesions was measured. RESULTS: Compared with anatomical imaging, 68Ga-DOTA-TOC PET and 18F-DOPA PET each had a per-patient and per-lesion detection rate of 100 % in nonmetastatic extra-adrenal PGL. However, in metastatic or multifocal disease, the per-lesion detection rate of 68Ga-DOTA-TOC was 100 % and that of 18F-DOPA PET was 56.0 %. Overall, 68Ga-DOTA-TOC PET identified 45 lesions; anatomical imaging identified 43 lesions, and 18F-DOPA PET identified 32 lesions. The overall per-lesion detection rate of 68Ga-DOTA-TOC PET was 100 % (McNemar, $P < 0.5$), and that of 18F-DOPA PET was 71.1 % (McNemar, $P < 0.001$). The SUVmax (mean \pm SD) of all 32 concordant lesions was 67.9 \pm 61.5 for 68Ga-DOTA-TOC PET and 11.8 \pm 7.9 for 18F-DOPA PET (Mann-Whitney U test, $P < 0.0001$). CONCLUSION: 68Ga-DOTA-TOC PET may be superior to 18F-DOPA PET and diagnostic CT in providing valuable information for pretherapeutic staging of extra-adrenal PGL, particularly in surgically inoperable tumours and metastatic or multifocal disease.

[404]

TÍTULO / TITLE: - Readability assessment of internet-based patient education materials related to acoustic neuromas.

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

REVISTA / JOURNAL: - Otol Neurotol. 2013 Sep;34(7):1349-54. doi: 10.1097/MAO.0b013e31829530e5.

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

[1097/MAO.0b013e31829530e5](#)

AUTORES / AUTHORS: - Cherla DV; Sanghvi S; Choudhry OJ; Jyung RW; Eloy JA; Liu JK

INSTITUCIÓN / INSTITUTION: - *Department of Otolaryngology-Head and Neck Surgery, daggerDepartment of Neurological Surgery, and double daggerCenter for Skull Base and Pituitary Surgery, Neurological Institute of New Jersey, Rutgers University-New Jersey Medical School, Newark, New Jersey, U.S.A.

RESUMEN / SUMMARY: - OBJECTIVE: The objectives of this study were to assess the readability of Internet-based patient education materials related to acoustic neuromas (AN-IPEMs) by 4 widely validated readability indices, to evaluate scores against the existing sixth grade recommended reading level, and to compare the readability scores of patient education materials (PEMs) produced by professional organizations, clinical practices, hospitals, and miscellaneous sources. MATERIALS AND METHODS: AN-IPEMs from 67 web sites (6 professional societies, 33 clinical practices, 19 hospitals, and 9 miscellaneous) were assessed using Flesch Reading Ease Score (FRES), Flesch-Kincaid

Grade Level (FKGL), Simple Measure of Gobbledygook (SMOG), and Gunning Frequency of Gobbledygook (Gunning FOG). Scores were then evaluated against national recommendations by 1-tailed t tests and against each other using 1-way ANOVAs. RESULTS: The average FKGL, SMOG, and Gunning FOG scores were all significantly higher than the recommended sixth grade reading level suggested by the USDHHS ($p < 0.0001$, single sample 1-tailed t test). Zero articles, by all indices, had a reading level equal to or below the sixth grade reading level. The FKGLs also varied between the various sources at a significant level ($p = 0.01$ one-way ANOVA independent samples). The average FKGLs of clinical practice and professional society AN-IPEMs were significantly higher than the average FKGLs of hospital AN-IPEMs (both $p \leq 0.05$ one-tailed t-tests assuming unequal variances). CONCLUSION: AN-IPEMs are written at a level significantly higher than that suggested by national recommendations. Current AN-IPEMs may need to be revised in order to enhance patient comprehension.

[405]

TÍTULO / TITLE: - Multiple cutaneous hemangiomas in a patient with combined pituitary hormone deficiency.

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

REVISTA / JOURNAL: - J Pediatr Endocrinol Metab. 2013 Sep 11:1-4. doi: 10.1515/jpem-2013-0208.

●● Enlace al texto completo (gratis o de pago) [1515/jpem-2013-0208](#)

AUTORES / AUTHORS: - Aykut A; Ozen S; Simsek DG; Onay H; Cogulu O; Darcan S; Ozkinay F

RESUMEN / SUMMARY: - Abstract Combined pituitary hormone deficiency (CPHD) refers to a rare heterogeneous group of conditions in which there is a deficiency in at least two anterior pituitary hormones. Patients with POU1F1 mutations show a combined pituitary deficiency with low or absent levels of growth hormone, prolactin, and thyroid-stimulating hormone. In this study, a 7-month-old girl with a CPHD is presented. She had facial dysmorphic features, hypertrichosis, and hypotonia. Additionally, she also presented with multiple cutaneous hemangioma that until now has not been reported in association with this disorder.

[406]

TÍTULO / TITLE: - Dysregulated mTOR-Dependent Signaling in Neurodegeneration or Carcinogenesis: Implication for Alzheimer's Disease and Brain Tumors.

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

REVISTA / JOURNAL: - J Alzheimers Dis. 2013 Jan 1;37(3):495-505. doi: 10.3233/JAD-130641.

●● Enlace al texto completo (gratis o de pago) [3233/JAD-130641](https://doi.org/10.3233/JAD-130641)

AUTORES / AUTHORS: - Wang S; Wu J; Nie SD; Berezcki E; Pei JJ

INSTITUCIÓN / INSTITUTION: - Department of Pharmaceutical Engineering, College of Chemistry and Chemical Engineering, Central South University, Changsha, China.

RESUMEN / SUMMARY: - Recent evidence implicated aberrant mammalian target of rapamycin (mTOR)-dependent signaling in both Alzheimer's disease (AD) and brain tumors. This review focuses on the potential mechanisms shared by both neurodegeneration and carcinogenesis. In particular, attention was paid to the possible roles of mTOR-dependent signaling in these two fundamental pathophysiological processes. We hypothesize that common stresses could lead either to progressive degeneration or uncontrolled carcinogenesis via cell type specific upregulation of mTOR-dependent signaling in the central nervous system while mTOR-mediated carcinogenesis might permit glial cells to escape from degeneration.

[407]

TÍTULO / TITLE: - A case of radiologically multicentric but genetically identical multiple glioblastomas.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Aug 11.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0157-x](https://doi.org/10.1007/s10014-013-0157-x)

AUTORES / AUTHORS: - Akimoto J; Sasaki H; Haraoka R; Nakajima N; Fukami S; Kohno M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tokyo Medical University, 6-7-1 Nishishinjuku, Shinjuku-ku, Tokyo, 160-0023, Japan, jakimoto@tokyo-med.ac.jp.

RESUMEN / SUMMARY: - Surgery was performed in a 65-year-old male patient with malignant gliomas at two locations in the left and right cerebral hemispheres that showed no apparent continuity in imaging studies. Slight differences in histopathological appearance were seen between the tumors, and multicentric malignant glioma was diagnosed. Detailed genetic examination showed both the left- and right-side tumors to be of the IDH-1 wild type with a p53 mutation at the same locus. Whole genome analysis by comparative genomic hybridization revealed many of the same mutations to be present in both tumors. The O6-methylguanine-methyltransferase promoter in both cases was unmethylated, and the genetic profiles of both showed them to be homologous tumors. They were therefore inferred to be multiple gliomas from the same clone. There have been occasional reports of multicentric gliomas classified by diagnostic imaging. This report discusses the need to examine tumor origin by genomic profiling.

[408]

TÍTULO / TITLE: - Therapy targets in glioblastoma and cancer stem cells: lessons from haematopoietic neoplasms.

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

REVISTA / JOURNAL: - J Cell Mol Med. 2013 Sep 2. doi: 10.1111/jcmm.12122.

●● Enlace al texto completo (gratis o de pago) [1111/jcmm.12122](#)

AUTORES / AUTHORS: - Cruceru ML; Neagu M; Demoulin JB; Constantinescu SN

INSTITUCIÓN / INSTITUTION: - Department of Cellular and Molecular Medicine, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania.

RESUMEN / SUMMARY: - Despite intense efforts to identify cancer-initiating cells in malignant brain tumours, markers linked to the function of these cells have only very recently begun to be uncovered. The notion of cancer stem cell gained prominence, several molecules and signalling pathways becoming relevant for diagnosis and treatment. Whether a substantial fraction or only a tiny minority of cells in a tumor can initiate and perpetuate cancer, is still debated. The paradigm of cancer-initiating stem cells has initially been developed with respect to blood cancers where chronic conditions such as myeloproliferative neoplasms are due to mutations acquired in a haematopoietic stem cell (HSC), which maintains the normal hierarchy to neoplastic haematopoiesis. In contrast, acute leukaemia transformation of such blood neoplasms appears to derive not only from HSCs but also from committed progenitors that cannot differentiate. This review will focus on putative novel therapy targets represented by markers described to define cancer stem/initiating cells in malignant gliomas, which have been called 'leukaemia of the brain', given their rapid migration and evolution. Parallels are drawn with other cancers, especially haematopoietic, given the similar rampant proliferation and treatment resistance of glioblastoma multiforme and secondary acute leukaemias. Genes associated with the malignant conditions and especially expressed in glioma cancer stem cells are intensively searched. Although many such molecules might only coincidentally be expressed in cancer-initiating cells, some may function in the oncogenic process, and those would be the prime candidates for diagnostic and targeted therapy. For the latter, combination therapies are likely to be envisaged, given the robust and plastic signalling networks supporting malignant proliferation.

[409]

TÍTULO / TITLE: - Oligodendrogliomas with abundant refractile eosinophilic granular cells.

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

REVISTA / JOURNAL: - Can J Neurol Sci. 2013 Sep;40(5):746-8.

AUTORES / AUTHORS: - Au K; Bilbao J; Mainprize T; Schwartz M; Keith J

INSTITUCIÓN / INSTITUTION: - Department of Anatomical Pathology, University of Toronto, Toronto, Ontario, Canada.

[410]

TÍTULO / TITLE: - Clinical Course and Outcome of Non-Functioning Pituitary Adenomas in the Elderly Compared with Younger Age Groups.

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

REVISTA / JOURNAL: - Endocr Pract. 2013 Sep 6:1-20.

●● Enlace al texto completo (gratis o de pago) [4158/EP13182.OR](#)

AUTORES / AUTHORS: - Robenshtok E; Benbassat CA; Hirsch D; Tzvetov G; Cohen ZR; Iraqi HM; Gorshtein A; Toledano Y; Shimon I

INSTITUCIÓN / INSTITUTION: - Endocrinology & Metabolism Institute, Rabin Medical Center, Beilinson Hospital, Petah Tikva, Israel Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel.

RESUMEN / SUMMARY: - Objective: Non-functioning pituitary adenomas (NFPA) are the most common type of pituitary adenomas diagnosed in older patients. However, there is insufficient data regarding the clinical course, risk of regrowth and long term prognosis in elderly patients compared to younger age groups. Methods: This retrospective cohort study observed 105 adult patients with NFPA diagnosed between 1995 and 2012 were stratified into 3 age groups: 18-44 (29 patients), 45-64 (38 patients), and over 65 years old (38 patients). The impact of age on presenting symptoms, disease course and outcome was analyzed. Results: Adenoma size was larger in patients younger than 45 years (mean 2.9+/-1.2 cm) compared to the other age groups (2.3+/-0.9 and 2.5+/-0.8 cm respectively, p=0.05), with transsphenoidal surgery being the treatment of choice in all three groups (83%, 92%, and 84%, ns). After a mean follow-up of 6 years there were higher recovery rates from hypopituitarism in patients younger than 45 years (58% vs. 27% and 24%, p=0.04). Visual fields improved in most affected patients following surgery (74%, 94% and 86%), with a trend toward more full normalization in the young age group (58% versus 44% and 41%, p=0.09). There were no significant differences in the risk of remnant growth (29%-39%), rates of radiation therapy, or need for repeated surgeries. There was no disease related mortality. Conclusions: Elderly patients with NFPA have lower rates of recovery from hypopituitarism after treatment compared to younger age groups, with similar rates of regrowth and need for salvage surgery.

[411]

TÍTULO / TITLE: - Visual acuity of children treated with chemotherapy for optic pathway gliomas.

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

REVISTA / JOURNAL: - Pediatr Blood Cancer. 2013 Aug 19. doi: 10.1002/pbc.24726.

●● Enlace al texto completo (gratis o de pago) [1002/pbc.24726](#)

AUTORES / AUTHORS: - Kalin-Hajdu E; Decarie JC; Marzouki M; Carret AS; Ospina LH

INSTITUCIÓN / INSTITUTION: - CHU Sainte Justine, University of Montreal, Montreal, Quebec, Canada.

RESUMEN / SUMMARY: - BACKGROUND: Chemotherapy is the most common primary treatment modality for pediatric optic pathway gliomas (OPGs). Due to the risk of severe visual impairment, visual acuity (VA) has become a clinical parameter of fundamental importance for children with OPGs. Despite this reality, most studies omit crucial information necessary for analysis of the effect of chemotherapy on VA in patients with cerebral gliomas. The principal goal of this study was to determine the immediate and long-term visual outcome of children treated first with chemotherapy for OPGs. PROCEDURE: Retrospective, non-comparative, case series of children with OPGs treated initially with chemotherapy. VA was measured prior to chemotherapy, directly following chemotherapy, as well as at last follow-up. RESULTS: Seven children (14 eyes) were positive for the neurofibromatosis type-1 (NF1) mutation and 10 children (20 eyes) were without the NF1 mutation (sporadic). Three deaths, all in the sporadic cohort, occurred as a result of their OPG. Median follow-up time of survivors was 10.54 +/- 4.36 (SD) years. Both NF1 mutation positive and sporadic cohorts had deterioration in VA over time; however, deterioration was only statistically significant in the sporadic population. The percentage of eyes with vision weaker than 20/200 prior to chemotherapy, directly following chemotherapy and at last follow-up grew from 18% to 24% to 38%, respectively. CONCLUSIONS: In both NF1 mutant and sporadic OPGs, VA deteriorated directly following chemotherapy as well as at long-term follow-up. Despite chemotherapy, eyes with severe functional impairment gradually increased over time. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[412]

TÍTULO / TITLE: - Genetic variants in SLC7A7 are associated with risk of glioma in a Chinese population.

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

REVISTA / JOURNAL: - *Exp Biol Med* (Maywood). 2013 Sep 1;238(9):1075-81. doi: 10.1177/1535370213498977. Epub 2013 Aug 23.

●● Enlace al texto completo (gratis o de pago) [1177/1535370213498977](https://doi.org/10.1177/1535370213498977)

AUTORES / AUTHORS: - Fan S; Zhao Y; Li X; Du Y; Wang J; Song X; Zhou F; Chen H; Chen G; Zhao Y; Mao Y; Lan Q

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Second Affiliated Hospital of Soochow University, Suzhou 215004, China.

RESUMEN / SUMMARY: - Dysregulation of the amino acid transporter SLC7A7 is involved in multiple types of cancer including glioblastoma (GBM), the most malignant form of glioma. We hypothesized that SLC7A7 genetic variants may influence glioma risk. To test this hypothesis, we conducted a case-control study in 736 incident glioma cases

and 793 cancer-free controls in a Chinese population by genotyping 22 common single nucleotide polymorphisms in SLC7A7. In single-locus analysis, we found an increased risk was associated with the variant genotypes of rs12888930 (adjusted odds ratio [OR] = 1.25, 95% confidence interval [CI] 1.02-1.54, P = 0.034), rs12433985 (adjusted OR = 1.38, 95%CI = 1.13-1.70), rs2065134 (adjusted OR = 1.43, 95% CI 1.05-1.95) in a dominant genetic model and rs12436190 (adjusted OR = 1.37, 95%CI 1.06-1.77) in a recessive model. Multivariate analysis confirmed that rs12433985 and rs2065134 were significant and independent risk factor for glioma as well as GBM subtype (for rs12433985, OR = 1.21, 95%CI 1.04-1.42, P = 0.016 for all types of gliomas and P = 0.013, OR = 1.30, 95%CI 1.06-1.60 for GBM. For rs2065134, OR = 1.39, 95%CI 1.02-1.89, P = 0.039 for all types of gliomas and OR = 1.66, 95%CI 1.12-2.24, P = 0.011). These results, for the first time, provide suggestive evidence of polymorphisms in SLC7A7 is involved in the aetiology of glioma.

[413]

TÍTULO / TITLE: - Systemic treatment with 4-²¹¹Atphenylalanine enhances survival of rats with intracranial glioblastoma.

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

REVISTA / JOURNAL: - Nuklearmedizin. 2013 Sep 6;52(6).

●● [Enlace al texto completo \(gratis o de pago\) 3413/Nukmed-0580-13-05](#)

AUTORES / AUTHORS: - Borrmann N; Friedrich S; Schwabe K; Hedrich HJ; Krauss JK; Knapp WH; Nakamura M; Meyer GJ; Walte A

INSTITUCIÓN / INSTITUTION: - Dr. Almut Walte, Klinik für Nuklearmedizin, Medizinische Hochschule Hannover, Carl-Neuberg-Str. 1 30625 Hannover, Germany, Tel.

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RESUMEN / SUMMARY: - Objective: Increased amino acid transport in brain tumours is used for diagnostic purposes. It has been shown that the alpha-emitting radionuclide astatine-211 labeled to L-phenylalanine is taken up by glioblastoma cells. We here tested, if systemic treatment with 4-[²¹¹At]astatine-phenylalanine (At-Phe) has a beneficial effect on survival of rats with intracranial glioblastoma. Animals, methods: The rat glioblastoma cell line BT4Ca was implanted into the prefrontal cortex of female BDIX rats by stereotaxic microinjection (10 000 cells/3 microl; n = 83). 3 days after implantation At-Phe or phosphate buffered saline were injected intravenously. A third group was treated twice, i.e., on day 3 and 10. Health condition was assessed each day by using a score system. Rats were sacrificed on days 6, 10, 13 and 17 after implantation, or when showing premortal health condition to measure tumour volume and necrosis. The proliferation index (PI) was assessed after immunohistochemical staining of Ki-67. Results: Survival time of rats treated twice with At-Phe was significantly prolonged. Additionally, both At-Phe-treated groups remained significantly longer in a better health condition. Rats with poor health status had larger

tumours than rats with fair health condition. Overall, irrespective of treatment the PI was reduced in rats with poor health condition. Necrosis was larger in rats treated twice with At-Phe. Conclusion: Intravenous treatment with At-Phe enhanced survival time of rats with intracranial glioblastomas and improved health condition. These results encourage studies using local treatment of intracranial glioblastoma with At-Phe, either by repeated local injection or by intracavitary application after tumour resection.

[414]

TÍTULO / TITLE: - Combined molecular MRI and immuno-spin-trapping for in vivo detection of free radicals in orthotopic mouse GL261 gliomas.

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

REVISTA / JOURNAL: - Biochim Biophys Acta. 2013 Aug 17;1832(12):2153-2161. doi: 10.1016/j.bbadis.2013.08.004.

AUTORES / AUTHORS: - Towner RA; Smith N; Saunders D; De Souza PC; Henry L; Lupu F; Silasi-Mansat R; Ehrenshaft M; Mason RP; Gomez-Mejiba SE; Ramirez DC

INSTITUCIÓN / INSTITUTION: - Advanced Magnetic Resonance Center, Oklahoma Health Sciences Center, Oklahoma City, OK 73104, USA. Electronic address: Rheal-Towner@omrf.org.

RESUMEN / SUMMARY: - Free radicals play a major role in gliomas. By combining immuno-spin-trapping (IST) and molecular magnetic resonance imaging (mMRI), in vivo levels of free radicals were detected within mice bearing orthotopic GL261 gliomas. The nitron spin trap DMPO (5,5-dimethyl pyrroline N-oxide) was administered prior to injection of an anti-DMPO probe (anti-DMPO antibody covalently bound to a bovine serum albumin (BSA)-Gd (gadolinium)-DTPA (diethylene triamine penta acetic acid)-biotin MRI contrast agent) to trap tumor-associated free radicals. mMRI detected the presence of anti-DMPO adducts by either a significant sustained increase ($p < 0.001$) in MR signal intensity or a significant decrease ($p < 0.001$) in T1 relaxation, measured as %T1 change. In vitro assessment of the anti-DMPO probe indicated a significant decrease ($p < 0.0001$) in T1 relaxation in GL261 cells that were oxidatively stressed with hydrogen peroxide, compared to controls. The biotin moiety of the anti-DMPO probe was targeted with fluorescently-labeled streptavidin to locate the anti-DMPO probe in excised brain tissues. As a negative control a non-specific IgG antibody covalently bound to the albumin-Gd-DTPA-biotin construct was used. DMPO adducts were also confirmed in tumor tissue from animals administered DMPO, compared to non-tumor brain tissue. GL261 gliomas were found to have significantly increased malondialdehyde (MDA) protein adducts ($p < 0.001$) and 3-nitrotyrosine (3-NT) ($p < 0.05$) compared to normal mouse brain tissue, indicating increased oxidized lipids and proteins, respectively. Co-localization of the anti-DMPO probe with either 3-

NT or 4-hydroxynonenal was also observed. This is the first report regarding the detection of in vivo levels of free radicals from a glioma model.

[415]

TÍTULO / TITLE: - Factors relating to pregnancy and birth and the risk of childhood brain tumors: Results from an Australian case-control study.

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

REVISTA / JOURNAL: - *Pediatr Blood Cancer*. 2013 Aug 26. doi: 10.1002/pbc.24751.

●● [Enlace al texto completo \(gratis o de pago\) 1002/pbc.24751](#)

AUTORES / AUTHORS: - Greenop KR; Blair EM; Bower C; Armstrong BK; Milne E

INSTITUCIÓN / INSTITUTION: - Telethon Institute for Child Health Research, Centre for Child Health Research, University of Western Australia, Perth, Western Australia, Australia.

RESUMEN / SUMMARY: - **BACKGROUND:** Childhood brain tumors (CBT) are the leading cause of cancer death in children, yet their causes are largely unknown. This study investigated the association between maternal and birth characteristics and risk of CBT. **PROCEDURES:** Cases families were recruited from all 10 Australian pediatric oncology centers between 2005 and 2010. Control families were recruited via random-digit dialing, frequency matched to cases on the basis of child's age, sex, and State of residence. Maternal and birth characteristics of children were ascertained by questionnaires. Odds ratios (ORs) and 95% confidence intervals (CI) were estimated using unconditional logistic regression, adjusting for relevant confounders. **RESULTS:** For this analysis, data on 319 case children and 1,079 control children were available. No association was found between risk of CBT and birth weight, fetal growth, birth order, gestational age, or maternal body mass index. The ORs for inadequate and excessive maternal gestational weight gain (GWG) (Institute of Medicine 2009 guidelines) were 1.8 (95% CI 1.2-2.6) and 1.4 (95% CI 1.0-2.1), respectively; similar findings for GWG were seen across categories of child's age, fetal growth, maternal body mass index and height, maternal smoking, and parental education. Risk of low grade glioma appeared increased with preterm birth (OR 1.6 (95% CI 0.8-3.1) and admission to neonatal intensive care (NICU) for >2 days (OR 1.7, 95% CI 0.9-3.6). **CONCLUSION:** We found little evidence of associations between risk of CBT and most birth characteristics. The associations we observed with GWG, prematurity and NICU admission require corroboration in other studies. © 2013 Wiley Periodicals, Inc.

[416]

TÍTULO / TITLE: - Nodal regulates energy metabolism in glioma cells by inducing expression of hypoxia-inducible factor 1alpha.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Oct;15(10):1330-41. doi: 10.1093/neuonc/not086. Epub 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not086](https://doi.org/10.1093/neuonc/not086)

AUTORES / AUTHORS: - Lai JH; Jan HJ; Liu LW; Lee CC; Wang SG; Hueng DY; Cheng YY; Lee HM; Ma HI

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RESUMEN / SUMMARY: - Background A shift in glucose metabolism from oxidative phosphorylation to anaerobic glycolysis is the biochemical hallmark of malignant cancer cells. Methods In the present study, we demonstrated that Nodal stimulated the expression of glycolytic enzymes and decreased reliance on mitochondrial oxidative phosphorylation in human glioma cancer cells. The shift in glucose metabolism was mediated by induction of the hypoxia-inducible factor (HIF). Results Nodal protein expression was shown to be correlated with expression levels of glucose transporter (Glut)-1, hexokinase (HK)-II, pyruvate dehydrogenase kinase (PDK)-1, the phosphorylation level of pyruvate dehydrogenase (PDH), glucose uptake, and lactate accumulation in human glioma cells. These effects were inversely correlated with mitochondrial oxygen consumption and ATP production. Knockdown of Nodal expression with specific small hairpin RNA reduced Glut-1, HK-II, and PDK-1 expressions and PDH phosphorylation. Nodal knockdown also reduced glucose uptake and lactate generation, which in turn increased mitochondrial membrane potential (Psi), O₂ utilization, and ATP synthesis. The ectopic expression of Nodal in low-expressing Nodal glioma cells resulted in the opposite results compared with those of Nodal knockdown glioma cells. Treatment of cells with recombinant Nodal increased HIF-1 expression, and this effect was regulated at the transcriptional level. Blockage of the Nodal receptor by a pharmacological inhibitor or Nodal knockdown in U87MG cells decreased HIF-1alpha expression. Furthermore, HIF-1alpha knockdown in U87MG cells decreased Glut-1, HK-II, and PDK-1 expressions and PDH phosphorylation, which were similar to results in Nodal knockdown cells. Conclusion Taken together, these results suggest that Nodal affects energy metabolism through HIF-1alpha.

[417]

TÍTULO / TITLE: - Treatment options for childhood medulloblastoma.

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

REVISTA / JOURNAL: - Vojnosanit Pregl. 2013 Aug;70(8):773-7.

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[418]

TÍTULO / TITLE: - The immune cell infiltrate populating meningiomas is composed of mature, antigen-experienced T and B cells.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Aug 26.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not110](#)

AUTORES / AUTHORS: - Fang L; Lowther DE; Meizlish ML; Anderson RC; Bruce JN; Devine L; Huttner AJ; Kleinstein SH; Lee JY; Stern JN; Yaari G; Lovato L; Cronk KM; O'Connor KC

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RESUMEN / SUMMARY: - BackgroundMeningiomas often harbor an immune cell infiltrate that can include substantial numbers of T and B cells. However, their phenotype and characteristics remain undefined. To gain a deeper understanding of the T and B cell repertoire in this tumor, we characterized the immune infiltrate of 28 resected meningiomas representing all grades.MethodsImmunohistochemistry was used to grossly characterize and enumerate infiltrating lymphocytes. A molecular analysis of the immunoglobulin variable region of tumor-infiltrating B cells was used to characterize their antigen experience. Flow cytometry of fresh tissue homogenate and paired peripheral blood lymphocytes was used to identify T cell phenotypes and characterize the T cell repertoire.ResultsA conspicuous B and T cell infiltrate, primarily clustered in perivascular spaces, was present in the microenvironment of most tumors examined. Characterization of 294 tumor-infiltrating B cells revealed clear evidence of antigen experience, in that the cardinal features of an antigen-driven B cell response were present. Meningiomas harbored populations of antigen-experienced CD4+ and CD8+ memory/effector T cells, regulatory T cells, and T cells expressing the immune checkpoint molecules PD-1 and Tim-3, indicative of exhaustion. All of these

phenotypes were considerably enriched relative to their frequency in the circulation. The T cell repertoire in the tumor microenvironment included populations that were not reflected in paired peripheral blood. Conclusion The tumor microenvironment of meningiomas often includes postgerminal center B cell populations. These tumors invariably include a selected, antigen-experienced, effector T cell population enriched by those that express markers of an exhausted phenotype.

[419]

TÍTULO / TITLE: - Endoscopic surgery for hemorrhagic pineal cyst following antiplatelet therapy: case report.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(9):625-9.

AUTORES / AUTHORS: - Tamura Y; Yamada Y; Tucker A; Ukita T; Tsuji M; Miyake H; Kuroiwa T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Osaka Medical College.

RESUMEN / SUMMARY: - Pineal cysts of the third ventricle presenting with acute obstructive hydrocephalus due to internal cystic hemorrhage are a rare clinical entity. The authors report a case of a 61-year-old man taking antiplatelet medication who suffered from a hemorrhagic pineal cyst and was treated with endoscopic surgery. One month prior to treatment, the patient was diagnosed with a brainstem infarction and received clopi-dogrel in addition to aspirin. A small incidental pineal cyst was concurrently diagnosed using magnetic resonance (MR) imaging which was intended to be followed conservatively. The patient presented with a sudden onset of headache and diplopia. On admission, the neurological examination revealed clouding of consciousness and Parinaud syndrome. Computerized tomography (CT) scans demonstrated a hemorrhagic mass lesion in the posterior third ventricle. The patient underwent emergency external ventricular drainage with staged endoscopic biopsy and third ventriculostomy using a flexible videoscope. Histological examination revealed pineal tissue with necrotic change and no evidence of tumor cells. One year later MR imaging demonstrated no evidence of cystic lesion and a flow void between third ventricle and prepontine cistern. In patients with asymptomatic pineal cysts who are treated with antiplatelet therapy, it is important to be aware of the risk of pineal apoplexy. Endoscopic management can be effective for treatment of hemorrhagic pineal cyst with obstructive hydrocephalus.

[420]

TÍTULO / TITLE: - Cells with intense EGFR staining and a high nuclear to cytoplasmic ratio are specific for infiltrative glioma: a useful marker in neuropathological practice.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Oct;15(10):1278-88. doi: 10.1093/neuonc/not094. Epub 2013 Aug 9.

●● Enlace al texto completo (gratis o de pago) 1093/neuonc/not094

AUTORES / AUTHORS: - Burel-Vandenbos F; Turchi L; Benchetrit M; Fontas E; Pedeutour Z; Rigau V; Almairac F; Ambrosetti D; Michiels JF; Virolle T

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RESUMEN / SUMMARY: - Background The differential diagnosis between infiltrative glioma (IG) and benign or curable glial lesions, such as gliosis, pilocytic astrocytoma, dysembryoplastic neuroepithelial tumor, ganglioglioma, or demyelinating disease, may be challenging for the pathologist because specific markers are lacking. Recently, we described a strong EGFR immunolabelling pattern in cells with a high nuclear to cytoplasmic ratio that enables the discrimination of low-grade IG from gliosis. The aim of this study was to extend our observation to high-grade glioma to assess whether EGFR expression pattern is of value in the discrimination of all IG from noninfiltrative glial lesions (NIG), including gliosis, benign tumors, and demyelinating disease. Methods One hundred one IG and 58 NIG were compared for immunohistochemical expression of EGFR with use of an antibody that recognizes an epitope in the extracellular domain of both EGFRwt and EGFRVIII. Highly EGFR-positive cells with a high nuclear to cytoplasmic ratio were isolated and further characterized. Results Cells with intense EGFR staining and a high nuclear to cytoplasmic ratio were significantly associated with the diagnosis of IG (P < .0001). The sensitivity and specificity of this staining pattern for the diagnosis of IG were 95% and 100%, respectively. EGFR expression was independent of IDH1 mutations and EGFR amplification. Finally, we showed that these particular cells displayed the phenotype and properties of glial progenitors and coexpressed CXCR4, a marker of invasiveness. Conclusions We demonstrate that cells with intense EGFR staining and a high nuclear to cytoplasmic ratio are specific criteria for the diagnosis of IG, irrespective of grade, histological subtype, and progression pathway, and their identification represents a tool to discriminate IG from benign or curable glial lesions.

[421]

TÍTULO / TITLE: - Comparison of the clinical efficacy of temozolomide (TMZ) versus nimustine (ACNU)-based chemotherapy in newly diagnosed glioblastoma.

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

REVISTA / JOURNAL: - Neurosurg Rev. 2013 Aug 3.

●● Enlace al texto completo (gratis o de pago) 1007/s10143-013-0490-x

AUTORES / AUTHORS: - Wang Y; Chen X; Zhang Z; Li S; Chen B; Wu C; Wang L; Zhang X; Wang J; Chen L; Jiang T

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RESUMEN / SUMMARY: - Although temozolomide (TMZ) replaced nitrosoureas as the standard initial chemotherapy for glioblastoma (GBM), no studies have compared TMZ with nimustine (ACNU), a nitrosourea agent widely used in central Europe and most Asian regions. One hundred thirty-five patients with GBM who underwent extensive tumor resection in our institution received both radiation and chemotherapy as initial treatment, 34 received TMZ and 101 ACNU-based (ACNU plus teniposide or cisplatin) chemotherapy. Efficacy analysis included overall survival (OS) and progression-free survival (PFS). The following prognostic factors were taken into account: age, performance status, extent of resection, and O6-methylguanine-DNA-methyltransferase (MGMT) gene status. The median OS was superior in the TMZ versus the ACNU group ($p = 0.011$), although MGMT gene silencing, which is associated with a striking survival benefit from alkylating agents, was more frequent in the ACNU group. In multivariate Cox analysis adjusting for the common prognostic factors, TMZ chemotherapy independently predicted a favorable outcome ($p = 0.002$ for OS, hazard ratio [HR], 0.45; $p = 0.011$ for PFS, HR, 0.56). Given that >40 % of patients in ACNU group did not receive the intensive chemotherapy cycles because of severe hematological and nonhematological toxicity, we performed a further subanalysis for patients who received at least 4 cycles of chemotherapy. Although a modest improvement in survival occurred in this ACNU subgroup, the efficacy was still inferior to that in the TMZ cohort. Our data suggest that the survival benefit of TMZ therapy is superior to that of an ACNU-based regimen in patients with extensive tumor resection, also shows greater tolerability.

[422]

TÍTULO / TITLE: - Investigating the relationship between COMT polymorphisms and working memory performance among childhood brain tumor survivors.

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

REVISTA / JOURNAL: - *Pediatr Blood Cancer*. 2013 Aug 19. doi: 10.1002/pbc.24649.

●● Enlace al texto completo (gratis o de pago) [1002/pbc.24649](#)

AUTORES / AUTHORS: - Howarth RA; Adamson AM; Ashford JM; Merchant TE; Ogg RJ; Schulenberg SE; Ogg S; Li J; Wu S; Xiong X; Conklin HM

INSTITUCIÓN / INSTITUTION: - Department of Neuropsychology, Children's Healthcare of Atlanta, Atlanta, Georgia.

RESUMEN / SUMMARY: - **BACKGROUND:** Survivors of childhood brain tumors are at increased risk for neurocognitive impairments, including deficits in abilities supported by frontal brain regions. Catechol-O-methyltransferase (COMT) metabolizes dopamine in the prefrontal cortex, with the Met allele resulting in greater dopamine availability

and better performance on frontally mediated tasks compared to the Val allele. Given the importance of identifying resiliency factors against the emergence of cognitive late effects, the current study examined the relationship between COMT genotype and working memory performance among childhood brain tumor survivors. PROCEDURE: Children treated for a brain tumor with conformal radiation therapy (N = 50; mean age at irradiation = 7.41 +/- 3.41; mean age at assessment = 13.18 +/- 2.88) were administered two computerized measures of working memory (self-ordered search verbal and object tasks). Buccal (cheek) swabs were used to provide tissue from which DNA was extracted. RESULTS: Findings revealed an association between COMT genotype and performance on the self-ordered verbal (P = 0.03) but not object task (P = 0.33). Better performance was found for the Met/Val group compared to either Met/Met or Val/Val. CONCLUSIONS: COMT may indicate a potential resiliency factor against neurocognitive effects of cancer and its treatment; however, there is a need for replication with larger samples of childhood brain tumor survivors. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[423]

TÍTULO / TITLE: - The cost-effectiveness of temozolomide in the adjuvant treatment of newly diagnosed glioblastoma in the United States.

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

REVISTA / JOURNAL: - *Neuro Oncol.* 2013 Aug 29.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not096](#)

AUTORES / AUTHORS: - Messali A; Hay JW; Villacorta R

INSTITUCIÓN / INSTITUTION: - Department of Clinical Pharmacy and Pharmaceutical Economics and Policy, University of Southern California, Los Angeles, California.

RESUMEN / SUMMARY: - BackgroundThe objective of this work was to determine the cost-effectiveness of temozolomide compared with that of radiotherapy alone in the adjuvant treatment of newly diagnosed glioblastoma. Temozolomide is the only chemotherapeutic agent to have demonstrated a significant survival benefit in a randomized clinical trial. Our analysis builds on earlier work by incorporating caregiver time costs and generic temozolomide availability. It is also the first analysis applicable to the US context.MethodsA systematic literature review was conducted to collect relevant data. Transition probabilities were calculated from randomized controlled trial data comparing temozolomide plus radiotherapy with radiotherapy alone. Direct costs were calculated from charges reported by the Mayo Clinic. Utilities were obtained from a previous cost-utility analysis. Using these data, a Markov model with a 1-month cycle length and 5-year time horizon was constructed.ResultsThe addition of brand Temodar and generic temozolomide to the standard radiotherapy regimen was associated with base-case incremental cost-effectiveness ratios of \$102 364 and \$8875, respectively, per quality-adjusted life-year. The model was most sensitive to

the progression-free survival associated with the use of only radiotherapy. Conclusions Both the brand and generic base-case estimates are cost-effective under a willingness-to-pay threshold of \$150 000 per quality-adjusted life-year. All 1-way sensitivity analyses produced incremental cost-effectiveness ratios below this threshold. We conclude that both the brand Temodar and generic temozolomide are cost-effective treatments for newly diagnosed glioblastoma within the US context. However, assuming that the generic product produces equivalent quality of life and survival benefits, it would be significantly more cost-effective than the brand option.

[424]

TÍTULO / TITLE: - Natural Compounds as Potential Treatments of NF2-Deficient Schwannoma and Meningioma: Cucurbitacin D and Goyzensolide.

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

REVISTA / JOURNAL: - Otol Neurotol. 2013 Oct;34(8):1519-27. doi: 10.1097/MAO.0b013e3182956169.

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

[1097/MAO.0b013e3182956169](#)

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RESUMEN / SUMMARY: - HYPOTHESIS: Cucurbitacin D and goyzensolide, 2 plant-derived natural compounds, possess potent growth-inhibitory activity in schwannoma and meningioma cells. BACKGROUND: Currently, no FDA-approved drugs are available for neurofibromatosis type 2 (NF2)-associated schwannomas and meningiomas. Selected natural compounds with antineoplastic activity, such as cucurbitacin D and goyzensolide, may be developed as potential treatments for these tumors. METHODS: The Nf2-deficient mouse schwannoma Sch10545 and human benign meningioma Ben-Men-1 cells were treated with various concentrations of cucurbitacin D and goyzensolide. The effect on cell proliferation was determined using resazurin assays. Flow cytometry was used to assess the cell cycle profiles. Western blot analysis was performed to investigate the expression of various signaling molecules related to the cell cycle and the AKT pathway. RESULTS: Cucurbitacin D inhibited proliferation of Sch10545 cells (IC50 approximately 0.75 µM) and Ben-Men-1 cells (IC50 approximately 0.2 µM). Goyzensolide also reduced cell proliferation of Sch10545 cells (IC50 approximately 0.9 µM) and Ben-Men-1 cells (IC50 approximately 1 µM).

The G2/M population increased in both Sch10545 and Ben-Men-1 cells treated with cucurbitacin D or goyazensolide around the IC50. Cucurbitacin and goyazensolide substantially reduced the levels of cyclins E and A in treated Sch10545 and Ben-Men-1 cells. Cucurbitacin D also inhibited cyclin B, phospho-AKT and phospho-PRAS40 expression. In addition, goyazensolide reduced the levels of phospho-AKT and NFkappaB and increased the expression of pro-apoptotic Bim in Sch10545 and Ben-Men-1 cells. CONCLUSION: Both cucurbitacin D and goyazensolide effectively inhibit proliferation of NF2-deficient schwannoma and meningioma cells, suggesting that these natural compounds should be further evaluated as potential treatments for NF2-related tumors.

[425]

TÍTULO / TITLE: - Serum-free culture success of glial tumors is related to specific molecular profiles and expression of extracellular matrix-associated gene modules.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Sep 17.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not116](#)

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RESUMEN / SUMMARY: - BackgroundRecent molecular characterization studies have identified clinically relevant molecular subtypes to coexist within the same histological entities of glioma. Comparative studies between serum-supplemented and serum-free (SF) culture conditions have demonstrated that SF conditions select for glioma stem-like cells, which superiorly conserve genomic alterations. However, neither the representation of molecular subtypes within SF culture assays nor the molecular distinctions between successful and unsuccessful attempts have been elucidated. MethodsA cohort of 261 glioma samples from varying histological grades was documented for SF culture success and clinical outcome. Gene expression and single nucleotide polymorphism arrays were interrogated on a panel of tumors for comparative analysis of SF+ (successful cultures) and SF- (unsuccessful cultures). ResultsSF culture outcome was correlated with tumor grade, while no relation was found between SF+ and patient overall survival. Copy number-based hierarchical clustering revealed an absolute separation between SF+ and SF- parental tumors. All SF+ cultures are derived from tumors that are isocitrate dehydrogenase 1

(IDH1) wild type, chromosome 7 amplified, and chromosome 10q deleted. SF- cultures derived from IDH1 mutant tumors demonstrated a fade-out of mutated cells during the first passages. SF+ tumors were enriched for The Cancer Genome Atlas Classical subtype and intrinsic glioma subtype-18. Comparative gene ontology analysis between SF+ and SF- tumors demonstrated enrichment for modules associated with extracellular matrix composition, Hox-gene signaling, and inflammation. Conclusion SF cultures are derived from a subset of parental tumors with a shared molecular background including enrichment for extracellular matrix-associated gene modules. These results provide leads to develop enhanced culture protocols for glioma samples not propagatable under current SF conditions.

[426]

TÍTULO / TITLE: - Joint denervation and neuroma surgery as joint-preserving therapy for ankle pain.

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

REVISTA / JOURNAL: - Foot Ankle Clin. 2013 Sep;18(3):571-89. doi: 10.1016/j.fcl.2013.06.007.

●● Enlace al texto completo (gratis o de pago) [1016/j.fcl.2013.06.007](#)

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RESUMEN / SUMMARY: - Partial joint denervation or surgical neuroma therapy are alternative concepts to treat pain around the ankle joint that preserve joint function and relieve pain by interrupting neural pathways that transmit pain impulses from the joint to the brain. This review article summarizes the indication, anatomic background, operative techniques, and clinical results of joint denervation or neuroma surgery, which, although rarely reported and used, may provide a valuable alternative treatment in selected patients with neurogenous problems around the ankle.

[427]

TÍTULO / TITLE: - Leukemia-like onset of bone marrow metastasis from anaplastic oligodendroglioma after 17 years of dormancy: an autopsy case report.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Jul 31.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0156-y](#)

AUTORES / AUTHORS: - Tanaka Y; Nobusawa S; Ikota H; Yokoo H; Hirato J; Ito H; Saito T; Ogura H; Nakazato Y

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RESUMEN / SUMMARY: - Extraneural metastases from primary brain tumors are extremely rare. We present an autopsy case that displayed a very late and unique pattern of metastasis from an anaplastic oligodendroglioma. The patient was a 74-year-old woman who was disease free for 17 years after resection of the primary oligodendroglioma. She was subsequently admitted to a hospital for heart failure where her bone marrow was found to be completely infiltrated with tumor cells, eventually resulting in disseminated intravascular coagulation. The onset was like leukemia, but the “blast-like” cells were different from leukemic cells, and the diagnosis was difficult until autopsy. After her death, a review of her past medical history and comprehensive analysis of her primary brain tumor and aspiration biopsy/autopsy bone marrow samples with glial immunohistochemical markers, fluorescence in situ hybridization examination, and immunohistochemical/sequencing analyses of mutant IDH1 revealed the accurate diagnosis. The metastatic tumor in her bone marrow was finally diagnosed as bone metastasis from the primary anaplastic oligodendroglioma. Although metastatic oligodendroglioma is very rare, it should be noted that this condition displays a propensity for bone and bone marrow and can present with features similar to those of leukemia after a long latency period.

[428]

TÍTULO / TITLE: - Erratum to: Leukemia-like onset of bone marrow metastasis from anaplastic oligodendroglioma after 17 years of dormancy: an autopsy case report.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Sep 15.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10014-013-0163-z](#)

AUTORES / AUTHORS: - Tanaka Y; Nobusawa S; Ikota H; Yokoo H; Hirato J; Ito H; Saito T; Ogura H; Nakazato Y

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[429]

TÍTULO / TITLE: - Apoptosis-related gene expression in glioblastoma (LN-18) and medulloblastoma (Daoy) cell lines.

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

REVISTA / JOURNAL: - Hum Cell. 2013 Sep 15.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s13577-011-0029-9](#)

AUTORES / AUTHORS: - Wybranska I; Polus A; Mikolajczyk M; Knapp A; Sliwa A; Zapala B; Staszal T; Dembinska-Kiec A

INSTITUCIÓN / INSTITUTION: - Department of Genetic Diagnostics and Nutrigenomics, Chair of Clinical Biochemistry, The Jagiellonian University, Medical College, Krakow, Poland, mbwybran@cyf-kr.edu.pl.

RESUMEN / SUMMARY: - The expression of apoptosis genes in a commercial pre-designed low-density array from Applied Biosystems was evaluated in two human brain cancer cell models, LN-18 and Daoy (HTB-186) in comparison to the reference human primary endothelial cells under basic conditions. Analysis of the gene expression in the cancer cell lines compared to the normal control revealed features reflecting anti-apoptotic and inflammatory characteristics of the former. There was an overall downregulation of apoptosis-stimulating genes in both cancer cell lines, along with an upregulation of certain apoptosis inhibitors. A number of genes demonstrated statistically significant changes in their expressions, including BAX (BCL2-associated X protein); the CARD4/NLR family, CARD domain containing 4; CASP10 (caspase 10, apoptosis-related cysteine peptidase); DAP1 (death-associated protein kinase 1), and BIRC5 (baculoviral IAP repeat-containing 5). Anti-apoptotic potential in both cell lines was demonstrated by changes in the Bax:Bcl-2 ratio and downregulation of the APAF1 gene in LN18 cells. There was also significant downregulation of extrinsic signals and the TNF/FADD/inflammatory cascade, and upregulation of caspase inhibitors (IAPs). These results provided a novel molecular characterization of important human cancer cell lines, which might provide a useful research tool for investigating the experimental model of the CNS cell.

[430]

TÍTULO / TITLE: - Social problem solving and social performance after a group social skills intervention for childhood brain tumor survivors.

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

REVISTA / JOURNAL: - Psychooncology. 2013 Sep 4. doi: 10.1002/pon.3387.

●● [Enlace al texto completo \(gratis o de pago\) 1002/pon.3387](#)

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RESUMEN / SUMMARY: - PURPOSE: The aim of this study was to explore the ability of a group social skills intervention program for childhood brain tumor survivors to effect two steps of the social information processing model: social problem solving and social performance. METHODS: Participants were 15 survivors (eight men and seven women) aged 7-15 years. The intervention consisted of eight 2-h weekly sessions

focused on social skills including friendship making. Social problem solving, using hypothetical scenarios, was assessed during sessions 1 and 8. Social performance was observed during intervention sessions 1, 4, and 8. RESULTS: Compared with session 1, significant increases were found in social performance: frequency of maintaining eye contact and social conversations with peers over the course of the intervention. No significant changes in social problem solving were noted. CONCLUSIONS: This pilot study is the first to report improvements related to group social skills intervention at the level of observed social performance over the course of intervention. The lack of change in social problem solving suggests that survivors may possess the social knowledge required for social situations but have difficulty enacting social behaviors. Copyright © 2013 John Wiley & Sons, Ltd.

[431]

TÍTULO / TITLE: - Clinical features of sellar and suprasellar meningiomas.

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

REVISTA / JOURNAL: - Pituitary. 2013 Aug 22.

●● Enlace al texto completo (gratis o de pago) [1007/s11102-013-0507-z](#)

AUTORES / AUTHORS: - Kwancharoen R; Blitz AM; Tavares F; Caturegli P; Gallia GL; Salvatori R

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RESUMEN / SUMMARY: - Meningiomas account for about 1 % of sellar masses. Although they can mimic pituitary adenomas, they are more vascularized and invasive. To gain insights that would enhance our ability to establish a pre-surgical diagnosis of meningioma, we performed a retrospective study of these tumors. Query of the surgical pathology database identified 1,516 meningiomas operated at our institution between January 2000 and May 2012. Cases were matched to the radiology database to identify a strictly defined sellar and/or suprasellar location. We identified 57 meningiomas. F:M ratio was 6:1. The mean age was 52 years (median 50, range 30-78). The most common symptoms were visual disturbance (58 %), headache (16 %) and incidental finding (12 %). The mean duration of symptoms was 13 months. Hyperprolactinemia was found in 36 %, with mean value of 51.6 ng/ml (median 41.8, range 22.5-132). Mean maximal diameter was 2.9 cm (median 2.7, range 0.9-6.8), and most tumors enhanced homogeneously on MRI after gadolinium. A “dural tail” sign was reported in a third. The radiologist reported “likely meningioma” in 65 %, “possible meningioma” in 8.7 %, and pituitary adenoma in 11 %. After surgery, visual disturbances improved in most patients (80 %) but headache only in 7 %. Post-operative complications at 1 and 3 months occurred 38.6 and 33.3 % respectively. There was no mortality. Sellar/suprasellar meningiomas represent 4 % of all

meningiomas, and have a particularly high female predominance. The diagnosis is suggested by the radiologist in approximately 2/3 of the cases. An improved method to differentiate preoperatively these tumors from adenomas would be desirable.

[432]

TÍTULO / TITLE: - Multifunctional nanoparticles for brain tumor diagnosis and therapy.

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

REVISTA / JOURNAL: - Adv Drug Deliv Rev. 2013 Sep 20. pii: S0169-409X(13)00201-9. doi: 10.1016/j.addr.2013.09.006.

●● Enlace al texto completo (gratis o de pago) [1016/j.addr.2013.09.006](#)

AUTORES / AUTHORS: - Cheng Y; Morshed R; Auffinger B; Tobias AL; Lesniak MS

INSTITUCIÓN / INSTITUTION: - The Brain Tumor Center, The University of Chicago, Chicago, IL, USA.

RESUMEN / SUMMARY: - Brain tumors are a diverse group of neoplasms that often carry a poor prognosis for patients. Despite tremendous efforts to develop diagnostic tools and therapeutic avenues, the treatment of brain tumors remains a formidable challenge in the field of neuro-oncology. Physiological barriers including the blood-brain barrier result in insufficient accumulation of therapeutic agents at the site of a tumor, preventing adequate destruction of malignant cells. Furthermore, there is a need for improvements in brain tumor imaging to allow for better characterization and delineation of tumors, visualization of malignant tissue during surgery, and tracking of response to chemotherapy and radiotherapy. Multifunctional nanoparticles offer the potential to improve upon many of these issues and may lead to breakthroughs in brain tumor management. In this review, we discuss the diagnostic and therapeutic applications of nanoparticles for brain tumors with an emphasis on innovative approaches in tumor targeting, tumor imaging, and therapeutic agent delivery. Clinically feasible nanoparticle administration strategies for brain tumor patients are also examined. Furthermore, we address the barriers towards clinical implementation of multifunctional nanoparticles in the context of brain tumor management.

[433]

TÍTULO / TITLE: - Hypoxia and oxygenation induce a metabolic switch between pentose phosphate pathway and glycolysis in glioma stem-like cells.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Sep 5.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1173-y](#)

AUTORES / AUTHORS: - Kathagen A; Schulte A; Balcke G; Phillips HS; Martens T; Matschke J; Gunther HS; Soriano R; Modrusan Z; Sandmann T; Kuhl C; Tissier A; Holz M; Krawinkel LA; Glatzel M; Westphal M; Lamszus K

INSTITUCIÓN / INSTITUTION: - Laboratory for Brain Tumor Biology, Department of Neurosurgery, University Medical Center Hamburg-Eppendorf, Martinistrasse 52, 20246, Hamburg, Germany.

RESUMEN / SUMMARY: - Fluctuations in oxygen tension during tissue remodeling impose a major metabolic challenge in human tumors. Stem-like tumor cells in glioblastoma, the most common malignant brain tumor, possess extraordinary metabolic flexibility, enabling them to initiate growth even under non-permissive conditions. We identified a reciprocal metabolic switch between the pentose phosphate pathway (PPP) and glycolysis in glioblastoma stem-like (GS) cells. Expression of PPP enzymes is upregulated by acute oxygenation but downregulated by hypoxia, whereas glycolysis enzymes, particularly those of the preparatory phase, are regulated inversely. Glucose flux through the PPP is reduced under hypoxia in favor of flux through glycolysis. PPP enzyme expression is elevated in human glioblastomas compared to normal brain, especially in highly proliferative tumor regions, whereas expression of parallel preparatory phase glycolysis enzymes is reduced in glioblastomas, except for strong upregulation in severely hypoxic regions. Hypoxia stimulates GS cell migration but reduces proliferation, whereas oxygenation has opposite effects, linking the metabolic switch to the “go or grow” potential of the cells. Our findings extend Warburg’s observation that tumor cells predominantly utilize glycolysis for energy production, by suggesting that PPP activity is elevated in rapidly proliferating tumor cells but suppressed by acute severe hypoxic stress, favoring glycolysis and migration to protect cells against hypoxic cell damage.

[434]

TÍTULO / TITLE: - Contribution of ATM and ATR to the resistance of glioblastoma and malignant melanoma cells to the methylating anticancer drug temozolomide.

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

REVISTA / JOURNAL: - Mol Cancer Ther. 2013 Aug 19.

●● Enlace al texto completo (gratis o de pago) [1158/1535-7163.MCT-13-](#)

[0136](#)

AUTORES / AUTHORS: - Eich M; Roos WP; Nikolova T; Kaina B

INSTITUCIÓN / INSTITUTION: - 1Institute of Toxicology, Medical Center of the University Mainz.

RESUMEN / SUMMARY: - The major cytotoxic DNA adduct induced by temozolomide and other methylating agents used in malignant glioma and metastasized melanoma therapy is O6-methylguanine. This primary DNA damage is converted by mismatch repair into secondary lesions, which block replication and in turn induce DNA double-strand breaks that trigger the DNA damage response (DDR). Key upstream players in the DDR are the PI3 kinases ATM and ATR. Here we addressed the question of the importance of ATM and ATR in the cell death response following temozolomide. We

show that a) ATM and ATR mutated cells are hypersensitive to temozolomide, b) O6-methylguanine triggers ATM and ATR activation, c) knockdown of ATM and ATR enhances cell kill in glioblastoma and malignant melanoma cells with a stronger effect in ATR knockdown cells, d) ATR, but not ATM knockdown abolished phosphorylation of H2AX, CHK1 and CHK2 in glioma cells, and e) temozolomide-induced cell death was more prominently enhanced by pharmacological inhibition of CHK1 compared to CHK2. The data suggests that ATM and, even better, ATR inhibition is a useful strategy in sensitizing cancer cells to temozolomide and presumably also other anticancer drugs.

[435]

TÍTULO / TITLE: - Biomechanical comparison of laminectomy, hemilaminectomy and a new minimally invasive approach in the surgical treatment of multilevel cervical intradural tumour: a finite element analysis.

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

REVISTA / JOURNAL: - Eur Spine J. 2013 Sep 7.

●● Enlace al texto completo (gratis o de pago) [1007/s00586-013-2992-1](http://dx.doi.org/10.1007/s00586-013-2992-1)

AUTORES / AUTHORS: - Xie T; Qian J; Lu Y; Chen B; Jiang Y; Luo C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Changzheng Hospital, Second Military Medical University, No. 415 FengYang Road, Shanghai, 200003, China.

RESUMEN / SUMMARY: - PURPOSE: The objective of this study was to investigate the impact of the less invasive procedures of hemilaminectomy and unilateral multilevel interlaminar fenestration (UMIF) on the cervical spinal biomechanics. METHODS: A validated nonlinear finite element model of the intact cervical spine (C2-C7) was modified to study the biomechanical changes as a result of surgical alteration for treatment of intradural tumours at C3-6 using multilevel laminectomy (ML), multilevel hemilaminectomy (MHL) and UMIF with or without unilateral graded facetectomy. RESULTS: Under the load-controlled method, the greatest biomechanical changes occurred at the surgical segments. The largest increases occurred in flexion motions following ML approach with 70, 62 and 60 % increase at C3-4, C4-5 and C5-6, respectively. The increases were significantly reduced to no more than 14 % under MHL and UMIF. When combined with graded facetectomy, the changes in flexion under ML approach have a significantly further increase, up to 110 % at C3-4. The further increase was not significantly following MHL and UMIF, with no more than 31 % increase at C3-4, C4-5 and C5-6. The motion following UMIF was only slightly smaller in axial rotation than MHL. The maximum stresses in the annulus occurred during flexion in ML model, with 39, 34 and 38 % more stress than the intact at C3-4, C4-5 and C5-6, respectively. The increases of stress were significantly reduced to 5-7 % under MHL and UMIF. CONCLUSIONS: The less invasive approaches of UMIF and MHL greatly preserved the flexion motion (more than 48 %) of the cervical spine compared with

laminectomy, and the preserved motion mean the low-risk of postoperative spinal instability. UMIF and MHL also reduced the increased stress of annulus caused by ML, and the lesser stress will lower the risk of postoperative disc degeneration. The posterior bone elements play a slight role in spinal stability after removal of the attached ligaments.

[436]

TÍTULO / TITLE: - Stereotactic iodine-125 brachytherapy for the treatment of WHO grades II and III gliomas located in the central sulcus region.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Sep 17.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not126](#)

AUTORES / AUTHORS: - Ruge MI; Kickingeder P; Grau S; Dorn F; Galldiks N; Treuer H; Sturm V

INSTITUCIÓN / INSTITUTION: - Department of Stereotaxy and Functional Neurosurgery, Centre of Neurosurgery (M.I.R., P.K., H.T., V.S.); Department of General Neurosurgery, Centre of Neurosurgery (S.G.); Department of Radiology (F.D.); Department of Neurology, University of Cologne, Cologne, Germany (N.G.); Institute of Neuroscience and Medicine (INM-3), Research Centre Jülich, Jülich, Germany (N.G.).

RESUMEN / SUMMARY: - Background Resection of gliomas located in eloquent brain areas remains a neurosurgical challenge. The reported incidence of transient or permanent neurological deficits after microsurgery in eloquent brain ranges 20%-100%, or 0%-47% among contemporary neurosurgical series. The aim of this study was to assess the feasibility of stereotactic brachytherapy (SBT) as a local treatment alternative to microsurgical resection for patients with gliomas in highly eloquent areas, located in the central sulcus region (CSR). Method Between 1997 and 2010, 60 patients with World Health Organization (WHO) grades II and III gliomas located in the CSR were treated with SBT (iodine-125 seeds; cumulative therapeutic dose, 50-65 Gy). Following SBT, WHO grade III glioma patients additionally received percutaneous radiotherapy (median boost dose, 25.2 Gy). We evaluated procedure-related complications, clinical outcome, and progression-free survival. Results Procedure-related mortality was zero. Within 30 days of SBT, 3 patients (5%) had transient neurological deficits, and 8 patients (13%) had temporarily increased seizure activity. One patient (1.6%) deteriorated permanently. Space-occupying cysts (6 patients) and radiation necrosis (1 patient) developed after a median of 38 months and required surgical intervention. Seizure activity, rated 12 months following SBT, decreased in 82% of patients (Engel classes I-III). Median progression-free survivals were 62.2 +/- 19.7 months (grade II gliomas) and 26.1 +/- 17.9 months (grade III gliomas). Conclusions Compared with microsurgical resection, SBT harbors a low risk of procedural complications, is minimally invasive, and seems to be an effective local treatment option for patients

with inoperable, eloquent WHO grade II and III gliomas in the CSR. However, the value of SBT for treating gliomas still needs to be determined in prospective, randomized studies.

[437]

TÍTULO / TITLE: - Anaplastic Oligodendroglioma: A New Treatment Paradigm and Current Controversies.

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

REVISTA / JOURNAL: - Curr Treat Options Oncol. 2013 Aug 2.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11864-013-0251-7](#)

AUTORES / AUTHORS: - Roth P; Wick W; Weller M

INSTITUCIÓN / INSTITUTION: - Department of Neurology, University Hospital Zurich, Frauenklinikstrasse 26, 8091, Zurich, Switzerland.

RESUMEN / SUMMARY: - OPINION STATEMENT: Anaplastic oligodendroglial tumors have gained increasing interest with the emerging role of molecular markers and systemic chemotherapy during the past years. The long-term results of two landmark trials, RTOG 9402 and EORTC 26961, have resulted in a reconsideration of the appropriate therapeutic approaches for patients with these tumors. Both trials indicate that patients whose tumors harbor a 1p/19q co-deletion benefit particularly from the addition of procarbazine/lomustine (CCNU)/vincristine (PCV) chemotherapy to radiation therapy (RT). The median survival of patients with co-deleted tumors treated within the RTOG trial with PCV before irradiation was 14.7 years compared with 7.3 years of patients who received RT alone. Median overall survival has not been reached in the RT plus PCV arm of the EORTC trial, but a similar difference can be anticipated after a follow-up of more than 12 years. In contrast, no such benefit was observed for patients with tumors lacking 1p/19q co-deletion. Outside clinical trials, patients with anaplastic oligodendroglial tumors, and 1p/19q co-deletion therefore should be offered a combined treatment modality regimen, including radio- and chemotherapy. PCV, however, is associated with significant hematological toxicity and also nonhematological side effects, which probably translate into reduced quality of life for long-term survivors. Therefore, it might be warranted to replace PCV by temozolomide, which displays a more favorable side effect profile. Data from the NOA-04 study suggest that PCV and temozolomide have similar effects. However, long-term data on the benefit from temozolomide are lacking, making a definite answer on the equivalence of temozolomide and PCV in anaplastic oligodendroglioma (AO) impossible. The current evidence precludes RT alone for AO patients. Neither the RTOG nor the EORTC trial defined the role of chemotherapy alone. A comparison of combined modality treatment with chemotherapy alone followed by RT at progression is pending. Long-term follow-up of NOA-04 patients and results from future trials may help to clarify these questions. With more and more AO patients living 10 years or

more, particular attention must be paid to late side effects, such as neurotoxicity, and careful monitoring is required for all treated patients.

[438]

TÍTULO / TITLE: - Is There a Role for Bevacizumab in the Treatment of Glioblastoma?

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

REVISTA / JOURNAL: - Oncologist. 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) [1634/theoncologist.2013-0296](#)

AUTORES / AUTHORS: - Chamberlain MC; Chi AS

INSTITUCIÓN / INSTITUTION: - Andrew S. Chi, Stephen E. and Catherine Pappas Center for Neuro-Oncology and Division of Hematology/Oncology, Department of Neurology, Massachusetts General Hospital Cancer Center, Harvard Medical School; Marc C. Chamberlain, Fred Hutchinson Cancer Center, Seattle Cancer Care Alliance, University of Washington.

[439]

TÍTULO / TITLE: - Recent Advances in Treatment of Primary Central Nervous System Lymphoma.

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

REVISTA / JOURNAL: - Curr Treat Options Oncol. 2013 Aug 11.

●● Enlace al texto completo (gratis o de pago) [1007/s11864-013-0252-6](#)

AUTORES / AUTHORS: - Nayak L; Batchelor TT

INSTITUCIÓN / INSTITUTION: - Dana-Farber Cancer Institute, Center for Neuro-Oncology, Department of Neurology, Brigham and Women's Hospital, Harvard Medical School, 450 Brookline Avenue, Boston, MA, 02215, USA.

RESUMEN / SUMMARY: - OPINION STATEMENT: Therapeutic options are limited in primary central nervous system lymphoma (PCNSL) with no uniform consensus on optimal management and few published, randomized trials. High-dose methotrexate in combination with other chemotherapeutic agents forms the mainstay of treatment. There hasn't been much progress beyond high-dose methotrexate in this disease, and although results from trials using high-dose chemotherapy and autologous stem-cell transplant seem promising, these need to be further validated. Moreover, the role of whole brain radiation in the upfront setting remains to be determined. However, international efforts in this direction are underway, with ongoing randomized trials in newly diagnosed PCNSL, more research on the molecular pathogenesis and biomarkers, and the use of novel agents in salvage therapy. There also is emphasis on quality of life parameters and neurocognitive status. Future treatment options should optimize high-efficacy rates while minimizing the risk of neurotoxicity.

[440]

TÍTULO / TITLE: - Treatment Options for Medulloblastoma and CNS Primitive Neuroectodermal Tumor (PNET).

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

REVISTA / JOURNAL: - Curr Treat Options Neurol. 2013 Oct;15(5):593-606. doi: 10.1007/s11940-013-0255-4.

●● Enlace al texto completo (gratis o de pago) [1007/s11940-013-0255-4](#)

AUTORES / AUTHORS: - De Braganca KC; Packer RJ

INSTITUCIÓN / INSTITUTION: - Memorial Sloan-Kettering Cancer Center, 1275 York Ave., New York, NY, 10065, USA, debragak@mskcc.org.

RESUMEN / SUMMARY: - OPINION STATEMENT: Medulloblastoma and central nervous system (CNS) primitive neuroectodermal tumor (PNET) are primary pediatric brain tumors that require multidisciplinary therapies. Although often treated similarly in clinical trials, they are biologically different diseases. Even within medulloblastomas and CNS PNETs, there are molecularly distinct subgroups with differing presentations and prognoses. Overall, prognosis is better for medulloblastomas. Specific treatments for these types of cancer are continuously evolving to maximize survival and minimize long-term sequelae of treatment. Patients should be treated on a clinical trial, if eligible, as they may gain benefit with minimal risk over current standard of care. The amount of residual disease after surgery better correlates with survival for medulloblastomas than for CNS PNETs. Maximal surgical resection of tumor should be done, only if additional permanent, neurologic deficits can be spared. Patients should have a staging work-up to assess the extent of disease. This includes postoperative magnetic resonance imaging (MRI) of the brain, MRI of the entire spine and lumbar cerebrospinal fluid (CSF) sampling for cytological examination, if deemed safe. Radiation therapy to the entire CNS axis is required, with a greater dose (boost) given to the region of the primary site or any bulky residual disease for older children. Adjuvant chemotherapy must be given even if no evidence of disease after radiation therapy exists, as the risk of relapse is substantial after radiation alone. Subsets of younger children with medulloblastoma, arbitrarily defined as those younger than 3 years of age in some studies and 4 or even 5 years in other studies, can be effectively treated with chemotherapy alone. Recent genomic studies have revealed further subtypes of disease than previously recognized. Clinical trials to exploit these biologic differences are required to assess potential efficacy of targeted agents. The treatment of medulloblastoma and CNS PNET can cause significant impairment in neurologic function. Evaluations by physical therapy, occupational therapy, speech therapy and neurocognitive assessments should be obtained, as needed. After therapy is completed, survivors need follow-up of endocrine function, surveillance scans and psychosocial support.

[441]

TÍTULO / TITLE: - Screening for AIP gene mutations in a Han Chinese pituitary adenoma cohort followed by LOH analysis.

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

REVISTA / JOURNAL: - Eur J Endocrinol. 2013 Sep 19.

●● Enlace al texto completo (gratis o de pago) [1530/EJE-13-0442](#)

AUTORES / AUTHORS: - Cai F; Zhang Y; Zhao X; Yang Y; Ma S; Dai C; Liu X; Yao Y; Feng M; Wei J; Xing B; Wei Z; Yin Z; Zhang B; Gu F; Wang R

INSTITUCIÓN / INSTITUTION: - F Cai, Neurosurgery, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China.

RESUMEN / SUMMARY: - OBJECTIVE: The aryl hydrocarbon receptor interacting protein gene, AIP, is associated with pituitary adenoma (PA). AIP has not been sequenced in East Asian PA populations so we performed this in a Han Chinese cohort. DESIGN: Our study included six familial PA pedigrees comprising 16 patients and 27 unaffected relatives, as well as 216 sporadic PA patients and 100 unrelated healthy controls. METHODS: AIP sequencing was carried out on genomic DNA isolated from blood samples. Multiplex ligation-dependent probe amplification (MLPA) and microsatellite marker analysis on DNA from the paired tumor tissues were performed for LOH analysis. RESULTS: We identified three common and four rare SNPs, one intron insertion, one novel synonymous variant, four novel missense variants, and a reported nonsense mutation in three familial isolated pituitary adenoma (FIPA) cases from the same family. Large genetic deletions were not observed in the germline but were seen in the sporadic tumor DNA from three missense variant carriers. Except for common SNPs, AIP variants were mainly in somatotropinoma (60%, 6/10) and male patients (70.0%, 7/10), and the prevalence of AIP variants was 5.88% and 9.09% in young (≤ 30 years) and pediatric patients (≤ 18 years), respectively. All AIP variant patients suffered from macroadenomas. However, the AIP mutation rate in FIPA families was low in this cohort (16.67%, 1/6 families). CONCLUSION: AIP gene mutation may not be frequent in FIPA or sporadic PA from Han Chinese population. AIP sequencing and long term follow-up investigations should be performed for young patients with large PAs and their families with PA predisposition.

[442]

TÍTULO / TITLE: - Recurrent or refractory primary central nervous lymphoma: therapeutic considerations.

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

REVISTA / JOURNAL: - Expert Rev Anticancer Ther. 2013 Sep;13(9):1109-19. doi: 10.1586/14737140.2013.829634.

●● Enlace al texto completo (gratis o de pago) [1586/14737140.2013.829634](https://doi.org/10.1586/14737140.2013.829634)

AUTORES / AUTHORS: - Dahiya S; Murphy ES; Stevens GH; Peereboom DM; Ahluwalia MS

INSTITUCIÓN / INSTITUTION: - The Rose Ella Burkhardt Brain Tumor Neuro-Oncology Center, Neurological Institute, Cleveland Clinic, Cleveland, OH, USA.

RESUMEN / SUMMARY: - Primary central nervous system lymphoma (PCNSL) is an uncommon variant of extranodal non-Hodgkin lymphoma (NHL) that involves the brain, leptomeninges, eyes or spinal cord without evidence of systemic disease. Despite the high complete remission rate achieved with aggressive first-line therapy, 10-35% of PCNSL are treatment refractory and 35-60% of patients relapse. Standard therapy for recurrent or refractory disease has not yet been established, although retrospective data suggests improvement in survival with salvage therapy. The reported survival after relapse of PCNSL varies between 2 months and 24 months, with most series reporting an average of 4-12 months. The outcomes depend on whether treatment is instituted or not, suggesting a need for treatment guidelines for these patients. We review therapeutic approaches and their outcomes in recurrent or refractory PCNSL.

[443]

TÍTULO / TITLE: - Toll-like receptor 2 mediates microglia/brain macrophage MT1-MMP expression and glioma expansion.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Oct 1.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not115](https://doi.org/10.1093/neuonc/not115)

AUTORES / AUTHORS: - Vinnakota K; Hu F; Ku MC; Georgieva PB; Szulzewsky F; Pohlmann A; Waiczies S; Waiczies H; Niendorf T; Lehnardt S; Hanisch UK; Synowitz M; Markovic D; Wolf SA; Glass R; Kettenmann H

INSTITUCIÓN / INSTITUTION: - Cellular Neurosciences (K.V., F.H., M-C.K., P.B.G., F.S., S.A.W., R.G., H.K.) and Berlin Ultrahigh Field Facility, Max Delbrück Center for Molecular Medicine, Berlin, Germany (A.P., S.W., H.W., T.N.); Department of Neurology and Center for Anatomy, Institute of Cell Biology and Neurobiology, Charité Universitätsmedizin, Berlin, Germany (S.L.); Department of Neuropathology, University of Göttingen, Göttingen, Germany (U-K.H.); Department of Neurosurgery, Charité Universitätsmedizin, Berlin, Germany (M.S.); Department of Neurosurgery, Helios Clinic, Berlin, Germany (D.M.) Present affiliation: Neurosurgical Research, Clinic for Neurosurgery, Ludwig Maximilians University of Munich, Munich, Germany (R. G.).

RESUMEN / SUMMARY: - Background Glioblastomas are the most aggressive primary brain tumors in humans. Microglia/brain macrophage accumulation in and around the tumor correlates with malignancy and poor clinical prognosis of these tumors. We

have previously shown that microglia promote glioma expansion through upregulation of membrane type 1 matrix metalloprotease (MT1-MMP). This upregulation depends on signaling via the Toll-like receptor (TLR) adaptor molecule myeloid differentiation primary response gene 88 (MyD88). Methods Using in vitro, ex vivo, and in vivo techniques, we identified TLR2 as the main TLR controlling microglial MT1-MMP expression and promoting microglia-assisted glioma expansion. Results The implantation of mouse GL261 glioma cells into TLR2 knockout mice resulted in significantly smaller tumors, reduced MT1-MMP expression, and enhanced survival rates compared with wild-type control mice. Tumor expansion studied in organotypic brain slices depended on both parenchymal TLR2 expression and the presence of microglia. Glioma-derived soluble factors and synthetic TLR2 specific ligands induced MT1-MMP expression in microglia from wild-type mice, but no such change in MT1-MMP gene expression was observed in microglia from TLR2 knockout mice. We also found evidence that TLR1 and TLR6 cofunction with TLR2 as heterodimers in regulating MT1-MMP expression in vitro. Conclusions Our results thus show that activation of TLR2 along with TLRs 1 and/or 6 converts microglia into a glioma supportive phenotype.

[444]

TÍTULO / TITLE: - Mitochondrial protein ATPase family, AAA domain containing 3^a correlates with radioresistance in glioblastoma.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Oct;15(10):1342-52. doi: 10.1093/neuonc/not077.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not077](#)

AUTORES / AUTHORS: - You WC; Chiou SH; Huang CY; Chiang SF; Yang CL; Sudhakar JN; Lin TY; Chiang IP; Shen CC; Cheng WY; Lin JC; Shieh SH; Chow KC

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Kuan-Chih Chow, PhD, Graduate Institute of Biomedical Sciences, National Chung Hsing University, 250 Kuo-Kuang Road, Taichung 40227, Taiwan. kcchow@dragon.nchu.edu.tw.

RESUMEN / SUMMARY: - Background ATPase-family, AAA domain containing 3^a (ATAD3A) is located on human chromosome 1p36.33, and high endogenous expression may associate with radio- and chemosensitivity. This study was conducted to investigate the significance of ATAD3A in glioblastoma multiforme (GBM). Methods Clinical significance of ATAD3A expression was assessed by immunohistochemistry in 67 GBM specimens, and prognostic value was assessed in 32 GBM patients statistically. To investigate in vitro phenotypic effects of ATAD3A, cell viability was measured using a clonogenic survival assay under either knockdown or ectopic expression of ATAD3A in GBM cell lines. The effects of ATAD3A knockdown on targeted DNA repair-associated proteins in T98G cells were evaluated using immunofluorescence and Western blotting. Results Clinically, high expression of ATAD3A was independent of O(6)-DNA

methylguanine-methyltransferase methylation status and correlated with worse prognosis. In vitro, high ATAD3A-expressing T98G cells were more resistant to radiation-induced cell death compared with control and low endogenous ATAD3A U87MG cells. After silencing ATAD3A, T98G cells became more sensitive to radiation. On the other hand, enforced ATAD3A expression in U87MG cells exhibited increased radioresistance. ATAD3A may coordinate with aldo-keto reductase genes and participate in bioactivation or detoxication of temozolomide. Surprisingly, deficient DNA repair after irradiation was observed in T98G/ATAD3A knockdown as a result of decreased nuclear ataxia telangiectasia mutated kinase and histones H2AX and H3, which was also evidenced by the sustained elevation of poly (ADP-ribose) polymerase prior to and after radiation treatment. Conclusion Our data suggest that high expression of ATAD3A is an independent biomarker for radioresistance in GBM. ATAD3A could be a potential target for therapy.

[445]

TÍTULO / TITLE: - Pituitary macroadenoma: a case report and review.

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

REVISTA / JOURNAL: - Clin Exp Optom. 2013 Aug 15. doi: 10.1111/cxo.12099.

●● Enlace al texto completo (gratis o de pago) [1111/cxo.12099](#)

AUTORES / AUTHORS: - Herse P

INSTITUCIÓN / INSTITUTION: - Luxottica Institute of Learning, Macquarie Park, New South Wales, Australia. peter.herse@luxottica.com.au.

RESUMEN / SUMMARY: - Pituitary adenomas are the most common tumours of the sellar region. They generally have a slow but severe impact on vision due to compression of the optic nerves, optic chiasm and cavernous sinus. This case report reviews the clinical presentation, management and treatment of the major classifications of pituitary adenoma. As Australian optometrists perform over 300,000 visual field assessments per year, it is vital they are aware of this important cause of visual field loss.

[446]

TÍTULO / TITLE: - Integrative genetic, epigenetic and pathological analysis of paraganglioma reveals complex dysregulation of NOTCH signaling.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Oct;126(4):575-594. Epub 2013 Aug 18.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1165-y](#)

AUTORES / AUTHORS: - Cama A; Verginelli F; Lotti LV; Napolitano F; Morgano A; D'Orazio A; Vacca M; Perconti S; Pepe F; Romani F; Vitullo F; di Lella F; Visone R; Mannelli M;

Neumann HP; Raiconi G; Paties C; Moschetta A; Tagliaferri R; Veronese A; Sanna M; Mariani-Costantini R

INSTITUCIÓN / INSTITUTION: - Unit of General Pathology, Aging Research Center (Ce.S.I.), G. d'Annunzio University Foundation, Via Colle dell'Ara, 66100, Chieti, Italy.

RESUMEN / SUMMARY: - Head and neck paragangliomas, rare neoplasms of the paraganglia composed of nests of neurosecretory and glial cells embedded in vascular stroma, provide a remarkable example of organoid tumor architecture. To identify genes and pathways commonly deregulated in head and neck paraganglioma, we integrated high-density genome-wide copy number variation (CNV) analysis with microRNA and immunomorphological studies. Gene-centric CNV analysis of 24 cases identified a list of 104 genes most significantly targeted by tumor-associated alterations. The "NOTCH signaling pathway" was the most significantly enriched term in the list ($P = 0.002$ after Bonferroni or Benjamini correction). Expression of the relevant NOTCH pathway proteins in sustentacular (glial), chief (neuroendocrine) and endothelial cells was confirmed by immunohistochemistry in 47 head and neck paraganglioma cases. There were no relationships between level and pattern of NOTCH1/JAG2 protein expression and germline mutation status in the SDH genes, implicated in paraganglioma predisposition, or the presence/absence of immunostaining for SDHB, a surrogate marker of SDH mutations. Interestingly, NOTCH upregulation was observed also in cases with no evidence of CNVs at NOTCH signaling genes, suggesting altered epigenetic modulation of this pathway. To address this issue we performed microarray-based microRNA expression analyses. Notably 5 microRNAs (miR-200a,b,c and miR-34b,c), including those most downregulated in the tumors, correlated to NOTCH signaling and directly targeted NOTCH1 in in vitro experiments using SH-SY5Y neuroblastoma cells. Furthermore, lentiviral transduction of miR-200s and miR-34s in patient-derived primary tympano-jugular paraganglioma cell cultures was associated with NOTCH1 downregulation and increased levels of markers of cell toxicity and cell death. Taken together, our results provide an integrated view of common molecular alterations associated with head and neck paraganglioma and reveal an essential role of NOTCH pathway deregulation in this tumor type.

[447]

TÍTULO / TITLE: - Saponins: the Potential Chemotherapeutic Agents in Pursuing New Anti-glioblastoma Drugs.

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

REVISTA / JOURNAL: - Mini Rev Med Chem. 2013 Oct;13(12):1709-24.

AUTORES / AUTHORS: - Tian X; Tang H; Lin H; Cheng G; Wang S; Zhang X

INSTITUCIÓN / INSTITUTION: - Institute of Materia, School of Pharmacy, Fourth Military Medical University, 169 Changle West Rd., Xi'an 710032, PR China.

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RESUMEN / SUMMARY: - Saponins are natural glycosides consisting of a triterpene or steroid aglycone with a range of pharmacological properties such as significant anti-tumor activity. In this article, we review our recent progress in the studies of the saponins possessing anticancer effects, especially anti-glioblastoma effects from twelve species of marine organisms and terrestrial plants. The anti-glioblastoma active saponins discovered by other researchers in recent decades are also reviewed and compared. Systematic extraction, isolation and structural elucidation on the saponin constituents from three species of starfishes, five species of sea cucumbers and four species of medicinal plants led to the identification of more than 129 saponins, among which 76 saponins are new compounds. Most of the new compounds were found to possess relatively rare structural features showing in vitro cytotoxicity against tumor cells, especially glioblastoma cells. Several saponins exhibited significant anti-glioblastoma effects in vivo by in situ administration (interstitial chemotherapy) and their haemolytic side effects were avoided in the tests. Multiple mechanisms of action, such as interfering with cell cycle progression, inducing apoptosis, promoting stabilization of microtubule, as well as several signal transduction pathways, were involved in their anticancer effects. The review provided valuable leads for pursuing new anti-glioblastoma drugs, and established a new viewpoint for further development of these marine and terrestrial organisms. The successful approach to administer saponins in situ conquered the bottleneck in the development of saponins as new drugs- haemolytic effects. It means that saponins may be developed as potential chemotherapeutic agents in pursuing new antiglioblastoma drugs.

[448]

TÍTULO / TITLE: - Fractionated Stereotactic Radiotherapy for Acoustic Neuromas: Long-term Outcomes.

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

REVISTA / JOURNAL: - Clin Oncol (R Coll Radiol). 2013 Aug 21. pii: S0936-6555(13)00308-7. doi: 10.1016/j.clon.2013.08.002.

●● Enlace al texto completo (gratis o de pago) [1016/j.clon.2013.08.002](http://dx.doi.org/10.1016/j.clon.2013.08.002)

AUTORES / AUTHORS: - Woolf DK; Williams M; Goh CL; Henderson DR; Menashy RV; Simpson N; Mastroianni B; Collis CH

INSTITUCIÓN / INSTITUTION: - Department of Oncology, Royal Free Hospital, London, UK. Electronic address: dwoolf@doctors.org.uk.

RESUMEN / SUMMARY: - AIMS: Acoustic neuromas are rare, benign intracranial tumours. There are a variety of treatment options, with no clear optimal management strategy and wide variation in treated outcomes. We report the outcomes from a 15 year cohort of patients treated at our centre using fractionated stereotactic radiotherapy (52.5 Gy in 25 fractions). MATERIALS AND METHODS: We analysed a retrospective case series. Patients were identified from patient records and a retrospective review of

case notes and imaging reports was undertaken. We assessed tumour response using RECIST criteria and recorded toxicity. Progression-free survival was estimated using the Kaplan-Meier method. The study was conducted according to the STROBE guidelines. RESULTS: In total, 93 patients were identified; 83 patients had follow-up data, with a median follow-up period of 5.7 years. The overall control rate using RECIST criteria was 92%. Data on complications were available for 90 patients, with six (7%) experiencing a reduction in hearing, one (1%) developing trigeminal nerve dysfunction and one (1%) a deterioration in facial nerve function. Other toxicities included four (4%) patients who developed hydrocephalus, requiring the placement of a shunt and one (1%) patient who developed radiation brainstem necrosis. After further evaluation this patient was deemed to have been treated within acceptable dose constraints. CONCLUSION: These data suggest that a good control rate of acoustic neuromas is achievable using fractionated stereotactic radiotherapy to a dose of 52.5 Gy in 25 fractions. Toxicity is considered acceptable but the episode of radiation brainstem necrosis remains of concern and is the subject of further work.

[449]

TÍTULO / TITLE: - Cognitive function in children with brain tumors in the first year after diagnosis compared to healthy matched controls.

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

REVISTA / JOURNAL: - *Pediatr Blood Cancer*. 2013 Aug 29. doi: 10.1002/pbc.24746.

●● [Enlace al texto completo \(gratis o de pago\) 1002/pbc.24746](#)

AUTORES / AUTHORS: - Shortman RI; Lowis SP; Penn A; McCarter RJ; Hunt LP; Brown CC; Stevens MC; Curran AL; Sharples PM

INSTITUCIÓN / INSTITUTION: - Neuropsychology, Frenchay Hospital, Bristol, England.

RESUMEN / SUMMARY: - BACKGROUND: Improved survival of children with brain tumors (BTs) has increased focus on ameliorating morbidity. To reduce the risk of progressive cognitive decline, remedial strategies need to be instituted early, based upon accurate appraisal of need, yet few studies have investigated cognition in BT children early post-diagnosis. The study aims were to investigate cognition in children with primary BTs 1, 6, and 12 months post-diagnosis compared with healthy children, exploring the impact of disease and treatment variables. METHODS: Forty-eight children aged 2-16 years with primary BTs, referred to a Regional Neurosurgical Unit over the 2-year study period were eligible for enrolment. The “best friends” model was used to recruit matched controls. Cognition was assessed using age-appropriate Wechsler Intelligence scales; Children’s Memory Scale; Test of Everyday Attention for Children, and Wechsler Quicktest. RESULTS: Patients with BTs had significantly reduced performance compared to controls early post-diagnosis in tests of Performance IQ, processing speed, verbal and visual memory, and selective attention. Improved performance over 12 months was seen in patients with BTs although also, for some measures, in

controls. Significant deficits in cognitive performance were seen one year post-diagnosis for Verbal IQ; processing speed, visual and verbal immediate memory, and selective attention. Infratentorial site, high tumor grade, hydrocephalus, radiotherapy, and chemotherapy were associated with poorer functioning. CONCLUSION: Early cognitive impairment is present in BT children, sometimes prior to radiotherapy/chemotherapy treatment, and is associated with hydrocephalus, high tumor grade and infratentorial site. Future studies should investigate the role of early rehabilitation in improving cognition. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[450]

TÍTULO / TITLE: - Effectiveness and preclinical safety profile of doxycycline to be used 'off-label' to induce therapeutic transgene expression in a Phase I clinical trial for glioma.

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

REVISTA / JOURNAL: - *Hum Gene Ther Clin Dev.* 2013 Sep 5.

●● [Enlace al texto completo \(gratis o de pago\) 1089/humc.2013.139](#)

AUTORES / AUTHORS: - Vanderveen N; Paran C; Krasinkiewicz J; Zhao L; Palmer D; Hervey-Jumper S; Ng P; Lowenstein P; Castro M

INSTITUCIÓN / INSTITUTION: - University of Michigan, Neurosurgery, Ann Arbor, Michigan, United States ; nathan.vanderveen@gmail.com.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common malignant primary brain cancer in adults; it carries a dismal prognosis despite improvements in standard of care. We developed a combined gene therapy strategy using (1) herpes simplex type 1-thymidine kinase (TK) in conjunction with the cytotoxic pro-drug ganciclovir to kill actively proliferating tumor cells and (2) doxycycline (DOX)-inducible Fms-like tyrosine kinase 3 ligand (Flt3L), an immune stimulatory molecule that induces anti-GBM immunity. As a prelude to a Phase I clinical trial, we examined the efficacy and safety of this approach (Muhammad et al., 2010; Muhammad et al., 2012). In the present paper, we investigated the efficacy and safety of the "off-label" use of the antibiotic doxycycline (DOX) to turn on the high-capacity adenoviral vector (HC-Ad) encoding therapeutic Flt3L expression. DOX-inducible Flt3L expression in male Lewis rats was assessed using DOX doses of 30.8 mg/kg/day (low-DOX) or 46.2 mg/kg/day (high-DOX), which are allometrically equivalent (Voisin et al., 1990) to the human doses that are recommended for the treatment of infections: 200 mg/day or 300 mg/day. Naive rats were intracranially injected with 1x10⁹ viral particles (vp) of HC-Ad-TetOn-Flt3L, and expression of the therapeutic transgene, i.e., Flt3L, was assessed using immunohistochemistry in brain sections after two weeks of DOX administration via oral gavage. The results show robust expression of Flt3L in the rat brain parenchyma in areas near the injection site in both the low-DOX and the high-DOX

groups, suggesting that Flt3L will be expressed in human glioma patients at a DOX dose of 200 mg/day or 300 mg/day. These doses have been approved by the FDA to treat infections in humans and would thus be considered safe for an “off label” use to treat GBM patients undergoing HC-Ad mediated gene therapy in a Phase I clinical trial.

[451]

- CASTELLANO -

TÍTULO / TITLE: Inzidenz und klinischer Verlauf von Radionekrosen bei Kindern mit Schadelstumoren : Eine 20-Jahres-Langzeit-Beobachtungsstudie.

TÍTULO / TITLE: - Incidence and clinical course of radionecrosis in children with brain tumors : A 20-year longitudinal observational study.

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

REVISTA / JOURNAL: - Strahlenther Onkol. 2013 Sep;189(9):759-764. Epub 2013 Aug 22.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00066-013-0408-0](#)

AUTORES / AUTHORS: - Strenger V; Lackner H; Mayer R; Sminia P; Sovinz P; Mokry M; Pilhatsch A; Benesch M; Schwinger W; Seidel M; Sperl D; Schmidt S; Urban C

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Hematology/Oncology, Medical University of Graz, Auenbruggerplatz 38, 8036, Graz, Austria, volker.strenger@medunigraz.at.

RESUMEN / SUMMARY: - Radionecrosis (RN) in children treated for brain tumors represents a potentially severe long-term complication. Its diagnosis is challenging, since magnetic resonance imaging (MRI) cannot clearly discriminate between RN and tumor recurrence. A retrospective single-center study was undertaken to describe the incidence and clinical course of RN in a cohort of 107 children treated with external radiotherapy (RT) for various brain tumors between 1992 and 2012. During a median follow-up of 4.6 years (range 0.29-20.1 years), RN was implied by suspicious MRI findings in 5 children (4.7 %), 5-131 months after RT. Suspicion was confirmed histologically (1 patient) or substantiated by FDG positron-emission tomography (FDG-PET, 2 patients) or by FDG-PET and MR spectroscopy (1 patient). Before developing RN, all 5 patients had received cytotoxic chemotherapy in addition to RT. In addition to standard treatment protocols, 2 patients had received further chemotherapy for progression or relapse. Median radiation dose expressed as the biologically equivalent total dose applied in 2 Gy fractions (EQD2) was 51.7 Gy (range 51.0-60.0 Gy). At RN onset, 4 children presented with neurological symptoms. Treatment of RN included resection (n = 1), corticosteroids (n = 2) and a combination of corticosteroids, hyperbaric oxygen (HBO) and bevacizumab (n = 1). One patient with asymptomatic RN was not treated. Complete radiological regression of the lesions was observed in all patients. Clinical symptoms normalized in 3 patients, whereas 2 developed permanent severe neurological deficits. RN represents a severe long-term treatment complication in children with brain tumors. The spectrum of clinical presentation is wide; ranging from asymptomatic lesions to progressive neurological deterioration. FDG-PET and MR

spectroscopy may be useful for distinguishing between RN and tumor recurrence. Treatment options in patients with symptomatic RN include conservative management (steroids, HBO, bevacizumab) and surgical resection.

[452]

TÍTULO / TITLE: - Quantitative T2 mapping of recurrent glioblastoma under bevacizumab improves monitoring for non-enhancing tumor progression and predicts overall survival.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Oct;15(10):1395-404. doi: 10.1093/neuonc/not105. Epub 2013 Aug 7.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not105](#)

AUTORES / AUTHORS: - Hattingen E; Jurcoane A; Daneshvar K; Pilatus U; Mittelbronn M; Steinbach JP; Bahr O

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Elke Hattingen, MD, Goethe-University Hospital Frankfurt, Schleusenweg 2-16, 60528, Frankfurt, Germany. elke.hattingen@kgu.de.

RESUMEN / SUMMARY: - Background Anti-angiogenic treatment in recurrent glioblastoma patients suppresses contrast enhancement and reduces vasogenic edema while non-enhancing tumor progression is common. Thus, the importance of T2-weighted imaging is increasing. We therefore quantified T2 relaxation times, which are the basis for the image contrast on T2-weighted images. Methods Conventional and quantitative MRI procedures were performed on 18 patients with recurrent glioblastoma before treatment with bevacizumab and every 8 weeks thereafter until further tumor progression. We segmented the tumor on conventional MRI into 3 subvolumes: enhancing tumor, non-enhancing tumor, and edema. Using coregistered quantitative maps, we followed changes in T2 relaxation time in each subvolume. Moreover, we generated differential T2 maps by a voxelwise subtraction using the first T2 map under bevacizumab as reference. Results Visually segmented areas of tumor and edema did not differ in T2 relaxation times. Non-enhancing tumor volume did not decrease after commencement of bevacizumab treatment but strikingly increased at progression. Differential T2 maps clearly showed non-enhancing tumor progression in previously normal brain. T2 relaxation times decreased under bevacizumab without re-increasing at tumor progression. A decrease of <26 ms in the enhancing tumor following exposure to bevacizumab was associated with longer overall survival. Conclusions Combining quantitative MRI and tumor segmentation improves monitoring of glioblastoma patients under bevacizumab. The degree of change in T2 relaxation time under bevacizumab may be an early response parameter predictive of overall survival. The sustained decrease in T2 relaxation times toward values of healthy tissue masks progressive tumor on conventional T2-weighted images.

Therefore, quantitative T2 relaxation times may detect non-enhancing progression better than conventional T2-weighted imaging.

[453]

TÍTULO / TITLE: - Differential diagnosis of small cell glioblastoma and anaplastic oligodendroglioma: a case report of an elderly man.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Aug 24.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0158-9](#)

AUTORES / AUTHORS: - Takahashi K; Tsuda M; Kanno H; Murata J; Mahabir R; Ishida Y; Kimura T; Tanino M; Nishihara H; Nagashima K; Tanaka S

INSTITUCIÓN / INSTITUTION: - Department of Cancer Pathology, Hokkaido University Graduate School of Medicine, N15, W7 Kita-Ku, Sapporo, Hokkaido, Japan, takakenta@med.hokudai.ac.jp.

RESUMEN / SUMMARY: - Small cell glioblastoma is a histological subtype of glioblastoma with characteristic features of highly proliferative, monotonous small glial cells with high nuclear cytoplasm ratio. Morphologically, malignant lymphoma or small cell metastatic carcinoma should be carefully discriminated. Some cases are difficult to differentiate from anaplastic oligodendroglioma. In this report, we present a case of small cell glioblastoma of an elderly man. The lack of IDH1/2 mutation was confirmed by immunohistochemistry and direct sequencing. Fluorescence in situ hybridization revealed the lower rates of chromosome 1p and 19q deletion. Microsatellite analysis disclosed partial 10q alteration near the PTEN locus. Not only morphological and immunohistochemical examinations, but also cytogenetical investigations for IDH1/2 mutation, 1p/19q loss, and PTEN alteration, are strongly supportive methods for the differential diagnosis of small cell glioblastoma and anaplastic oligodendroglioma.

[454]

TÍTULO / TITLE: - A Case of Intraosseous Microcystic Meningioma Without a Mass Lesion.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013 Sep 24.

AUTORES / AUTHORS: - Ichimura S; Hara K; Shimokawa R; Kagami H; Inaba M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Saiseikai Yokohamashi Tobu Hospital.

RESUMEN / SUMMARY: - Both intraosseous and microcystic meningiomas are rare tumor types. We report the case of a 66-year-old woman with intraosseous microcystic meningioma without a mass lesion. She presented with a rare intraosseous microcystic meningioma manifesting as pain. Radiological examination revealed an osteolytic lesion in the right parietal bone. Magnetic resonance (MR) images showed iso- to

hypointensity on T1-weighted images and hyperintensity on T2-weighted images corresponding to the lesion. T1-weighted MR imaging with gadolinium enhancement better defined the marginal area. The inner table of the skull was disrupted prominently, and both sides of the outer table were eroded. There was fluid leakage during surgery but no obvious tumor mass. Histological examination revealed microcystic meningioma in the inner part of the defective bone. A macroscopic lesion was not found, because most of the tumor comprised microcysts, and their contents leaked out during the surgical procedure. Intraosseous microcystic meningioma may be considered as one of the differential diagnoses when the intraosseous tumor in the skull has fluid leakage and does not have a mass lesion during the surgery.

[455]

TÍTULO / TITLE: - Optic Nerve Sheath Meningioma: A Case Report with 15-Year Follow-Up.

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

REVISTA / JOURNAL: - Semin Ophthalmol. 2013 Aug 16.

●● Enlace al texto completo (gratis o de pago) [3109/08820538.2013.810279](https://doi.org/10.1007/s00401-013-1169-7)

AUTORES / AUTHORS: - Vukovic Arar Z; Vatacuk Z; Miskic B; Janjetovic Z; Sekelj S; Knezevic Pravec M

INSTITUCIÓN / INSTITUTION: - Department of Ophthalmology, General Hospital "Dr Josip Bencevic", Slavonski Brod, Croatia.

RESUMEN / SUMMARY: - Abstract Meningiomas are benign neoplastic lesions of arachnoidal cells of the meninges. These tumors may arise wherever meninges exist, such as in the nasal cavity, paranasal sinuses, middle ear, and mediastinum. Optic nerve sheath meningiomas (ONSMs) are usually unilateral and occur predominantly in middle-aged females, although they may be present at any age. We present a case of a 55-year-old female with ONSM diagnosed when she was 40 years old. Diagnosis and follow-up was based on the clinical picture, CT orbit scan, and magnetic resonance imaging.

[456]

TÍTULO / TITLE: - Frequent triple-hit expression of MYC, BCL2, and BCL6 in primary lymphoma of the central nervous system and absence of a favorable MYCBCL2 subgroup may underlie the inferior prognosis as compared to systemic diffuse large B cell lymphomas.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Oct;126(4):603-605. Epub 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1169-7](https://doi.org/10.1007/s00401-013-1169-7)

AUTORES / AUTHORS: - Brunn A; Nagel I; Montesinos-Rongen M; Klapper W; Vater I; Paulus W; Hans V; Blumcke I; Weis J; Siebert R; Deckert M

INSTITUCIÓN / INSTITUTION: - Department of Neuropathology, University Hospital of Cologne, Kerpener Str. 62, 50924, Cologne, Germany.

[457]

TÍTULO / TITLE: - Time trends in glioblastoma multiforme survival: the role of temozolomide.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Sep 17.

- [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not122](#)

AUTORES / AUTHORS: - Dubrow R; Darefsky AS; Jacobs DI; Park LS; Rose MG; Laurans MS; King JT Jr

INSTITUCIÓN / INSTITUTION: - Department of Chronic Disease Epidemiology, Yale School of Public Health and Yale School of Medicine, New Haven, Connecticut (R.D., A.S.D., L.S.P.); Department of Environmental Health Sciences, Yale School of Public Health and Yale School of Medicine, New Haven, Connecticut (D.I.J.); Department of Neurosurgery, Yale School of Medicine, New Haven, Connecticut (M.S.H.L., J.T.K.); Department of Internal Medicine, Yale School of Medicine, New Haven, Connecticut (M.G.R.); VA Connecticut Healthcare System, West Haven, Connecticut (M.G.R., M.S.H.L., J.T.K.).

RESUMEN / SUMMARY: - Background In 2005, maximum safe surgical resection, followed by radiotherapy with concomitant temozolomide (TMZ), followed by adjuvant TMZ became the standard of care for glioblastoma (GBM). Furthermore, a modest, but meaningful, population-based survival improvement for GBM patients occurred in the US between 1999 (when TMZ was first introduced) and 2008. We hypothesized that TMZ usage explained this GBM survival improvement. Methods We used national Veterans Health Administration (VHA) databases to construct a cohort of GBM patients, with detailed treatment information, diagnosed 1997-2008 (n = 1645). We compared survival across 3 periods of diagnosis (1997-2000, 2001-2004, and 2005-2008) using Kaplan-Meier curves. We used proportional hazards models to calculate period hazard rate ratios (HRs) and 95% confidence intervals (CIs), adjusted for demographic, clinical, and treatment covariates. Results Survival increased over calendar time (stratified log-rank P < .0001). After adjusting for age and Charlson comorbidity score, for cases diagnosed in 2005-2008 versus 1997-2000, the HR was 0.72 (95% CI, 0.64-0.82; p-trend < .0001). Sequentially adding non-TMZ treatment variables (ie, surgery, radiotherapy, non-TMZ chemotherapy) to the model did not change this result. However, adding TMZ to the model containing age, Charlson comorbidity score, and all non-TMZ treatments eliminated the period effect entirely (HR = 1.01; 95% CI, 0.86-1.19; p-trend = 0.84). Conclusions The observed survival

improvement among GBM patients diagnosed in the VHA system between 1997 and 2008 was completely explained by TMZ. Similar studies in other populations are warranted to test the generalizability of our finding to other patient cohorts and health care settings.

[458]

TÍTULO / TITLE: - Infectious complications in the first year following autologous hematopoietic progenitor cell rescue for children with brain tumors.

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

REVISTA / JOURNAL: - *Pediatr Blood Cancer*. 2013 Aug 17. doi: 10.1002/pbc.24665.

●● [Enlace al texto completo \(gratis o de pago\) 1002/pbc.24665](#)

AUTORES / AUTHORS: - Brown RJ; Rahim H; Wong KE; Cooper RM; Marachelian A; Butturini A; Dhall G; Finlay JL

INSTITUCIÓN / INSTITUTION: - Neuro-Oncology Program, Children's Center for Cancer and Blood Diseases, Children's Hospital Los Angeles, Los Angeles, California.

RESUMEN / SUMMARY: - **BACKGROUND:** High-dose chemotherapy with autologous hematopoietic progenitor cell rescue (AuHPCR) for pediatric patients with brain tumors has become an important therapeutic modality to avoid or delay the long-term effects of cranial irradiation. Data on post-AuHPCR infectious complications in this population are lacking. This single institution retrospective review reports the prophylactic practices and infections in the first year following AuHPCR in pediatric patients with brain tumors. **PROCEDURE:** The medical record of patients who underwent AuHPCR for the treatment of a malignant brain tumor at Children's Hospital Los Angeles between 1988 and 2010 were reviewed. Patients without prior irradiation who were free of disease at 1 year without additional chemotherapy were evaluated for all infectious disease complications occurring from time of neutrophil engraftment to 1 year post-AuHPCR. **RESULTS:** Forty-three of the 115 eligible patients were included. The median time to neutrophil engraftment was 11 days (range: 8-43 days), and 20 Grade III/IV (no Grade V) infectious episodes developed in 15 patients (35%). Fourteen episodes of bacteremia (70%) were catheter-related, predominantly gram-negative (71%), and polymicrobial (50%). There were no fungal or pneumocystis infections and only 1 of 25 (4%) at-risk patients developed VZV reactivation. **CONCLUSIONS:** These data suggest patients with brain tumors undergoing AuHPCR have few late-occurring non-catheter-related post-transplant infections indicating that prophylaxis practices were sufficient. Central lines should be removed soon after engraftment, but those with central line infections should receive adequate treatment including gram-negative coverage. In addition, only at-risk patients who receive further irradiation may benefit from VZV reaction prophylaxis. *Pediatr Blood Cancer*. © 2013 Wiley Periodicals, Inc.

[459]

TÍTULO / TITLE: - Esthesioneuroblastoma as an Unusual Cause for Dystopia.

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

REVISTA / JOURNAL: - Orbit. 2013 Sep 24.

●● Enlace al texto completo (gratis o de pago) [3109/01676830.2013.833252](#)

AUTORES / AUTHORS: - Kamath VB; Sowmya V; Mendonca N

INSTITUCIÓN / INSTITUTION: - Department of Ophthalmology and.

RESUMEN / SUMMARY: - Abstract Esthesioneuroblastoma, also known as olfactory neuroblastoma, is an uncommon malignant neoplasm arising from the olfactory epithelium in the roof of the nasal cavity. There are very few case reports published worldwide. The common presenting symptoms of Esthesioneuroblastoma are unilateral nasal obstruction (70%), epistaxis (50%), anosmia, rhinorrhoea, facial pain, headache, excessive lacrimation and rarely proptosis and visual disturbance. Apart from being locally aggressive, it metastasizes by haematogenous and lymphatic routes. We report an extremely rare case of esthesioneuroblastoma in a 20-year-old man with orbital involvement presenting as dystopia. This rare tumour should be considered in the differential diagnosis for young patients presenting to ophthalmic outpatient department with dystopia.

[460]

TÍTULO / TITLE: - Targeting the somatostatin receptor in pituitary and neuroendocrine tumors.

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

REVISTA / JOURNAL: - Expert Opin Ther Targets. 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) [1517/14728222.2013.830711](#)

AUTORES / AUTHORS: - Veenstra MJ; de Herder WW; Feelders RA; Hofland LJ

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RESUMEN / SUMMARY: - Introduction: Neuroendocrine and pituitary tumors are uncommon tumors that develop from cells of the (neuro-)endocrine system. They can secrete hormones, leading to typical symptoms and syndromes. The cornerstone of antisecretory treatment for neuroendocrine and growth hormone-secreting pituitary tumors consists of somatostatin analogs, which target the somatostatin receptors that are expressed on the tumor cell membrane. Somatostatin analogs activate the second messenger pathways that inhibit hormone secretion and may also delay tumor growth. Areas covered: Recent developments in the field of somatostatin analogs and promising new angles in neuroendocrine tumor treatment are discussed. The recently approved somatostatin analog pasireotide and promising new analogs KE108 and

somatoprim are reviewed. Further, innovative developments in the field of receptor manipulation, such as epigenetic manipulation and viral somatostatin receptor subtype-2 expression vectors, are discussed, as well as oncolytic viruses specifically targeting neuroendocrine tumor cells. Expert opinion: In addition to the development of novel somatostatin analogs and refining treatment with existing somatostatin analogs, alternative treatments targeting the somatostatin receptors that aim at increasing the number of somatostatin receptors should be explored as well, thereby broadening treatment perspectives and increasing options for prolonging survival.

[461]

TÍTULO / TITLE: - A case of pediatric optic pathway oligodendroglioma presenting widespread invasion and dissemination in the cerebrospinal fluid.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Aug 31.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10014-013-0160-2](#)

AUTORES / AUTHORS: - Katayama K; Asano K; Ohkuma H; Terui K; Sasaki S; Sato T; Ito E; Komori T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Hirosaki University Graduate School of Medicine, Zaifu-cho 5, Hirosaki-shi, Aomori, 036-8562, Japan, k.kosuke@cc.hirosaki-u.ac.jp.

RESUMEN / SUMMARY: - Optic pathway oligodendrogliomas are a rare form of pediatric intracranial tumor. A 10-year-old girl presented with symptoms of hydrocephalus and seizure. Head computed tomography and magnetic resonance images showed hydrocephalus, chiasmatal tumor, and enlarged and tortuous optic nerves. The tumor was partially removed by operation and diagnosed as oligodendroglioma. Operatively, there was evidence of cerebrospinal fluid dissemination in the sylvian fissure indicating widespread invasion. After the operation, Packer's regimen (vincristine and carboplatin therapy) was administered. However, magnetic resonance images obtained 2 months after the operation revealed enlargement of the original tumor and the appearance of new lesions, and treatment was changed to irradiation and temozolomide therapy according to the presence of a high-grade glioma. Two years after the operation, the patient is free of neurological symptoms, and the tumor is controlled with partial response. This is the first report of pediatric optic pathway oligodendroglioma presenting widespread invasion and cerebrospinal dissemination.

[462]

TÍTULO / TITLE: - The role of glycogen synthase kinase-3beta in glioma cell apoptosis induced by remifentanyl.

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

REVISTA / JOURNAL: - Cell Mol Biol Lett. 2013 Aug 29.

●● Enlace al texto completo (gratis o de pago) [2478/s11658-013-0102-3](https://doi.org/10.1007/s11658-013-0102-3)

AUTORES / AUTHORS: - Xu J; Xu P; Li Z; Xiao L; Yang Z

INSTITUCIÓN / INSTITUTION: - College of Medicine, Nankai University, Tianjin, 300071, China.

RESUMEN / SUMMARY: - The aim of malignant glioma treatment is to inhibit tumor cell proliferation and induce tumor cell apoptosis. Remifentanyl is a clinical anesthetic drug that can activate the N-methyl-D-aspartate (NMDA) receptor. NMDA receptor signaling activates glycogen synthase kinase-3beta (GSK-3beta). Discovered some 32 years ago, GSK-3beta was only recently considered as a therapeutic target in cancer treatment. The purpose of this study was to assess whether remifentanyl can induce the apoptosis of C6 cells through GSK-3beta activation. 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) was used to detect cell viability. Hoechst 33342 staining and flow cytometry were used to detect cell apoptosis. The effect of GSK-3beta activation was detected using a GSK-3beta activation assay kit and 4-benzyl-2-methyl-1,2,4-thiadiazolidine-3,5-dione (TDZD-8), a potent and selective small molecule inhibitor of GSK-3beta. The MTT assay indicated that remifentanyl induced C6 cell death in a concentration- and time-dependent manner. Hoechst 33342 staining and flow cytometry showed that remifentanyl significantly induced C6 cell apoptosis. The measurement of GSK-3beta activation showed that remifentanyl increased the cellular level of GSK-3beta. All of these toxic effects can be attenuated by treatment with TDZD-8. These results suggest that remifentanyl is able to induce C6 cell apoptosis through GSK-3beta activation, which provides a basis for its potential use in the treatment of malignant gliomas.

[463]

TÍTULO / TITLE: - Ossification in an extra-intradural spinal meningioma-pathologic and surgical views.

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

REVISTA / JOURNAL: - Spine J. 2013 Sep 14. pii: S1529-9430(13)01257-6. doi: 10.1016/j.spinee.2013.06.102.

●● Enlace al texto completo (gratis o de pago) [1016/j.spinee.2013.06.102](https://doi.org/10.1016/j.spinee.2013.06.102)

AUTORES / AUTHORS: - Chotai SP; Mrak RE; Mutgi SA; Medhkour A

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Department of Surgery, University of Toledo Medical Center, Toledo, 3000 Arlington Ave, OH 43614, USA.

RESUMEN / SUMMARY: - BACKGROUND CONTEXT: Intradural and intratumorous ossification in spinal meningiomas are rare compared to their cranial counterparts. Extradural extension of the spinal meningioma is not uncommon. To the best of our knowledge, the ossification in an extra-intradural spinal meningioma is not yet reported in the literature. PURPOSE: The authors report a rare case of an extra-

intradural spinal meningioma with ossification and calcification. The review of literature including the surgical challenges and the histologic variations as well as histogenesis of the ossified spinal meningioma is discussed. **STUDY DESIGN:** Case report and review of the literature. **METHODS:** A 61-year-old woman presented with complaints of numbness and weakness for 3 years, and gait disturbances for 6 months. Magnetic resonance imaging revealed a mass compressing the spinal cord at the T4 level. **RESULTS:** Complete resection of the tumor was achieved with coagulation and partial resection of the dura. Histopathological examination demonstrated a psammomatous spinal meningioma with intratumorous and intradural mature lamellar bone formation, complete with marrow and hematopoietic cells. The patient is asymptomatic at 3-year postoperative follow-up. **CONCLUSIONS:** Despite adherence of the ossified mass to the dura, arachnoid, and spinal cord, complete atraumatic resection of the mass was possible with favorable surgical outcome. In addition to calcification as a likely forerunner of ossification in the psammomatous subtype of meningioma, metaplastic differentiation of neoplastic cells to osseous and hematopoietic component might play a crucial role.

[464]

TÍTULO / TITLE: - A pure fluid-filled intradural cyst associated with intradural disc herniation and possible pathogenesis: a case report.

RESUMEN / SUMMARY: -

ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=23932776

●● Enlace al texto completo (gratis o de pago) 1016/j.spinee.2013.06.009

AUTORES / AUTHORS: - Nam KH; Han IH; Cho WH; Choi BK

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery & Medical Research Institute, Pusan National University Hospital, Pusan National University School of Medicine, 305 Gudeok-Ro Seo-Gu, Busan 602-739, Korea.

RESUMEN / SUMMARY: - **BACKGROUND CONTEXT:** Lumbar intradural disc herniation (IDH) is rare, and intradural cyst associated with IDH is quite rare. Only seven cases of an intradural cyst associated with lumbar disc herniation have been reported, and all were gas-filled cysts. We report the first case, to our knowledge, of a fluid-filled intradural cyst associated with IDH. **PURPOSE:** To report an extremely rare case of a fluid-filled intradural cyst associated with lumbar IDH and suggests the possible pathogenesis. **STUDY DESIGN:** Case report. **METHODS:** An 82-year-old woman presented with right leg pain and motor weakness. Computed tomography and magnetic resonance imaging (MRI) scans showed calcified lumbar disc herniation and an intradural cystic mass at the L1-L2 level. An MRI, which was performed 2 years before admission, showed an IDH without a cyst at the same level. **RESULTS:** Surgical resection of the intradural cyst was performed. Intraoperative finding showed a fluid-filled intradural cyst with 1-cm diameter of displacing nerve rootlets. The cyst was

connected with extradural cystic components through a ventral dural hole, but the tract was blocked by fibrous septum. Histopathologic examination showed a pseudocyst that consisted of degenerative cartilaginous and fibrous tissues, including degenerative disc materials. We concluded that the cyst was an intradural cyst transformed from the intradural disc fragment. CONCLUSIONS: The current case is the first report to our knowledge of a fluid-filled intradural cyst associated with IDH. The possible mechanism may be focal degeneration and spontaneous absorption of the intradural disc with fluid production. Unlike the gas-filled intradural cysts, the cause of the pure fluid-filled cyst may be disconnection from the intervertebral vacuum because of a calcified disc and septation of the cyst.

[465]

TÍTULO / TITLE: - Intramedullary arachnoid cyst in association with cervical spondylosis: case report.

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

REVISTA / JOURNAL: - Spine J. 2013 Aug 8. pii: S1529-9430(13)00523-8. doi: 10.1016/j.spinee.2013.05.014.

●● Enlace al texto completo (gratis o de pago) [1016/j.spinee.2013.05.014](#)

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RESUMEN / SUMMARY: - BACKGROUND CONTEXT: Intramedullary spinal arachnoid cysts are considered to be very rare, and only 11 cases have been reported previously. Development of such a cyst in association with marked cervical spondylosis has not been reported until recently. PURPOSE: Brief review of reported cases and debate on likely treatment strategy when such a cyst is associated with symptomatic spondylosis. STUDY DESIGN: To report the first example of a cervicothoracic intramedullary arachnoid cyst along with a symptomatic cervical spondylosis. METHODS: Evaluation of quadriplegia in a 58-year-old female resulted in detection of a cervical spondylotic stenosis that was accompanied with an intramedullary cystic lesion. Parallel management of both pathologies was through a wide laminectomy extending from the lower edge of C3 to T2 with subsequent fenestration and partial resection of the cyst wall via an appropriate dorsal entry root zone myelotomy. Cervicothoracic instrumentation from C3 down to T2 was done to prevent postlaminectomy deformity. RESULT: Histopathological findings were consistent with the diagnosis of arachnoid cyst. Postoperatively, the patient exhibited marked improvement in neurologic status. CONCLUSION: Through the review of the current case, first example from the literature, we concluded that surgery should target toward the proper management of both pathologies in a single-stage operation.

[466]

TÍTULO / TITLE: - Overcoming resistance to sonic hedgehog inhibition by targeting p90 ribosomal S6 kinase in pediatric medulloblastoma.

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

REVISTA / JOURNAL: - *Pediatr Blood Cancer*. 2013 Aug 12. doi: 10.1002/pbc.24675.

●● [Enlace al texto completo \(gratis o de pago\) 1002/pbc.24675](#)

AUTORES / AUTHORS: - Pambid MR; Berns R; Adomat HH; Hu K; Triscott J; Maurer N; Zisman N; Ramaswamy V; Hawkins CE; Taylor MD; Dunham C; Guns E; Dunn SE

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, British Columbia Children's Hospital, University of British Columbia, Vancouver, British Columbia, Canada.

RESUMEN / SUMMARY: - **BACKGROUND:** Molecular subtyping has allowed for the beginning of personalized treatment in children suffering from medulloblastoma (MB). However, resistance inevitably emerges against these therapies, particularly in the Sonic Hedgehog (SHH) subtype. We found that children with SHH subtype have the worst outcome underscoring the need to identify new therapeutic targets.

PROCEDURE: High content screening of a 129 compound library identified agents that inhibited SHH MB growth. Lead molecular target levels, p90 ribosomal S6 kinase (RSK) were characterized by immunoblotting and qRT-PCR. Comparisons were made to human neural stem cells (hNSC). Impact of inhibiting RSK with the small molecule BI-D1870 or siRNA was assessed in growth assays (monolayer, neurosphere, and soft agar). NanoString was used to detect RSK in a cohort of 66 patients with MB. To determine BI-D1870 pharmacokinetics/pharmacodynamics, 100 mg/kg was I.P. injected into mice and tissues were collected at various time points. **RESULTS:** Daoy, ONS76, UW228, and UW426 MB cells were exquisitely sensitive to BI-D1870 but unresponsive to SHH inhibitors. Anti-tumor growth corresponded with inactivation of RSK in MB cells. BI-D1870 had no effect on hNSCs. Inhibiting RSK with siRNA or BI-D1870 suppressed growth, induced apoptosis, and sensitized cells to SHH agents. Notably, RSK expression is correlated with SHH patients. In mice, BI-D1870 was well-tolerated and crossed the blood-brain barrier (BBB). **CONCLUSIONS:** RSK inhibitors are promising because they target RSK which is correlated with SHH patients as well as cause high levels of apoptosis to only MB cells. Importantly, BI-D1870 crosses the BBB, acting as a scaffold for development of more long-lived RSK inhibitors. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[467]

TÍTULO / TITLE: - ATRX loss refines the classification of anaplastic gliomas and identifies a subgroup of IDH mutant astrocytic tumors with better prognosis.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Sep;126(3):443-51. doi: 10.1007/s00401-013-1156-z. Epub 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1156-z](https://doi.org/10.1007/s00401-013-1156-z)

AUTORES / AUTHORS: - Wiestler B; Capper D; Holland-Letz T; Korshunov A; von Deimling A; Pfister SM; Platten M; Weller M; Wick W

INSTITUCIÓN / INSTITUTION: - Department of Neurooncology, Neurology Clinic and National Center for Tumor Disease, University of Heidelberg and German Cancer Research Center, Im Neuenheimer Feld 400, 69120, Heidelberg, Germany.

RESUMEN / SUMMARY: - Mutation/loss of alpha-thalassemia/mental retardation syndrome X-linked (ATRX) expression has been described in anaplastic gliomas. The present study explored the role of ATRX status in the molecular classification of anaplastic gliomas and its impact on survival in the biomarker cohort of the NOA-04 anaplastic glioma trial. Patients (n = 133) of the NOA-04 trial were analyzed for ATRX expression using immunohistochemistry. ATRX status was correlated with age, histology, isocitrate dehydrogenase (IDH), 1p/19q, alternative lengthening of telomeres (ALT) and O6-methylguanine-DNA methyltransferase (MGMT) status, and the trial efficacy endpoints. Loss of ATRX expression was detected in 45 % of anaplastic astrocytomas (AA), 27 % of anaplastic oligoastrocytomas (AOA) and 10 % of anaplastic oligodendrogliomas (AO). It was mostly restricted to IDH mutant tumors and almost mutually exclusive with 1p/19q co-deletion. The ALT phenotype was significantly correlated with ATRX loss. ATRX and 1p/19q status were used to re-classify AOA: AOA harboring ATRX loss shared a similar clinical course with AA, whereas AOA carrying 1p/19q co-deletion shared a similar course with AO. Accordingly, in a Cox regression model including ATRX and 1p/19q status, histology was no longer significantly associated with time to treatment failure. Survival analysis showed a marked separation of IDH mutant astrocytic tumors into two groups based on ATRX status: tumors with ATRX loss had a significantly better prognosis (median time to treatment failure 55.6 vs. 31.8 months, p = 0.0168, log rank test). ATRX status helps better define the clinically and morphologically mixed group of AOA, since ATRX loss is a hallmark of astrocytic tumors. Furthermore, ATRX loss defines a subgroup of astrocytic tumors with a favorable prognosis.

[468]

TÍTULO / TITLE: - Mesenchymal Differentiation Mediated by NF-kappaB Promotes Radiation Resistance in Glioblastoma.

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

REVISTA / JOURNAL: - Cancer Cell. 2013 Sep 9;24(3):331-46. doi: 10.1016/j.ccr.2013.08.001. Epub 2013 Aug 29.

●● Enlace al texto completo (gratis o de pago) [1016/j.ccr.2013.08.001](https://doi.org/10.1016/j.ccr.2013.08.001)

AUTORES / AUTHORS: - Bhat KP; Balasubramaniyan V; Vaillant B; Ezhilarasan R; Hummelink K; Hollingsworth F; Wani K; Heathcock L; James JD; Goodman LD; Conroy S; Long L; Lelic N; Wang S; Gumin J; Raj D; Kodama Y; Raghunathan A; Olar A; Joshi K; Pelloski CE; Heimberger A; Kim SH; Cahill DP; Rao G; Den Dunnen WF; Boddeke HW; Phillips HS; Nakano I; Lang FF; Colman H; Sulman EP; Aldape K

INSTITUCIÓN / INSTITUTION: - Department of Pathology, The University of Texas, M.D. Anderson Cancer Center, Houston, TX 77030, USA. Electronic address:

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RESUMEN / SUMMARY: - Despite extensive study, few therapeutic targets have been identified for glioblastoma (GBM). Here we show that patient-derived glioma sphere cultures (GSCs) that resemble either the proneural (PN) or mesenchymal (MES) transcriptomal subtypes differ significantly in their biological characteristics. Moreover, we found that a subset of the PN GSCs undergoes differentiation to a MES state in a TNF-alpha/NF-kappaB-dependent manner with an associated enrichment of CD44 subpopulations and radioresistant phenotypes. We present data to suggest that the tumor microenvironment cell types such as macrophages/microglia may play an integral role in this process. We further show that the MES signature, CD44 expression, and NF-kappaB activation correlate with poor radiation response and shorter survival in patients with GBM.

[469]

TÍTULO / TITLE: - Formulation and in vitro evaluation of 17-allylamino-17-demethoxygeldanamycin (17-AAG) loaded polymeric mixed micelles for glioblastoma multiforme.

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

REVISTA / JOURNAL: - Colloids Surf B Biointerfaces. 2013 Aug 2;112C:350-355. doi: 10.1016/j.colsurfb.2013.07.031.

●● Enlace al texto completo (gratis o de pago) [1016/j.colsurfb.2013.07.031](https://doi.org/10.1016/j.colsurfb.2013.07.031)

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INSTITUCIÓN / INSTITUTION: - Department of Pharmaceutical Sciences, Irma Lerma Rangel College of Pharmacy, Texas A&M Health Science Center, Kingsville, TX 78363, USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common and aggressive malignant primary brain tumor in human. 17-Allylamino-17-demethoxy geldanamycin (17-AAG) is an inhibitor of heat shock protein 90 (HSP90). The highly lipophilic nature and selective targeting of tumor cells makes 17-AAG a promising candidate for therapy of GBMs but poor water solubility, short biological half-life and hepatotoxicity limited its clinical use. Polymeric mixed micelles composed of Pluronic® P-123 and F-127 (2:1 (w/w)) containing 17-AAG were prepared and characterized. Cellular uptake and in vitro cytotoxicity of the prepared micelles were determined in U87MG human glioblastoma cells. The particle size of 17-AAG loaded Pluronic® P-123

and F-127 mixed micelles was 22.2 +/- 0.1 nm; drug loading was about 4.0 +/- 0.5% (w/w) with 88.2 +/- 3.1% (w/w) encapsulation efficiency. About 90% of drug was released from the nanoparticles over 8 days. Cellular uptake studies showed intracellular uptake of mixed micelles. Cytotoxicity study showed 5-fold increase ($P < 0.05$, $n = 3$) in the cytotoxicity of 17-AAG-loaded mixed micelles to free 17-AAG. Due to their targeting ability, size, high drug loading and controlled release behavior, 17-AAG loaded Pluronic® P-123 and F-127 mixed micelles might be developed as a delivery system for GBM treatment.

[470]

TÍTULO / TITLE: - TERT promoter mutations in primary and secondary glioblastomas.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Aug 17.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00401-013-1163-0](#)

AUTORES / AUTHORS: - Nonoguchi N; Ohta T; Oh JE; Kim YH; Kleihues P; Ohgaki H

INSTITUCIÓN / INSTITUTION: - Section of Molecular Pathology, International Agency for Research on Cancer, 150 Cours Albert Thomas, 69372, Lyon, France.

RESUMEN / SUMMARY: - Telomerase reverse transcriptase (TERT) is up-regulated in a variety of human neoplasms. Mutations in the core promoter region of the TERT gene, which increases promoter activity, have been reported in melanomas and a variety of human neoplasms, including gliomas. In the present study, we screened for TERT promoter mutations by direct DNA sequencing in a population-based collection of 358 glioblastomas. TERT promoter mutations (C228T, C250T) were detected in 55 % glioblastomas analysed. Of these, 73 % had a C228T mutation, and 27 % had a C250T mutation; only one glioblastoma had both C228T and C250T mutations. TERT promoter mutations were significantly more frequent in primary (IDH1 wild-type) glioblastomas (187/322; 58 %) than in secondary (IDH1 mutated) glioblastomas (10/36, 28 %; $P = 0.0056$). They showed significant inverse correlations with IDH1 mutations ($P = 0.0056$) and TP53 mutations ($P = 0.043$), and a significant positive correlation with EGFR amplification ($P = 0.048$). Glioblastoma patients with TERT mutations showed a shorter survival than those without TERT mutations in univariate analysis (median, 9.3 vs. 10.5 months; $P = 0.015$) and multivariate analysis after adjusting for age and gender (HR 1.38, 95 % CI 1.01-1.88, $P = 0.041$). However, TERT mutations had no significant impact on patients' survival in multivariate analysis after further adjusting for other genetic alterations, or when primary and secondary glioblastomas were separately analysed. These results suggest that the prognostic value of TERT mutations for poor survival is largely due to their inverse correlation with IDH1 mutations, which are a significant prognostic marker of better survival in patients with secondary glioblastomas.

[471]

TÍTULO / TITLE: - Nasally located ectopic ACTH-secreting pituitary adenoma (EAPA) causing Nelson's syndrome: diagnostic challenges.

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

REVISTA / JOURNAL: - Pituitary. 2013 Sep 25.

●● Enlace al texto completo (gratis o de pago) [1007/s11102-013-0520-2](#)

AUTORES / AUTHORS: - Gurazada K; Ihuoma A; Galloway M; Dorward N; Wilhelm T; Khoo B; Bouloux PM

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RESUMEN / SUMMARY: - **PURPOSE:** We report the first case of an Ectopic adrenocorticotrophin (ACTH)-secreting pituitary adenoma (EAPA) located within the posterior nasal septum associated with Nelson's syndrome, which eluded diagnosis for over a decade. In this report, we explore the reasons for such diagnostic difficulty and suggest ways in which an earlier diagnosis may be made. **METHODS AND RESULTS:** A 19 years old Lebanese man presented in 2000, with overt Cushing's syndrome confirmed with markedly elevated urine free cortisol and failed dexamethasone suppression tests. An unsuppressed ACTH and a possible 5 mm adenoma on MRI (Magnetic Resonance Imaging) pituitary suggested Cushing's disease. The patient underwent trans-sphenoidal surgery (TSS), but histology revealed normal pituitary tissue and Cushing's syndrome persisted. A repeat MRI pituitary showed no anomaly, and extensive investigations failed to locate an ectopic lesion. Subsequently a bilateral adrenalectomy was performed. Over the ensuing years, the patient developed Nelson's syndrome with hyperpigmentation and markedly elevated ACTH levels. Repeated high dose dexamethasone suppression tests, corticotrophin releasing hormone (CRH) tests, and CRH stimulated inferior petrosal sinus samplings (IPSS) suggested a pituitary origin of the ACTH. Two further TSS were unsuccessful. The pituitary was irradiated. Subsequent review of his previous MRIs revealed an enlarging mass within the posterior nasal septum, which was excised in 2011. The histology confirmed the diagnosis of an EAPA within the nasal septum. **CONCLUSION:** Ectopic ACTH-secreting pituitary adenomas can occur not only along the developmental route of Rathke's pouch, but other aberrant locations giving a clinical and biochemical picture identical to Cushing's disease or Nelson's syndrome. Clinicians should suspect an EAPA, when a central ACTH source seems to be apparent with no obvious pituitary adenoma. A detailed MRI involving possible EAPA sites aids in locating these unusual lesions.

[472]

TÍTULO / TITLE: - Primary lymphoma of the central nervous system-a diagnostic challenge.

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

REVISTA / JOURNAL: - Hematol Oncol. 2013 Aug 16. doi: 10.1002/hon.2087.

●● Enlace al texto completo (gratis o de pago) [1002/hon.2087](#)

AUTORES / AUTHORS: - Deckert M; Brunn A; Montesinos-Rongen M; Terreni MR; Ponzoni M

INSTITUCIÓN / INSTITUTION: - Department of Neuropathology, University Hospital of Cologne, Cologne, Germany.

RESUMEN / SUMMARY: - Primary lymphoma of the central nervous system is a distinct diffuse large B-cell lymphoma confined to the nervous system. Whereas classical cases can be classified easily, differential diagnosis can be a challenge in particular in patients who had received treatment prior to biopsy. In the differential diagnosis, other tumours and inflammatory diseases of autoimmune and infectious aetiology need to be considered. Copyright © 2013 John Wiley & Sons, Ltd.

[473]

- CASTELLANO -

TÍTULO / TITLE: Fraktionierte stereotaktische Strahlentherapie in der Behandlung von Hypophysenadenomen.

TÍTULO / TITLE: - Fractionated stereotactic radiotherapy in the treatment of pituitary adenomas.

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

REVISTA / JOURNAL: - Strahlenther Onkol. 2013 Sep 8.

●● Enlace al texto completo (gratis o de pago) [1007/s00066-013-0433-z](#)

AUTORES / AUTHORS: - Kopp C; Theodorou M; Poullos N; Astner ST; Geinitz H; Stalla GK; Meyer B; Molls M; Nieder C; Grosu AL

INSTITUCIÓN / INSTITUTION: - Klinik und Poliklinik für Strahlentherapie und Radiologische Onkologie, Klinikum rechts der Isar, Technische Universität München, Ismaningerstr. 22, 81675, Munich, Germany, Christine.Kopp@lrz.tu-muenchen.de.

RESUMEN / SUMMARY: - PURPOSE: The purpose of this work was to evaluate tumor control and side effects associated with fractionated stereotactic radiotherapy (FSRT) in the management of residual or recurrent pituitary adenomas. PATIENTS AND METHODS: We report on 37 consecutive patients with pituitary adenomas treated with FSRT at our department. All patients had previously undergone surgery. Twenty-nine patients had nonfunctioning, 8 had hormone-producing adenoma. The mean total dose delivered by a linear accelerator was 49.4 Gy (range 45-52.2 Gy), 5 x 1.8 Gy weekly. The mean PTV was 22.8 ccm (range 2.0-78.3 ccm). Evaluation included serial imaging tests, endocrinologic and ophthalmologic examination. RESULTS: Tumor control was 91.9 % for a median follow-up time of 57 months (range 2-111 months).

Before FSRT partial hypopituitarism was present in 41 % of patients, while 35 % had anterior panhypopituitarism. After FSRT pituitary function remained normal in 22 %, 43 % had partial pituitary dysfunction, and 35 % had anterior panhypopituitarism. Visual acuity was stable in 76 % of patients, improved in 19 %, and deteriorated in 5 %. Visual fields remained stable in 35 patients (95 %), improved in one and worsened in 1 patient (2.7 %). CONCLUSION: FSRT is an effective and safe treatment for recurrent or residual pituitary adenoma. Good local tumor control and preservation of adjacent structures can be reached, even for large tumors.

[474]

TÍTULO / TITLE: - Glial cell line-derived neurotrophic factor induces cell migration in human oral squamous cell carcinoma.

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

REVISTA / JOURNAL: - Oral Oncol. 2013 Sep 23. pii: S1368-8375(13)00669-6. doi: 10.1016/j.oraloncology.2013.08.009.

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

[1016/j.oraloncology.2013.08.009](#)

AUTORES / AUTHORS: - Chuang JY; Tsai CF; Chang SW; Chiang IP; Huang SM; Lin HY; Yeh WL; Lu DY

INSTITUCIÓN / INSTITUTION: - Department of Medical Laboratory Science and Biotechnology, China Medical University, Taichung, Taiwan.

RESUMEN / SUMMARY: - OBJECTIVES: Perineural invasion is a prominent clinical feature of various cancers, which causes difficulty in curative resection. Glial cell-derived neurotrophic factor (GDNF), a potent neurotrophic factor, plays an important role in the invasive and metastatic behavior of various cancers. The aim of this study was to examine the role of GDNF on oral squamous cell carcinoma. MATERIALS AND METHODS: GDNF expression in tissue samples was analyzed by immunohistochemistry. Transwell assay, zymography, Western blot, reverse transcription-PCR, and electrophoretic mobility shift assay (EMSA) were carried out to assess the effects of GDNF on oral cancer cells. RESULTS: Human oral cancer tissues showed higher GDNF expression than that in normal tissues. We also found that application of human GDNF enhanced the cell migration ability of human oral cancers. Moreover, treatment with GDNF increased matrix metalloproteinase (MMP)-9 and MMP-13 expression in oral cancer. Inhibition of MMP-9 and MMP-13 in oral cancer cells by pharmacological inhibitors or neutralizing antibodies reduced GDNF-enhanced cell migration. Moreover, transfection with siRNA against MMP-13 inhibited GDNF-enhanced cell migration. Treatment with GDNF also increased ERK, p38 and JNK phosphorylation, and AP-1 DNA binding activity in human oral cancer cells. Inhibition of MAP kinase or AP-1 also reduced GDNF-induced oral cancer cell migration. In migration-prone sublines, oral cancer cells showed a higher migration ability than that

of the original oral cancer cells. Surprisingly, the enhancement of cell migratory activity in migration-prone sublines was reduced by a GDNF-neutralizing antibody. Importantly, migration-prone sublines of oral cancer revealed higher GDNF expression. CONCLUSION: These results indicate a regulatory effect on cell migration by GDNF in oral squamous cancer.

[475]

TÍTULO / TITLE: - Downregulation of PAK5 inhibits glioma cell migration and invasion potentially through the PAK5-Egr1-MMP2 signaling pathway.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0161-1](#)

AUTORES / AUTHORS: - Han ZX; Wang XX; Zhang SN; Wu JX; Qian HY; Wen YY; Tian H; Pei DS; Zheng JN

INSTITUCIÓN / INSTITUTION: - Center of Clinical Oncology, Affiliated Hospital of Xuzhou Medical College, Xuzhou, 221002, China.

RESUMEN / SUMMARY: - PAK5 (p21 activated kinase 5) is upregulated in human colorectal carcinoma cells and is a known tumor promoter in carcinogenesis of the colon. Little is known regarding the mechanisms underlying the downstream targets of PAK5, and information concerning its biological significance in glioma is lacking. In this study, we investigated the effects of PAK5 on proliferation, migration, invasion, and apoptosis in human U87 and U251 glioma cells and examined the underlying molecular mechanism. We performed cell growth assays and cell cycle analysis to observe the cell proliferation. Flow cytometry analysis was performed to evaluate apoptosis, and in vitro scratch assays, cell migration assays, and gelatin zymography were performed to examine cell migration. Western blot analysis was performed to examine signal transduction in the cells. We demonstrated that suppression of PAK5 in glioma cells significantly inhibited cell migration and invasion. We also observed that suppression of PAK5 in human glioma cell lines inhibited cell growth because of G1 phase arrest. Additionally, flow cytometry and Western blot analysis indicated that PAK5 could inhibit cell apoptosis. These results suggest that the PAK5-Egr1-MMP2 signaling pathway is involved in tumor progression and may have a potential role in cancer prevention and treatment.

[476]

TÍTULO / TITLE: - Cerebrovascular complications and utilization of endovascular techniques following transsphenoidal resection of pituitary adenomas: a study of the Nationwide Inpatient Sample 2001-2010.

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

REVISTA / JOURNAL: - Pituitary. 2013 Sep 19.

- Enlace al texto completo (gratis o de pago) [1007/s11102-013-0521-1](https://doi.org/10.1007/s11102-013-0521-1)

AUTORES / AUTHORS: - Brinjikji W; Lanzino G; Cloft HJ

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Mayo Clinic, 200 1st Street SW, Rochester, MN, 55901, USA, Brinjikji.waleed@mayo.edu.

RESUMEN / SUMMARY: - PURPOSE: Cerebrovascular complications following transsphenoidal resection of pituitary tumors are rare and often evaluated and treated with endovascular techniques. We determined the utilization rate and outcomes of endovascular procedures in transsphenoidal pituitary resection patients using an administrative database. METHODS: Using the Nationwide Inpatient Sample 2001-2010, patients receiving transsphenoidal resection of benign pituitary tumors were identified. The rate of cerebrovascular complications and utilization of endovascular repair procedures and cerebral angiography were compared between high (≥ 75 procedures/year) and low volume (< 75 procedures/year) centers. Chi squared tests were used to compare categorical variables. RESULTS: 70,878 were patients included in this study. ICH/SAH occurred in 0.9 % of patients (652/70,878) and stroke occurred in 0.5 % of patients (327/70,878). Patients treated at high volume centers had significantly lower rates of stroke (0.5 % vs. 1.0 %, $P = 0.04$), and ICH/SAH (0.5 vs. 1.0 %, $P = 0.05$) when compared to patients treated at low-volume centers. Overall, 531 patients (0.7 %) received post-operative angiography and 83 patients (0.1 %) received endovascular repair procedures. High volume center patients underwent angiography in 0.4 % of cases compared to 0.9 % for low volume center patients ($P = 0.02$). There was no significant difference in endovascular repair procedure rates at high and low volume centers (0.1 vs. 0.2 %, $P = 0.37$). CONCLUSIONS: Cerebrovascular surgical complications requiring cerebral angiography and endovascular repair are rare among transsphenoidal pituitary resection patients. These occur with higher frequency at low volume centers and are associated with high mortality rates.

[477]

TÍTULO / TITLE: - Apparent diffusion coefficient of pediatric cerebellar tumors: A biomarker of tumor grade?

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

REVISTA / JOURNAL: - Pediatr Blood Cancer. 2013 Aug 12. doi: 10.1002/pbc.24578.

- Enlace al texto completo (gratis o de pago) [1002/pbc.24578](https://doi.org/10.1002/pbc.24578)

AUTORES / AUTHORS: - Poretti A; Meoded A; Cohen KJ; Grotzer MA; Boltshauser E; Huisman TA

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Radiology, Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, Baltimore, MD; Division of Pediatric Neurology, University Children's Hospital, Zurich, Switzerland.

RESUMEN / SUMMARY: - BACKGROUND: The role of diffusion weighted imaging (DWI) to reliably differentiate tumor types and grades in pediatric cerebellar tumors is controversial. We aimed to clarify the discrepancy reported in previous articles. PROCEDURES: We retrospectively evaluated the apparent diffusion coefficient (ADC) values of the enhancing, solid parts of cerebellar tumors and correlated the absolute tumor ADC values and cerebellar and thalamic ratios with histology in a cohort of children with cerebellar tumors. RESULTS: Twenty-four children (12 females) were included in the study. The median age at pre-surgical MRI was 10 years (range 29 days-18.5 years). Absolute ADC values (mean 1.49, SD 0.25 vs. 0.63 +/- 0.18), cerebellar (2.04 +/- 0.33 vs. 0.83 +/- 0.25), and thalamic ratio (1.98 +/- 0.35 vs. 0.79 +/- 0.23) were significantly higher in low- than in high-grade tumors (P < 0.0001). Absolute ADC values and cerebellar and thalamic ratios were significantly higher in low-grade astrocytomas than in MBs. Overlap was seen for WHO grade II and III ependymomas. One hundred percent specific cutoff ADC values of >1.2 x 10³ and <0.8 x 10⁻³ mm² /s were established for low- and high-grade tumors. CONCLUSION: ADC analysis of the solid, contrast enhancing components of pediatric cerebellar tumors may facilitate differentiation between various tumor histologies. *Pediatr Blood Cancer* © 2013 Wiley Periodicals, Inc.

[478]

TÍTULO / TITLE: - Radiotherapy in Craniopharyngiomas.

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

REVISTA / JOURNAL: - *Clin Oncol (R Coll Radiol)*. 2013 Jul 30. pii: S0936-6555(13)00275-6. doi: 10.1016/j.clon.2013.07.005.

●● Enlace al texto completo (gratis o de pago) [1016/j.clon.2013.07.005](http://dx.doi.org/10.1016/j.clon.2013.07.005)

AUTORES / AUTHORS: - Iannalfi A; Fragkandrea I; Brock J; Saran F

INSTITUCIÓN / INSTITUTION: - National Center for Oncological Hadrontherapy, Pavia, Italy.

RESUMEN / SUMMARY: - The optimal management of craniopharyngioma remains controversial. Although aggressive (i.e. attempted macroscopic complete/radical) primary surgery can be associated with significant morbidity and a noticeable recurrence rate, a conservative (limited) surgical approach followed by radiotherapy has increasingly been adopted after reports of excellent local control and a significant reduction in the incidence of complications by most multidisciplinary teams. A literature review from January 1990 to May 2012 was carried out identifying 43 studies with 1716 patients treated with irradiation for craniopharyngioma. The outcome and treatment-related toxicity were analysed in relation to the timing of radiotherapy, the target volume definition and radiotherapy dose and compared with the results of radical surgery. For patients undergoing limited surgery and postoperative radiotherapy, reported 10 year local control rates ranged between 77 and 100% and 20 year overall survival was reported as high as 66-92%. Comparable progression-free

survival and overall survival were reported for radiotherapy delivered at first diagnosis or at progression. Long-term toxicity of combined limited surgery and irradiation seems to be less than that associated with radical surgery. The total recommended dose prescription to achieve long-term control while minimising adverse sequelae is 50-54 Gy delivered with conventional fractionation. Care should be provided by a multidisciplinary team in a specialised centre. However, national and international prospective co-operative trials are warranted to provide robust data to define an internationally multidisciplinary accepted risk-based management strategy.

[479]

TÍTULO / TITLE: - Central nervous system prophylaxis with intrathecal liposomal cytarabine in diffuse large B-cell lymphomas.

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

REVISTA / JOURNAL: - Pol Arch Med Wewn. 2013 Aug 8. pii: AOP_13_043.

AUTORES / AUTHORS: - Krawczyk K; Jurczak W; Dlugosz-Danecka M; Zauska-Giza A; Dziejczka J; Wrobel T; Skotnicki AB

RESUMEN / SUMMARY: - INTRODUCTION Central nervous system (CNS) dissemination is a serious and potentially fatal complication in lymphoma patients, associated with a particularly poor prognosis (median progression free survival [PFS] of 4-6 months). Although CNS prophylaxis of high risk cases is considered necessary, there are no clear guidelines for selecting patients or treatment regimen. OBJECTIVES Investigate and assess the safety and efficacy of CNS prophylaxis with intrathecal (IT) liposomal cytarabine. PATIENTS AND METHODS Seventy nine patients with diffuse large B-cell lymphoma (DLBCL) - 83.5% and primary mediastinal large B-cell lymphoma (PMBCL) - 16.5% and considered to be at high risk of developing CNS involvement, who were diagnosed and treated in the Department of Hematology in Krakow and Wroclaw between 2009-2012. Medium age was 48.5 years (20-79), in the subgroup with DLBCL diagnosis 50.1 (20-79) and with PMBCL 40.5 (28-57). There were 46 males and 33 females. RESULTS Adverse reactions after IT liposomal cytarabine reported in 59 patients (74.68%), were regarded as severe in 7 cases. The most common side effect was headache (67.1%). During anti-lymphoma therapy and prophylaxis, functional status assessed by Karnofsky score improved in 56 (70.88%) patients and remained unchanged in the rest of the cases. At median follow-up time of 28 months (range 1.4-52.1), neither median overall survival (OS) nor PFS were reached (projected PFS and OS at 48 months is 86.1 % and 90.1% respectively). CONCLUSIONS Both effectiveness and toxicity profile of CNS prophylaxis with liposomal cytarabine encourages the use of this treatment in high risk lymphoma patients.

[480]

TÍTULO / TITLE: - Role of Histone Lysine Methyltransferases SUV39H1 and SETDB1 in Gliomagenesis: Modulation of Cell Proliferation, Migration, and Colony Formation.

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

REVISTA / JOURNAL: - Neuromolecular Med. 2013 Aug 13.

●● Enlace al texto completo (gratis o de pago) [1007/s12017-013-8254-x](#)

AUTORES / AUTHORS: - Spyropoulou A; Gargalionis A; Dalagiorgou G; Adamopoulos C; Papavassiliou KA; Lea RW; Piperi C; Papavassiliou AG

INSTITUCIÓN / INSTITUTION: - Department of Biological Chemistry, Medical School, University of Athens, 75, M. Asias Street, 11527, Athens, Greece.

RESUMEN / SUMMARY: - Posttranslational modifications of histones are considered as critical regulators of gene expression, playing significant role in the pathogenesis and progression of tumors. Trimethylation of histone 3 lysine 9 (H3K9me3), a repressed transcription mark, is mainly regulated by the histone lysine N-methyltransferases (HKMTs), SUV39H1 and SETDB1. The present study investigated the implication of these HKMTs in glioma progression. SUV39H1 and SETDB1 expression was upregulated in glioma cell lines (GOS-3, 1321N1, T98G, U87MG) and in glioma tissues compared to normal brain being positively correlated with grade and histological malignancy. Suppression by siRNA of the two HKMTs for 24 and 48 h resulted in significantly reduced proliferation of GOS-3 and T98G glioma cells with siSUV39H1 effects being most prominent. Furthermore, HKMTs knockdown-induced apoptosis with a high rate of apoptotic cells have been observed after siSUV39H1 and siSETDB1 for both cell lines. Additionally, suppression of the two HKMTs reduced cell migration and clonogenic ability of both glioma cell lines. Our results indicate overexpression of SETDB1 and SUV39H1 in gliomas. Treatments that alter HKMT expression affect the proliferative and apoptotic rates in glioma cells as well as their migratory and colony formation capacity. These data suggest that both HKMTs and especially SUV39H1 may serve as novel biomarkers for future therapeutic targeting of these tumors.

[481]

TÍTULO / TITLE: - Comparative study of microtubule inhibitors - Estramustine and natural podophyllotoxin conjugated PAMAM dendrimer on glioma cell proliferation.

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

REVISTA / JOURNAL: - Eur J Med Chem. 2013 Jul 27;68C:47-57. doi: 10.1016/j.ejmech.2013.07.007.

●● Enlace al texto completo (gratis o de pago) [1016/j.ejmech.2013.07.007](#)

AUTORES / AUTHORS: - Sk UH; Dixit D; Sen E

INSTITUCIÓN / INSTITUTION: - Natural Plant Products Division, CSIR-Institute of Himalayan Bioresource Technology, Palampur, (H.P.) 176 061, India. Electronic address: ugir@ihbt.res.in.

RESUMEN / SUMMARY: - The synthetic estramustine (EM) and natural podophyllotoxin (PODO) anti-mitotic agents that inhibit tubulin polymerization are known anticancer agents. As low bioavailability limits their anticancer properties, we investigated whether conjugation with PAMAM dendrimer (D) could enhance the activity of D-EM and D-PODO by altering their release pattern. Release kinetics indicated synthesized conjugates to be stable against hydrolytic cleavage and showed sustained release characteristics. However, release of D-EM was slow compared to D-PODO conjugate. Antitumor effect of these conjugates on glioma cells revealed (i) increased cell death and cell cycle arrest (ii) decreased migration and (iii) increased tubulin depolymerization as compared to free drug. Importantly, the effects of natural PODO conjugate on glioma cell survival and migration is more pronounced than D-EM.

[482]

TÍTULO / TITLE: - The first report of cabergoline-induced immune hemolytic anemia in an adolescent with prolactinoma.

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

REVISTA / JOURNAL: - J Pediatr Endocrinol Metab. 2013 Aug 14:1-5. doi: 10.1515/jpem-2013-0151.

●● Enlace al texto completo (gratis o de pago) [1515/jpem-2013-0151](#)

AUTORES / AUTHORS: - Gurbuz F; Yagci-Kupeli B; Kor Y; Yuksel B; Zorludemir S; Gurbuz BB; Kupeli S

RESUMEN / SUMMARY: - Abstract Prolactinomas are common pituitary tumors that can cause gonadal dysfunction and infertility related to hyperprolactinemia. Dopamine agonists are the first-line treatment in these patients. Cabergoline leads to significant reduction in serum prolactin levels and tumor size in patients with prolactinoma. Dopamine agonists have been associated with adverse effects such as nausea, vomiting and psychosis. We report here a case with cabergoline-induced immune hemolytic anemia. The patient had cabergoline treatment history for prolactinoma and presented with weakness, fatigue, nausea, and paleness. Laboratory findings revealed severe anemia-related immune hemolysis. There were no causes identified to explain hemolytic anemia except cabergoline. Therefore, cabergoline therapy was stopped and subsequently hemolytic anemia resolved and did not occur again. This is the first reported pediatric case with prolactinoma and cabergoline-induced hemolytic anemia. Clinicians should be watchful for this rare side effect induced by cabergoline.

[483]

TÍTULO / TITLE: - Insomnia among brain tumor patients: a population-based prospective study of tumor patients in northern Finland.

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

REVISTA / JOURNAL: - J Psychosoc Oncol. 2013;31(5):507-16. doi: 10.1080/07347332.2013.822048.

●● Enlace al texto completo (gratis o de pago) [1080/07347332.2013.822048](https://doi.org/10.1080/07347332.2013.822048)

AUTORES / AUTHORS: - Mainio A; Hakko H; Niemela A; Koivukangas J; Rasanen P

INSTITUCIÓN / INSTITUTION: - a University of Oulu, Department of Psychiatry, and Oulu University Hospital, Department of Psychiatry, Oulu, Finland.

RESUMEN / SUMMARY: - Patients with neurological diseases often suffer from sleep disturbances. Insomnia among adult brain tumor patients has usually been studied as part of quality-of-life studies, or some case reports on insomnia in these patients have been described. The authors aimed to study insomnia in a prospective study setting among patients with primary brain tumors and evaluate whether insomnia is related to tumor laterality. Entire study population consisted of 70 patients with a solitary primary supratentorial brain tumor treated surgically at the Clinic for Neurosurgery, Oulu University Hospital. The overall functional state of the patients was assessed by the Karnofsky Performance Scale, depression was measured by Beck Depression Inventory, and insomnia by Nottingham Health Profile. Repeated measurements were assessed before tumor operation as well as 3 months and one year after surgery. Prevalence of insomnia among patients with a primary brain tumor waiting for surgery was higher compared to general population, but level of insomnia significantly decreased as soon as 3 months after tumor operation. Patients with a bilateral primary brain tumor had significantly more often insomnia without comorbid depression compared to patients with a left or right tumor for up to one year after operation. The authors suggest that insomnia among patients with a bilateral brain tumor may not be associated with depression but have other biological background.

[484]

TÍTULO / TITLE: - Effect of the Preoperative Use of Dopamine Agonists in the Postoperative Course of Prolactinomas: A Systematic Review.

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

REVISTA / JOURNAL: - Endocr Pract. 2013 Sep 6:1-15.

●● Enlace al texto completo (gratis o de pago) [4158/EP13165.RA](https://doi.org/10.1177/1078299513504165)

AUTORES / AUTHORS: - Carija R; Tudor M; Vucina D

INSTITUCIÓN / INSTITUTION: - Clinical Department of Neurosurgery, Clinical Hospital Center, Spinciceva 1, 21000 Split, Croatia, EU.

RESUMEN / SUMMARY: - Objective: Since the 1980s, it has been discussed whether the preoperative treatment of prolactinomas with dopamine agonists (DAs) is beneficial or detrimental regarding postoperative residue or recurrence. Many neurosurgeons have emphasized the difficulties caused by fibrosis during the ablation of such prolactinomas. Methods: From February to December 2012, the authors searched electronic databases and book chapters published from 1991 to 2012; a total of 3,771 articles and 37 book chapters were searched. Ten articles that explicitly addressed this

issue were found. Results: Five articles found that preoperative treatment did not affect the postoperative status. One article found a positive influence of preoperative treatment with DAs ($P < 0.01$), and three articles found a negative influence ($P = 0.040$, $P = 0.02$). One article described histopathological evidence of tumor fibrosis that was found intraoperatively after preoperative treatment with DAs. Conclusions: This systematic review did not provide any strong evidence that the preoperative treatment of prolactinomas with DAs was harmful or beneficial. Therefore, further studies are needed.

[485]

TÍTULO / TITLE: - The shaping of invasive glioma phenotype by the ubiquitin-proteasome system.

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

REVISTA / JOURNAL: - Cell Commun Adhes. 2013 Oct;20(5):87-92. Epub 2013 Sep 5.

●● [Enlace al texto completo \(gratis o de pago\) 3109/15419061.2013.833192](#)

AUTORES / AUTHORS: - Vlachostergios PJ; Voutsadakis IA; Papandreou CN

INSTITUCIÓN / INSTITUTION: - Faculty of Medicine, Department of Medical Oncology, University of Thessaly University Hospital of Larissa, Larissa, Greece.

RESUMEN / SUMMARY: - Abstract Protein degradation is an indispensable process for cells which is often deregulated in various diseases, including malignant conditions. Depending on the specific cell type and functions of expressed proteins, this aberration may have different effects on the determination of malignant phenotypes. A discrete, inherent feature of malignant glioma is its profound invasive and migratory potential, regulated by the expression of signaling and effector proteins, many of which are also subjected to post-translational regulation by the ubiquitin-proteasome system (UPS). Here we provide an overview of this connection, focusing on important pro-invasive protein signals targeted by the UPS.

[486]

TÍTULO / TITLE: - Ganglion cyst in the external auditory canal.

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

REVISTA / JOURNAL: - Ear Nose Throat J. 2013 Aug;92(8):E33-4.

AUTORES / AUTHORS: - Lee CK; Oh MH; Park KH

INSTITUCIÓN / INSTITUTION: - Department of Otorhinolaryngology-Head and Neck Surgery, Soonchunhyang University School of Medicine, Cheonan, Korea.

[487]

TÍTULO / TITLE: - Large osteoma of the external auditory canal.

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

REVISTA / JOURNAL: - Ear Nose Throat J. 2013 Jul;92(7):286, 290.

AUTORES / AUTHORS: - Iizuka T; Haruyama T; Nagaya K

INSTITUCIÓN / INSTITUTION: - Department of Otorhinolaryngology, Juntendo University Faculty of Medicine, Tokyo, Japan.

[488]

TÍTULO / TITLE: - Paraganglioma presenting as cholesterol granuloma of the petrous apex.

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

REVISTA / JOURNAL: - Ear Nose Throat J. 2013 Sep;92(9):430-4.

AUTORES / AUTHORS: - Heman-Ackah SE; Huang TC

INSTITUCIÓN / INSTITUTION: - Department of Otolaryngology-Head and Neck Surgery, University of Minnesota, MMC 396, 420 Delaware Ave., SE, Minneapolis, MN 55455, USA.

RESUMEN / SUMMARY: - We report the unique finding of a petrous apex cholesterol granuloma associated with a paraganglioma, also known as a glomus jugulare tumor, in a 52-year-old woman who presented to our department with pulsatile tinnitus, hearing loss, aural fullness, and disequilibrium. She had been treated for a petrous apex cholesterol granuloma 20 years earlier, at which time she had undergone drainage of the granuloma via subtotal petrous apicectomy. When she came to our facility approximately 20 years later, she had signs and symptoms consistent with a jugular paraganglioma, which was likely to have been present at the time of her initial presentation for the cholesterol granuloma. In fact, microscopic bleeding from the paraganglioma might have led to the formation of the cholesterol granuloma. The metachronous presentation of these two entities, which to our knowledge has not been reported previously in the literature, indicates the potential association of paragangliomas with the formation of cholesterol granulomas of the petrous apex.

[489]

TÍTULO / TITLE: - PRESENTATION AND SURGICAL RESULTS OF INCIDENTALLY DISCOVERED NON-FUNCTIONING PITUITARY ADENOMAS: EVIDENCE FOR A BETTER OUTCOME INDEPENDENTLY OF OTHER PATIENTS' CHARACTERISTICS.

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

REVISTA / JOURNAL: - Eur J Endocrinol. 2013 Sep 2.

●● [Enlace al texto completo \(gratis o de pago\) 1530/EJE-13-0515](#)

AUTORES / AUTHORS: - Losa M; Donofrio CA; Barzaghi R; Mortini P

INSTITUCIÓN / INSTITUTION: - M Losa, Neurosurgery, IRCCS San Raffaele, Milano, 20132, Italy.

RESUMEN / SUMMARY: - OBJECTIVE: Few data are available on the surgical results in patients with incidentally discovered non-functioning pituitary adenoma (NFPA). We investigated the efficacy and safety of surgery in patients with incidentally discovered NFPA. DESIGN: Retrospective analysis of prospectively recorded outcomes. METHODS: From 1990 to 2011, of 804 consecutive patients undergoing surgery for NFPA 212 cases had an incidentally discovered tumor (26.4%). Among them, 117 patients were asymptomatic, while 95 had some visual and/or hormonal deficit. The main outcome of the study was to evaluate the frequency of radical resection as judged on the first postoperative neuroimaging study and detection of recurring disease during long-term follow-up. RESULTS: Postoperative residual tumor was detected in 8.9% of patients with asymptomatic incidentalomas as compared with 31.2% of patients with symptomatic incidentalomas ($p < 0.001$) and 41.2% of patients in the control group ($p < 0.001$). Multivariate analysis confirmed that having an asymptomatic incidentaloma was independently associated with a better outcome. The 5-yr recurrence-free survival in patients with incidentaloma was 86.8% (95% CI 80.2 - 92.4%) as compared with 77.9% (95% CI 73.6 - 82.2%; $p < 0.01$) in the control group. This difference was almost completely due to a lower frequency of relapse in asymptomatic patients. Multivariate analysis confirmed the independent lower risk of tumor recurrence in asymptomatic NFPA. CONCLUSION: Our study shows for the first time that surgically treated patients with asymptomatic NFPA have a better early and long-term outcome that is independent from all the other demographic, clinical, and morphologic characteristics of the patients.

[490]

TÍTULO / TITLE: - Hypothalamic hamartoma associated with central precocious puberty and growth hormone deficiency.

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

REVISTA / JOURNAL: - J Pediatr Endocrinol Metab. 2013 Aug 10:1-5. doi: 10.1515/jpem-2013-0108.

●● Enlace al texto completo (gratis o de pago) [1515/jpem-2013-0108](#)

AUTORES / AUTHORS: - Rousseau-Nepton I; Kaduri S; Garfield N; Krishnamoorthy P

RESUMEN / SUMMARY: - Abstract Hypothalamic hamartomas (HHs) are tumors generally associated with isolated central precocious puberty (CPP). To our knowledge, we report a unique case of a girl with HH associated with CPP and growth hormone deficiency. This case highlights the complex interaction between HHs and the hypothalamic-pituitary-gonadal axis. It also emphasizes the value of close follow-up of growth velocity in these patients even after treatment of the CPP.

[491]

TÍTULO / TITLE: - Current management of choroid plexus carcinomas.

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

REVISTA / JOURNAL: - Neurosurg Rev. 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago) [1007/s10143-013-0499-1](#)

AUTORES / AUTHORS: - Sun MZ; Oh MC; Ivan ME; Kaur G; Safae M; Kim JM; Phillips JJ; Auguste KI; Parsa AT

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of California San Francisco, 505 Parnassus Ave., San Francisco, CA, 94117, USA.

RESUMEN / SUMMARY: - Choroid plexus carcinoma (CPC) is a World Health Organization (WHO) grade III brain tumor with a poor prognosis that occurs mainly in children. Gross total resection of CPC is highly recommended and is associated with improved overall survival, although it is often associated with increased morbidity. The use of adjuvant therapies has yet to be standardized, although evidence suggests that for patients with incompletely resected CPCs, a combination of chemotherapy and radiation therapy may be beneficial. The use of radiation therapy for younger children (<3 years old) with CPC, however, is not recommended, due to the potential negative neurological sequelae associated with radiation to the developing brain. Given that the majority of CPC patients are young children, questions regarding optimal radiation dose, chemotherapy agents, and how to combine these two adjuvant treatment modalities to achieve the best outcomes remain unanswered. In this paper we summarize the current management of CPC in the literature. Further studies are needed to standardize the treatment paradigm for this malignant brain tumor.

[492]

TÍTULO / TITLE: - Gangliocytic paraganglioma of duodenum metastatic to lymph nodes and liver and extending into the retropancreatic space.

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

REVISTA / JOURNAL: - Pathologica. 2013 Jun;105(3):90-3.

AUTORES / AUTHORS: - Amin SM; Albrechtsen NW; Forster J; Damjanov I

INSTITUCIÓN / INSTITUTION: - Department of Pathology and Laboratory Medicine, The University of Kansas School of Medicine, Kansas City, KS 66160, USA.

RESUMEN / SUMMARY: - Gangliocytic paraganglioma (GP) is a rare benign neuroendocrine tumour found most often in the duodenum. To our knowledge, only a dozen cases of possibly malignant duodenal GP with local lymph node metastasis and only one case with liver metastasis have previously been published. Herein, we report an unusual case of GP of the duodenum spreading to the retropancreatic space and metastatic to the liver and lymph nodes. Additionally, the present tumour secreted pancreatic polypeptide (PP) which was detected in the serum during the follow-up period. We suggest that serum PP could be a valuable marker in the diagnosis and follow-up of patients with GP.

[493]

TÍTULO / TITLE: - Hyperspectral unmixing of Raman micro-images for assessment of morphological and chemical parameters in non-dried brain tumor specimens.

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

REVISTA / JOURNAL: - Anal Bioanal Chem. 2013 Aug 11.

●● Enlace al texto completo (gratis o de pago) [1007/s00216-013-7257-7](#)

AUTORES / AUTHORS: - Bergner N; Medyukhina A; Geiger KD; Kirsch M; Schackert G; Krafft C; Popp J

INSTITUCIÓN / INSTITUTION: - Institute of Photonic Technology, Albert Einstein Strasse 9, 07745, Jena, Germany.

RESUMEN / SUMMARY: - Hyperspectral unmixing is an unsupervised algorithm to calculate a bilinear model of spectral endmembers and abundances of components from Raman images. Thirty-nine Raman images were collected from six glioma brain tumor specimens. The tumor grades ranged from astrocytoma WHO II to glioblastoma multiforme WHO IV. The abundance plots of the cell nuclei were processed by an image segmentation procedure to determine the average nuclei size, the number of nuclei, and the fraction of nuclei area. The latter two morphological parameters correlated with the malignancy. A combination of spectral unmixing and non-negativity constrained linear least squares fitting is introduced to assess chemical parameters. First, endmembers of the most abundant and most dissimilar components were defined that represent all data sets. Second, the content of the obtained components' proteins, nucleic acids, lipids, and lipid to protein ratios were determined in all Raman images. Except for the protein content, all chemical parameters correlated with the malignancy. We conclude that the morphological and chemical information offer new ways to develop Raman-based classification approaches that can complement diagnosis of brain tumors. The role of non-linear Raman modalities to speed-up image acquisition is discussed.

[494]

TÍTULO / TITLE: - Pituitary incidentalomas.

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

REVISTA / JOURNAL: - Pituitary. 2013 Sep 20.

●● Enlace al texto completo (gratis o de pago) [1007/s11102-013-0517-x](#)

AUTORES / AUTHORS: - Scangas GA; Laws ER Jr

INSTITUCIÓN / INSTITUTION: - Department of Otolaryngology/Head and Neck Surgery, Brigham and Women's Hospital, Boston, MA, 02115, USA.

RESUMEN / SUMMARY: - INTRODUCTION: Incidentally discovered pituitary adenomas are more and more commonly encountered in endocrinology and neurosurgical practices.

Often they present as difficult problems in management strategies. This review summarizes the latest evidence and opinions in a variety of settings in which incidental pituitary tumors are discovered, including subclinical pituitary tumor apoplexy. METHODS: A systematic literature review was accomplished using a spectrum of contemporary sources for information regarding pituitary incidentalomas. RESULTS: Up to date findings regarding epidemiology, definition of pituitary incidentaloma, patient evaluation, diagnostic studies, and management are presented. CONCLUSIONS: Current experience from a multidisciplinary pituitary center is presented, with indications for treatment and longitudinal care of these challenging patients.

[495]

TÍTULO / TITLE: - A glioblastoma neurosphere line with alternative lengthening of telomeres.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Sep 11.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1174-x](#)

AUTORES / AUTHORS: - Heaphy CM; Schreck KC; Raabe E; Mao XG; An P; Chu Q; Poh W; Jiao Y; Rodriguez FJ; Oda Y; Meeker AK; Eberhart CG

INSTITUCIÓN / INSTITUTION: - Johns Hopkins University, Baltimore, MD, USA.

[496]

TÍTULO / TITLE: - FTIR spectro-imaging of collagen scaffold formation during glioma tumor development.

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

REVISTA / JOURNAL: - Anal Bioanal Chem. 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago) [1007/s00216-013-7337-8](#)

AUTORES / AUTHORS: - Noreen R; Chien CC; Chen HH; Bobroff V; Moenner M; Javerzat S; Hwu Y; Petibois C

INSTITUCIÓN / INSTITUTION: - Department of Chemistry, Government College University, 38000, Faisalabad, Pakistan.

RESUMEN / SUMMARY: - Evidence has recently emerged that solid and diffuse tumors produce a specific extracellular matrix (ECM) for division and diffusion, also developing a specific interface with microvasculature. This ECM is mainly composed of collagens and their scaffolding appears to drive tumor growth. Although collagens are not easily analyzable by UV-fluorescence means, FTIR imaging has appeared as a valuable tool to characterize collagen contents in tissues, specially the brain, where ECM is normally devoid of collagen proteins. Here, we used FTIR imaging to characterize collagen content changes in growing glioma tumors. We could determine that C6-derived solid tumors presented high content of triple helix after 8-11 days of growth (typical of

collagen fibrils formation; 8/8 tumor samples; 91 % of total variance), and further turned to larger alpha-helix (days 12-15; 9/10 of tumors; 94 % of variance) and beta-turns (day 18-21; 7/8 tumors; 97 % of variance) contents, which suggest the incorporation of non-fibrillar collagen types in ECM, a sign of more and more organized collagen scaffold along tumor progression. The growth of tumors was also associated to the level of collagen produced ($P < 0.05$). This study thus confirms that collagen scaffolding is a major event accompanying the angiogenic shift and faster tumor growth in solid glioma phenotypes.

[497]

TÍTULO / TITLE: - Giant left atrial myxoma as a cause of recurrent cerebral emboli.

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

REVISTA / JOURNAL: - Pol Arch Med Wewn. 2013 Aug 16;123(7-8):417-8.

AUTORES / AUTHORS: - Konopka M; Pikto-Pietkiewicz W; Sawicki J; Gierlak W;

Dluzniewski M

[498]

TÍTULO / TITLE: - Cavernous sinus syndrome secondary to intracranial lymphoma in a cat.

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

REVISTA / JOURNAL: - J Feline Med Surg. 2013 Sep 20.

●● [Enlace al texto completo \(gratis o de pago\) 1177/1098612X13505580](#)

AUTORES / AUTHORS: - Guevar J; Gutierrez-Quintana R; Peplinski G; Helm JR; Penderis J

INSTITUCIÓN / INSTITUTION: - School of Veterinary Medicine, College of Medical, Veterinary and Life Sciences, University of Glasgow, Bearsden Road, Glasgow, UK.

RESUMEN / SUMMARY: - Cavernous sinus syndrome is characterised by internal and external ophthalmoplegia and sensory deficits over the head due to combined deficits of the three cranial nerves (CNs) responsible for the eye movements and pupil function (CN III, IV, VI) and at least one branch of the trigeminal nerve (CN V). It has rarely been described in cats and may occur secondary to inflammatory, infectious or neoplastic lesions within the region of the cavernous sinus on the ventral aspect of the calvarium. This report describes the clinical and magnetic resonance imaging findings in a 14-year-old domestic shorthair cat with neurological deficits compatible with cavernous sinus syndrome caused by presumptive extranodal lymphoma. Treatment with chemotherapy resulted in clinical and imaging remission. Identification of the neurological deficits in cavernous sinus syndrome allows accurate neuroanatomical localisation in order to target diagnostic imaging studies.

[499]

TÍTULO / TITLE: - Cavernous angioma of the corpus callosum presenting with acute psychosis.

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

REVISTA / JOURNAL: - Behav Neurol. 2013 Aug 20.

●● Enlace al texto completo (gratis o de pago) [3233/BEN-130379](#)

AUTORES / AUTHORS: - Pavesi G; Causin F; Feletti A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Padova Hospital, Padova, Italy.

RESUMEN / SUMMARY: - Psychiatric symptoms may occasionally be related to anatomic alterations of brain structures. Particularly, corpus callosum lesions seem to play a role in the change of patients' behavior. We present a case of a sudden psychotic attack presumably due to a hemorrhagic cavernous angioma of the corpus callosum, which was surgically removed with complete resolution of symptoms. Although a developmental defect like agenesis or lipoma is present in the majority of these cases, a growing lesion of the corpus callosum can rarely be the primary cause. Since it is potentially possible to cure these patients, clinicians should be aware of this association.

[500]

TÍTULO / TITLE: - Transsphenoidal cyst cisternostomy with a keyhole dural opening for sellar arachnoid cysts: technical note.

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

REVISTA / JOURNAL: - Neurosurg Rev. 2013 Sep 3.

●● Enlace al texto completo (gratis o de pago) [1007/s10143-013-0496-4](#)

AUTORES / AUTHORS: - Oyama K; Fukuhara N; Taguchi M; Takeshita A; Takeuchi Y; Yamada S

INSTITUCIÓN / INSTITUTION: - Department of Hypothalamic & Pituitary Surgery, Toranomon Hospital, 2-2-2 Toranomon, Minato, Tokyo, 1058470, Japan, ko-neuro@nms.ac.jp.

RESUMEN / SUMMARY: - A less invasive transsphenoidal approach with a keyhole dural opening for intrasellar arachnoid cysts is described. This approach was used to address seven sellar cystic lesions with suprasellar extension; they were six intrasellar arachnoid cysts (IACs) and one Rathke's cleft cyst (RCC). In all cases, preoperative MRI revealed cerebrospinal fluid (CSF) intensity on both T1- and T2-weighted images. On preoperative contrast-enhanced MRI, five of the six IACs manifested posterior displacement of the flattened pituitary gland toward the dorsum sellae; one of the six IACs and the RCC exhibited a flattened pituitary gland on the anterior surface of the cyst. Wide cyst cisternostomy through a keyhole dural opening was carried out safely using a microscope with the support of a thin angled endoscope (30 degrees and/or 70 degrees, diameter 2.7 mm). As we aimed to avoid iatrogenic injury of the pituitary

function, we found it difficult to obtain a sufficiently wide and precise opening of the cyst wall when the pituitary gland was located on the anterior surface of the cyst wall. Our approach facilitates safe cyst cisternostomy as wide as that obtainable by transcranial manipulation. In addition, CSF leakage is prevented by dural plasty using the fascia lata and stitching with 6-0 monofilament sutures. This technique can be adapted to address various sellar cystic lesions. However, as the posterior or anterior displacement of the normal pituitary gland in the presence of IACs or RCCs, respectively, affects the width of the cyst opening, our technique is more suitable for IACs than RCCs.

[501]

- CASTELLANO -

TÍTULO / TITLE: Síndrome de Horner incompleto como signo de presentación de ependimoma del cuarto ventrículo.

TÍTULO / TITLE: - Incomplete Horner's syndrome as a presenting sign of fourth ventricle ependymoma.

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

REVISTA / JOURNAL: - Arch Soc Esp Oftalmol. 2013 Sep;88(9):359-361. doi: 10.1016/j.oftal.2012.05.006. Epub 2012 Jul 24.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.oftal.2012.05.006](#)

AUTORES / AUTHORS: - Escrivá E; Martínez-Costa L

INSTITUCIÓN / INSTITUTION: - Servicio de Oftalmología, Hospital Dr. Peset, Valencia, España. Electronic address: estherescrivapastor@yahoo.es.

RESUMEN / SUMMARY: - CASE REPORT: The case of 44 year old male patient with palpebral ptosis and trigeminal neuralgia as presenting sign of fourth ventricle ependymoma is reported. After surgical treatment, the patient developed a residual paresis of the sixth cranial nerve. DISCUSSION: Horner's syndrome occurs due to an alteration of the sympathetic innervations of the eye and adnexa. Some tumours may be the cause, in our case an ependymoma of the fourth ventricle, which onset exceptionally with blepharoptosis and involvement of the ophthalmic division of trigeminal nerve, due to the proximity of these nerve fibres at the brainstem.

[502]

TÍTULO / TITLE: - Relationship between magnetic resonance imaging features and miRNA gene expression in patients with glioblastoma multiforme.

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

REVISTA / JOURNAL: - Chin Med J (Engl). 2013;126(15):2881-5.

AUTORES / AUTHORS: - Li WB; Chen HY; Zhang W; Yan W; Shi R; Li SW; Jiang T

INSTITUCIÓN / INSTITUTION: - Cancer Center, Beijing Shijitan Hospital, Capital Medical University, Beijing 100038, China.

RESUMEN / SUMMARY: - BACKGROUND: Magnetic resonance imaging (MRI) is commonly utilized as part of the diagnostic workup for the clinical diagnosis of glioblastoma multiforme (GBM), further guiding the clinical treatment of this aggressive cancer. Recent research has shown that microRNAs (miRNAs) may act as oncogenes, or in some cases, tumor suppressor genes that in turn may reflect the genotypic features of GBM. This study aimed to investigate the relationship between MRI features and miRNA gene expression in patients with glioblastoma multiforme. METHODS: In order to identify the relationship between the radiographic findings of MRI and those identified changes in miRNA gene expression of GBM, we reviewed the MRI images of GBM patients and compared them with the identified miRNA expression profiles utilizing microarray analysis of paired GBM tumor samples. We chose five MRI imaging features: (1) contrast tumor enhanced/necrosis ratio, (2) contrast tumor enhanced/T2 ratio, (3) multiple lesions, (4) hemorrhage, and (5) necrotic volume. The relationship between these five imaging features and miRNA expression was studied using significance analysis of microarrays analysis. RESULTS: We found that the expression of miRNAs such as hsa-miR-892b, hsa-miR-892^a, and hsa-miR-888 was inversely correlated with an enhanced/necrosis ratio ≥ 1 . The miRNAs such as hsa-miR-95, hsa-miR-498, and hsa-miR-1300 were associated with a contrast tumor enhanced/T2 ratio ≥ 1 . The miRNAs such as hsa-miR-612, hsa-miR-524-3, and hsa-miR-1282 were associated with multiple lesions identified on MRI and the expression of miR-221 was associated with hemorrhage by GBM. The expression of miR-let-7, including miR-let-7f, miR-let-7i, and miR-let-7f-1*, was downregulated in the hemorrhage group. The gene expression of miRNAs such as hsa-miR-140-5p, hsa-miR-30e, and hsa-miR-301^a was relatively low when compared with the larger necrotic volume group as identified by MRI. CONCLUSIONS: The miRNA gene expression profiles correlate with several selected MRI features of patients with GBM. Further analysis of key imaging features of MRI with correlation with miRNA gene expression patterns may help to guide treatment decisions based on these unique correlative profiles of GBM.

[503]

TÍTULO / TITLE: - Incidence, causative mechanisms, and anatomic localization of stroke in pituitary adenoma patients treated with postoperative radiation therapy versus surgery alone.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Sep 1;87(1):53-9. doi: 10.1016/j.ijrobp.2013.05.006.

●● Enlace al texto completo (gratis o de pago) 1016/j.ijrobp.2013.05.006

AUTORES / AUTHORS: - Sattler MG; Vroomen PC; Sluiter WJ; Schers HJ; van den Berg G; Langendijk JA; Wolffenbuttel BH; van den Bergh AC; van Beek AP

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands.

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RESUMEN / SUMMARY: - PURPOSE: To assess and compare the incidence of stroke and stroke subtype in pituitary adenoma patients treated with postoperative radiation therapy (RT) and surgery alone. METHODS AND MATERIALS: A cohort of 462 pituitary adenoma patients treated between 1959 and 2008 at the University Medical Center Groningen in The Netherlands was studied. Radiation therapy was administered in 236 patients. The TOAST (Trial of ORG 10172 in Acute Stroke Treatment) and the Oxfordshire Community Stroke Project classification methods were used to determine causative mechanism and anatomic localization of stroke. Stroke incidences in patients treated with RT were compared with that observed after surgery alone. Risk factors for stroke incidence were studied by log-rank test, without and with stratification for other significant risk factors. In addition, the stroke incidence was compared with the incidence rate in the general Dutch population. RESULTS: Thirteen RT patients were diagnosed with stroke, compared with 12 surgery-alone patients. The relative risk (RR) for stroke in patients treated with postoperative RT was not significantly different compared with surgery-alone patients (univariate RR 0.62, 95% confidence interval [CI] 0.28-1.35, P=.23). Stroke risk factors were coronary or peripheral artery disease (univariate and multivariate RR 10.4, 95% CI 4.7-22.8, P<.001) and hypertension (univariate RR 3.9, 95% CI 1.6-9.8, P=.002). There was no difference in TOAST and Oxfordshire classification of stroke. In this pituitary adenoma cohort 25 strokes were observed, compared with 16.91 expected (standard incidence ratio 1.48, 95% CI 1.00-1.96, P=.049). CONCLUSIONS: In pituitary adenoma patients, an increased incidence of stroke was observed compared with the general population. However, postoperative RT was not associated with an increased incidence of stroke or differences in causative mechanism or anatomic localization of stroke compared with surgery alone. The primary stroke risk factor was pre-existent coronary or peripheral artery disease.

Int J Radiat Oncol Biol Phys

[504]

TÍTULO / TITLE: - YB-1 dependent oncolytic adenovirus efficiently inhibits tumor growth of glioma cancer stem like cells.

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

REVISTA / JOURNAL: - J Transl Med. 2013 Sep 18;11(1):216.

●● Enlace al texto completo (gratis o de pago) [1186/1479-5876-11-216](#)

AUTORES / AUTHORS: - Mantwill K; Naumann U; Seznec J; Girbinger V; Lage H; Surowiak P; Beier D; Mittelbronn M; Schlegel J; Holm PS

RESUMEN / SUMMARY: - BACKGROUND: The brain cancer stem cell (CSC) model describes a small subset of glioma cells as being responsible for tumor initiation, conferring therapy resistance and tumor recurrence. In brain CSC, the PI3-K/AKT and the RAS/mitogen activated protein kinase (MAPK) pathways are found to be activated. In consequence, the human transcription factor YB-1, knowing to be responsible for the emergence of drug resistance and driving adenoviral replication, is phosphorylated and activated. With this knowledge, YB-1 was established in the past as a biomarker for disease progression and prognosis. This study determines the expression of YB-1 in glioblastoma (GBM) specimen in vivo and in brain CSC lines. In addition, the capacity of Ad-Delo3-RGD, an YB-1 dependent oncolytic adenovirus, to eradicate CSC was evaluated both in vitro and in vivo. METHODS: YB-1 expression was investigated by immunoblot and immuno-histochemistry. In vitro, viral replication as well as the capacity of Ad-Delo3-RGD to replicate in and, in consequence, to kill CSC was determined by real-time PCR and clonogenic dilution assays. In vivo, Ad-Delo3-RGD-mediated tumor growth inhibition was evaluated in an orthotopic mouse GBM model. Safety and specificity of Ad-Delo3-RGD were investigated in immortalized human astrocytes and by siRNA-mediated downregulation of YB-1. RESULTS: YB-1 is highly expressed in brain CSC lines and in GBM specimen. Efficient viral replication in and virus-mediated lysis of CSC was observed in vitro. Experiments addressing safety aspects of Ad-Delo3-RGD showed that (i) virus production in human astrocytes was significantly reduced compared to wild type adenovirus (Ad-WT) and (ii) knockdown of YB-1 significantly reduced virus replication. Mice harboring orthotopic GBM developed from a temozolomide (TMZ)-resistant GBM derived CSC line which was intratumorally injected with Ad-Delo3-RGD survived significantly longer than mice receiving PBS-injections or TMZ treatment. CONCLUSION: The results of this study supported YB-1 based virotherapy as an attractive therapeutic strategy for GBM treatment which will be exploited further in multimodal treatment concepts.

[505]

TÍTULO / TITLE: - Individual surgical treatment of intracranial arachnoid cyst in pediatric patients.

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

REVISTA / JOURNAL: - Neurol India. 2013 Jul-Aug;61(4):400-5. doi: 10.4103/0028-3886.117618.

●● Enlace al texto completo (gratis o de pago) [4103/0028-3886.117618](#)

AUTORES / AUTHORS: - Wang C; Han G; You C; Liu C; Wang J; Xiong Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery of GuiZhou, Provincial People's Hospital, GuiZhou - 550 002, People's Republic of China.

RESUMEN / SUMMARY: - Background and Aim: Intracranial arachnoid cysts (IAC) are benign congenital cystic lesions filled with cerebrospinal fluid (CSF). This study

evaluated microsurgical craniotomy and endoscopy in the surgical treatment of IAC. Materials and Methods: Eight-one consecutive pediatric patients with IAC were surgically treated between January 2004 and January 2011. The surgical procedures included microsurgical craniotomy and endoscopy. Symptoms at presentation, location of IAC, surgical treatment options, and effectiveness were evaluated. Results: There were 43 males and 38 females and the mean age was 8.7 years (range between 1 month and 14 years) at the time of surgery. The cyst location was supratentorial in 72 patients and infratentorial in 9 patients, arachnoid cyst were identified. Follow-up period ranged between 2 and 8 years. Of the 49 patients with headache 83.67% of patients had cure and 10.2% had significant improvement. Of the eight patients with hydrocephalus and gait disturbances, six (75%) had complete total relief of symptoms and two (25%) patients had significant improvement. Four of the six patients with cognitive decline and weakness showed improvement. Of the 18 patients with epilepsy seizure freedom was: Engle class I grade I in 14 (77.78%) patients; class II in 2 (11.11%) patients; and class III in 2 (11.11%) patients. Follow-up studies from 2 to 8 years showed that headache was cured in 41 of the 49 cases (83.67%), significantly improved in 5 cases (10.20%), and showed no variation in 3 cases (6.12%). Hydrocephalus and gait disturbances were controlled in six of the eight cases (75.00%) and significantly improved in two cases (25.00%). Cognitive decline and weakness were obviously improved in four of the six cases (66.67%) and exhibited no variation in two cases (33.33%). According to the Engle standard, the following results were obtained from 18 patients with epilepsy: Grade I in 14 cases (77.78%); grade II in 2 cases (11.11%); and grade III in 2 cases (11.11%). Eleven cases with local or general enlarged skull exhibited no further progression. On follow-up computed tomography (CT) scan, there was variable alleviation of mass effect in all the 81 patients. Cystic size was significantly reduced in 65 patients with supratentorial arachnoid cysts and in 9 patients with infratentorial arachnoid cysts. Twenty-one patients who had decreased skull thickness, had no further progression. Four patients who had cranioplasty had good outcome. Conclusion: The endoscopic approach was highly effective for most cases of IAC, particularly for cysts in the suprasellar and quadrigeminal regions as well as in the posterior fossa. Microsurgical craniotomy was recommended for IAC in the extracerebral convexity and intracerebrum. Local skull cranioplasty is needed for patients, or patients with preoperative diagnosis showed signs of cystic tumor and cyst-related epilepsy.

[506]

TÍTULO / TITLE: - Recurrent bradycardia and asystole in a patient undergoing supratentorial tumor resection: Different types of trigeminal cardiac reflex in same patients.

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

REVISTA / JOURNAL: - Saudi J Anaesth. 2013 Apr;7(2):216-8. doi: 10.4103/1658-354X.114062.

●● Enlace al texto completo (gratis o de pago) [4103/1658-354X.114062](https://doi.org/10.4103/1658-354X.114062)

AUTORES / AUTHORS: - Chowdhury T; Cappellani RB; West M

INSTITUCIÓN / INSTITUTION: - Department of Anesthesiology and Perioperative Medicine, Health Sciences Center, University of Manitoba, Winnipeg, Canada.

[507]

TÍTULO / TITLE: - An infant with prenatally diagnosed congenital anaplastic astrocytoma who remains disease-free after proton therapy.

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

REVISTA / JOURNAL: - J Korean Med Sci. 2013 Sep;28(9):1394-8. doi: 10.3346/jkms.2013.28.9.1394. Epub 2013 Aug 28.

●● Enlace al texto completo (gratis o de pago) [3346/jkms.2013.28.9.1394](https://doi.org/10.3346/jkms.2013.28.9.1394)

AUTORES / AUTHORS: - Shin HJ; Kwon YJ; Park HJ; Park BK; Shin SH; Kim JY; Lee SH; Kim HS; Kim DW

INSTITUCIÓN / INSTITUTION: - Joy Pediatric Clinic, Seoul, Korea.

RESUMEN / SUMMARY: - The authors present a rare of prenatally diagnosed congenital anaplastic astrocytoma. A 9-month-old boy had three recurrences despite two surgical resections and various chemotherapeutic regimens. He underwent the 3rd gross tumor removal at 11 months of age, followed by proton therapy, and now he remains disease-free for 3 yr without a significant neurocognitive dysfunction. This is the 1st case of a pediatric tumor treated by proton therapy in Korea, and proton therapy may be a treatment of choice for a congenital anaplastic astrocytoma in infants and young children, considering limitation of radiation therapy.

[508]

TÍTULO / TITLE: - Primary cerebral low-grade B-cell lymphoma, monoclonal immunoglobulin deposition disease, cerebral light chain deposition disease and “aggregoma”: an update on classification and diagnosis.

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

REVISTA / JOURNAL: - BMC Neurol. 2013 Aug 15;13:107. doi: 10.1186/1471-2377-13-107.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2377-13-107](https://doi.org/10.1186/1471-2377-13-107)

AUTORES / AUTHORS: - Skardelly M; Pantazis G; Bisdas S; Feigl GC; Schuhmann MU; Tatagiba MS; Ritz R

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital Tuebingen, Hoppe-Seyler-Str. 3, 72076, Tuebingen, Baden-Wuerttemberg, Germany. marco.skardelly@med.uni-tuebingen.de

RESUMEN / SUMMARY: - BACKGROUND: This work aims to add evidence and provide an update on the classification and diagnosis of monoclonal immunoglobulin deposition

disease (MIDD) and primary central nervous system low-grade lymphomas. MIDD is characterized by the deposition of light and heavy chain proteins. Depending on the spatial arrangement of the secreted proteins, light chain-derived amyloidosis (AL) can be distinguished from non-amyloid light chain deposition disease (LCDD). We present a case of an extremely rare tumoral presentation of LCDD (agregoma) and review the 3 previously published LCDD cases and discuss their presentation with respect to AL. CASE PRESENTATION: A 61-year-old woman presented with a 3(1/2)-year history of neurologic symptoms due to a progressive white matter lesion of the left subcortical parieto-insular lobe and basal ganglia. 2 former stereotactic biopsies conducted at different hospitals revealed no evidence of malignancy or inflammation; thus, no therapy had been initiated. After performing physiological and functional magnetic resonance imaging (MRI), the tumor was removed under intraoperative monitoring at our department. Histological analysis revealed large amorphous deposits and small islands of lymphoid cells. CONCLUSION: LCCD is a very rare and obscure manifestation of primary central nervous system low-grade lymphomas that can be easily misdiagnosed by stereotactic biopsy sampling. If stereotactic biopsy does not reveal a definite result, a “wait-and-see” strategy can delay possible therapy for this disease. The impact of surgical removal, radiotherapy and chemotherapy in LCDD obviously remains controversial because of the low number of relevant cases.

[509]

TÍTULO / TITLE: - Clinical variables serve as prognostic factors in a model for survival from glioblastoma multiforme: an observational study of a cohort of consecutive non-selected patients from a single institution.

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

REVISTA / JOURNAL: - BMC Cancer. 2013 Sep 3;13(1):402.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1471-2407-13-402](#)

AUTORES / AUTHORS: - Michaelsen SR; Christensen IJ; Grunnet K; Stockhausen MT; Broholm H; Kosteljanetz M; Poulsen HS

RESUMEN / SUMMARY: - BACKGROUND: Although implementation of temozolomide (TMZ) as a part of primary therapy for glioblastoma multiforme (GBM) has resulted in improved patient survival, the disease is still incurable. Previous studies have correlated various parameters to survival, although no single parameter has yet been identified. More studies and new approaches to identify the best and worst performing patients are therefore in great demand. METHODS: This study examined 225 consecutive, non-selected GBM patients with performance status (PS) 0--2 receiving postoperative radiotherapy with concomitant and adjuvant TMZ as primary therapy. At relapse, patients with PS 0--2 were mostly treated by reoperation and/or combination with bevacizumab/irinotecan (BEV/IRI), while a few received TMZ therapy if the recurrence-free period was >6 months. RESULTS: Median overall survival and time to progression were 14.3 and 8.0 months, respectively. Second-line therapy

indicated that reoperation and/or BEV/IRI increased patient survival compared with untreated patients and that BEV/IRI was more effective than reoperation alone. Patient age, ECOG PS, and use of corticosteroid therapy were significantly correlated with patient survival and disease progression on univariate analysis, whereas p53, epidermal growth factor receptor, and O6-methylguanine-DNA methyltransferase expression (all detected by immunohistochemistry), tumor size or multifocality, and extent of primary operation were not. A model based on age, ECOG PS, and corticosteroids use was able to predict survival probability for an individual patient. CONCLUSION: The survival of RT/TMZ-treated GBM patients can be predicted based on patient age, ECOG PS, and corticosteroid therapy status.

[510]

TÍTULO / TITLE: - Improvement of paraneoplastic limbic encephalitis after systemic treatment with rituximab in a patient with B-cell chronic lymphocytic leukemia.

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

REVISTA / JOURNAL: - Case Rep Hematol. 2013;2013:958704. doi: 10.1155/2013/958704. Epub 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1155/2013/958704](#)

AUTORES / AUTHORS: - Nogai H; Israel-Willner H; Zschenderlein R; Pezzutto A

INSTITUCIÓN / INSTITUTION: - Department of Hematology, Oncology, and Tumor Immunology, Charite-Universitätsmedizin Berlin, Campus Benjamin Franklin, Hindenburgdamm 30, 12203 Berlin, Germany.

RESUMEN / SUMMARY: - Limbic encephalitis is an inflammatory disease of the central nervous system characterized by diverse neurologic symptoms including mnemonic disturbances, hallucinations, and seizures as well as behavioral symptoms like depression, personality changes, and acute confusional states resembling dementia. Several antibodies have been described in the pathogenesis of limbic encephalitis. It is often a paraneoplastic syndrome associated with small cell lung cancer, breast cancer, or Hodgkin's lymphoma among others. Here, we report a patient with B-cell chronic lymphocytic leukemia (B-CLL), presenting with otherwise unexplained neurologic symptoms consistent with limbic encephalitis. Despite intensive diagnostic procedures, no causing agent could be identified. Pleocytosis consisting of T cells was detected in the cerebrospinal fluid (CSF). We initiated anti-B-cell therapy with Rituximab for B-CLL with quick and durable resolution of symptoms. We speculate that disruption of interaction between autoreactive T and malignant B cells is responsible for the therapeutic effect of Rituximab.

[511]

TÍTULO / TITLE: - Prognostic factors and therapeutic outcomes in 22 patients with pleomorphic xanthoastrocytoma.

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

REVISTA / JOURNAL: - J Korean Neurosurg Soc. 2013 May;53(5):281-7. doi: 10.3340/jkns.2013.53.5.281. Epub 2013 May 31.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.53.5.281](https://doi.org/10.3340/jkns.2013.53.5.281)

AUTORES / AUTHORS: - Lim S; Kim JH; Kim SA; Park ES; Ra YS; Kim CJ

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea.

RESUMEN / SUMMARY: - **OBJECTIVE:** Pleomorphic xanthoastrocytoma (PXA) is a rare primary low-grade astrocytic tumor classified as WHO II. It is generally benign, but disease progression and malignant transformation have been reported. Prognostic factors for PXA and optimal therapies are not well known. **METHODS:** The study period was January 2000 to March 2012. Data on MR findings, histology, surgical extents and adjuvant therapies were reviewed in twenty-two patients diagnosed with PXA. **RESULTS:** The frequent symptoms of PXA included seizures, headaches and neurologic deficits. Tumors were most common in the temporal lobe followed by frontal, parietal and occipital lobes. One patient who died from immediate post-operative complications was excluded from the statistical analysis. Of the remaining 21 patients, 3 (14%) died and 7 (33%) showed disease progression. Atypical tumor location ($p<0.001$), peritumoral edema ($p=0.022$) and large tumor size ($p=0.048$) were correlated with disease progression, however, Ki-67 index and necrosis were not statistically significant. Disease progression occurred in three (21%) of 14 patients who underwent GTR, compared with 4 (57%) of 7 patients who did not undergo GTR, however, it was not statistically significant. Ten patients received adjuvant radiotherapy and the tumors were controlled in 5 of these patients. **CONCLUSION:** The prognosis for PXA is good; in our patients overall survival was 84%, and event-free survival was 59% at 3 years. Atypical tumor location, peritumoral edema and large tumor size are significantly correlated with disease progression. GTR may provide prolonged disease control, and adjuvant radiotherapy may be beneficial, but further study is needed.

[512]

TÍTULO / TITLE: - The value of extended glioblastoma resection: Insights from randomized controlled trials.

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

REVISTA / JOURNAL: - Surg Neurol Int. 2013 Aug 28;4:110. doi: 10.4103/2152-7806.117173.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.117173](https://doi.org/10.4103/2152-7806.117173)

AUTORES / AUTHORS: - Gonda DD; Warnke P; Sanai N; Taich Z; Kasper EM; Chen CC

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, University of California, San Diego, CA, USA.

[513]

TÍTULO / TITLE: - Expression of bmi-1 in pediatric brain tumors as a new independent prognostic marker of patient survival.

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

REVISTA / JOURNAL: - Biomed Res Int. 2013;2013:192548. doi: 10.1155/2013/192548. Epub 2013 Jul 28.

●● Enlace al texto completo (gratis o de pago) [1155/2013/192548](#)

AUTORES / AUTHORS: - Farivar S; Zati Keikha R; Shiari R; Jadali F

INSTITUCIÓN / INSTITUTION: - Department of Genetics, Faculty of Biological Science, Shahid Beheshti University (GC), Tehran 1983963113, Iran ; Laser and Plasma Research Institute, Shahid Beheshti University (GC), Tehran 1983963113, Iran.

RESUMEN / SUMMARY: - Objectives. The B-cell-specific moloney leukemia virus insertion site 1 (the Bmi-1) gene is an important member in the family of polycomb group (PcG) genes that plays an oncogenic role in several types of cancer, but its expression as a prognostic marker in pediatric brain tumors has not been indicated. Materials and Methods. The Bmi-1 gene expression, clinic pathological and prognostic significance in a series of pediatric brain tumors were examined by real-time PCR method in 56 pediatric brain tumors. Results. The Bmi-1 gene expression in various types of pediatric brain tumors compared to that in normal brain tissue was 4.85-fold. The relative expression varied from 8.64-fold in ependymomas to 2.89-fold in other types. Expression level in high-grade tumors compared to that in low-grade tumors was 2.5 times. In univariate survival analysis of the pediatric brain tumors, a significant association of high expression of the Bmi-1 with patient survival was demonstrated. In multivariate analysis, the Bmi-1 high expression provided significant independent prognostic factors. Conclusion. Increased expression of the Bmi-1 in pediatric brain tumors may be important in the acquisition of an aggressive phenotype. In addition, it can be used as a strong and independent molecular marker of prognosis in pediatric brain tumors.

[514]

TÍTULO / TITLE: - Circulating endothelial cells and procoagulant microparticles in patients with glioblastoma: prognostic value.

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

REVISTA / JOURNAL: - PLoS One. 2013 Jul 29;8(7):e69034. doi: 10.1371/journal.pone.0069034. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0069034](#)

AUTORES / AUTHORS: - Reynes G; Vila V; Fleitas T; Reganon E; Font de Mora J; Jorda M; Martinez-Sales V

INSTITUCIÓN / INSTITUTION: - Servicio de Oncología Médica, Hospital Universitari i Politécnic La Fe, Valencia, España. greynesm@gmail.com

RESUMEN / SUMMARY: - AIM: Circulating endothelial cells and microparticles are prognostic factors in cancer. However, their prognostic and predictive value in patients

with glioblastoma is unclear. The objective of this study was to investigate the potential prognostic value of circulating endothelial cells and microparticles in patients with newly diagnosed glioblastoma treated with standard radiotherapy and concomitant temozolomide. In addition, we have analyzed the methylation status of the MGMT promoter. METHODS: Peripheral blood samples were obtained before and at the end of the concomitant treatment. Blood samples from healthy volunteers were also obtained as controls. Endothelial cells were measured by an immunomagnetic technique and immunofluorescence microscopy. Microparticles were quantified by flow cytometry. Microparticle-mediated procoagulant activity was measured by endogenous thrombin generation and by phospholipid-dependent clotting time. Methylation status of MGMT promoter was determined by multiplex ligation-dependent probe amplification. RESULTS: Pretreatment levels of circulating endothelial cells and microparticles were higher in patients than in controls ($p < 0.001$). After treatment, levels of microparticles and thrombin generation decreased, and phospholipid-dependent clotting time increased significantly. A high pretreatment endothelial cell count, corresponding to the 99(th) percentile in controls, was associated with poor overall survival. MGMT promoter methylation was present in 27% of tumor samples and was associated to a higher overall survival (66 weeks vs 30 weeks, $p < 0.004$). CONCLUSION: Levels of circulating endothelial cells may have prognostic value in patients with glioblastoma.

[515]

TÍTULO / TITLE: - Controversies in the treatment of elderly patients with newly diagnosed glioblastoma.

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

REVISTA / JOURNAL: - J Natl Compr Canc Netw. 2013 Sep 1;11(9):1165-73.

AUTORES / AUTHORS: - Holdhoff M; Chamberlain MC

INSTITUCIÓN / INSTITUTION: - From the aBrain Cancer Program, The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, Maryland; and bFred Hutchinson Cancer Research Center, University of Washington, Seattle, Washington.

RESUMEN / SUMMARY: - Approximately half of all patients with glioblastoma are older than 65 years and nearly one-quarter are older than 70 years, with a rising incidence of this disease in the elderly population. The life expectancy of elderly patients with glioblastoma is significantly shorter than in younger patients. Potential explanations for this abbreviated survival include differences in tumor biology, reduced use of therapies, enhanced toxicity of treatment, or diminished efficacy of available therapies with increasing age. The current standard treatment of newly diagnosed, protocol-eligible, nonelderly patients with glioblastoma is based on the randomized prospective EORTC/NCIC study that included patients aged 18 to 70 years with a performance status of ECOG 0 to 2. Limited single-institution retrospective series suggest that clinically fit elderly patients may benefit from a similar treatment

regimen. However, no randomized trial has been performed in the elderly population using this regimen. Available prospective randomized clinical trials in the elderly population with glioblastoma have shown that radiotherapy is superior to supportive care only, that single-modality hypofractionated radiotherapy (reduced dose and shorter treatment schedule) is an alternative to single-modality standard fractionated radiotherapy, and that single-agent temozolomide is equivalent to radiotherapy alone. This article summarizes published data of current patterns of care in elderly patients and reviews published evidence as it pertains to the benefit of different treatment modalities in elderly patients with glioblastoma. Notwithstanding the previously mentioned randomized trials, the optimal treatment of elderly patients with glioblastoma remains controversial.

[516]

TÍTULO / TITLE: - The timing of neural stem cell-based virotherapy is critical for optimal therapeutic efficacy when applied with radiation and chemotherapy for the treatment of glioblastoma.

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

REVISTA / JOURNAL: - Stem Cells. %8?(3k+]3s <http://stemcells.alphamedpress.org/>

●● Stem Cells: <> Transl Med. 2013 Sep;2(9):655-66. doi: 10.5966/sctm.2013-0039. Epub 2013 Aug 7.

●● [Enlace al texto completo \(gratis o de pago\) 5966/sctm.2013-0039](#)

AUTORES / AUTHORS: - Tobias AL; Thaci B; Auffinger B; Rincon E; Balyasnikova IV; Kim CK; Han Y; Zhang L; Aboody KS; Ahmed AU; Lesniak MS

INSTITUCIÓN / INSTITUTION: - Brain Tumor Center, University of Chicago, Chicago, IL, USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) remains fatal despite intensive surgical, radiotherapeutic, and chemotherapeutic interventions. Neural stem cells (NSCs) have been used as cellular vehicles for the transportation of oncolytic virus (OV) to therapeutically resistant and infiltrative tumor burdens throughout the brain. The HB1.F3-CD human NSC line has demonstrated efficacy as a cell carrier for the delivery of a glioma tropic OV CRAd-Survivin-pk7 (CRAd-S-pk7) in vitro and in animal models of glioma. At this juncture, no study has investigated the effectiveness of OV-loaded NSCs when applied in conjunction with the standard of care for GBM treatment, and therefore this study was designed to fill this void. Here, we show that CRAd-S-pk7-loaded HB1.F3-CD cells retain their tumor-tropic properties and capacity to function as in situ viral manufacturers in the presence of ionizing radiation (XRT) and temozolomide (TMZ). Furthermore, for the first time, we establish a logical experimental model that aims to recapitulate the complex clinical scenario for the treatment of GBM and tests the compatibility of NSCs loaded with OV. We report that applying OV-loaded NSCs together with XRT and TMZ can increase the median survival of glioma bearing mice by approximately 46%. Most importantly, the timing and order of therapeutic implementation impact therapeutic outcome. When OV-loaded NSCs

are delivered prior to rather than after XRT and TMZ treatment, the median survival of mice bearing patient-derived GBM43 glioma xenografts is extended by 30%. Together, data from this report support the testing of CRAd-S-pk7-loaded HB1.F3-CD cells in the clinical setting and argue in favor of a multimodality approach for the treatment of patients with GBM.

[517]

TÍTULO / TITLE: - Aspergillosis in a patient receiving temozolomide for the treatment of glioblastoma.

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

REVISTA / JOURNAL: - Case Rep Oncol. 2013 Aug 8;6(2):410-5. doi: 10.1159/000354429.

●● Enlace al texto completo (gratis o de pago) [1159/000354429](#)

AUTORES / AUTHORS: - Munhoz RR; Pereira Picarelli AA; Troques Mitteldorf CA; Feher O

INSTITUCIÓN / INSTITUTION: - Centro de Oncologia, Hospital Sirio Libanes, Sao Paulo, Brazil.

RESUMEN / SUMMARY: - Leukopenia and selective CD4+ lymphopenia represent major adverse events associated with the use of temozolomide (TMZ), an oral alkylating agent incorporated in the treatment of glioblastoma (GBM). The increased risk of opportunistic infections, including those caused by *Pneumocystis jiroveci* and cytomegalovirus, has been previously described in the literature. Here we report the case, the first to our knowledge, of a patient with pulmonary invasive aspergillosis immediately after the completion of chemoradiation with TMZ for GBM. Diagnosis was confirmed through a CT-guided lung biopsy, and the patient had excellent response to systemic voriconazole. This case illustrates that TMZ can be associated with severe opportunistic infections, presumably associated with T lymphocyte immune dysfunction, and patients exposed to this agent should be carefully monitored.

[518]

TÍTULO / TITLE: - Multiple brain metastases in a patient with uterine papillary serous adenocarcinoma: Treatment options for this rarely seen metastatic brain tumor.

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

REVISTA / JOURNAL: - Surg Neurol Int. 2013 Aug 28;4:111. doi: 10.4103/2152-7806.117176.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.117176](#)

AUTORES / AUTHORS: - Gulsen S; Terzi A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Baskent University Medical Faculty, Maresal Fevzi Cakmak Cad. 10. Sokak No: 45 C 06490, Bahcelievler, Ankara, Turkey.

RESUMEN / SUMMARY: - BACKGROUND: Uterine papillary serous adenocarcinoma (UPSAC) occurs 10-fold less frequently than endometrial carcinoma, and is referred to type 2 endometrial adenocarcinoma. The prognosis of UPSAC is worse than that of

type I endometrial carcinoma. Herein we report what is only the second case of UPSAC, but it should prove to be more informative than the first reported case. CASE DESCRIPTION: A 71-year-old female had three different metastases in the brain; two of the metastases were located in the posterior fossa within the cerebellar parenchyma with perilesional edema, but no mass effect, and the third metastasis was located in the right frontal lobe, and caused hemispheric edema and subfalcine herniation. The lesion that caused mass effect was completely extirpated without any surgical complications. The patient's recovery was excellent. She is able to walk independently, and use her left hand and left arm. Her Karnofsky performance score 5 months postsurgery was 80/100. CONCLUSION: Based on the outcome in the presented case, we think that in any UPSAC patient with a metastatic brain tumor causing mass effect the symptomatic metastatic tumor must be removed, regardless of disease grade, to ensure optimal quality of life.

[519]

TÍTULO / TITLE: - Pituitary stalk hemangioblastoma in a von hippel-lindau patient : clinical course follow-up over a 20-year period.

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

REVISTA / JOURNAL: - J Korean Neurosurg Soc. 2013 May;53(5):297-9. doi: 10.3340/jkns.2013.53.5.297. Epub 2013 May 31.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.53.5.297](#)

AUTORES / AUTHORS: - Lee KM; Kim EJ; Choi WS; Kim TS

INSTITUCIÓN / INSTITUTION: - Department of Radiology, College of Medicine, Kyung Hee University, Seoul, Korea.

RESUMEN / SUMMARY: - Supratentorial hemangioblastomas (HBs) are rare, and pituitary stalk HBs are extremely uncommon; therefore, pituitary stalk evaluation is often overlooked. Herein, we report the development of pituitary stalk HB over a 20-year period and the importance of regular long-term follow up for patients with HBs.

[520]

TÍTULO / TITLE: - A catecholamine-secreting skull base sinonasal paraganglioma presenting with labile hypertension in a patient with previously undiagnosed genetic mutation.

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

REVISTA / JOURNAL: - J Neurol Surg Rep. 2012 Oct;73(1):19-24. doi: 10.1055/s-0032-1301408. Epub 2012 Feb 17.

●● Enlace al texto completo (gratis o de pago) [1055/s-0032-1301408](#)

AUTORES / AUTHORS: - Hahn S; Palmer JN; Adappa ND

INSTITUCIÓN / INSTITUTION: - Department of Otorhinolaryngology-Head and Neck Surgery, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania.

RESUMEN / SUMMARY: - Sinonasal paragangliomas are very uncommon neuroendocrine tumors that can present as skull base lesions. Functional paragangliomas are exceedingly rare. They can be associated with genetic mutations that have been associated with increased risk of head and neck paragangliomas. We present a case of a rare functioning sinonasal paraganglioma of the skull base in a patient with distant history of prior abdominal paragangliomas. The patient underwent subtotal endoscopic resection of the skull base lesion limited by carotid encasement of the tumor. They were treated with postoperative adjuvant radiation and therapeutic metaiodobenzylguanidine (MIBG) therapy. Genetic testing revealed succinate dehydrogenase B (SDHB) mutation. Skull base paragangliomas are rare tumors that may preclude complete surgical resection. (131)Iodine-MIBG can be used as adjuvant therapy in postoperative external beam radiation and in MIBG avid tumors. Long-term follow-up is needed given locally aggressive nature of these tumors, especially for patients with history of genetic mutations such as SDHB mutations as recurrent paragangliomas may develop.

[521]

TÍTULO / TITLE: - Cytoplasmic TRADD confers a worse prognosis in glioblastoma.

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

REVISTA / JOURNAL: - Neoplasia. 2013 Aug;15(8):888-97.

AUTORES / AUTHORS: - Chakraborty S; Li L; Tang H; Xie Y; Puliappadamba VT; Raisanen J; Burma S; Boothman DA; Cochran B; Wu J; Habib AA

INSTITUCIÓN / INSTITUTION: - Department of Neurology and Neurotherapeutics, University of Texas Southwestern Medical Center, Dallas, TX, USA.

RESUMEN / SUMMARY: - Tumor necrosis factor receptor 1 (TNFR1)-associated death domain protein (TRADD) is an important adaptor in TNFR1 signaling and has an essential role in nuclear factor kappa-light-chain-enhancer of activated B cells (NF-kappaB) activation and survival signaling. Increased expression of TRADD is sufficient to activate NF-kappaB. Recent studies have highlighted the importance of NF-kappaB activation as a key pathogenic mechanism in glioblastoma multiforme (GBM), the most common primary malignant brain tumor in adults. We examined the expression of TRADD by immunohistochemistry (IHC) and find that TRADD is commonly expressed at high levels in GBM and is detected in both cytoplasmic and nuclear distribution. Cytoplasmic IHC TRADD scoring is significantly associated with worse progression-free survival (PFS) both in univariate and multivariate analysis but is not associated with overall survival (n = 43 GBMs). PFS is a marker for responsiveness to treatment. We propose that TRADD-mediated NF-kappaB activation confers chemoresistance and thus a worse PFS in GBM. Consistent with the effect on PFS, silencing TRADD in glioma cells results in decreased NF-kappaB activity, decreased proliferation of cells, and increased sensitivity to temozolomide. TRADD expression is common in glioma-initiating cells. Importantly, silencing TRADD in GBM-initiating stem cell cultures results

in decreased viability of stem cells, suggesting that TRADD may be required for maintenance of GBM stem cell populations. Thus, our study suggests that increased expression of cytoplasmic TRADD is both an important biomarker and a key driver of NF-kappaB activation in GBM and supports an oncogenic role for TRADD in GBM.

[522]

TÍTULO / TITLE: - Optic radiation fiber tractography in glioma patients based on high angular resolution diffusion imaging with compressed sensing compared with diffusion tensor imaging - initial experience.

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

REVISTA / JOURNAL: - PLoS One. 2013 Jul 26;8(7):e70973. doi: 10.1371/journal.pone.0070973. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0070973](#)

AUTORES / AUTHORS: - Kuhnt D; Bauer MH; Sommer J; Merhof D; Nimsky C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Marburg, Marburg, Germany. kuhntd@med.uni-marburg.de

RESUMEN / SUMMARY: - OBJECTIVE: Up to now, fiber tractography in the clinical routine is mostly based on diffusion tensor imaging (DTI). However, there are known drawbacks in the resolution of crossing or kissing fibers and in the vicinity of a tumor or edema. These restrictions can be overcome by tractography based on High Angular Resolution Diffusion Imaging (HARDI) which in turn requires larger numbers of gradients resulting in longer acquisition times. Using compressed sensing (CS) techniques, HARDI signals can be obtained by using less non-collinear diffusion gradients, thus enabling the use of HARDI-based fiber tractography in the clinical routine. METHODS: Eight patients with gliomas in the temporal lobe, in proximity to the optic radiation (OR), underwent 3T MRI including a diffusion-weighted dataset with 30 gradient directions. Fiber tractography of the OR using a deterministic streamline algorithm based on DTI was compared to tractography based on reconstructed diffusion signals using HARDI+CS. RESULTS: HARDI+CS based tractography displayed the OR more conclusively compared to the DTI-based results in all eight cases. In particular, the potential of HARDI+CS-based tractography was observed for cases of high grade gliomas with significant peritumoral edema, larger tumor size or closer proximity of tumor and reconstructed fiber tract. CONCLUSIONS: Overcoming the problem of long acquisition times, HARDI+CS seems to be a promising basis for fiber tractography of the OR in regions of disturbed diffusion, areas of high interest in glioma surgery.

[523]

TÍTULO / TITLE: - Increased focal hemosiderin deposition in pediatric medulloblastoma patients receiving radiotherapy at a later age.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Aug 30.

●● Enlace al texto completo (gratis o de pago) [3171/2013.7.PEDS1330](#)

AUTORES / AUTHORS: - Yeom KW; Lober RM; Partap S; Telischak N; Tsolinas R; Barnes PD; Edwards MS

INSTITUCIÓN / INSTITUTION: - Departments of Radiology.

RESUMEN / SUMMARY: - Object Focal hemosiderin deposition (FHD) is commonly observed on brain MRI scans of patients treated for childhood medulloblastoma (MB). The authors sought to determine the clinical significance of FHD and its relationship to patient age, radiation dose, and cognitive outcomes. Methods A single-institution retrospective study of 93 MB patients at Lucile Packard Children's Hospital at Stanford from 1998 to 2011 identified 41 patients with a negative baseline MRI scan and at least 2 posttreatment MRI scans obtained with T2* gradient recalled echo (GRE). The number and cumulative rate of FHDs detectable by GRE were compared between patients aged 6 years and younger (early age) and aged 7-21 years (late age) at the time of radiotherapy (RT) and between low-dose (1800-2340 cGy) and high-dose (2920-3960 cGy) RT. Results The median age at MB diagnosis was 7.3 years (range 0.9-21.0 years), the median clinical follow-up period was 5.8 years (range 0.8-13.4 years), and the median 5-year overall survival was 81% +/- 7%. Of 30 school-aged children with MB, 21 (70%) required special education, and the median IQ of 10 tested patients was 100 (range 50-118). Thirty-three patients (80%) had FHD after a median latency of 1.9 years (range 0.1-5.9 years). Ninety-four percent (436 of 466) of the lesions arose in the supratentorial region of the brain, whereas 29 (6%) resided in the brainstem or the cerebellum. No spinal lesions were observed on routine spine MRI scans using T2 fast spin echo imaging. The mean cumulative lesion rate per year was 2.23 +/- 3.05, and this rate was higher in older children at the time of RT compared with younger children (3.23 vs 0.67 per year, p = 0.002) but did not differ among different RT doses (p = 0.395). A child's IQ or need for special education showed no significant correlation with the rate of lesion development or number of lesions. None of the lesions resulted in symptomatic hemorrhage that required surgical intervention. Conclusions More FHD was observed in children treated for MB at the older ages than in those treated at the younger ages. There was no significant association of the incidence of FHD with radiation dose or cognitive outcomes, and none of the lesions required surgical intervention.

[524]

TÍTULO / TITLE: - Radiation-induced temporal lobe injury after intensity modulated radiotherapy in nasopharyngeal carcinoma patients: a dose-volume-outcome analysis.

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

REVISTA / JOURNAL: - BMC Cancer. 2013 Aug 27;13(1):397.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-397](#)

AUTORES / AUTHORS: - Sun Y; Zhou GQ; Qi ZY; Zhang L; Huang SM; Liu LZ; Li L; Lin AH; Ma J

RESUMEN / SUMMARY: - BACKGROUND: To identify the radiation volume effect and significant dosimetric parameters for temporal lobe injury (TLI) and determine the radiation dose tolerance of the temporal lobe (TL) in nasopharyngeal carcinoma (NPC) patients treated with intensity modulated radiation therapy (IMRT). METHODS: Twenty NPC patients with magnetic resonance imaging (MRI)-diagnosed unilateral TLI were reviewed. Dose-volume data was retrospectively analyzed. RESULTS: Paired samples t-tests showed all dosimetric parameters significantly correlated with TLI, except the TL volume (TLV) and V75 (the TLV that received ≥ 75 Gy, $P = 0.73$ and 0.22 , respectively). Receiver operating characteristic (ROC) curves showed V10 and V20 ($P = 0.552$ and 0.11 , respectively) were the only non-significant predictors from V10 to V70 for TLI. D0.5cc (dose to 0.5 ml of the TLV) was an independent predictor for TLI ($P < 0.001$) in multivariate analysis; the area under the ROC curve for D0.5cc was 0.843 ($P < 0.001$), and the cutoff point 69 Gy was deemed as the radiation dose limit. The distribution of high dose 'hot spot' regions and the location of TLI were consistent. CONCLUSIONS: A D0.5cc of 69 Gy may be the dose tolerance of the TL. The risk of TLI was highly dependent on high dose 'hot spots' in the TL; physicians should be cautious of such 'hot spots' in the TL during IMRT treatment plan optimization, review and approval.

[525]

TÍTULO / TITLE: - Colonic schistosomiasis and associated cecal neuroma.

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

REVISTA / JOURNAL: - Conn Med. 2013 Jun-Jul;77(6):339-42.

AUTORES / AUTHORS: - Paunovic B; El-Fanek H; Fiedler P; Appel C; Edwards L

INSTITUCIÓN / INSTITUTION: - Department of Pathology and Laboratory Medicine, Danbury Hospital, Danbury, USA. branka.paunovic@wcthn.org

RESUMEN / SUMMARY: - Schistosomiasis remains a major health threat in many resource-poor countries and is being seen with increasing frequency in developed countries among immigrants and tourists who have a history of freshwater exposure in endemic areas. We report a case of a 56-year-old male with no significant past medical history, who presented for a routine screening colonoscopy, which revealed two polyps in the cecum, and multiple petechiae in the rectum. Histologic evaluation showed presence of *Schistosoma mansoni* eggs. One of the polyps, where eggs were also present, was diagnosed as neuroma/Schwann cell hamartoma. This is the first reported case where colonic schistosomiasis is associated with cecal neuroma.

[526]

TÍTULO / TITLE: - An Analysis of the Prognostic Value of IDH1 (Isocitrate Dehydrogenase 1) Mutation in Polish Glioma Patients.

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

REVISTA / JOURNAL: - Mol Diagn Ther. 2013 Aug 10.

●● Enlace al texto completo (gratis o de pago) [1007/s40291-013-0050-7](#)

AUTORES / AUTHORS: - Lewandowska MA; Furtak J; Szyberg T; Roszkowski K; Windorbska W; Rytlevska J; Jozwicki W

INSTITUCIÓN / INSTITUTION: - Molecular Oncology and Genetics Unit, Department of Tumor Pathology and Pathomorphology, The Franciszek Lukaszczuk Oncology Center, dr I. Romanowskiej 2, 85-796, Bydgoszcz, Poland, lewandowskam@co.bydgoszcz.pl.

RESUMEN / SUMMARY: - BACKGROUND AND OBJECTIVE: IDH1 (isocitrate dehydrogenase 1) is a potential biomarker and drug target. Genomic and epigenetic data on astrocytoma have demonstrated that the IDH1 mutation is sufficient to establish the glioma hypermethylator phenotype. Furthermore, recent studies have also indicated that a mutant IDH1 inhibitor induced demethylation of histone H3K9me3 and expression of genes associated with gliogenic differentiation. As the presence of the p.R132H mutation in the IDH1 gene seems to be a more powerful prognostic marker than O6-methylguanine-DNA methyltransferase promoter status, we evaluated the presence of IDH1 mutation in Polish patients with astrocytoma, glioblastoma, oligoastrocytoma, ganglioglioma, oligodendroglioma, and ependymoma. METHODS: The IDH1 mutation status at codon 132 was determined using a mouse monoclonal antibody specific for the R132H mutation, direct sequencing, and Co-amplification at Lower Denaturation Temperature (COLD) polymerase chain reaction (PCR) high-resolution melting-curve analysis (HRM). RESULTS: Wild-type (WT) IDH1 was detected in cases with a World Health Organization (WHO) grade I astrocytoma. The IDH1 c.G395A; p.R132H mutation was observed in 56 and 94 % of grade II and grade III astrocytoma cases, respectively. Significant differences in the median overall survival were observed in astrocytoma patients grouped on the basis of the presence of IDH1 mutation: survival was 24 months longer in grade II astrocytoma and 12 months longer in glioblastoma. Overall survival was compared between grade II astrocytoma patients with low or high expression of the mutant protein. Interestingly, lower R132H expression correlated with better overall survival. CONCLUSION: Our results indicate the usefulness of assessing the R132H IDH1 mutation in glioma patients: the presence or absence of the R132H mutation can help pathologists to distinguish pilocytic astrocytomas (IDH1 WT) from diffuse ones (R132H IDH1/WT). Moreover, low IDH1 p.R132H expression was related to better prognosis. This clinical implication appears to be important for personalization of prognosis and treatment by oncologists.

TÍTULO / TITLE: - Magnetic resonance imaging-based target volume delineation in radiation therapy treatment planning for brain tumors using localized region-based active contour.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Sep 1;87(1):195-201. doi: 10.1016/j.ijrobp.2013.04.049.

●● Enlace al texto completo (gratis o de pago) [1016/j.ijrobp.2013.04.049](#)

AUTORES / AUTHORS: - Aslian H; Sadeghi M; Mahdavi SR; Babapour Mofrad F; Astarakee M; Khaledi N; Fadavi P

INSTITUCIÓN / INSTITUTION: - Department of Medical Radiation, Science and Research Branch, Islamic Azad University, Tehran, Iran.

RESUMEN / SUMMARY: - **PURPOSE:** To evaluate the clinical application of a robust semiautomatic image segmentation method to determine the brain target volumes in radiation therapy treatment planning. **METHODS AND MATERIALS:** A local robust region-based algorithm was used on MRI brain images to study the clinical target volume (CTV) of several patients. First, 3 oncologists delineated CTVs of 10 patients manually, and the process time for each patient was calculated. The averages of the oncologists' contours were evaluated and considered as reference contours. Then, to determine the CTV through the semiautomatic method, a fourth oncologist who was blind to all manual contours selected 4-8 points around the edema and defined the initial contour. The time to obtain the final contour was calculated again for each patient. Manual and semiautomatic segmentation were compared using 3 different metric criteria: Dice coefficient, Hausdorff distance, and mean absolute distance. A comparison also was performed between volumes obtained from semiautomatic and manual methods. **RESULTS:** Manual delineation processing time of tumors for each patient was dependent on its size and complexity and had a mean (+/-SD) of 12.33 +/- 2.47 minutes, whereas it was 3.254 +/- 1.7507 minutes for the semiautomatic method. Means of Dice coefficient, Hausdorff distance, and mean absolute distance between manual contours were 0.84 +/- 0.02, 2.05 +/- 0.66 cm, and 0.78 +/- 0.15 cm, and they were 0.82 +/- 0.03, 1.91 +/- 0.65 cm, and 0.7 +/- 0.22 cm between manual and semiautomatic contours, respectively. Moreover, the mean volume ratio (=semiautomatic/manual) calculated for all samples was 0.87. **CONCLUSIONS:** Given the deformability of this method, the results showed reasonable accuracy and similarity to the results of manual contouring by the oncologists. This study shows that the localized region-based algorithms can have great ability in determining the CTV and can be appropriate alternatives for manual approaches in brain cancer.

1052.95 - Int J Radiat Oncol Biol Phys

TÍTULO / TITLE: - Monitoring of Radiochemotherapy in Patients with Glioblastoma Using O-(2-[18F]fluoroethyl)-L-Tyrosine Positron Emission Tomography: Is Dynamic Imaging Helpful?

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

REVISTA / JOURNAL: - Mol Imaging. 2013;12(0):1-8.

AUTORES / AUTHORS: - Piroth MD; Liebenstund S; Galldiks N; Stoffels G; Shah NJ; Eble MJ; Coenen HH; Langen KJ

RESUMEN / SUMMARY: - AbstractMonitoring of radiochemotherapy (RCX) in patients with glioblastoma is difficult because unspecific alterations in magnetic resonance imaging with contrast enhancement can mimic tumor progression. Changes in tumor to brain ratios (TBRs) in positron emission tomography (PET) using O-(2-[18F]fluoroethyl)-l-tyrosine (18F-FET) after RCX with temozolomide of patients with glioblastoma have been shown to be valuable parameters to predict survival. The kinetic behavior of 18F-FET in the tumors is another promising parameter to analyze tumor metabolism. In this study, we investigated the predictive value of dynamic 18F-FET PET during RCX of glioblastoma. Time-activity curves (TACs) of 18F-FET uptake of 25 patients with glioblastoma were evaluated after surgery (FET-1), early (7-10 days) after completion of RCX (FET-2), and 6 to 8 weeks later (FET-3). Changes in the time to peak (TTP) and the slope of the TAC (10-50 minutes postinjection) were analyzed and related to survival. Changes in kinetic parameters of 18F-FET uptake after RCX showed no relationship with survival time. In contrast, the high predictive value of changes of TBR to predict survival was confirmed. We conclude that dynamic 18F-FET PET does not provide additional prognostic information during RCX. Static 18F-FET PET imaging (20-40 minutes postinjection) appears to be sufficient for this purpose and reduces costs.

[529]

TÍTULO / TITLE: - Monitoring of Radiochemotherapy in Patients with Glioblastoma Using O-(2-[18F]Fluoroethyl)-L-Tyrosine Positron Emission Tomography: Is Dynamic Imaging Helpful?

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

REVISTA / JOURNAL: - Mol Imaging. 2013 Sep 1;12(6):388-95.

AUTORES / AUTHORS: - Piroth MD; Liebenstund S; Galldiks N; Stoffels G; Shah NJ; Eble MJ; Coenen HH; Langen KJ

RESUMEN / SUMMARY: - AbstractMonitoring of radiochemotherapy (RCX) in patients with glioblastoma is difficult because unspecific alterations in magnetic resonance imaging with contrast enhancement can mimic tumor progression. Changes in tumor to brain ratios (TBRs) in positron emission tomography (PET) using O-(2-[18F]fluoroethyl)-l-tyrosine (18F-FET) after RCX with temozolomide of patients with glioblastoma have been shown to be valuable parameters to predict survival. The kinetic behavior of 18F-FET in the tumors is another promising parameter to analyze

tumor metabolism. In this study, we investigated the predictive value of dynamic 18F-FET PET during RCX of glioblastoma. Time-activity curves (TACs) of 18F-FET uptake of 25 patients with glioblastoma were evaluated after surgery (FET-1), early (7-10 days) after completion of RCX (FET-2), and 6 to 8 weeks later (FET-3). Changes in the time to peak (TTP) and the slope of the TAC (10-50 minutes postinjection) were analyzed and related to survival. Changes in kinetic parameters of 18F-FET uptake after RCX showed no relationship with survival time. In contrast, the high predictive value of changes of TBR to predict survival was confirmed. We conclude that dynamic 18F-FET PET does not provide additional prognostic information during RCX. Static 18F-FET PET imaging (20-40 minutes postinjection) appears to be sufficient for this purpose and reduces costs.

[530]

TÍTULO / TITLE: - A descriptive study to find possible correlation between MRI findings of pituitary gland and serum prolactin level.

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

REVISTA / JOURNAL: - J Pak Med Assoc. 2013 Jun;63(6):739-42.

AUTORES / AUTHORS: - Azeemuddin M; Naqi R; Wasay M

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Aga Khan University Hospital, Karachi.

RESUMEN / SUMMARY: - **OBJECTIVE:** To explore equation, if any, between findings of magnetic resonance imaging of pituitary gland and serum prolactin level. **METHODS:** The retrospective, descriptive study was conducted at the Department of Radiology, Aga Khan University Hospital, Karachi, and related to patients' records from April 19, 2006 to April 23, 2009. Seventy patients underwent magnetic resonance imaging of brain for pituitary gland. Inclusion criteria were all patients referred with relevant clinical symptoms or deranged serum prolactin level. Patients who were claustrophobic or had a pacemaker, aneurysm clip, metallic foreign body in the orbit or with no laboratory investigation were excluded from the study. SPSS 19 was used for statistical analysis. **RESULTS:** Of the 70 patients, normal imaging was noted in 29 (41.4%) patients. Out of these, 18 (62.06%) patients had normal and 11 (37.93%) had raised serum prolactin levels. Microadenoma was found in 23 (32.8%) patients. Out of these, 10 (42.47%) had normal and 13 (56.52%) had raised prolactin levels. Macroadenoma was found in 16 (22.8%). Out of these, 8 (50%) had normal and 8 (50%) had raised prolactin levels. Pituitary cyst was located in 2 (2.8%) patients. Out of these, 1 (50%) had normal and 1 (50%) had raised serum prolactin levels. **CONCLUSION:** Magnetic resonance imaging of pituitary gland was not associated with serum prolactin levels in patients with clinical suspicion of pituitary abnormality. Therefore, regular monitoring of serum prolactin is suggested.

[531]

TÍTULO / TITLE: - Defining the best management for patients with intracranial WHO Grade II Meningiomas.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Sep 4. pii: S1878-8750(13)01082-6. doi: 10.1016/j.wneu.2013.08.051.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.08.051](#)

AUTORES / AUTHORS: - Pollock BE

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[532]

TÍTULO / TITLE: - Meningeal seeding from glioblastoma multiforme treated with radiotherapy and temozolomide.

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

REVISTA / JOURNAL: - Asian J Surg. 2013 Aug 23. pii: S1015-9584(13)00069-9. doi: 10.1016/j.asjsur.2013.07.012.

●● Enlace al texto completo (gratis o de pago) [1016/j.asjsur.2013.07.012](#)

AUTORES / AUTHORS: - Kuo LT; Tsai SY; Yang CY; Lin LW

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Department of Surgery, National Taiwan University Hospital, Yun-Lin Branch, Yun-Lin, Taiwan. Electronic address: Y01951@ms1.ylh.gov.tw.

RESUMEN / SUMMARY: - Extracranial and meningeal seeding of glioblastoma multiforme is rare. We report herein a case of glioblastoma in a 41-year-old man who underwent surgical resection, concomitant chemoradiotherapy (CCRT) and seven courses of adjuvant chemotherapy with temozolomide. The patient then complained of intermittent severe lower back pain and gait disturbance. Imaging studies demonstrated that although the intracranial residual tumors were well-controlled by the treatment, meningeal seeding involving the brainstem and spinal cord was present. The patient died 2 months after the diagnosis of spinal seeding. This case illustrates the need for consideration of extracranial metastasis if a patient is symptomatic, even if the intracranial tumor appears responsive to treatment. We suggested that the prophylactic craniospinal irradiation may be considered in patients at high risk of meningeal seeding immediately after surgery.

[533]

TÍTULO / TITLE: - MiR-21 mediates the radiation resistance of glioblastoma cells by regulating PDCD4 and hMSH2.

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

REVISTA / JOURNAL: - J Huazhong Univ Sci Technolog Med Sci. 2013 Aug;33(4):525-9. doi: 10.1007/s11596-013-1153-4. Epub 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1007/s11596-013-1153-4](http://dx.doi.org/10.1007/s11596-013-1153-4)

AUTORES / AUTHORS: - Chao TF; Xiong HH; Liu W; Chen Y; Zhang JX

INSTITUCIÓN / INSTITUTION: - Cancer Centre, Huazhong University of Science and Technology, Wuhan, 430030, China, turnface@126.com.

RESUMEN / SUMMARY: - The purpose of this study was to investigate the molecular mechanism by which miR-21 and its target genes mediate radiation resistance of glioblastoma cells. Real-time PCR was employed to detect miR-21 expression in normal brain tissues, glioblastoma tissues and glioblastoma cell lines (A172, T98G and U87MG). T98G cells were transfected with anti-miR-21 oligonucleotides, or plasmids containing PDCD4 or hMSH2 (PDCD4-pcDNA3 and hMSH2-pcDNA3). The survival curve was obtained to investigate the sensitivity of T98G cells to radiation. Cell apoptosis was measured by using the Caspase-3/7 kit and cell cycle by flow cytometry. Western blotting was performed to detect the expression of hMSH2 and PDCD4 in miR-21-inhibiting T98G cells. The results showed that miR-21 expression in glioblastoma cells and tissues was conversely associated with the radiation sensitivity. Over-expression of miR-21 resulted in radiation resistance, while knockdown of miR-21 led to higher sensitivity of glioblastoma cells to radiation. After miR-21 knockdown, the apoptosis of T98G cells was significantly increased and the G2 phase arrest was more significant. In addition, miR-21 knockdown increased the expression of endogenous PDCD4 and hMSH2, which contributed to the apoptosis and G2 arrest of T98G cells. The findings suggested that miR-21 may mediate the resistance of glioblastoma cells against radiation via its target genes PDCD4 and hMSH2. MiR-21 and its target genes may be used as potential molecular targets for clinical radiotherapy sensitization in the future.

[534]

TÍTULO / TITLE: - ZnO nanoparticles induces cell death in malignant human T98G gliomas, KB and non-malignant HEK cells.

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

REVISTA / JOURNAL: - J Biomed Nanotechnol. 2013 Jul;9(7):1181-9.

AUTORES / AUTHORS: - Wahab R; Kaushik NK; Kaushik N; Choi EH; Umar A; Dwivedi S; Musarrat J; Al-Khedhairi AA

INSTITUCIÓN / INSTITUTION: - Abdul Rahman Al-Jeraisy Chair for DNA Research, Department of Zoology, College of Science, King Saud University, Riyadh 11451, Saudi Arabia rwahab@ksu.edu.sa

RESUMEN / SUMMARY: - This paper reports the synthesis and characterization of ZnO nanoparticles prepared by soft chemical process. The nanoparticles of ZnO possess wurtzite hexagonal phase and were used for the induction of cell death in malignant human T98G gliomas, KB epithermoids and HEK normal non-malignant kidney cells. By

applying ZnO nanoparticles, the cells exhibit that the nanoparticles are more efficacious on T98G cancer cells, moderately effective on KB cells and least toxic on normal human HEK cells. The results demonstrated that the treatment with ZnO nanoparticles sensitize T98G cells by increasing both the mitotic (linked to cytogenetic damage) and interphase (apoptosis) death. The ZnO nanoparticles behave as genotoxic drugs, since they induce a micronucleus formation in cells. The present study could be helpful in designing more potent anticancer agents for the therapeutic uses.

[535]

TÍTULO / TITLE: - Low intensity ultrasound promotes the sensitivity of rat brain glioma to Doxorubicin by down-regulating the expressions of p-glycoprotein and multidrug resistance protein 1 in vitro and in vivo.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 5;8(8):e70685. doi: 10.1371/journal.pone.0070685. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0070685](https://doi.org/10.1371/journal.pone.0070685)

AUTORES / AUTHORS: - Zhang Z; Xu K; Bi Y; Yu G; Wang S; Qi X; Zhong H

INSTITUCIÓN / INSTITUTION: - Department of Ultrasound, China Medical University affiliated First Hospital, Shenyang, Liaoning, China ; Key Laboratory of diagnosis and interventional therapy of Liaoning Province, China Medical University affiliated First Hospital, Liaoning, China.

RESUMEN / SUMMARY: - The overall prognosis for malignant glioma is extremely poor, and treatment options are limited in part because of multidrug resistant proteins. Our previous findings suggest low intensity ultrasound (LIUS) can induce apoptosis of glioma cells. Given this finding, we were interested in determining if LIUS could help treat glioma by inhibiting multidrug resistant proteins, and if so, which pathways are involved. In this study, the toxicity sensitivity and multidrug resistance proteins of glioma induced by LIUS were investigated using CCK-8, immunohistochemistry, immunofluorescence, and RT-PCR in tissue samples and cultured cells. LIUS inhibited increase of C6 cells in an intensity- and time-dependent manner. The toxicity sensitivity of C6 cells increased significantly after LIUS sonication (intensity of 142.0 mW/cm²) or Doxorubicin (DOX) at different concentration, particularly by the combination of LIUS sonication and DOX. The expressions of P-gp and MRP1 decreased significantly post-sonication at intensity of 142.0 mW/cm² both in vitro and in vivo. The expressions of p110 delta (PI3K), NF-kappaB-p65, Akt/PKB, and p-Akt/PKB were downregulated by LIUS sonication and DOX treatment separately or in combination at the same parameters in rat glioma. These results indicate that LIUS could increase the toxicity sensitivity of glioma by down-regulating the expressions of P-gp and MRP1, which might be mediated by the PI3K/Akt/NF-kappaB pathway.

[536]

TÍTULO / TITLE: - Prognostic Value of CD109+ Circulating Endothelial Cells in Recurrent Glioblastomas Treated with Bevacizumab and Irinotecan.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 12;8(9):e74345. doi: 10.1371/journal.pone.0074345.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0074345](#)

AUTORES / AUTHORS: - Cuppini L; Calleri A; Bruzzone MG; Prodi E; Anghileri E; Pellegatta S; Mancuso P; Porrati P; Di Stefano AL; Ceroni M; Bertolini F; Finocchiaro G; Eoli M

INSTITUCIÓN / INSTITUTION: - Department of Neuro-Oncology Unit, Fondazione IRCCS Istituto Neurologico C, Besta, Milan, Italy.

RESUMEN / SUMMARY: - BACKGROUND: Recent data suggest that circulating endothelial and progenitor cells (CECs and CEPs, respectively) may have predictive potential in cancer patients treated with bevacizumab, the antibody recognizing vascular endothelial growth factor (VEGF). Here we report on CECs and CEPs investigated in 68 patients affected by recurrent glioblastoma (rGBM) treated with bevacizumab and irinotecan and two Independent Datasets of rGBM patients respectively treated with bevacizumab alone (n=32, independent dataset A: IDA) and classical antineoplastic chemotherapy (n=14, independent dataset B: IDB). METHODS: rGBM patients with KPS \geq 50 were treated until progression, as defined by MRI with RANO criteria. CECs expressing CD109, a marker of tumor endothelial cells, as well as other CEC and CEP subtypes, were investigated by six-color flow cytometry. RESULTS: A baseline count of CD109+ CEC higher than 41.1/ml (1(st) quartile) was associated with increased progression free survival (PFS; 20 versus 9 weeks, P=0.008) and overall survival (OS; 32 versus 23 weeks, P=0.03). Longer PFS (25 versus 8 weeks, P=0.02) and OS (27 versus 17 weeks, P=0.03) were also confirmed in IDA with CD109+ CECs higher than 41.1/ml but not in IDB. Patients treated with bevacizumab with or without irinotecan that were free from MRI progression after two months of treatment had significant decrease of CD109+ CECs: median PFS was 19 weeks; median OS 29 weeks. The presence of two non-contiguous lesions (distant disease) at baseline was an independent predictor of shorter PFS and OS (P<0.001). CONCLUSIONS: Data encourage further studies on the predictive potential of CD109+ CECs in GBM patients treated with bevacizumab.

[537]

TÍTULO / TITLE: - Boron neutron capture therapy induces cell cycle arrest and cell apoptosis of glioma stem/progenitor cells in vitro.

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

REVISTA / JOURNAL: - Radiat Oncol. 2013 Aug 6;8(1):195. doi: 10.1186/1748-717X-8-195.

●● Enlace al texto completo (gratis o de pago) [1186/1748-717X-8-195](#)

AUTORES / AUTHORS: - Sun T; Zhang Z; Li B; Chen G; Xie X; Wei Y; Wu J; Zhou Y; Du Z

INSTITUCIÓN / INSTITUTION: - Neurosurgery & Brain and Nerve Research Laboratory, The First Affiliated Hospital of Soochow University, Suzhou, Jiangsu, China.

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RESUMEN / SUMMARY: - BACKGROUND: Glioma stem cells in the quiescent state are resistant to clinical radiation therapy. An almost inevitable glioma recurrence is due to the persistence of these cells. The high linear energy transfer associated with boron neutron capture therapy (BNCT) could kill quiescent and proliferative cells. METHODS: The present study aimed to evaluate the effects of BNCT on glioma stem/progenitor cells in vitro. The damage induced by BNCT was assessed using cell cycle progression, apoptotic cell ratio and apoptosis-associated proteins expression. RESULTS: The surviving fraction and cell viability of glioma stem/progenitor cells were decreased compared with differentiated glioma cells using the same boronophenylalanine pretreatment and the same dose of neutron flux. BNCT induced cell cycle arrest in the G2/M phase and cell apoptosis via the mitochondrial pathway, with changes in the expression of associated proteins. CONCLUSIONS: Glioma stem/progenitor cells, which are resistant to current clinical radiotherapy, could be effectively killed by BNCT in vitro via cell cycle arrest and apoptosis using a prolonged neutron irradiation, although radiosensitivity of glioma stem/progenitor cells was decreased compared with differentiated glioma cells when using the same dose of thermal neutron exposure and boronophenylalanine pretreatment. Thus, BNCT could offer an appreciable therapeutic advantage to prevent tumor recurrence, and may become a promising treatment in recurrent glioma.

[538]

TÍTULO / TITLE: - Autophagic Degradation of Caspase-8 Protects U87MG Cells Against H₂O₂-induced Oxidative Stress.

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

REVISTA / JOURNAL: - Asian Pac J Cancer Prev. 2013;14(7):4095-9.

AUTORES / AUTHORS: - Zhang YB; Zhao W; Zeng RX

INSTITUCIÓN / INSTITUTION: - Department of Pathogen Biology, School of Basic Medical Sciences, Liaoning Medical University, Jinzhou, China E-mail : jzyb2009@163.com.

RESUMEN / SUMMARY: - Oxidative stress induces apoptosis in many cellular systems including glioblastoma cells, with caspase-8 activation was regarded as a major contribution to H₂O₂-induced cell death. This study focused on the role of the autophagic protein p62 in H₂O₂-induced apoptosis in U87MG cells. Oxidative stress was applied with H₂O₂, and cell apoptosis and viability were measured with use of caspase inhibitors or autophagic mediators or siRNA p62, GFP-p62 and GFP-p62-UBA (del) transfection. We found that H₂O₂ -induced U87MG cell death was correlated with caspase-8. To understand the role of p62 in MG132-induced cell death, the levels of p62/SQSTM1 or autophagy in U87MG cells were modulated with biochemical or genetic methods. The results showed that the over-expression of wild type

p62/SQSTM1 significantly reduced H₂O₂ induced cell death, but knockdown of p62 aggravated the process. In addition, inhibition of autophagy promoted p62 and active caspase-8 increasing H₂O₂ -induced apoptosis while induction of autophagy manifested the opposite effect. We further demonstrated that the function of p62/SQSTM1 required its C-terminus UBA domain to attenuate H₂O₂ cytotoxicity by inhibition of caspase-8 activity. Our results indicated that p62/SQSTM1 was a potential contributor to mediate caspase-8 activation by autophagy in oxidative stress process.

[539]

TÍTULO / TITLE: - Meningiomas of the upper and middle part of the clivus and surrounding structures: early and long-term outcome.

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

REVISTA / JOURNAL: - Neurol Neurochir Pol. 2013 Jul-Aug;47(4):332-44.

AUTORES / AUTHORS: - Ladzinski P; Majchrzak H; Kaspera W; Maliszewski M; Majchrzak K; Tymowski M; Adamczyk P; Blaszczyk B; Slaska-Kaspera A

INSTITUCIÓN / INSTITUTION: - Katedra i Oddzial Kliniczny Neurochirurgii, Slaski Uniwersytet Medyczny w Katowicach, Sosnowiec. sekr_nch@wss5.pl

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Meningiomas of the upper and middle parts of the clivus and surrounding structures are removed using petrosal approaches: anterior, posterior, combined and complete. The purpose of this study is to show the results of treatment of these meningiomas and to present our interpretation of the treatment strategy. MATERIAL AND METHODS: Twenty-six patients (17 women, 9 men) were included in the study. The neurological status of the patients was assessed before and after surgery as well as at the conclusion of the treatment. The following measurements and data were collected and recorded: approximate volume of the treated lesion, its relation to large blood vessels, cranial nerves and the brainstem, as well as tumour consistency and vascularisation. RESULTS: Symptoms duration ranged from 1 to 60 months (median: 16 months). In 57.7% of patients, imbalance was the predominant sign. Less frequent symptoms were: headaches, dysacusis and hemiparesis. Approximate volumes of the tumours ranged from 4 to 65 mL (mean: 32 mL). Total or subtotal resection was achieved in 73.1% of patients. The patients' performance improved postoperatively in 34.5%, remained unchanged in 46.2% and deteriorated in 11.5% of patients. Two (7.8%) patients died after the surgery. CONCLUSIONS: The use of petrosal approaches in the surgical treatment of meningiomas of the upper and middle parts of the clivus and the surrounding structures facilitates good or at least satisfactory neurological outcome with a high proportion of complete resections and relatively low mortality.

[540]

TÍTULO / TITLE: - Early Pseudoprogression following Chemoradiotherapy in Glioblastoma Patients: The Value of RANO Evaluation.

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

REVISTA / JOURNAL: - J Oncol. 2013;2013:690585. doi: 10.1155/2013/690585. Epub 2013 Aug 13.

●● Enlace al texto completo (gratis o de pago) [1155/2013/690585](#)

AUTORES / AUTHORS: - Linhares P; Carvalho B; Figueiredo R; Reis RM; Vaz R

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Hospital de Sao Joao, Alameda Prof. Hernani Monteiro, 4200-319 Porto, Portugal ; Faculty of Medicine, University of Porto, Praca Gomes Teixeira, 4099-002 Porto, Portugal.

RESUMEN / SUMMARY: - Introduction. The aim of this study was to determine the frequency of pseudoprogression in a cohort of glioblastoma (GBM) patients following radiotherapy/temozolomide (RT/TMZ) by comparing Macdonald criteria to Response Assessment in Neuro-Oncology (RANO) criteria. The impact on prognosis and survival analysis was also studied. Materials and Methods. All patients receiving RT/TMZ for newly diagnosed GBM from January 2005 to December 2009 were retrospectively evaluated, and demographic, clinical, radiographic, treatment, and survival data were reviewed. Updated RANO criteria were used for the evaluation of the pre-RT and post-RT MRI and compared to classic Macdonald criteria. Survival data was evaluated using the Kaplan-Meier and log-rank analysis. Results and Discussion. 70 patients were available for full radiological response assessment. Early progression was confirmed in 42 patients (60%) according to Macdonald criteria and 15 patients (21%) according to RANO criteria. Pseudoprogression was identified in 10 (23.8%) or 2 (13.3%) patients in Macdonald and RANO groups, respectively. Cumulative survival of pseudoprogression group was higher than that of true progression group and not statistically different from the non-progressive disease group. Conclusion. In this cohort, the frequency of pseudoprogression varied between 13% and 24%, being overdiagnosed by older Macdonald criteria, which emphasizes the importance of RANO criteria and new radiological biomarkers for correct response evaluation.

[541]

TÍTULO / TITLE: - Presentation of a Patient who Underwent Fertility-Sparing Surgeries for Contralateral Recurrence of Ovarian Immature Teratoma with Gliomatosis Peritonei.

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

REVISTA / JOURNAL: - Jpn Clin Med. 2013;4:37-40. doi: 10.4137/JCM.S11532.

●● Enlace al texto completo (gratis o de pago) [4137/JCM.S11532](#)

AUTORES / AUTHORS: - Seo S; Matsumoto Y; Tsukioka M; Sumi T; Wakasa K; Ishiko O

INSTITUCIÓN / INSTITUTION: - Department of Obstetrics and Gynecology, Osaka City University Graduate School of Medicine, Osaka, Japan.

RESUMEN / SUMMARY: - We report a patient who has maintained a regular menstrual cycle despite undergoing cystectomy and chemotherapy for contralateral recurrence

of ovarian immature teratoma with gliomatosis peritonei. We initially performed a fertility-sparing right salpingo-oophorectomy, omentectomy and peritoneal biopsy for immature teratoma with gliomatosis peritonei, with adjuvant chemotherapy; we performed a left ovarian cystectomy and peritoneal biopsy for mature cystic teratoma with gliomatosis peritonei 16 months after the first surgery, a fertility-sparing left ovarian cystectomy and peritoneal biopsy for contralateral recurrence of ovarian immature teratoma with gliomatosis peritonei 60 months after the first surgery, and a left ovarian cystectomy and peritoneal and external iliac lymph node biopsy for endometrial cyst with gliomatosis peritonei 71 months after first surgery. The peritoneal gliomatosis lesions gradually decreased through the 4 surgeries over 8 years. The patient has maintained a regular menstrual cycle and currently shows no evidence of disease.

[542]

TÍTULO / TITLE: - Xeroderma pigmentosum complementation group f polymorphisms influence risk of glioma.

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

REVISTA / JOURNAL: - Asian Pac J Cancer Prev. 2013;14(7):4083-7.

AUTORES / AUTHORS: - Cheng HB; Xie C; Zhang RY; Hu SS; Wang Z; Yue W

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Fourth Affiliated Hospital, Harbin Medical University, Harbin, China E-mail : yuewang_hmu@163.com.

RESUMEN / SUMMARY: - We conducted an exploratory investigation of whether variation in six common SNPs of xeroderma pigmentosum complementation group F (XPF) is associated with risk of glioma in a Chinese population. Six single nucleotide polymorphisms (SNPs) were genotyped in 207 glioma cases and 236 cancer-free controls by a 384-well plate format on the Sequenom MassARRAY platform (Sequenom, San Diego, USA). The rs1800067 G and rs2276466 G allele frequencies were significantly higher in the glioma group than controls. Individuals with the rs1800067 GG genotype were at greater risk of glioma when compared with the A/A genotype in the codominant model, with an OR (95% CI) of 2.63 (1.04-7.25). The rs2276466 polymorphism was significantly associated with moderate increased risk of glioma in codominant and dominant models, with ORs (95% CI) of 1.90 (1.05-3.44) and 1.55 (1.07-2.47), respectively. The combination genotype of rs1800067 G and rs2276466 G alleles was associated with a reduced risk of glioma (OR=0.44, 95% CI=0.19-0.98). These findings indicate that genetic variants of the XPF gene have critical functions in the development of glioma.

[543]

TÍTULO / TITLE: - Functional language shift to the right hemisphere in patients with language-eloquent brain tumors.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 17;8(9):e75403. doi:
10.1371/journal.pone.0075403.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0075403](#)

AUTORES / AUTHORS: - Krieg SM; Sollmann N; Hauck T; Ille S; Foerschler A; Meyer B;
Ringel F

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery; Klinikum rechts der Isar,
Technische Universität München, Germany.

RESUMEN / SUMMARY: - OBJECTIVES: Language function is mainly located within the left hemisphere of the brain, especially in right-handed subjects. However, functional MRI (fMRI) has demonstrated changes of language organization in patients with left-sided perisylvian lesions to the right hemisphere. Because intracerebral lesions can impair fMRI, this study was designed to investigate human language plasticity with a virtual lesion model using repetitive navigated transcranial magnetic stimulation (rTMS). EXPERIMENTAL DESIGN: Fifteen patients with lesions of left-sided language-eloquent brain areas and 50 healthy and purely right-handed participants underwent bilateral rTMS language mapping via an object-naming task. All patients were proven to have left-sided language function during awake surgery. The rTMS-induced language errors were categorized into 6 different error types. The error ratio (induced errors/number of stimulations) was determined for each brain region on both hemispheres. A hemispheric dominance ratio was then defined for each region as the quotient of the error ratio (left/right) of the corresponding area of both hemispheres (ratio >1 = left dominant; ratio <1 = right dominant). RESULTS: Patients with language-eloquent lesions showed a statistically significantly lower ratio than healthy participants concerning "all errors" and "all errors without hesitations", which indicates a higher participation of the right hemisphere in language function. Yet, there was no cortical region with pronounced difference in language dominance compared to the whole hemisphere. CONCLUSIONS: This is the first study that shows by means of an anatomically accurate virtual lesion model that a shift of language function to the non-dominant hemisphere can occur.

[544]

TÍTULO / TITLE: - Effects of androgen deprivation on cerebral morphometry in prostate cancer patients - an exploratory study.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 19;8(8):e72032. doi:
10.1371/journal.pone.0072032.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0072032](#)

AUTORES / AUTHORS: - Chao HH; Hu S; Ide JS; Uchio E; Zhang S; Rose M; Concato J; Li CS

INSTITUCIÓN / INSTITUTION: - Department of Internal Medicine & Yale Comprehensive Cancer Center, Yale University School of Medicine, New Haven, Connecticut, United

States of America ; Medical Service, VA Connecticut Healthcare System, West Haven, Connecticut, United States of America.

RESUMEN / SUMMARY: - BACKGROUND: Androgen deprivation therapy (ADT) is a common treatment for non-metastatic, low-risk prostate cancer, but a potential side effect of ADT is impaired brain functioning. Previous work with functional magnetic resonance imaging (MRI) demonstrated altered prefrontal cortical activations in cognitive control, with undetectable changes in behavioral performance. Given the utility of brain imaging in identifying the potentially deleterious effects of ADT on brain functions, the current study examined the effects of ADT on cerebral structures using high resolution MRI and voxel-based morphometry (VBM). METHODS: High resolution T1 weighted image of the whole brain were acquired at baseline and six months after ADT for 12 prostate cancer patients and 12 demographically matched non-exposed control participants imaged at the same time points. Brain images were segmented into gray matter, white matter and cerebral ventricles using the VBM toolbox as implemented in Statistical Parametric Mapping 8. RESULTS: Compared to baseline scan, prostate cancer patients undergoing ADT showed decreased gray matter volume in frontopolar cortex, dorsolateral prefrontal cortex and primary motor cortex, whereas the non-exposed control participants did not show such changes. In addition, the decrease in gray matter volume of the primary motor cortex showed a significant correlation with longer reaction time to target detection in a working memory task. CONCLUSIONS: ADT can affect cerebral gray matter volumes in prostate cancer patients. If replicated, these results may facilitate future studies of cognitive function and quality of life in men receiving ADT, and can also help clinicians weigh the benefits and risks of hormonal therapy in the treatment of prostate cancer.

[545]

TÍTULO / TITLE: - Value of diffusion tensor imaging in differentiating high-grade from low-grade gliomas.

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

REVISTA / JOURNAL: - J Med Assoc Thai. 2013 Jun;96(6):716-21.

AUTORES / AUTHORS: - Piyapittayanan S; Chawalparit O; Tritakarn SO; Witthiwej T; Sangruchi T; Nunta-Aree S; Sathornsumetee S; Itthimethin P; Komoltri C

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Siriraj Hospital Mahidol University, Bangkok, Thailand.

RESUMEN / SUMMARY: - OBJECTIVE: To determine the usefulness of diffusion tensor imaging (DTI) in differentiating high-grade glioma (HGG) from low-grade glioma (LGG). MATERIAL AND METHOD: Patients with cerebral gliomas underwent conventional MRI and DTI before surgery. All proven pathologies were classified into two groups, i.e. LGG and HGG. The authors measured fractional anisotropy (FA) and apparent diffusion coefficient (ADC) values in region of interest (ROI) including solid tumoral region, necrotic region, peritumoral edema, contralateral normal appearing white matter

(NAWM) and normal corpus callosum as well as calculated ADC ratios. Pairwise comparisons were performed by using the t-test. The ROC curves of imaging parameters were employed to determine the best parameter for differentiating the two entities. RESULTS: Forty-three patients with cerebral gliomas, 17 with LGG and 26 with HGG, no statistical significant difference between LGG and HGG using mean FA values in each ROI. The ADC and minimal ADC values of solid tumoral region and peritumoral edema, the ADC and minimal ADC ratios of solid tumoral region are statistical significant to differentiate HGG from LGG, $p < 0.05$. The ratio ADC solid tumoral region to normal corpus callosum had highest predictive accuracy to differentiate the two entities with AUC of 0.74. CONCLUSION: The ADC value, minimal ADC value, and ADC ratios of solid tumoral region appeared to be useful for differentiating HGG from LGG.

[546]

TÍTULO / TITLE: - True progression versus pseudoprogression in the treatment of glioblastomas: a comparison study of normalized cerebral blood volume and apparent diffusion coefficient by histogram analysis.

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

REVISTA / JOURNAL: - Korean J Radiol. 2013 Jul-Aug;14(4):662-72. doi: 10.3348/kjr.2013.14.4.662. Epub 2013 Jul 17.

●● Enlace al texto completo (gratis o de pago) [3348/kjr.2013.14.4.662](#)

AUTORES / AUTHORS: - Song YS; Choi SH; Park CK; Yi KS; Lee WJ; Yun TJ; Kim TM; Lee SH; Kim JH; Sohn CH; Park SH; Kim IH; Jahng GH; Chang KH

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Seoul National University College of Medicine, Seoul 110-744, Korea.

RESUMEN / SUMMARY: - OBJECTIVE: The purpose of this study was to differentiate true progression from pseudoprogression of glioblastomas treated with concurrent chemoradiotherapy (CCRT) with temozolomide (TMZ) by using histogram analysis of apparent diffusion coefficient (ADC) and normalized cerebral blood volume (nCBV) maps. MATERIALS AND METHODS: Twenty patients with histopathologically proven glioblastoma who had received CCRT with TMZ underwent perfusion-weighted imaging and diffusion-weighted imaging ($b = 0, 1000 \text{ sec/mm}^2$). The corresponding nCBV and ADC maps for the newly visible, entirely enhancing lesions were calculated after the completion of CCRT with TMZ. Two observers independently measured the histogram parameters of the nCBV and ADC maps. The histogram parameters between the true progression group ($n = 10$) and the pseudoprogression group ($n = 10$) were compared by use of an unpaired Student's t test and subsequent multivariable stepwise logistic regression analysis to determine the best predictors for the differential diagnosis between the two groups. Receiver operating characteristic analysis was employed to determine the best cutoff values for the histogram parameters that proved to be

significant predictors for differentiating true progression from pseudoprogression. Intraclass correlation coefficient was used to determine the level of inter-observer reliability for the histogram parameters. RESULTS: The 5th percentile value (C5) of the cumulative ADC histograms was a significant predictor for the differential diagnosis between true progression and pseudoprogression ($p = 0.044$ for observer 1; $p = 0.011$ for observer 2). Optimal cutoff values of $892 \times 10^{-6} \text{ mm}^2/\text{sec}$ for observer 1 and $907 \times 10^{-6} \text{ mm}^2/\text{sec}$ for observer 2 could help differentiate between the two groups with a sensitivity of 90% and 80%, respectively, a specificity of 90% and 80%, respectively, and an area under the curve of 0.880 and 0.840, respectively. There was no other significant differentiating parameter on the nCBV histograms. Inter-observer reliability was excellent or good for all histogram parameters (intraclass correlation coefficient range: 0.70-0.99). CONCLUSION: The C5 of the cumulative ADC histogram can be a promising parameter for the differentiation of true progression from pseudoprogression of newly visible, entirely enhancing lesions after CCRT with TMZ for glioblastomas.

[547]

TÍTULO / TITLE: - CMV-Independent Lysis of Glioblastoma by Ex Vivo Expanded/Activated Vdelta1+ gammadelta T Cells.

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

REVISTA / JOURNAL: - PLoS One. 2013;8(8):e68729. doi: 10.1371/journal.pone.0068729.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0068729](#)

AUTORES / AUTHORS: - Knight A; Arnouk H; Britt W; Gillespie GY; Cloud GA; Harkins L; Su Y; Lowdell MW; Lamb LS

INSTITUCIÓN / INSTITUTION: - The Department of Haematology, University College London, London, United Kingdom.

RESUMEN / SUMMARY: - Vdelta2(neg) gammadelta T cells, of which Vdelta1+ gammadelta T cells are by far the largest subset, are important effectors against CMV infection. Malignant gliomas often contain CMV genetic material and proteins, and evidence exists that CMV infection may be associated with initiation and/or progression of glioblastoma multiforme (GBM). We sought to determine if Vdelta1+ gammadelta T cells were cytotoxic to GBM and the extent to which their cytotoxicity was CMV dependent. We examined the cytotoxic effect of ex vivo expanded/activated Vdelta1+ gammadelta T cells from healthy CMV seropositive and CMV seronegative donors on unmanipulated and CMV-infected established GBM cell lines and cell lines developed from short-term culture of primary tumors. Expanded/activated Vdelta1+ T cells killed CMV-negative U251, U87, and U373 GBM cell lines and two primary tumor explants regardless of the serologic status of the donor. Experimental CMV infection did not increase Vdelta1+ T cell-mediated cytotoxicity and in some cases the cell lines were more resistant to lysis when infected with CMV. Flow cytometry analysis of CMV-

infected cell lines revealed down-regulation of the NKG2D ligands ULBP-2, and ULBP-3 as well as MICA/B in CMV-infected cells. These studies show that ex vivo expanded/activated Vdelta1+ gammadelta T cells readily recognize and kill established GBM cell lines and primary tumor-derived GBM cells regardless of whether CMV infection is present, however, CMV may enhance the resistance GBM cell lines to innate recognition possibly contributing to the poor immunogenicity of GBM.

[548]

TÍTULO / TITLE: - Ataxia, Intellectual Disability, and Ocular Apraxia with Cerebellar Cysts: A New Disease?

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

REVISTA / JOURNAL: - Cerebellum. 2013 Sep 7.

●● Enlace al texto completo (gratis o de pago) [1007/s12311-013-0521-8](https://doi.org/10.1007/s12311-013-0521-8)

AUTORES / AUTHORS: - Poretti A; Hausler M; von Moers A; Baumgartner B; Zerres K; Klein A; Aiello C; Moro F; Zanni G; Santorelli FM; Huisman TA; Weis J; Valente EM; Bertini E; Boltshauser E

INSTITUCIÓN / INSTITUTION: - Department of Pediatric Neurology, University Children's Hospital of Zurich, Steinwiesstrasse 75, 8032, Zurich, Switzerland.

RESUMEN / SUMMARY: - Cerebellar cysts are rare findings in pediatric neuroimaging and rather characteristic for dystroglycanopathies and GPR56-related encephalopathy. We aim to report on seven children with cerebellar cysts showing absence of weakness and ruling out mutations within eight dystroglycanopathy genes and GPR56. Data about neurological and ophthalmological features, outcome, and creatine kinase values were collected from clinical histories and follow-up examinations. All MR images were qualitatively evaluated for infra- and supratentorial abnormalities. A SNP 6.0-Array was performed in three children. The POMT1, POMT2, POMGnT1, FKR, FKTN, LARGE, ISPD, B3GALNT2, and GPR56 genes were screened in all patients by Sanger sequencing. Seven children from five families were studied. Ataxia, intellectual disability, and language impairment were found in all patients, ocular motor apraxia in five, and severe myopia in three. None of the patients had weakness, only three a minimally increased creatine kinase value. Qualitative neuroimaging evaluation showed cerebellar cysts and dysplasia in the cerebellar hemispheres and vermis in all children. Additional findings were an enlarged fourth ventricle in all children, vermian hypoplasia and brain stem morphological abnormalities in five. The SNP array showed no pathogenetic imbalances in all children evaluated. In all patients, no mutations were found in POMT1, POMT2, POMGnT1, FKR, FKTN, LARGE, ISPD, B3GALNT2, and GPR56. The peculiar combination of the same clinical and neuroimaging findings in our patients highly suggests that this phenotype may represent a novel entity, possibly falling within the spectrum of dystroglycanopathies.

[549]

TÍTULO / TITLE: - Interplay between Parkin and p53 Governs a Physiological Homeostasis That Is Disrupted in Parkinson's Disease and Cerebral Cancer.

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

REVISTA / JOURNAL: - Neurodegener Dis. 2013 Sep 4.

●● Enlace al texto completo (gratis o de pago) [1159/000354075](#)

AUTORES / AUTHORS: - Checler F; Alves da Costa C

INSTITUCIÓN / INSTITUTION: - Institut de Pharmacologie Moleculaire et Cellulaire, Team Fondation pour la Recherche Medicale and Labex Distalz, Valbonne, France.

RESUMEN / SUMMARY: - Parkin is responsible for most autosomal juvenile recessive cases of Parkinson's disease (PD). Besides its well-characterized function as ubiquitin ligase, we previously established that parkin could repress p53 at the transcriptional level. Interestingly, p53 was recently shown to upregulate parkin, suggesting a feedback loop by which parkin and p53 interplay, thereby contributing to their physiological homeostasis. This equilibrium is disrupted in both PD and cerebral cancer. Thus, when parkin is mutated in PD, its transcriptional ability to repress p53 is abolished. Therefore, p53 elevation could likely contribute to the exacerbated cell death observed in PD-affected brains. Inversely, in brain-associated tumors linked to p53 mutations, the transcriptional control of parkin is reduced, and thereby, parkin expression is lowered. The reduction in parkin level could, in turn, contribute to an increase in the levels of transcriptionally inactive p53 that could explain, at least in part, the defect in cellular apoptotic commitment observed in cerebral cancer. Here, we discuss in detail the various studies demonstrating the importance of the functional interplay between parkin and p53 and its impairment by pathogenic mutations likely contributing to the etiology of PD and gliomas. © 2013 S. Karger AG, Basel.

[550]

TÍTULO / TITLE: - Pituitary oncocytoma presenting as Cushing's disease.

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

REVISTA / JOURNAL: - Indian J Endocrinol Metab. 2013 Jul;17(4):759-62. doi: 10.4103/2230-8210.113778.

●● Enlace al texto completo (gratis o de pago) [4103/2230-8210.113778](#)

AUTORES / AUTHORS: - Garg MK; Bharwaj R; Pathak HC; Kharb S; Gundgurthi A; Pandit A; Brar KS

INSTITUCIÓN / INSTITUTION: - Department of Endocrinology, Army Hospital (Research & Referral), Delhi Cantt-10, India.

RESUMEN / SUMMARY: - A 19-year-old girl presented with classical features of Cushing's syndrome. Endocrinal evaluation was consistent with pituitary source of ACTH; but imaging showed normal pituitary. Bilateral inferior petrosal sinus sampling confirmed the diagnosis. A successful remission was achieved after adenomectomy by transphenoidal route. Histopathological examination was consistent with pituitary

oncocyoma and immunohistochemistry was positive for synaptophysin, chromogranin, neuron specific enolase, S-100, ACTH, prolactin, and GH.

[551]

TÍTULO / TITLE: - Identification of early and distinct glioblastoma response patterns treated by boron neutron capture therapy not predicted by standard radiographic assessment using functional diffusion map.

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

REVISTA / JOURNAL: - Radiat Oncol. 2013 Aug 1;8(1):192. doi: 10.1186/1748-717X-8-192.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1748-717X-8-192](#)

AUTORES / AUTHORS: - Hiramatsu R; Kawabata S; Furuse M; Miyatake S; Kuroiwa T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Osaka Medical College, 2-7 Daigaku-machi, Takatsuki City, Osaka 569-8686, Japan. neu046@poh.osaka-med.ac.jp.

RESUMEN / SUMMARY: - BACKGROUND: Radiologic response of brain tumors is traditionally assessed according to the Macdonald criteria 10 weeks from the start of therapy. Because glioblastoma (GB) responds in days rather than weeks after boron neutron capture therapy (BNCT) that is a form of tumor-selective particle radiation, it is inconvenient to use the Macdonald criteria to assess the therapeutic efficacy of BNCT by gadolinium-magnetic resonance imaging (Gd-MRI). Our study assessed the utility of functional diffusion map (fDM) for evaluating response patterns in GB treated by BNCT. METHODS: The fDM is an image assessment using time-dependent changes of apparent diffusion coefficient (ADC) in tumors on a voxel-by-voxel approach. Other than time-dependent changes of ADC, fDM can automatically assess minimum/maximum ADC, Response Evaluation Criteria In Solid Tumors (RECIST), and the volume of enhanced lesions on Gd-MRI over time. We assessed 17 GB patients treated by BNCT using fDM. Additionally, in order to verify our results, we performed a histopathological examination using F98 rat glioma models. RESULTS: Only the volume of tumor with decreased ADC by fDM at 2 days after BNCT was a good predictor for GB patients treated by BNCT (P value = 0.022 by log-rank test and 0.033 by wilcoxon test). In a histopathological examination, brain sections of F98 rat glioma models treated by BNCT showed cell swelling of both the nuclei and the cytoplasm compared with untreated rat glioma models. CONCLUSIONS: The fDM could identify response patterns in BNCT-treated GB earlier than a standard radiographic assessment. Early detection of treatment failure can allow a change or supplementation before tumor progression and might lead to an improvement of GB patients' prognosis.

[552]

TÍTULO / TITLE: - Dosimetric impact of reduced nozzle-to-isocenter distance in intensity-modulated proton therapy of intracranial tumors in combined proton-carbon fixed-nozzle treatment facilities.

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

REVISTA / JOURNAL: - Radiat Oncol. 2013 Sep 18;8(1):218.

●● Enlace al texto completo (gratis o de pago) [1186/1748-717X-8-218](https://doi.org/10.1186/1748-717X-8-218)

AUTORES / AUTHORS: - Jelen U; Bubula ME; Ammazalorso F; Engenhardt-Cabillic R; Weber U; Wittig A

RESUMEN / SUMMARY: - BACKGROUND: In combined proton-carbon fixed-nozzle treatment facilities with raster scanning delivery, the scattering of proton pencil beams caused by nozzle elements and the relatively large nozzle-to-isocenter distance cause a beam broadening. This may pose limitations to the achievable dose conformity. One way to counteract this effect is by delivering the treatment in a position closer to the nozzle than the room isocenter. Purpose of this study was to assess the potential dosimetric benefit of such solution, in terms of dose conformity and normal tissue sparing, in intensity-modulated proton therapy (IMPT) of intracranial tumors. MATERIAL AND METHODS: For 12 patients with intracranial lesions, IMPT-plans were created at two treatment positions: nozzle-to-treatment-isocenter distance: 100 cm (room isocenter) and nozzle-to-treatment-isocenter distance: 60 cm. The resulting plans were compared in terms of dose distributions, dose-volume histograms and selected dosimetric indexes. RESULTS: With comparable target coverage, statistically significant normal tissue sparing was achieved through the reduction of the distance between nozzle and treatment isocenter. The decrease in mean dose (D_{mean}) was 12.5% to the whole brain, 16.2% to the brainstem, 9.7% and 15.4% to the temporal lobes, 10.0% and 12.9% to the hippocampi, 11.8% and 12.5% to the optic nerves and 0.2% to the chiasm. The volume receiving at least 10% of the prescribed dose (V_{10%}) was reduced by more than 10% for most organs at risk (OARs). The maximum dose (D_{near-max}) values to most OARs remained without significant difference. CONCLUSION: A reduced distance between nozzle and treatment isocenter leads to steeper lateral dose gradients and significantly reduces the volume of OARs adjacent to the target, which receives low to intermediate doses. Technical solutions shifting the treatment isocenter closer to the nozzle should be considered in clinical situations, where critical OARs are adjacent to the beam channel and where the integral dose should be minimized.

[553]

TÍTULO / TITLE: - Promoter hypermethylation-mediated down-regulation of RUNX3 gene in human brain tumors.

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

REVISTA / JOURNAL: - Ir J Med Sci. 2013 Aug 11.

●● Enlace al texto completo (gratis o de pago) [1007/s11845-013-1001-3](https://doi.org/10.1007/s11845-013-1001-3)

AUTORES / AUTHORS: - Avci CB; Dodurga Y; Susluer SY; Sigva ZO; Yucebas M; Caglar HO; Akalin T; Dalbasti T; Oktar N; Gunduz C

INSTITUCIÓN / INSTITUTION: - Department of Medical Biology, Ege University Medical Faculty, Bornova, 35100, Izmir, Turkey, cbavci@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND: The Runx family proteins, including RUNX3, are tissue-restricted transcription factors and play role in neuronal development and tumorigenesis. RUNX3 has an important role in glioblastoma (GBM) tumorigenesis because of its promoter hypermethylation. AIM: We aimed to evaluate the methylation-mediated expression regulation of RUNX3 gene in brain tumors. PATIENTS AND METHODS: Cases of meningiomas WHO grade III (3), anaplastic astrocytomas (3), diffuse astrocytoma (3), and GBM (12) were recruited into this study. Real-time quantitative PCR was performed for analyses of DNA promoter methylation and analyses of methylation-mediated expression status of RUNX3 gene was performed by real-time quantitative RT-PCR. RESULTS: There was no significant difference between methylated and unmethylated quantitative ratio of RUNX3 gene promoter region and also no significant difference in relative ratio of RUNX3 gene expression in brain tumor groups. Methylated and unmethylated ratio in anaplastic astrocytoma, diffuse astrocytoma, GBM, meningioma (WHO grade III) and in all groups were; 1.44, 1.09, 1.51, 1.52 and 1.43, respectively. One allele was found methylated necessarily. No methylation was detected in one case of GBM group and one case of anaplastic astrocytoma group. There was no unmethylated promoter in one of the GBM cases. There were significant differences between relative ratio of RUNX3 gene expression and methylated/unmethylated ratio rates for all cases ($p = 0.001$) and GBM groups ($p = 0.041$). CONCLUSION: This study overemphasized the RUNX3 gene importance in brain tumors, due to the existence of at least one methylated allele.

[554]

TÍTULO / TITLE: - Meningioma in long-term survivor after renal transplantation.

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

REVISTA / JOURNAL: - Indian J Nephrol. 2013 Sep;23(5):393-4. doi: 10.4103/0971-4065.116338.

●● Enlace al texto completo (gratis o de pago) [4103/0971-4065.116338](#)

AUTORES / AUTHORS: - Kute VB; Patel HV; Vanikar AV; Shah PR; Gumber MR; Balwani MR; Trivedi HL

INSTITUCIÓN / INSTITUTION: - Department of Nephrology and Clinical Transplantation, Institute of Kidney Diseases and Research Center, Dr. H. L. Trivedi Institute of Transplantation Sciences (IKDRC ITS), Ahmedabad, India.

[555]

TÍTULO / TITLE: - Induction of the unfolded protein response drives enhanced metabolism and chemoresistance in glioma cells.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 15;8(8):e73267. doi: 10.1371/journal.pone.0073267.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0073267](https://doi.org/10.1371/journal.pone.0073267)

AUTORES / AUTHORS: - Dodd RD; Merz AL; Dechkovskaia AM; Herring M; Winston BA; Russell RL; Madsen H; Nega M; Dusto NL; White J; Bigner DD; Nicchitta CV; Serkova NJ; Graner MW

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Anschutz Medical Center, University of Colorado Denver, Aurora, Colorado, United States of America ; Cell and Molecular Biology Program, Cancer Biology, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, Colorado, United States of America.

RESUMEN / SUMMARY: - The unfolded protein response (UPR) is an endoplasmic reticulum (ER)-based cytoprotective mechanism acting to prevent pathologies accompanying protein aggregation. It is frequently active in tumors, but relatively unstudied in gliomas. We hypothesized that UPR stress effects on glioma cells might protect tumors from additional exogenous stress (ie, chemotherapeutics), postulating that protection was concurrent with altered tumor cell metabolism. Using human brain tumor cell lines, xenograft tumors, human samples and gene expression databases, we determined molecular features of glioma cell UPR induction/activation, and here report a detailed analysis of UPR transcriptional/translational/metabolic responses. Immunohistochemistry, Western and Northern blots identified elevated levels of UPR transcription factors and downstream ER chaperone targets in gliomas. Microarray profiling revealed distinct regulation of stress responses between xenograft tumors and parent cell lines, with gene ontology and network analyses linking gene expression to cell survival and metabolic processes. Human glioma samples were examined for levels of the ER chaperone GRP94 by immunohistochemistry and for other UPR components by Western blotting. Gene and protein expression data from patient gliomas correlated poor patient prognoses with increased expression of ER chaperones, UPR target genes, and metabolic enzymes (glycolysis and lipogenesis). NMR-based metabolomic studies revealed increased metabolic outputs in glucose uptake with elevated glycolytic activity as well as increased phospholipid turnover. Elevated levels of amino acids, antioxidants, and cholesterol were also evident upon UPR stress; in particular, recurrent tumors had overall higher lipid outputs and elevated specific UPR arms. Clonogenicity studies following temozolomide treatment of stressed or unstressed cells demonstrated UPR-induced chemoresistance. Our data characterize the UPR in glioma cells and human tumors, and link the UPR to chemoresistance possibly via enhanced metabolism. Given the role of the UPR in the balance between cell survival and apoptosis, targeting the UPR and/or controlling metabolic activity may prove beneficial for malignant glioma therapeutics.

PTPTPTP - Journal Article

TÍTULO / TITLE: - Combining molecular targeted agents with radiation therapy for malignant gliomas.

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

REVISTA / JOURNAL: - Onco Targets Ther. 2013;6:1079-95. doi: 10.2147/OTT.S48224.

●● Enlace al texto completo (gratis o de pago) [2147/OTT.S48224](#)

AUTORES / AUTHORS: - Scaringi C; Enrici RM; Minniti G

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Sant'Andrea Hospital, University Sapienza, Rome, Italy.

RESUMEN / SUMMARY: - The expansion in understanding the molecular biology that characterizes cancer cells has led to the rapid development of new agents to target important molecular pathways associated with aberrant activation or suppression of cellular signal transduction pathways involved in gliomagenesis, including epidermal growth factor receptor, vascular endothelial growth factor receptor, mammalian target of rapamycin, and integrins signaling pathways. The use of antiangiogenic agent bevacizumab, epidermal growth factor receptor tyrosine kinase inhibitors gefitinib and erlotinib, mammalian target of rapamycin inhibitors temsirolimus and everolimus, and integrin inhibitor cilengitide, in combination with radiation therapy, has been supported by encouraging preclinical data, resulting in a rapid translation into clinical trials. Currently, the majority of published clinical studies on the use of these agents in combination with radiation and cytotoxic therapies have shown only modest survival benefits at best. Tumor heterogeneity and genetic instability may, at least in part, explain the poor results observed with a single-target approach. Much remains to be learned regarding the optimal combination of targeted agents with conventional chemoradiation, including the use of multipathways-targeted therapies, the selection of patients who may benefit from combined treatments based on molecular biomarkers, and the verification of effective blockade of signaling pathways.

[557]

TÍTULO / TITLE: - Critical role of zinc finger protein 521 in the control of growth, clonogenicity and tumorigenic potential of medulloblastoma cells.

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

REVISTA / JOURNAL: - Oncotarget. 2013 Aug;4(8):1280-92.

AUTORES / AUTHORS: - Spina R; Filocamo G; Iaccino E; Scicchitano S; Lupia M; Chiarella E; Mega T; Bernaudo F; Pelaggi D; Mesuraca M; Pazzaglia S; Semenkov S; Bar EE; Kool M; Pfister S; Bond HM; Eberhart CG; Steinkuhler C; Morrone G

INSTITUCIÓN / INSTITUTION: - Laboratory of Molecular Haematopoiesis and Stem Cell Biology, Dept. of Experimental and Clinical Medicine, University of Catanzaro Magna Graecia, Catanzaro, Italy.

RESUMEN / SUMMARY: - The stem cell-associated transcription co-factor ZNF521 has been implicated in the control of hematopoietic, osteo-adipogenic and neural progenitor cells. ZNF521 is highly expressed in cerebellum and in particular in the

neonatal external granule layer that contains candidate medulloblastoma cells-of-origin, and in the majority of human medulloblastomas. Here we have explored its involvement in the control of human and murine medulloblastoma cells. The effect of ZNF521 on growth and tumorigenic potential of human medulloblastoma cell lines as well as primary Ptc1-/+ mouse medulloblastoma cells was investigated in a variety of in vitro and in vivo assays, by modulating its expression using lentiviral vectors carrying the ZNF521 cDNA, or shRNAs that silence its expression. Enforced overexpression of ZNF521 in DAOY medulloblastoma cells significantly increased their proliferation, growth as spheroids and ability to generate clones in single-cell cultures and semisolid media, and enhanced their migratory ability in wound-healing assays. Importantly, ZNF521-expressing cells displayed a greatly enhanced tumorigenic potential in nude mice. All these activities required the ZNF521 N-terminal motif that recruits the nucleosome remodeling and histone deacetylase complex, which might therefore represent an appealing therapeutic target. Conversely, silencing of ZNF521 in human UW228 medulloblastoma cells that display high baseline expression decreased their proliferation, clonogenicity, sphere formation and wound-healing ability. Similarly, Zfp521 silencing in mouse Ptc1-/+ medulloblastoma cells drastically reduced their growth and tumorigenic potential. Our data strongly support the notion that ZNF521, through the recruitment of the NuRD complex, contributes to the clonogenic growth, migration and tumorigenicity of medulloblastoma cells.

[558]

TÍTULO / TITLE: - Cyclin D1 Gene G870A Variants and Primary Brain Tumors.

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

REVISTA / JOURNAL: - Asian Pac J Cancer Prev. 2013;14(7):4101-6.

AUTORES / AUTHORS: - Zeybek U; Yaylim I; Ozkan NE; Korkmaz G; Turan S; Kafadar D; Cacina C; Kafadar AM

INSTITUCIÓN / INSTITUTION: - Department of Molecular Medicine, Institute of Experimental Medicine, Cerrahpasa Medical Faculty, Istanbul University, Istanbul, Turkey E-mail : kafadar@istanbul.edu.tr, umz67@yahoo.com.

RESUMEN / SUMMARY: - Alterations of cyclin D1, one of the main regulators of the cell cycle, are known to be involved in various cancers. The CCDN1 G870A polymorphism causes production of a truncated variant with a shorter half-life and thus thought to impact the regulatory effect of CCDN1. The aim of the present study was to contribute to existing results to help to determine the prognostic value of this specific gene variant and evaluate the role of CCDN1 G870A polymorphism in brain cancer susceptibility. A Turkish study group including 99 patients with primary brain tumors and 155 healthy controls were examined. Genotypes were determined by polymerase chain reaction-restriction fragment length polymorphism analysis. The CCDN1 genotype frequencies in meningioma, glioma and control cases were not significantly different ($p>0.05$). No significant association was detected according to clinical

parameters or tumor characteristics; however, a higher frequency of AG genotype was recorded within patients with astrocytic or oligoastrocytic tumors. A significant association between AG genotype and glioblastoma multiforme (GBM) was recorded within the patients with glial tumors (p value=0.048 OR: 1.87 CI% 1.010-3.463). According to tumor characteristics, no statistically significant difference was detected within astrocytic, oligoastrocytic tumors and oligodendroglomas. However, patients with astrocytic or oligoastrocytic tumors showed a higher frequency of AG genotype (50%) when compared to those with oligodendroglial tumors (27.3%). Our results indicate a possible relation between GBM formation and CCDN1 genotype.

[559]

TÍTULO / TITLE: - Frontal lobe syndrome caused by a giant meningioma presenting as depression and bipolar disorder.

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

REVISTA / JOURNAL: - Singapore Med J. 2013 Aug;54(8):e158-9.

AUTORES / AUTHORS: - Mumoli N; Pulera F; Vitale J; Camaiti A

INSTITUCIÓN / INSTITUTION: - Department of Internal Medicine, Ospedale Civile Livorno, Viale Alfieri 36, 57100 Livorno, Italy. nimumoli@tiscali.it.

RESUMEN / SUMMARY: - Frontal meningiomas may present only with psychological symptoms that resemble depression, anxiety states, hypomania and schizophrenia. Herein, we present the case of a 55-year-old man who was initially thought to have depression and bipolar disorder, but was eventually diagnosed with frontal lobe syndrome caused by a giant frontal meningioma.

[560]

TÍTULO / TITLE: - Early Experience of Pre- and Post-Contrast 7.0T MRI in Brain Tumors.

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

REVISTA / JOURNAL: - J Korean Med Sci. 2013 Sep;28(9):1362-72. doi:

10.3346/jkms.2013.28.9.1362. Epub 2013 Aug 28.

●● Enlace al texto completo (gratis o de pago) [3346/jkms.2013.28.9.1362](https://doi.org/10.3346/jkms.2013.28.9.1362)

AUTORES / AUTHORS: - Paek SL; Chung YS; Paek SH; Hwang JH; Sohn CH; Choi SH; Son YD; Kim YB; Kim DG; Lee KH; Cho ZH

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Seoul National University Hospital, Seoul, Korea. ; Department of Neurosurgery, Physiology, and Biomedical Engineering, Mayo Clinic, Minneapolis, MN, USA.

RESUMEN / SUMMARY: - We investigated the safety and clinical applicability of 7.0 Tesla (T) brain magnetic resonance imaging (MRI) in patients with brain tumors. Twenty-four patients with intraaxial or extraaxial brain tumors were enrolled in this study. 7.0T MRIs of T2*-weighted axial and T1-weighted coronal or sagittal images were obtained

and compared with 1.5T brain MRIs. The T2*-weighted images from 7.0T brain MRI revealed detailed microvasculature and the internal contents of supratentorial brain tumors better than that of 1.5T brain MRI. For brain tumors located in parasellar areas or areas adjacent to major cerebral vessels, flow-related artifacts were exaggerated in the 7.0T brain MRIs. For brain tumors adjacent to the skull base, susceptibility artifacts in the interfacing areas of the paranasal sinus and skull base hampered the acquisition of detailed images and information on brain tumors in the 7.0T brain MRIs. This study shows that 7.0T brain MRI can provide detailed information on the intratumoral components and margins in supratentorial brain tumors. Further studies are needed to develop refined MRI protocols for better images of brain tumors located in the skull base, parasellar, and adjacent major cerebrovascular structures.

[561]

TÍTULO / TITLE: - The potential for genetically altered microglia to influence glioma treatment.

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

REVISTA / JOURNAL: - CNS Neurol Disord Drug Targets. 2013 Sep;12(6):750-62.

AUTORES / AUTHORS: - Li W; Holsinger RM; Kruse CA; Flugel A; Graeber MB

INSTITUCIÓN / INSTITUTION: - Brain and Mind Research Institute, The University of Sydney, Camperdown, NSW, Australia. manuel@graeber.net.

RESUMEN / SUMMARY: - Diffuse and unstoppable infiltration of brain and spinal cord tissue by neoplastic glial cells is the single most important therapeutic problem posed by the common glioma group of tumors: astrocytoma, oligoastrocytoma, oligodendroglioma, their malignant variants and glioblastoma. These neoplasms account for more than two thirds of all malignant central nervous system tumors. However, most glioma research focuses on an examination of the tumor cells rather than on host-specific, tumor micro-environmental cells and factors. This can explain why existing diffuse glioma therapies fail and why these tumors have remained incurable. Thus, there is a great need for innovation. We describe a novel strategy for the development of a more effective treatment of diffuse glioma. Our approach centers on gaining control over the behavior of the microglia, the defense cells of the CNS, which are manipulated by malignant glioma and support its growth. Armoring microglia against the influences from glioma is one of our research goals. We further discuss how microglia precursors may be genetically enhanced to track down infiltrating glioma cells.

[562]

TÍTULO / TITLE: - Involvement of Calcium-Mediated Reactive Oxygen Species in Inductive GRP78 Expression by Geldanamycin in 9L Rat Brain Tumor Cells.

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

REVISTA / JOURNAL: - Int J Mol Sci. 2013 Sep 18;14(9):19169-85. doi: 10.3390/ijms140919169.

●● Enlace al texto completo (gratis o de pago) [3390/ijms140919169](https://doi.org/10.3390/ijms140919169)

AUTORES / AUTHORS: - Sun FC; Shyu HY; Lee MS; Lee MS; Lai YK

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RESUMEN / SUMMARY: - Treatment with geldanamycin (GA) leads to an increase in $[Ca^{2+}]_c$ and the production of reactive oxygen species (ROS) in rat brain tumor 9L RBT cells. GA-exerted calcium signaling was blocked by BAPTA/AM and EGTA. The effect of GA on $[Ca^{2+}]_c$ was significantly reduced in the presence of thapsigargin (TG) and ruthenium red (RR). GA-induced GRP78 expression is significantly decreased in the presence of BAPTA/AM, EGTA and RR, suggesting that the calcium influx from the extracellular space and intracellular calcium store oscillations are contributed to by the calcium mobilization and GRP78 expression induced by GA. The induced GRP78 expression is sensitive to added U73122 and Ro-31-8425, pinpointing the involvement of phospholipase C (PLC) and protein kinase C (PKC) in GA-induced endoplasmic reticulum (ER) stress. The antioxidants N-acetylcysteine (NAC), BAPTA/AM, EGTA and H7 also have significant inhibitory effects on ROS generation. Finally, neither H7 nor NAC was able to affect the calcium response elicited by GA. Our results suggest that the causal signaling cascade during GA-induced GRP78 expression occurs via a pathway that connects PLC to cytoplasmic calcium increase, PKC activation and, then, finally, ROS generation. Our data provides new insights into the influence of GA on ER stress response in 9L RBT cells.

[563]

TÍTULO / TITLE: - Apparent diffusion coefficients in evaluation of pediatric brain tumors.

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

REVISTA / JOURNAL: - J Med Assoc Thai. 2013 Feb;96(2):178-84.

AUTORES / AUTHORS: - Tuntiyatorn L; Nantawas B; Sirachainan N; Larbcharoensub N; Visudtibhan A; Hongeng S

INSTITUCIÓN / INSTITUTION: - Division of Neuroradiology, Department of Radiology, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand. lojana.tun@mahidol.ac.th

RESUMEN / SUMMARY: - BACKGROUND: MRI, which has high sensitivity in brain tumor detection, cannot reliably determine tumor grading or histology. Diffusion-weighted imaging and apparent diffusion coefficients (ADCs) provide information of tumor cellularity that can correlate with grading. OBJECTIVE: To investigate ADCs in differentiation low-grade from high-grade pediatric brain tumors. MATERIAL AND METHOD: Preoperative MRI, DWI, and ADC images of pediatric patients with pathologically proven brain tumors were retrospectively reviewed at a university hospital in two-year periods and classified into low-grade and high-grade categories.

Regions of interest were placed manually at the center and periphery of the solid tumor regions, then ADC values were calculated at “b” values = 0, 1000 sec/mm². RESULTS: The ADC values were calculated in 15 patients, which included 12 males and three females with an age range from three to 14 years. Seven and eight were with low- and high-grade tumors respectively. The ADC values of low-grade tumors were markedly higher than those of high-grade tumors with statistically significant differences by all methods of measurements at the central peripheral, and average areas on Man-Whitney U test, with p-values of 0.037, 0.009, and 0.021, respectively. CONCLUSION: MRI with ADCs for preoperative pediatric tumor evaluation may be useful for predicting tendency of tumor grading and surgical planning.

[564]

TÍTULO / TITLE: - High linear-energy-transfer radiation can overcome radioresistance of glioma stem-like cells to low linear-energy-transfer radiation.

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

REVISTA / JOURNAL: - J Radiat Res. 2013 Aug 16.

●● Enlace al texto completo (gratis o de pago) [1093/jrr/rrt095](#)

AUTORES / AUTHORS: - Hirota Y; Masunaga SI; Kondo N; Kawabata S; Hirakawa H; Yajima H; Fujimori A; Ono K; Kuroiwa T; Miyatake SI

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Osaka Medical College, 2-7 Daigaku-machi, Takatsuki City, Osaka 569-8686, Japan.

RESUMEN / SUMMARY: - Ionizing radiation is applied as the standard treatment for glioblastoma multiforme (GBM). However, radiotherapy remains merely palliative, not curative, because of the existence of glioma stem cells (GSCs), which are regarded as highly radioresistant to low linear-energy-transfer (LET) photons. Here we analyzed whether or not high-LET particles can overcome the radioresistance of GSCs. Glioma stem-like cells (GSLCs) were induced from the GBM cell line A172 in stem cell culture medium. The phenotypes of GSLCs and wild-type cells were confirmed using stem cell markers. These cells were irradiated with ⁶⁰Co gamma rays or reactor neutron beams. Under neutron-beam irradiation, high-LET proton particles can be produced through elastic scattering or nitrogen capture reaction. Radiosensitivity was assessed by a colony-forming assay, and the DNA double-strand breaks (DSBs) were assessed by a histone gamma-H2AX focus detection assay. In stem cell culture medium, GSLCs could form neurosphere-like cells and express neural stem cell markers (Sox2 and Musashi) abundantly in comparison with their parental cells. GSLCs were significantly more radioresistant to gamma rays than their parental cells, but neutron beams overcame this resistance. There were significantly fewer gamma-H2AX foci in the A172 GSLCs 24 h after irradiation with gamma rays than in their parental cultured cells, while there was no apparent difference following neutron-beam irradiation. High-LET radiation can overcome the radioresistance of GSLCs by producing unreparable DNA DSBs. High-LET

radiation therapy might have the potential to overcome GBM's resistance to X-rays in a clinical setting.

[565]

TÍTULO / TITLE: - Using Evolutional Properties of Gene Networks in Understanding Survival Prognosis of Glioblastoma.

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

REVISTA / JOURNAL: - IEEE J Biomed Health Inform. 2013 Sep 18.

●● Enlace al texto completo (gratis o de pago) [1109/JBHI.2013.2282569](#)

AUTORES / AUTHORS: - Upton A; Arvanitis T

RESUMEN / SUMMARY: - Previously, we investigated survival prognosis of glioblastoma by applying a gene regulatory approach to a human glioblastoma dataset. Here, we further extend our understanding of survival prognosis of glioblastoma by refining the network inference technique we apply to the glioblastoma dataset with the intent of uncovering further topological properties of the networks. For this work, we modify the approach by specifically looking at both positive and negative correlations separately, as oppose to absolute correlations. There is great interest in applying mathematical modeling approaches to cancer cell line datasets to generate network models of gene regulatory interactions. Analysis of these networks using graph theory metrics can identify genes of interest. The principal approach for modeling microarray datasets has been to group all the cell lines together into one overall network, and then analyze this network as a whole. As per the previous study, we categorize a human glioblastoma cell line data set into five categories based on survival data, and analyze each category separately using both negative and positive correlation networks constructed using a modified version of the WGCNA algorithm. Using this approach, we identified a number of genes as being important across different survival stages of the glioblastoma cell lines.

[566]

TÍTULO / TITLE: - Markers of angiogenesis (CD31, CD34, rCBV) and their prognostic value in low-grade gliomas.

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

REVISTA / JOURNAL: - Neurol Neurochir Pol. 2013 Jul-Aug;47(4):325-31.

AUTORES / AUTHORS: - Majchrzak K; Kaspera W; Szymas J; Bobek-Billewicz B; Hebda A; Majchrzak H

INSTITUCIÓN / INSTITUTION: - Katedra i Oddział Kliniczny Neurochirurgii, Sosnowiec.

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RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Antigens CD31 and CD34 and relative cerebral blood volume (rCBV) in gliomas reflect in different ways neoangiogenesis of the tumour. Thus, we decided: (1) to estimate the correlation between the values of CD31 and CD34 and the value of rCBV in low-grade gliomas

(LGG), and (2) to establish the prognostic value of these markers. MATERIAL AND METHODS: The investigated group consisted of 53 patients with LGG who were operated on in the Neurosurgical Department at Sosnowiec between 2005 and 2011. On the basis of perfusion-weighted imaging (PWI-MRI) in the tumour texture, rCBV was calculated. The values of CD31 and CD34 were estimated on the basis of immunohistochemical investigation. Three outcome measures were assessed: (1) overall survival, (2) progression-free survival, and (3) malignant-free survival. Statistical analyses were done using the STATISTICA 9.0 program. RESULTS: Higher value of rCBV in the texture of LGG significantly correlated with higher CD31 ($p = 0.0006$) and CD34 values ($p = 0.0043$). Progression-free survival was significantly longer in patients with $rCBV < 1.75$ than for persons with $rCBV > 1.75$ ($p = 0.015$). Lower expression of CD31 correlated with probability of longer survival of the patients after the operation of LGG ($p = 0.068$). CONCLUSIONS: Density of microvessels as assessed immunohistochemically with CD31+ and CD34+ in LGG correlated with the value of rCBV in the tumour. The value of 1.75 for rCBV may be the threshold for better or poorer outcome of these patients. Expression of CD31 antigen is an important prognostic factor for the time of survival for patients with LGG.

[567]

TÍTULO / TITLE: - Diffusion-weighted MRI as a biomarker for treatment response in glioma.

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

REVISTA / JOURNAL: - CNS Oncol. 2012 Nov 1;1(2):169-180.

●● [Enlace al texto completo \(gratis o de pago\) 2217/cns.12.25](#)

AUTORES / AUTHORS: - Schmainda KM

INSTITUCIÓN / INSTITUTION: - Department of Biophysics, Radiology, Translational Brain Tumor Research Program, Medical College of Wisconsin, 8701 Watertown Plank Rd, Milwaukee, WI 53226, USA; Tel.: +1 414 955 4051; ;

RESUMEN / SUMMARY: - Diffusion-weighted imaging (DWI) is a powerful MRI method, which probes abnormalities of tissue structure by detecting microscopic changes in water mobility at a cellular level beyond what is available with other imaging techniques. Accordingly, DWI has the potential to identify pathology before gross anatomic changes are evident on standard anatomical brain images. These features of tissue characterization and earlier detection are what make DWI particularly appealing for the evaluation of gliomas and the newer therapies where standard anatomical imaging is proving insufficient. This article focuses on the basic principles and applications of DWI, and its derived parameter, the apparent diffusion coefficient, for the purposes of diagnosis and evaluation of glioma, especially in the context of monitoring response to therapy.

[568]

TÍTULO / TITLE: - Cerebral Blood Volume Calculated by Dynamic Susceptibility Contrast-Enhanced Perfusion MR Imaging: Preliminary Correlation Study with Glioblastoma Genetic Profiles.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 19;8(8):e71704. doi: 10.1371/journal.pone.0071704.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0071704](#)

AUTORES / AUTHORS: - Ryoo I; Choi SH; Kim JH; Sohn CH; Kim SC; Shin HS; Yeom JA; Jung SC; Lee AL; Yun TJ; Park CK; Park SH

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Seoul National University College of Medicine, Seoul, Korea.

RESUMEN / SUMMARY: - **PURPOSE:** To evaluate the usefulness of dynamic susceptibility contrast (DSC) enhanced perfusion MR imaging in predicting major genetic alterations in glioblastomas. **MATERIALS AND METHODS:** Twenty-five patients (M:F = 13ratio12, mean age: 52.1+/-15.2 years) with pathologically proven glioblastoma who underwent DSC MR imaging before surgery were included. On DSC MR imaging, the normalized relative tumor blood volume (nTBV) of the enhancing solid portion of each tumor was calculated by using dedicated software (Nordic TumorEX, NordicNeuroLab, Bergen, Norway) that enabled semi-automatic segmentation for each tumor. Five major glioblastoma genetic alterations (epidermal growth factor receptor (EGFR), phosphatase and tensin homologue (PTEN), Ki-67, O6-methylguanine-DNA methyltransferase (MGMT) and p53) were confirmed by immunohistochemistry and analyzed for correlation with the nTBV of each tumor. Statistical analysis was performed using the unpaired Student t test, ROC (receiver operating characteristic) curve analysis and Pearson correlation analysis. **RESULTS:** The nTBVs of the MGMT methylation-negative group (mean 9.5+/-7.5) were significantly higher than those of the MGMT methylation-positive group (mean 5.4+/-1.8) (p = .046). In the analysis of EGFR expression-positive group, the nTBVs of the subgroup with loss of PTEN gene expression (mean: 10.3+/-8.1) were also significantly higher than those of the subgroup without loss of PTEN gene expression (mean: 5.6+/-2.3) (p = .046). Ki-67 labeling index indicated significant positive correlation with the nTBV of the tumor (p = .01). **CONCLUSION:** We found that glioblastomas with aggressive genetic alterations tended to have a high nTBV in the present study. Thus, we believe that DSC-enhanced perfusion MR imaging could be helpful in predicting genetic alterations that are crucial in predicting the prognosis of and selecting tailored treatment for glioblastoma patients.

[569]

TÍTULO / TITLE: - Endoscopic treatment of quadrigeminal arachnoid cysts in children.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Sep 6.

- Enlace al texto completo (gratis o de pago) 3171/2013.7.PEDS13155

AUTORES / AUTHORS: - El-Ghandour NM

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Faculty of Medicine, Cairo University, Cairo, Egypt.

RESUMEN / SUMMARY: - Object Quadrigeminal arachnoid cysts (QACs) are rare, comprising approximately 5%-10% of all intracranial arachnoid cysts. The management of these cysts is challenging, and their optimal surgical treatment is controversial. This study evaluates the role of endoscopy in the treatment of QACs in children, focusing on some factors or technical aspects that might influence the outcome. Methods Eighteen children with symptomatic QACs were the subject of this study. The group included 10 boys and 8 girls, with a mean age of 2.5 years. All patients had hydrocephalus. Surgical treatment included ventriculocystostomy (14 cases), endoscopic third ventriculostomy (14 cases), ventriculocystocisternostomy (2 cases), cystocisternostomy (2 cases), and removal of preexisting malfunctioning cystoperitoneal shunt (4 cases). Results Significant clinical improvement occurred in 15 cases (83.3%). Postoperative MRI showed a reduction in the cyst size in 14 cases (77.8%), whereas in the remaining 4 cases (22.2%) the cyst size was unchanged. A postoperative decrease in ventricular size was encountered in 16 cases (88.9%). Minor intraoperative bleeding occurred in 1 case (5.6%), which stopped spontaneously without any postoperative sequelae. Postoperative subdural hygroma occurred in 3 cases (16.7%) and required a subduroperitoneal shunt in 2 cases. During follow-up (mean 45.8 months), a repeat endoscopic procedure was performed in 7 patients (all 4 patients with a prior shunt and 3 patients without a prior shunt), and new shunt placement was required in 5 patients (all 4 patients with a prior shunt and 1 patient without a prior shunt). Thus, none of the patients with a prior shunt was able to become shunt independent, whereas 92.9% of patients without a prior shunt were able to avoid shunt placement. Conclusions Arachnoid cysts of the quadrigeminal cistern and the associated hydrocephalus can be effectively treated by endoscopy. The procedure is simple, minimally invasive, and associated with low morbidity and mortality rates. The fact that all patients who previously received shunts required a repeat endoscopic procedure and that none of these patients was able to become shunt independent makes it clear that endoscopic treatment should be considered the first choice in the management of patients with arachnoid cysts in the quadrigeminal cistern.

[570]

TÍTULO / TITLE: - Gene expression analysis of aberrant signaling pathways in meningiomas.

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

REVISTA / JOURNAL: - Oncol Lett. 2013 Jul;6(1):275-279. Epub 2013 May 23.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1363](https://doi.org/10.1016/j.ol.2013.1363)

AUTORES / AUTHORS: - Torres-Martin M; Martinez-Glez V; Pena-Granero C; Isla A; Lassaletta L; DE Campos JM; Pinto GR; Burbano RR; Melendez B; Castresana JS; Rey JA

INSTITUCIÓN / INSTITUTION: - Neuro-Oncogenetics Laboratory, Research Unit, Madrid, España ;

RESUMEN / SUMMARY: - Examining aberrant pathway alterations is one method for understanding the abnormal signals that are involved in tumorigenesis and tumor progression. In the present study, expression arrays were performed on tumor-related genes in meningiomas. The GE Array Q Series HS-006 was used to determine the expression levels of 96 genes that corresponded to six primary biological regulatory pathways in a series of 42 meningiomas, including 32 grade I, four recurrent grade I and six grade II tumors, in addition to three normal tissue controls. Results showed that 25 genes that were primarily associated with apoptosis and angiogenesis functions were downregulated and 13 genes frequently involving DNA damage repair functions were upregulated. In addition to the inactivation of the neurofibromin gene, NF2, which is considered to be an early step in tumorigenesis, variations of other biological regulatory pathways may play a significant role in the development of meningioma.

[571]

TÍTULO / TITLE: - Differential activation of catalase expression and activity by PPAR agonists: Implications for astrocyte protection in anti-glioma therapy.

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

REVISTA / JOURNAL: - Redox Biol. 2013 Jan 26;1(1):70-9. doi: 10.1016/j.redox.2012.12.006.

●● Enlace al texto completo (gratis o de pago) [1016/j.redox.2012.12.006](https://doi.org/10.1016/j.redox.2012.12.006)

AUTORES / AUTHORS: - Khoo NK; Hebbar S; Zhao W; Moore SA; Domann FE; Robbins ME

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Free Radical and Radiation Biology, Holden Comprehensive Cancer Center, The University of Iowa, Iowa City, IA 52242, USA ; Department of Pharmacology and Chemical Biology, University of Pittsburgh, Pittsburgh, Pennsylvania 15261, USA.

RESUMEN / SUMMARY: - Glioma survival is dismal, in part, due to an imbalance in antioxidant expression and activity. Peroxisome proliferator-activated receptor (PPAR) agonists have antineoplastic properties which present new redox-dependent targets for glioma anticancer therapies. Herein, we demonstrate that treatment of primary cultures of normal rat astrocytes with PPAR agonists increased the expression of catalase mRNA protein, and enzymatic activity. In contrast, these same agonists had no effect on catalase expression and activity in malignant rat glioma cells. The increase in steady-state catalase mRNA observed in normal rat astrocytes was due, in part, to de novo mRNA synthesis as opposed to increased catalase mRNA stability. Moreover, pioglitazone-mediated induction of catalase activity in normal rat astrocytes was

completely blocked by transfection with a PPARgamma-dominant negative plasmid. These data suggest that defects in PPAR-mediated signaling and gene expression may represent a block to normal catalase expression and induction in malignant glioma. The ability of PPAR agonists to differentially increase catalase expression and activity in normal astrocytes but not glioma cells suggests that these compounds might represent novel adjuvant therapeutic agents for the treatment of gliomas.

[572]

TÍTULO / TITLE: - Treatment of a traumatic leptomenigeal cyst in an adult with fibrinogen-based collagen.

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

REVISTA / JOURNAL: - J Korean Neurosurg Soc. 2013 May;53(5):300-2. doi: 10.3340/jkns.2013.53.5.300. Epub 2013 May 31.

●● Enlace al texto completo (gratis o de pago) [3340/jkns.2013.53.5.300](#)

AUTORES / AUTHORS: - Kim H; Jo KW

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Bucheon St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Bucheon, Korea.

RESUMEN / SUMMARY: - Reports of traumatic leptomenigeal cysts (TLMC) are rare in adults. The standard treatment approach is craniectomy with careful exposure of the intact dural edges, followed by duroplasty. However, occasionally, the location of the TLMC makes achieving watertight duroplasty impossible. Herein, we report the case of a 28-year-old male who presented with a soft growing mass on the vertex of his head 16 months after the head trauma. Upon enhanced CT examination, a bony defect involving both the inner and outer table of the cranium was observed close to the sagittal sinus, and a well-defined cystic mass, 5 cm in diameter, was nested within the defect. The risks associated with extension craniotomy were high because the lesion was located superficial to the sagittal sinus, we opted to use fibrinogen-based collagen fleece (TachoComb®) to repair the dural defect. Two months after surgery, the patient remained asymptomatic with a good cosmetic result. In cases like ours, when the defect is near the major sinuses and the risk of rupturing the sinus during watertight dural closure is high, fibrinogen-based collagen fleece (TachoComb®) is an effective alternative approach to standard dural suture techniques.

[573]

TÍTULO / TITLE: - A Literature Review of Key Molecular Genetic Aberrations in Meningiomas: A Potential Role in the Determination of Radiosurgery Outcomes.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Sep 4. pii: S1878-8750(13)01079-6. doi: 10.1016/j.wneu.2013.08.048.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.08.048](#)

AUTORES / AUTHORS: - Murovic J; Chang SD

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Stanford University.

[574]

TÍTULO / TITLE: - FoxM1 Promotes Glioma Cells Progression by Up-Regulating Anxa1 Expression.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 26;8(8):e72376. doi: 10.1371/journal.pone.0072376.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0072376](https://doi.org/10.1371/journal.pone.0072376)

AUTORES / AUTHORS: - Cheng SX; Tu Y; Zhang S

INSTITUCIÓN / INSTITUTION: - Institute of Traumatic Brain Injury and Nervous Diseases of Chinese People's Armed Police Forces, Center for Neurology and Neurosurgery of Affiliated Hospital of Logistics College of CPAPF, Tianjin, China.

RESUMEN / SUMMARY: - Forkhead box M1 (FoxM1) is a member of the forkhead transcription factor family and is overexpression in malignant gliomas. However, the molecular mechanisms by which FoxM1 lead to glioma carcinogenesis and progression are still not well known. In the present study, we show that Anxa1 was overexpression in gliomas and predicted the poor outcome. Furthermore, Anxa1 closely related to the FoxM1 expression and was a direct transcriptional target of FoxM1. Overexpression of FoxM1 up-regulated Anxa1 expression, whereas suppression of FoxM1 expression down-regulated Anxa1 expression in glioma cells. Finally, FoxM1 enhanced the proliferation, migration, and angiogenesis in Anxa1-dependent manner both in vitro and in vivo. Our findings provide both clinical and mechanistic evidences that FoxM1 contributes to glioma development by directly up-regulating Anxa1 expression.

[575]

TÍTULO / TITLE: - Enhanced MGMT expression contributes to temozolomide resistance in glioma stem-like cells.

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

REVISTA / JOURNAL: - Chin J Cancer. 2013 Aug 6. doi: 10.5732/cjc.012.10236.

●● Enlace al texto completo (gratis o de pago) [5732/cjc.012.10236](https://doi.org/10.5732/cjc.012.10236)

AUTORES / AUTHORS: - Qiu ZK; Shen D; Chen YS; Yang QY; Guo CC; Feng BH; Chen ZP

INSTITUCIÓN / INSTITUTION: - State Key Laboratory of Oncology in South China; Department of Neurosurgery/Neuro-oncology, Sun Yat-sen University Cancer Center, Guangzhou, Guangdong 510060, P.R. China Chenzhp@sysucc.org.cn.

RESUMEN / SUMMARY: - O6-methylguanine DNA methyltransferase (MGMT) can remove DNA alkylation adducts, thereby repairing damaged DNA and contributing to the drug resistance of gliomas to alkylating agents. In addition, glioma stem-like cells (GSCs) have been demonstrated to be involved in the recurrence and treatment resistance of gliomas. In this study, we aimed to investigate MGMT expression and regulatory mechanisms in GSCs and the association of MGMT with temozolomide (TMZ)

sensitivity. GSCs were enriched from one MGMT-positive cell line (SF-767) and 7 MGMT-negative cell lines (U251, SKMG-4, SKMG-1, SF295, U87, MGR1, and MGR2) through serum-free clone culture. GSCs from the U251G, SKMG-4G, SF295G, and SKMG-1G cell lines became MGMT-positive, but those from the U87G, MGR1G, and MGR2G cell lines remained MGMT-negative. However, all the GSCs and their parental glioma cell lines were positive for nuclear factor kappaB (NF-kappaB). In addition, GSCs were more resistant to TMZ than their parental glioma cell lines ($P > 0.05$). However, there was no significant difference in the 50% inhibition concentration (IC50) of TMZ between MGMT-positive and MGMT-negative GSCs ($P > 0.05$). When we treated the MGMT-positive GSCs with TMZ plus MG-132 (an NF-kappaB inhibitor), the antitumor activity was significantly enhanced compared to that of GSCs treated with TMZ alone ($P < 0.05$). Furthermore, we found that MGMT expression decreased through the downregulation of NF-kappaB expression by MG-132. Our results show that MG-132 may inhibit NF-kappaB expression and further decrease MGMT expression, resulting in a synergistic effect on MGMT-positive GSCs. These results indicate that enhanced MGMT expression contributes to TMZ resistance in MGMT-positive GSCs.

[576]

TÍTULO / TITLE: - Distinct phenotypic differences associated with differential amplification of receptor tyrosine kinase genes at 4q12 in glioblastoma.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 21;8(8):e71777. doi: 10.1371/journal.pone.0071777.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0071777](#)

AUTORES / AUTHORS: - Burford A; Little SE; Jury A; Popov S; Laxton R; Doey L; Al-Sarraj S; Jurgensmeier JM; Jones C

INSTITUCIÓN / INSTITUTION: - Divisions of Molecular Pathology, The Institute of Cancer Research, Sutton, United Kingdom ; Cancer Therapeutics, The Institute of Cancer Research, Sutton, United Kingdom.

RESUMEN / SUMMARY: - Gene amplification at chromosome 4q12 is a common alteration in human high grade gliomas including glioblastoma, a CNS tumour with consistently poor prognosis. This locus harbours the known oncogenes encoding the receptor tyrosine kinases PDGFRA, KIT, and VEGFR2. These receptors are potential targets for novel therapeutic intervention in these diseases, with expression noted in tumour cells and/or associated vasculature. Despite this, a detailed assessment of their relative contributions to different high grade glioma histologies and the underlying heterogeneity within glioblastoma has been lacking. We studied 342 primary high grade gliomas for individual gene amplification using specific FISH probes, as well as receptor expression in the tumour and endothelial cells by immunohistochemistry, and correlated our findings with specific tumour cell morphological types and patterns of vasculature. We identified amplicons which encompassed PDGFRA only, PDGFRA/KIT,

and PDGFRA/KIT/VEGFR2, with distinct phenotypic correlates. Within glioblastoma specimens, PDGFRA amplification alone was linked to oligodendroglial, small cell and sarcomatous tumour cell morphologies, and rare MGMT promoter methylation. A younger age at diagnosis and better clinical outcome in glioblastoma patients is only seen when PDGFRA and KIT are co-amplified. IDH1 mutation was only found when all three genes are amplified; this is a subgroup which also harbours extensive MGMT promoter methylation. Whilst PDGFRA amplification was tightly linked to tumour expression of the receptor, this was not the case for KIT or VEGFR2. Thus we have identified differential patterns of gene amplification and expression of RTKs at the 4q12 locus to be associated with specific phenotypes which may reflect their distinct underlying mechanisms.

[577]

TÍTULO / TITLE: - Tumor control after surgery for spinal myxopapillary ependymomas: distinct outcomes in adults versus children.

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

REVISTA / JOURNAL: - J Neurosurg Spine. 2013 Oct;19(4):471-476. Epub 2013 Aug 23.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.6.SPINE12927](#)

AUTORES / AUTHORS: - Feldman WB; Clark AJ; Safaee M; Ames CP; Parsa AT

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of California, San Francisco, California.

RESUMEN / SUMMARY: - Object Myxopapillary ependymomas (MPEs) are rare WHO Grade I tumors found in the conus medullaris, cauda equina, and filum terminale. Treatment generally consists of resection with or without adjuvant radiotherapy. Evidence-based guidelines for surgical management are lacking due to the rarity of this tumor. Methods An English-language PubMed search was performed using the key words “myxopapillary” and “ependymoma.” Reports describing fewer than 3 patients or those lacking data on the extent of resection or radiotherapy were excluded. A total of 28 articles describing 475 patients met the authors’ inclusion criteria. Patients were grouped by extent of resection and whether or not they underwent adjuvant radiotherapy. Differences in recurrence rates were assessed by chi-square test. Results The overall recurrence rate was 15.5% in patients treated by gross-total resection (GTR) and 32.6% in patients treated by subtotal resection (STR), irrespective of whether they underwent adjuvant therapy ($p < 0.001$). Regardless of the extent of resection, adjuvant radiotherapy was not associated with a decrease in recurrence rates. The overall recurrence rate was 15.6% in patients who underwent GTR and radiotherapy compared with 15.9% in patients who underwent GTR alone ($p = 0.58$), and it was 29.3% in patients who underwent STR and radiotherapy compared with 35.1% in those who underwent STR alone ($p = 0.53$). The difference between recurrence rates for patients who underwent GTR alone versus STR and radiotherapy was statistically significant ($p = 0.02$). Subgroup analysis demonstrated significantly

higher recurrence rates in pediatric patients compared with adults (40.5% vs 23.4%, respectively; $p = 0.02$). Even in the setting of GTR alone, recurrence rates were higher in pediatric patients (65% vs 7.6%; $p < 0.001$). Conclusions Gross-total resection alone is associated with decreased recurrence rates compared with STR with or without radiotherapy. The authors' results suggest that treatment goals should include attempted GTR whenever possible. The observation that children benefitted from radiation therapy to a greater extent than did adults suggests that biological differences between tumors in these patient populations warrants more rigorous scientific studies.

[578]

TÍTULO / TITLE: - Nimotuzumab as a radiosensitizing agent in the treatment of high grade glioma: challenges and opportunities.

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

REVISTA / JOURNAL: - Onco Targets Ther. 2013 Jul 24;6:931-42. doi: 10.2147/OTT.S33532. Print 2013.

- Enlace al texto completo (gratis o de pago) [2147/OTT.S33532](#)

AUTORES / AUTHORS: - Diaz-Miqueli A; Martinez GS

INSTITUCIÓN / INSTITUTION: - Department of System Biology, Center of Molecular Immunology, Havana, Cuba.

RESUMEN / SUMMARY: - Nimotuzumab is a humanized monoclonal antibody that binds specifically to human epidermal growth factor receptor, blocking receptor activation. Evidence of its radiosensitizing capacity has been widely evaluated. This article integrates published research findings regarding the role of nimotuzumab in the treatment of high grade glioma in combination with radiotherapy or radiochemotherapy in adult and pediatric populations. First, the mechanisms of action of nimotuzumab and its current applications in clinical trials containing both radiation and chemoradiation therapies are reviewed. Second, a comprehensive explanation of potential mechanisms driving radiosensitization by nimotuzumab in experimental settings is given. Finally, future directions of epidermal growth factor receptor targeting with nimotuzumab in combination with radiation containing regimens, based on its favorable toxicity profile, are proposed. It is hoped that this review may provide further insight into the rational design of new approaches employing nimotuzumab as a useful alternative for the therapeutic management of high grade glioma.

[579]

TÍTULO / TITLE: - Interfractional variation of radiation target and adaptive radiotherapy for totally resected glioblastoma.

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

REVISTA / JOURNAL: - J Korean Med Sci. 2013 Aug;28(8):1233-7. doi: 10.3346/jkms.2013.28.8.1233. Epub 2013 Jul 31.

●● Enlace al texto completo (gratuito o de pago) [3346/jkms.2013.28.8.1233](https://doi.org/10.3346/jkms.2013.28.8.1233)

AUTORES / AUTHORS: - Kim TG; Lim do H

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Samsung Changwon Hospital, Sungkyunkwan University School of Medicine, Changwon, Korea.

RESUMEN / SUMMARY: - This study aimed to evaluate the effects of volume adapted re-planning for radiotherapy (RT) after gross total resection (GTR) for glioblastoma. Nineteen patients with glioblastoma who underwent GTR and postoperative RT were analyzed. The volumes of the surgical cavity on computed tomography (CT) obtained one day after GTR (CT0), the first RT simulation CT (sim-CT1), and the second simulation CT for the boost RT plan (sim-CT2) were compared. The boost RT plan was based on the surgical cavity observed on the sim-CT2 (boost RTP2) and was compared with that based on the surgical cavity observed on the sim-CT1 (boost RTP1). The volume reduction ratios were 14.4%-51.3% (median, 29.0%) between CT0 and sim-CT1 and -7.9%-71.9% (median, 34.9%) between sim-CT1 and sim-CT2 ($P < 0.001$). The normal brain volumes in boost RTP1 were significantly reduced in boost RTP2, especially at high dose levels. Target volume in sim-CT2 which was not covered with the boost RTP1, developed in five cases (26.3%). The surgical cavity volume was reduced following surgery in patients with glioblastoma who underwent GTR. The application of volume-adapted re-planning during RT could decrease the irradiated volume of normal brain and prevent a target miss for boost RT.

[580]

TÍTULO / TITLE: - Susceptibility-weighted imaging: The value in cerebral astrocytomas grading.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](https://doi.org/10.4103/0028-3886.117617)

REVISTA / JOURNAL: - Neurol India. 2013 Jul-Aug;61(4):389-95. doi: 10.4103/0028-3886.117617.

●● Enlace al texto completo (gratuito o de pago) [4103/0028-3886.117617](https://doi.org/10.4103/0028-3886.117617)

AUTORES / AUTHORS: - Zhang H; Tan Y; Wang XC; Qing JB; Wang L; Wu XF; Zhang L; Liu QW

INSTITUCIÓN / INSTITUTION: - Department of Radiology, First Clinical Medical College, Shanxi Medical University, Taiyuan 030001, Shanxi Province, China.

RESUMEN / SUMMARY: - Objective: To investigate the value of susceptibility weighted imaging (SWI) in evaluating the histopathologic grade of cerebral astrocytomas and compare the relative value of SWI and conventional magnetic resonance imaging (MRI) sequences. Materials and Methods: This is an analysis of 26 untreated patients with pathologically confirmed astrocytomas. The tumors were classified as low grade (grade I-II: 12 cases) or high grade (grade III-IV: 14 cases). Imaging was performed with a 3.0 T MRI scanner. Conventional sequences [T1-weighted imaging (T1WI), contrast enhanced T1WI (CE-T1WI), T2-weighted imaging (T2WI), and T2 FLuid Attenuated

Inversion Recovery (T2FLAIR)] and SWI sequence (including CE-SWI) were done. The number of small vessels and the amount of blood products in the tumors were determined for each sequence. Differences between the two groups were analyzed statistically. Results: SWI was more sensitive than conventional sequences (T1WI, CE-T1WI, T2WI, and T2FLAIR) in visualizing small vessels and microhemorrhages in cerebral astrocytomas ($P < 0.01$). CE-SWI was better than CE-T1WI sequences for visualizing tumor small vessels and microhemorrhages. SWI visualized greater numbers of small vessels and areas of microhemorrhages in high-grade tumors than in low-grade tumors ($P < 0.01$). This was especially true after contrast administration ($P < 0.01$). Conclusion: SWI plays an important role in astrocytoma grading, especially for enhanced astrocytomas after contrast injection. CE-SWI was better than CE-T1WI in visualizing tumor architecture.

[581]

TÍTULO / TITLE: - The expression and clinical significance of melanoma-associated antigen-A1, -A3 and -A11 in glioma.

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

REVISTA / JOURNAL: - Oncol Lett. 2013 Jul;6(1):55-62. Epub 2013 May 15.

●● [Enlace al texto completo \(gratis o de pago\) 3892/ol.2013.1351](#)

AUTORES / AUTHORS: - Guo L; Sang M; Liu Q; Fan X; Zhang X; Shan B

INSTITUCIÓN / INSTITUTION: - Department of Neurology, The Fourth Clinical Hospital of Hebei Medical University, Shijiazhuang, Hebei 050011, P.R. China ; Research Center, The Fourth Clinical Hospital of Hebei Medical University, Shijiazhuang, Hebei 050011, P.R. China.

RESUMEN / SUMMARY: - Melanoma-associated antigens (MAGEs) were initially identified in melanoma and have since been widely studied. Melanoma-associated antigen-As (MAGE-As), a subfamily of MAGEs, are expressed in germ cells and various types of cancer, and are considered to be ideal targets for cancer immunotherapy. Glial cells and melanocytes originate from the neural ectoderm, so tumors derived from these two types of cells, i.e. gliomas and melanomas, may have common biological characteristics. However, studies on the expression of the MAGE-A family in gliomas are limited and conflicting. In the present study, the expression levels of MAGE-A1, -A3 and -A11 were detected by immunohistochemistry, and the association of their expression levels with the clinicopathological parameters, overall survival (OS) and ki-67 labeling indices of glioma patients were analyzed. The results showed that i) the expression levels of MAGE-A1, -A3 and -A11 proteins in the glioma tissues were 64.1, 51.3 and 57.7%, respectively and that no MAGE-A1, -A3 or -A11 expression was detected in the normal brain specimens; ii) the expression levels of MAGE-A1 and -A11 increased with ascending pathological grades and were positively correlated with the ki-67 labeling index; and iii) the OS of the patients in the groups with high MAGE-A1

($P=0.005$) and -A11 ($P=0.019$) expression was statistically lower compared with the groups with low expression and no significant differences in OS were detected between the patients in the groups with high and low MAGE-A3 expression ($P=0.304$). Based on these results, we conclude that MAGE-A1, -A3 and -A11 may be used as ideal targets for glioma immunotherapy, and that MAGE-A1 and -A11 expression may be involved in tumor cell proliferation. These proteins may be potential indicators of a poor prognosis in glioma patients.

[582]

TÍTULO / TITLE: - Recurrent depressive illness or craniopharyngioma: a diagnostic dilemma.

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

REVISTA / JOURNAL: - West Afr J Med. 2013 Apr-Jun;32(2):153-5.

AUTORES / AUTHORS: - Yusuf AJ; Mahmud MR; Ibinaiye PO; Liman AA

INSTITUCIÓN / INSTITUTION: - Department of Psychiatry, Ahmadu Bello University Teaching Hospital Shika- Zaria.

RESUMEN / SUMMARY: - BACKGROUND: Brain tumors have been associated with various psychiatric and neurological manifestations. However in some patients with brain tumors psychiatric symptom might be the only clinical presentation for various lengths of time. As such they would be treated as straight forward psychiatric disorders. OBJECTIVE: To report a case of craniopharyngioma presenting as recurrent depressive illness in a 42 years old man. METHODS: Clinical follow up of a patient presenting with recurrent depressive illness till death RESULTS: recurrent severe depressive illness in the absence of focal neurological deficit that is unresponsive to anti-depressant might be due to intracranial neoplasm. CONCLUSION: Brain tumors can sometime present as psychiatric disorders and be difficult to detect in the absences of focal neurological deficit and Neuro-imaging studies.

[583]

TÍTULO / TITLE: - Recurrent depressive illness or craniopharyngioma: a diagnostic dilemma.

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

REVISTA / JOURNAL: - West Afr J Med. 2013 Apr-Jun;32(2):63-5.

AUTORES / AUTHORS: - Yusuf AJ; Mahmud MR; Ibinaiye PO; Liman AA

INSTITUCIÓN / INSTITUTION: - Department of Surgery, University College Hospital Ibadan, Nigeria.

RESUMEN / SUMMARY: - BACKGROUND: Laparoscopic surgery requires acquisition of new skills such as hand eye coordination of instruments whose working tips can only be seen in two dimensions on a monitor screen and depth perception. Simulators have been demonstrated as necessary to acquire these skills safely. However these

simulators are expensive and not readily available in developing countries. METHODS: I describe a cheap homemade adaptation of a laparoscopic trainer using a polyethylene fluid container, a webcam and a laptop computer as a monitor. This simulator can be easily assembled by any surgical resident for use in his private time. CONCLUSION: This simulator for laparoscopic surgery is cheap and can be readily assembled. A major limitation is the fixity of the camera which limits the working area to within ten to thirty centimeters of the camera. On the contrary the inability to alter the camera position eliminates the need for an assistant to hold the camera.

[584]

TÍTULO / TITLE: - Detection of comorbidities and synchronous primary tumours via thoracic radiography and abdominal ultrasonography and their influence on treatment outcome in dogs with soft tissue sarcomas, primary brain tumours and intranasal tumours.

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

REVISTA / JOURNAL: - Vet Comp Oncol. 2013 Aug 23. doi: 10.1111/vco.12063.

●● Enlace al texto completo (gratis o de pago) [1111/vco.12063](#)

AUTORES / AUTHORS: - Bigio Marcello A; Gieger TL; Jimenez DA; Abigail Granger L

INSTITUCIÓN / INSTITUTION: - Department of Veterinary Clinical Sciences, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA, USA.

RESUMEN / SUMMARY: - Canine soft tissue sarcomas (STS), primary brain tumours and intranasal tumours are commonly treated with radiotherapy (RT). Given the low metastatic potential of these tumours, recommendations regarding imaging tests as staging are variable among institutions. The purpose of our study was to describe thoracic radiographic and abdominal ultrasonographic findings in dogs with these neoplasms and to investigate association of abnormal findings with alterations in recommended treatment. Medical records from 101 dogs, each having thoracic radiographs and abdominal ultrasound performed as part of their staging, were reviewed. In 98 of 101 (97%), imaging abnormalities were detected, 27% of which were further investigated with fine needle aspiration cytology or biopsy. Nine percent of the detected abnormalities were considered serious comorbidities that altered treatment recommendations, including 3 (3%) which were confirmed as synchronous primary neoplasms. These findings may influence recommendations regarding the decision to perform thoracic radiographs and abdominal ultrasound prior to initiation of RT.

[585]

TÍTULO / TITLE: - Reciprocal Activation of Transcription Factors Underlies the Dichotomy between Proliferation and Invasion of Glioma Cells.

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

REVISTA / JOURNAL: - PLoS One. 2013;8(8):e72134. doi: 10.1371/journal.pone.0072134.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0072134](https://doi.org/10.1371/journal.pone.0072134)

AUTORES / AUTHORS: - Dhruv HD; McDonough Winslow WS; Armstrong B; Tuncali S; Eschbacher J; Kislin K; Loftus JC; Tran NL; Berens ME

INSTITUCIÓN / INSTITUTION: - Translational Genomics Research Institute, Phoenix, Arizona, United States of America.

RESUMEN / SUMMARY: - Histology of malignant glioma depicts dense proliferative areas rich in angiogenesis as well as dissemination of neoplastic cells into adjacent brain tissue. Although the mechanisms that trigger transition from proliferative to invasive phenotypes are complex, the dichotomy of cell proliferation and migration, the “Go or Grow” hypothesis, argues for specific and coordinated regulation of these phenotypes. We investigated transcriptional elements that accompany the phenotypes of migration and proliferation, and consider the therapeutic significance of the “Go or Grow” hypothesis. Interrogation of matched core and rim regions from human glioblastoma biopsy specimens in situ (n = 44) revealed higher proliferation (Ki67 labeling index) in cells residing at the core compared to the rim. Profiling activated transcription factors in a panel of migration-activated versus migration-restricted GBM cells portrayed strong NF-kappaB activity in the migratory cell population. In contrast, increased c-Myc activity was found in migration-restricted proliferative cells. Validation of transcriptional activity by NF-kappaB- or c-Myc-driven GFP or RFP, respectively, showed an increased NF-kappaB activity in the active migrating cells, whereas the proliferative, migration restricted cells displayed increased c-Myc activity. Immunohistochemistry on clinical specimens validated a robust phosphorylated c-Myc staining in tumor cells at the core, whereas increased phosphorylated NF-kappaB staining was detected in the invasive tumor cells at the rim. Functional genomics revealed that depletion of c-Myc expression by siRNA oligonucleotides reduced cell proliferation in vitro, but surprisingly, cell migration was enhanced significantly. Conversely, inhibition of NF-kappaB by pharmacological inhibitors, SN50 or BAY-11, decreased both cell migration in vitro and invasion ex vivo. Notably, inhibition of NF-kappaB was found to have no effect on the proliferation rate of glioma cells. These findings suggest that the reciprocal and coordinated suppression/activation of transcription factors, such as c-Myc and NF-kappaB may underlie the shift of glioma cells from a “growing-to-going” phenotype.

[586]

TÍTULO / TITLE: - miR-106^a-5p Inhibits the Proliferation and Migration of Astrocytoma Cells and Promotes Apoptosis by Targeting FASTK.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 27;8(8):e72390. doi: 10.1371/journal.pone.0072390.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0072390](https://doi.org/10.1371/journal.pone.0072390)

AUTORES / AUTHORS: - Zhi F; Zhou G; Shao N; Xia X; Shi Y; Wang Q; Zhang Y; Wang R; Xue L; Wang S; Wu S; Peng Y; Yang Y

INSTITUCIÓN / INSTITUTION: - Modern Medical Research Center, Third Affiliated Hospital of Soochow University, Changzhou, Jiangsu, China.

RESUMEN / SUMMARY: - Astrocytomas are common malignant intracranial tumors that comprise the majority of adult primary central nervous system tumors. MicroRNAs (miRNAs) are small, non-coding RNAs (20-24 nucleotides) that post-transcriptionally modulate gene expression by negatively regulating the stability or translational efficiency of their target mRNAs. In our previous studies, we found that the downregulation of miR-106^a-5p in astrocytomas is associated with poor prognosis. However, its specific gene target(s) and underlying functional mechanism(s) in astrocytomas remain unclear. In this study, we used mRNA microarray experiments to measure global mRNA expression in the presence of increased or decreased miR-106^a-5p levels. We then performed bioinformatics analysis based on multiple target prediction algorithms to obtain candidate target genes that were further validated by computational predictions, western blot analysis, quantitative real-time PCR, and the luciferase reporter assay. Fas-activated serine/threonine kinase (FASTK) was identified as a direct target of miR-106^a-5p. In human astrocytomas, miR-106^a-5p is downregulated and negatively associated with clinical staging, whereas FASTK is upregulated and positively associated with advanced clinical stages, at both the protein and mRNA levels. Furthermore, Kaplan-Meier analysis revealed that the reduced expression of miR-106^a-5p or the increased expression of FASTK is significantly associated with poor survival outcome. These results further supported the finding that FASTK is a direct target gene of miR-106^a-5p. Next, we explored the function of miR-106^a-5p and FASTK during astrocytoma progression. Through gain-of-function and loss-of-function studies, we demonstrated that miR-106^a-5p can significantly inhibit cell proliferation and migration and can promote cell apoptosis in vitro. The knockdown of FASTK induced similar effects on astrocytoma cells as those induced by the overexpression of miR-106^a-5p. These observations suggest that miR-106^a-5p functions as a tumor suppressor during the development of astrocytomas by targeting FASTK.

[587]

TÍTULO / TITLE: - Intradural intraneural hemorrhagic cyst resulting in progressive cauda equina syndrome after anticoagulation therapy: case report.

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

REVISTA / JOURNAL: - Spine (Phila Pa 1976). 2013 Sep 15;38(20):E1288-90. doi: 10.1097/BRS.0b013e31829e1440.

●● Enlace al texto completo (gratis o de pago) [1097/BRS.0b013e31829e1440](#)

AUTORES / AUTHORS: - Hsieh PC; Jung SM; Wu CT; Chen JF; Lee ST

INSTITUCIÓN / INSTITUTION: - 1Departments of Neurosurgery 2Department of Pathology, Chang Gung Memorial Hospital, Chang Gung University and Medical College, Tao-Yuan, Taiwan, ROC.

RESUMEN / SUMMARY: - Study Design: Case report. Objective: To report a case of lumbar intraneural hemorrhagic cyst after anticoagulation therapy that caused progressive radiculopathy and cauda equina syndrome. The possible pathogenic mechanism, associated diseases, and treatment options are discussed. Summary of Background Data: Various pathologic processes can cause progressive cauda equina syndrome. However, there have been no reports of progressive cauda equina syndrome due to compression from an intraneural hemorrhagic cyst after anticoagulation therapy. Methods: A case of lumbar intradural intraneural hemorrhagic cyst with progressive cauda equina syndrome after anticoagulation therapy is presented. Results: A 42-year-old female patient complained at presentation of progressive bilateral lower extremity radiating pain, numbness and urinary difficulty during the previous 2 months. Lumbar magnetic resonance imaging (MRI) revealed an L1 cystic lesion with marked mass effect on the surrounding nerve roots. Complete drainage and excision of the lesion was performed which resulted in excellent postoperative symptoms relief. Pathologic examination revealed no definite neoplastic process except some nerve fibers with hemosiderin stain along the cyst wall. Based on a combination of intraoperative findings and pathology, an intradural intraneural hemorrhagic cyst that developed after systemic anticoagulation therapy was diagnosed. Conclusion: This is the first report of an intradural intraneural hemorrhagic cyst causing progressive cauda equina syndrome due to anticoagulation therapy. Surgical excision of the cyst is the definite treatment of choice.

[588]

TÍTULO / TITLE: - Convection-enhanced delivery of nanodiamond drug delivery platforms for intracranial tumor treatment.

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

REVISTA / JOURNAL: - Nanomedicine. 2013 Aug 3. pii: S1549-9634(13)00354-7. doi: 10.1016/j.nano.2013.07.013.

●● Enlace al texto completo (gratis o de pago) [1016/j.nano.2013.07.013](https://doi.org/10.1016/j.nano.2013.07.013)

AUTORES / AUTHORS: - Xi G; Robinson E; Mania-Farnell B; Vanin EF; Shim KW; Takao T; Allender EV; Mayanil CS; Soares MB; Ho D; Tomita T

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Neurosurgery, Ann & Robert H. Lurie Children's Hospital of Chicago, Northwestern University Feinberg School of Medicine, Chicago, IL, USA; Falk Brain Tumor Center, Ann & Robert H. Lurie Children's Hospital of Chicago, Northwestern University Feinberg School of Medicine, Chicago, IL, USA; Development Biology Department, Ann & Robert H. Lurie Children's Hospital of Chicago, Northwestern University Feinberg School of Medicine, Chicago, IL, USA. Electronic address: gxi@luriechildrens.org.

RESUMEN / SUMMARY: - This study examined a novel drug delivery system for treatment of malignant brain gliomas: DOX complexed with nanodiamonds (ND-Dox), and administered via convection-enhanced delivery (CED). Drug retention and toxicity were examined in glioma cell lines, and distribution, retention and toxicity were examined in normal rat parenchyma. Efficacy was assessed in a bioluminescence rodent tumor model. NDs markedly enhanced DOX uptake and retention in glioma cells. ND-Dox delivered via CED extended DOX retention and localized DOX toxicity in normal rodent parenchyma, and was significantly more efficient at killing tumor cells than uncomplexed DOX. Outcomes from this work suggest that CED of ND-Dox is a promising approach for brain tumor treatment.

[589]

TÍTULO / TITLE: - Biodistribution and Subcellular Localization of an Unnatural Boron-Containing Amino Acid (Cis-ABCPC) by Imaging Secondary Ion Mass Spectrometry for Neutron Capture Therapy of Melanomas and Gliomas.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 18;8(9):e75377. doi: 10.1371/journal.pone.0075377.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0075377](https://doi.org/10.1371/journal.pone.0075377)

AUTORES / AUTHORS: - Chandra S; Barth RF; Haider SA; Yang W; Huo T; Shaikh AL; Kabalka GW

INSTITUCIÓN / INSTITUTION: - Department of Biomedical Engineering, Cornell University, Ithaca, New York, United States of America.

RESUMEN / SUMMARY: - The development of new boron-delivery agents is a high priority for improving the effectiveness of boron neutron capture therapy. In the present study, 1-amino-3-borono-cyclopentanecarboxylic acid (cis-ABCPC) as a mixture of L- and D- enantiomers was evaluated in vivo using the B16 melanoma model for the human tumor and the F98 rat glioma as a model for human gliomas. A secondary ion mass spectrometry (SIMS) based imaging instrument, CAMECA IMS 3F SIMS Ion Microscope, was used for quantitative imaging of boron at 500 nm spatial resolution. Both in vivo and in vitro studies in melanoma models demonstrated that boron was localized in the cytoplasm and nuclei with some cell-to-cell variability. Uptake of cis-ABCPC in B16 cells was time dependent with a 7.5:1 partitioning ratio of boron between cell nuclei and the nutrient medium after 4 hrs. incubation. Furthermore, cis-ABCPC delivered boron to cells in all phases of the cell cycle, including S-phase. In vivo SIMS studies using the F98 rat glioma model revealed an 8:1 boron partitioning ratio between the main tumor mass and normal brain tissue with a 5:1 ratio between infiltrating tumor cells and contiguous normal brain. Since cis-ABCPC is water soluble and can cross the blood-brain-barrier via the L-type amino acid transporters (LAT), it may accumulate preferentially in infiltrating tumor cells in normal brain due to up-regulation of LAT in high grade gliomas. Once trapped inside the tumor cell, cis-ABCPC

cannot be metabolized and remains either in a free pool or bound to cell matrix components. The significant improvement in boron uptake by both the main tumor mass and infiltrating tumor cells compared to those reported in animal and clinical studies of p-boronophenylalanine strongly suggest that cis-ABCPC has the potential to become a novel new boron delivery agent for neutron capture therapy of gliomas and melanomas.

[590]

TÍTULO / TITLE: - Disrupting the CXCL12/CXCR4 axis disturbs the characteristics of glioblastoma stem-like cells of rat RG2 glioblastoma.

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

REVISTA / JOURNAL: - Cancer Cell Int. 2013 Aug 21;13(1):85.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1475-2867-13-85](#)

AUTORES / AUTHORS: - Lee CC; Lai JH; Hueng DY; Ma HI; Chung YC; Sun YY; Tsai YJ; Wu WB; Chen CL

RESUMEN / SUMMARY: - BACKGROUND: Glioblastoma stem-like cells (GSC) have been shown to promote tumor growth, tumor-associated neovascularization, therapeutic resistance, and metastasis. CXCR4 receptors have been found involved in the proliferation, metastasis, angiogenesis, and drug-resistant characteristics of glioblastoma. However, the role of CXCR4 in modulating the stem-like cell properties of rat glioblastoma remains ambiguous. METHODS: To explore the role of the CXCL12/CXCR4 axis in maintaining rat GSC properties, we disrupted the CXCR4 signaling by using small hairpin interfering RNA (shRNA). To investigate the role of the CXCL12/CXCR4 axis in maintaining rat GSC properties, we used a spheroid formation assay to assess the stem cell self-renewal properties. A western blot analysis and PCR arrays were used to examine the genes involved in proliferation, self-renewal, and cancer drug resistance. Finally, DNA content and flow cytometry, an immunohistochemical analysis, and methylcellulose colony formation, in vitro invasive and intracranial injection xenograft assays were employed to examine the disruptive effect of CXCR4 on the characteristics of GSCs of the RG2 cell line. RESULTS: Disrupting CXCR4 inhibited the proliferation of RG2 cells both in vitro and in vivo. The spheroid formation assay indicated that CXCR4 was vital for the self-renewal of RG2 GSCs. Disrupting the CXCL12/CXCR4 pathway also reduced the expression of GSC cell markers, including Nestin, ABCG2, and musashi (Msi), and the expression of genes involved in regulating stem cell properties, including Oct4, Nanog, maternal embryonic leucine zipper kinase (MELK), MGMT, VEGF, MMP2, and MMP9. CONCLUSION: The chemokine receptor CXCR4 is crucial for maintaining the self-renewal, proliferation, therapeutic resistance, and angiogenesis of GSCs of rat RG2 glioblastoma.

[591]

TÍTULO / TITLE: - 2'-Hydroxy C16-Ceramide Induces Apoptosis-Associated Proteomic Changes in C6 Glioma Cells.

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

REVISTA / JOURNAL: - J Proteome Res. 2013 Oct 4;12(10):4366-4375. Epub 2013 Sep 12.

●● Enlace al texto completo (gratis o de pago) [1021/pr4003432](#)

AUTORES / AUTHORS: - Kota V; Dhople VM; Fullbright G; Smythe NM; Szulc ZM; Bielawska A; Hama H

INSTITUCIÓN / INSTITUTION: - Department of Biochemistry and Molecular Biology, Medical University of South Carolina, Charleston, South Carolina 29425, United States.

RESUMEN / SUMMARY: - Ceramide is a bioactive sphingolipid involved in regulation of numerous cell signaling pathways. Evidence is accumulating that differences in ceramide structure, such as N-acyl chain length and desaturation of sphingoid base, determine the biological activities of ceramide. Using synthetic [®]-2'-hydroxy-C16-ceramide, which is the naturally occurring stereoisomer, we demonstrate that this ceramide has more potent pro-apoptotic activity compared to its (S) isomer or non-hydroxylated C16-ceramide. Upon exposure to [®]-2'-hydroxy-ceramide, C6 glioma cells rapidly underwent apoptosis as indicated by caspase-3 activation, PARP cleavage, chromatin condensation, and annexin V stain. A 2D gel proteomics analysis identified 28 proteins whose levels were altered during the initial 3 h of exposure. Using the list of 28 proteins, we performed a software-assisted pathway analysis to identify possible signaling events that would result in the observed changes. The result indicated that Akt and MAP kinase pathways are among the possible pathways regulated by [®]-2'-hydroxy-ceramide. Experimental validation confirmed that 2'-hydroxy-ceramide significantly altered phosphorylation status of Akt and its downstream effector GSK3beta, as well as p38, ERK1/2, and JNK1/2 MAP kinases. Unexpectedly, robust phosphorylation of Akt was observed within 1 h of exposure to 2'-hydroxy-ceramide, followed by dephosphorylation. Phosphorylation status of MAPKs showed a complex pattern, in which rapid phosphorylation of ERK1/2 was followed by dephosphorylation of p38 and ERK1/2 and phosphorylation of the 46 kDa isoform of JNK1/2. These data indicate that [®]-2'-hydroxy-ceramide regulates multiple signaling pathways by affecting protein kinases and phosphatases with kinetics distinct from that of the extensively studied non-hydroxy-ceramide or its unnatural stereoisomer.

[592]

TÍTULO / TITLE: - Glucocalyxin A, a negative Akt regulator, specifically induces apoptosis in human brain glioblastoma U87MG cells.

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

REVISTA / JOURNAL: - Acta Biochim Biophys Sin (Shanghai). 2013 Sep 15.

●● Enlace al texto completo (gratis o de pago) [1093/abbs/gmt097](#)

AUTORES / AUTHORS: - Xiao X; Cao W; Jiang X; Zhang W; Zhang Y; Liu B; Cheng J; Huang H; Huo J; Zhang X

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Xijing Institute of Clinical Neuroscience, Xijing Hospital, Fourth Military Medical University, Xi'an 710032, China.

RESUMEN / SUMMARY: - Akt is becoming an attractive target in the development of anti-tumor agents. In the present study, we aimed to discover novel negative Akt regulators against malignant glioma. An Akt regulator screening platform performed in an Akt-GFP overexpression cell line was developed, and natural product library was screened and evaluated using this platform. In addition, the cytotoxic effect of the regulator was detected by MTT assay. Cell apoptosis was assayed by Hoechst 33342 staining and flow cytometry analysis. Afterwards, the apoptotic signaling pathway was investigated by western blot analysis. Glucocalyxin A, isolated from *Rabdosia japonica*, was identified as a potent negative regulator of Akt. In human-derived malignant glioma U87MG cells, glucocalyxin A inhibited Akt phosphorylation, suppressed proliferation, and promoted apoptosis in a dose-dependent manner, but not in normal glial cells. Furthermore, glucocalyxin A activated caspase-3, decreased BAD phosphorylation, and reduced the expression of X-linked inhibitor of apoptosis protein. Taken together, these results indicated that glucocalyxin A may become a promising candidate in the treatment of malignant glioma.

[593]

TÍTULO / TITLE: - STAT3 activation promotes oncolytic HSV1 replication in glioma cells.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 2;8(8):e71932. doi: 10.1371/journal.pone.0071932. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0071932](https://doi.org/10.1371/journal.pone.0071932)

AUTORES / AUTHORS: - Okemoto K; Wagner B; Meisen H; Haseley A; Kaur B; Chiocca EA

INSTITUCIÓN / INSTITUTION: - Dardinger Center for Neuro-Oncology and Neurosciences, Department of Neurological Surgery, James Cancer Hospital/Solove Research Institute, the Ohio State University, Columbus, Ohio, United States of America.

RESUMEN / SUMMARY: - Recent studies report that STAT3 signaling is a master regulator of mesenchymal transformation of gliomas and that STAT3 modulated genes are highly expressed in the mesenchymal transcriptome of gliomas. A currently studied experimental treatment for gliomas consists of intratumoral injection of oncolytic viruses (OV), such as oncolytic herpes simplex virus type 1 (oHSV). We have described one particular oHSV (rQNestin34.5) that exhibits potent anti-glioma activity in animal models. Here, we hypothesized that alterations in STAT3 signaling in glioma cells may affect the replicative ability of rQNestin34.5. In fact, human U251 glioma cells engineered to either over-express STAT3 or with genetic down-regulation of STAT3 supported oHSV replication to a significantly higher or lesser degree, respectively, when compared to controls. Administration of pharmacologic agents that increase STAT3 phosphorylation/activation (Valproic Acid) or increase STAT3 levels (Interleukin 6) also significantly enhanced oHSV replication. Instead, administration of inhibitors of

STAT3 phosphorylation/activation (LLL12) significantly reduced oHSV replication. STAT3 led to a reduction in interferon signaling in oHSV infected cells and inhibition of interferon signaling abolished the effect of STAT3 on oHSV replication. These data thus indicate that STAT3 signaling in malignant gliomas enhances oHSV replication, likely by inhibiting the interferon response in infected glioma cells, thus suggesting avenues for possible potentiation of oncolytic virotherapy.

[594]

TÍTULO / TITLE: - Primary Paraganglioma of Thyroid Gland: A Clinicopathologic and Immunohistochemical Analysis of Three Cases with a Review of the Literature.

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

REVISTA / JOURNAL: - Head Neck Pathol. 2013 Aug 13.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s12105-013-0467-7](#)

AUTORES / AUTHORS: - Yu BH; Sheng WQ; Wang J

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Fudan University Shanghai Cancer Center, Fudan University, Shanghai, 200032, China, yubh@shca.org.cn.

RESUMEN / SUMMARY: - Thyroid paraganglioma is an extremely rare tumor and frequently mistaken for other thyroid neoplasms. Increased awareness of its potential presentation in thyroid and its characteristic features is essential for avoiding diagnostic and therapeutic pitfalls. We describe here three additional cases of primary thyroid paraganglioma and analyze their clinical findings and pathological characteristics. Patients included two women and one man presenting with asymptomatic thyroid nodules. Radiological examinations were nonspecific and none had been diagnosed correctly before surgery. On intraoperative frozen section consultation they were all misdiagnosed as carcinomas, either primary or metastatic. However, the permanent sections showed features consistent with paraganglioma. Of note, two cases displayed extension into adjacent thyroid tissues, one of which exhibited increased mitotic activity, confluent tumor necrosis and vascular invasion. Immunohistochemically, the neoplastic chief cells expressed chromogranin, synaptophysin, neuron-specific enolase and CD56, whereas the sustentacular cells were highlighted by S100 protein. All three patients were well with normal hormone secretion, without local recurrence or distant metastasis at last follow-up (range 10-47 months). We further reviewed the literature to summarize the characteristics of this distinctive entity. Albeit being very rare, paraganglioma should be included in the differential diagnosis of hypervascular thyroidal neoplasms. Accurate diagnosis relies on the histopathological findings and adjunctive immunohistochemical studies. To date, all the reported cases have pursued a benign course. Although atypical features seem to have no association with clinical behavior, long time postoperative surveillance with biochemical screening of hormone secretion, cervical ultrasonography and whole-body CT scan is recommended.

[595]

TÍTULO / TITLE: - Molecular MRI differentiation of VEGF receptor-2 levels in C6 and RG2 glioma models.

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

REVISTA / JOURNAL: - Am J Nucl Med Mol Imaging. 2013 Jul 10;3(4):300-11. Print 2013.

AUTORES / AUTHORS: - He T; Smith N; Saunders D; Pittman BP; Lerner M; Lightfoot S; Silasi-Mansat R; Lupu F; Towner RA

INSTITUCIÓN / INSTITUTION: - Advanced Magnetic Resonance Center, Oklahoma Medical Research Foundation Oklahoma City, OK 73104 USA ; Oklahoma Center for Neuroscience, University of Oklahoma Health Sciences Center Oklahoma City, OK 73104 USA.

RESUMEN / SUMMARY: - Vascular endothelial growth factor receptor 2 (VEGFR2) is an important angiogenic marker over-expressed in gliomas. With the use of molecular magnetic resonance imaging (mMRI) differing levels of VEGFR2 can be characterized in vivo with in rodent gliomas varying in angiogenesis. VEGFR2 levels were assessed by intravenous administration of an anti-VEGFR2 probe (anti-VEGFR2-albumin-Gd (gadolinium)-DTPA (diethylene triamine penta acetic acid)-biotin) into C6 or RG2 glioma-bearing rats, and visualized with mMRI. A non-specific IgG was coupled to the albumin-Gd-DTPA-biotin construct as a contrast agent molecular weight control. VEGFR2 levels are heterogeneous in different regions of C6 gliomas, whereas VEGFR2 was more homogenous or evenly distributed in RG2 gliomas. RG2 gliomas have less VEGFR2 within tumor periphery and peri-necrotic ($p < 0.05$) regions, but more VEGFR2 within tumor interior regions ($p < 0.01$), compared to C6 gliomas. mMRI results were confirmed with fluorescence staining and mean fluorescence intensity (MFI) quantification of the anti-VEGFR2 probe in excised glioma and brain tissues, as well as detection of VEGFR2 in C6 and RG2 gliomas and corresponding contralateral brain tissues. Ex vivo VEGFR2 levels were found to be significantly higher in C6 gliomas compared to RG2 tumors ($p < 0.001$), which corresponded with in vivo detection using the VEGFR2 probe. Immunohistochemistry staining for HIF-1 α (hypoxia inducible factor 1 α), which is associated with angiogenesis, indicated higher levels in RG2 ($p < 0.01$) compared to C6 gliomas. The data suggests that C6 gliomas have angiogenesis which is associated more with large blood vessels in tumor periphery and peri-necrotic regions, and less microvascular angiogenesis within the tumor interior, compared to RG2 gliomas.

[596]

TÍTULO / TITLE: - Surgery of tumors of the third ventricle region.

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

REVISTA / JOURNAL: - Chirurgia (Bucur). 2013 Jul-Aug;108(4):456-62.

AUTORES / AUTHORS: - Danaïla L; Radoi M

INSTITUCIÓN / INSTITUTION: - Neurosurgical Department, National Institute of Neurology and Neurovascular Diseases, Bucharest, Romania.

RESUMEN / SUMMARY: - BACKGROUND: The third ventricle is located in the center of the brain, surrounded by critical structures. The authors reported their experience in the surgical treatment of tumors originated from or expanding within the third ventricle, analysing the postoperative results and patient's outcome. MATERIAL AND METHODS: We performed a retrospective study on 120 patients, who had been operated in our neurosurgical department for tumors of the third ventricle and adjacent region over the last 21 years. According to their place of origin, these tumors were divided into primary tumors of the third ventricle (69 cases) and tumors developed from the surrounding structures (51 cases). The patients were operated on via a transcallosal-transventricular approach (58.34%), transcortical parieto-occipital approach (26.67%) or subfrontal approach (15%). Microsurgery has been used in all cases. In 20 patients (16.67%), preoperative ventricular drainage was performed. Stereotactic procedures were not used in this study. RESULTS: The overall mortality in this series was 11.67% (14/120 died). The death was directly correlated to the surgery in 8 cases, to general complications in 3 cases, to recurrence of the tumor in 2 cases, and to shunt malfunction in one case. Perioperative good evolution (GOS 5) was noted in 54 patients (45%), but at one-year follow-up, good neurological evolution was recorded in 72 patients (60%). The long-term neurological outcome recorded neurological impairments in 21.42% of patients, a permanent diabetes insipidus in 5.1% of patients and the persistence of neuropsychological deficits in 28.57%. The recurrence of the tumor has been encountered in 16 patients (13.34%). CONCLUSIONS: Transcallosal approach remains the best method for the microneurosurgical treatment of third ventricle tumors. This route provides the capability for a superior visualization of the entire cavity of the third ventricle through different corridors, and permanent neurological and neuropsychological deficits are not frequent.

[597]

TÍTULO / TITLE: - Glioblastoma: From Molecular Pathology to Targeted Treatment.

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

REVISTA / JOURNAL: - Annu Rev Pathol. 2013 Aug 5.

●● Enlace al texto completo (gratis o de pago) [1146/annurev-pathol-011110-130324](#)

AUTORES / AUTHORS: - Cloughesy TF; Cavenee WK; Mischel PS

INSTITUCIÓN / INSTITUTION: - Department of Neurology and Neuro-Oncology Program, University of California, Los Angeles, CA 90095.

RESUMEN / SUMMARY: - Glioblastoma (GBM) is one of the most lethal human cancers. Genomic analyses are defining the molecular architecture of GBM, uncovering relevant subsets of patients whose disease may require different treatments. Many

pharmacological targets have been revealed, promising to transform patient care through targeted therapies. However, for most patients, clinical responses to targeted inhibitors are either not apparent or not durable. In this review, we address the challenge of developing more effective, molecularly guided approaches for the treatment of GBM patients. We summarize the current state of knowledge regarding molecular classifiers and examine their benefit for stratifying patients for treatment. We survey the molecular landscape of the disease, discussing the challenges raised by acquired drug resistance. Furthermore, we analyze the biochemical features of GBM, suggesting a next generation of drug targets, and we examine the contribution of tumor heterogeneity and its implications. We conclude with an analysis of the experimental approaches and their potential benefit to patients. Expected final online publication date for the Annual Review of Pathology: Mechanisms of Disease Volume 9 is February 28, 2014. Please see annualreviews.org/catalog/pubdates.aspx for revised estimates.

[598]

TÍTULO / TITLE: - Oleanolic Acid Suppresses Migration and Invasion of Malignant Glioma Cells by Inactivating MAPK/ERK Signaling Pathway.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 21;8(8):e72079. doi: 10.1371/journal.pone.0072079.

●● Enlace al texto completo (gratis o de pago) 1371/journal.pone.0072079

AUTORES / AUTHORS: - Guo G; Yao W; Zhang Q; Bo Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Affiliated Hospital of Medical College, Qingdao University, Qingdao, China.

RESUMEN / SUMMARY: - Mitogen-activated protein kinases/Extracellular signal-regulated kinase (MAPK/ERK) pathway is essential for migration and invasion of malignant glioma. It is efficient to inhibit migration and invasion of glioma cells by targeting this pathway. Oleanolic acid (OA) has been well demonstrated to suppress survival, growth and angiogenesis of glioma cells. However, it is still unknown if OA affects the migration and invasion of glioma cells. We utilized U-87 MG glioma cell lines and primary glioma cells from patients to study the effect of OA on migration and invasion of glioma cells with multidisciplinary approaches. In this study, we found that OA significantly decreased the ability of glioma cells to migrate and invade. Epithelial-mesenchymal transition (EMT) of glioma cells was also suppressed by OA treatment. Furthermore, MAPK/ERK pathway was greatly inhibited in glioma cells under OA treatment. MAPK/ERK reactivation induced by a recombinant lentiviral vector, Lv-MEK, was able to rescue the inhibitory effect of OA on migration and invasion of glioma cells. Taken together, we provided evidences that OA was a MAPK/ERK pathway-targeting anti-tumor agent. Although the concentrations we used exceeded its

physiological level, OA may be used to prevent migration and invasion of glioma cells by developing its derivatives with enhanced bioactivity.

[599]

TÍTULO / TITLE: - Non-invasive in vivo assessment of IDH1 mutational status in glioma.

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

REVISTA / JOURNAL: - Nat Commun. 2013 Sep 10;4:2429. doi: 10.1038/ncomms3429.

●● Enlace al texto completo (gratis o de pago) [1038/ncomms3429](#)

AUTORES / AUTHORS: - Chaumeil MM; Larson PE; Yoshihara HA; Danforth OM; Vigneron DB; Nelson SJ; Pieper RO; Phillips JJ; Ronen SM

INSTITUCIÓN / INSTITUTION: - Department of Radiology and Biomedical Imaging, University of California San Francisco, 1700 4th Street, San Francisco, California 94158, USA.

RESUMEN / SUMMARY: - Gain-of-function mutations of the isocitrate dehydrogenase 1 (IDH1) gene are among the most prevalent in low-grade gliomas and secondary glioblastoma. They lead to intracellular accumulation of the oncometabolite 2-hydroxyglutarate, represent an early pathogenic event and are considered a therapeutic target. Here we show, in this proof-of-concept study, that [1-(13)C] alpha-ketoglutarate can serve as a metabolic imaging agent for non-invasive, real-time, in vivo monitoring of mutant IDH1 activity, and can inform on IDH1 status. Using (13)C magnetic resonance spectroscopy in combination with dissolution dynamic nuclear polarization, the metabolic fate of hyperpolarized [1-(13)C] alpha-ketoglutarate is studied in isogenic glioblastoma cells that differ only in their IDH1 status. In lysates and tumours that express wild-type IDH1, only hyperpolarized [1-(13)C] alpha-ketoglutarate can be detected. In contrast, in cells that express mutant IDH1, hyperpolarized [1-(13)C] 2-hydroxyglutarate is also observed, both in cell lysates and in vivo in orthotopic tumours.

[600]

TÍTULO / TITLE: - Hypofractionated stereotactic radiation therapy for recurrent glioblastoma: single institutional experience.

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

REVISTA / JOURNAL: - Radiat Oncol. 2013 Sep 25;8(1):222.

●● Enlace al texto completo (gratis o de pago) [1186/1748-717X-8-222](#)

AUTORES / AUTHORS: - Ciammella P; Podgornii A; Galeandro M; D Abbiero N; Pisanello A; Botti A; Cagni E; Iori M; Iotti C

RESUMEN / SUMMARY: - BACKGROUND: Glioblastoma (GBM) is the most common malignant primary brain tumor in adults. Tumor control and survival have improved with the use of radiotherapy (RT) plus concomitant and adjuvant chemotherapy, but the prognosis remain poor. In most cases the recurrence occurs within 7-9 months after primary treatment. Currently, many approaches are available for the salvage

treatment of patients with recurrent GBM, including resection, re-irradiation or systemic agents, but no standard of care exists. METHODS: We analysed a cohort of patients with recurrent GBM treated with frame-less hypofractionated stereotactic radiation therapy with a total dose of 25 Gy in 5 fractions. RESULTS: Of 91 consecutive patients with newly diagnosed GBM treated between 2007 and 2012 with conventional adjuvant chemo-radiation therapy, 15 underwent salvage RT at recurrence. The median time interval between primary RT and salvage RT was 10.8 months (range, 6--54 months). Overall, patients undergoing salvage RT showed a longer survival, with a median survival of 33 vs. 9.9 months ($p=0.00149$). Median overall survival (OS) from salvage RT was 9.5 months. No patients demonstrated clinically significant acute morbidity, and all patients were able to complete the prescribed radiation therapy without interruption. CONCLUSION: Our results suggest that hypofractionated stereotactic radiation therapy is effective and safe in recurrent GBM. However, until prospective randomized trials will confirm these results, the decision for salvage treatment should remain individual and based on a multidisciplinary evaluation of each patient.

[601]

TÍTULO / TITLE: - WT1 protein expression in astrocytic tumors and its relationship with cellular proliferation index.

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

REVISTA / JOURNAL: - Adv Biomed Res. 2013 Mar 14;2:33. doi: 10.4103/2277-9175.108772.

●● Enlace al texto completo (gratis o de pago) [4103/2277-9175.108772](#)

AUTORES / AUTHORS: - Mahzouni P; Meghdadi Z

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Isfahan University of Medical Sciences, Isfahan, Iran.

RESUMEN / SUMMARY: - BACKGROUND: Although Wilms' tumor gene (WT1) was initially known as a tumor marker in Wilms' tumor, nowadays its role is well known in other sorts of malignancy. This study aimed to evaluate WT1 protein expression levels and its association with cellular proliferation in astrocytic brain tumors by immunohistochemical methods. MATERIALS AND METHODS: This cross-sectional study performed on 73 randomly selected archived tissue samples of astrocytic brain tumors. Sections were observed after immunohistochemical staining regarding WT1 protein expression and MIB-1 staining index. Tumors were classified based on World Health Organization grading system. RESULTS: WT1 protein expression was seen in the majority of samples (97.3%) with significantly higher index in high-grade tumors ($P<0.001$). MIB-1 staining index was also significantly higher in high-grade tumors ($P<0.001$). Moreover, a significantly positive correlation was found between WT1 protein expression and MIB-1 staining index ($r: 0.64, P<0.001$). CONCLUSION: Astrocytic brain tumors express WT1 protein. It was also found that high-grade tumors

are accompanied with higher WT1 protein expression, which is correlated with MIB-1 staining index. WT1 can be used as a marker of malignant cell proliferation and diagnostic tool to differentiate normal astrocytes from neoplastic cells.

[602]

TÍTULO / TITLE: - Malignant tumours of the central nervous system in Kazakhstan - incidence trends from 2004-2011.

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

REVISTA / JOURNAL: - Asian Pac J Cancer Prev. 2013;14(7):4181-6.

AUTORES / AUTHORS: - Igissinov N; Akshulakov S; Igissinov S; Moore M; Adilbekov Y; Gaitova K; Kissaev Y; Mustafina M

INSTITUCIÓN / INSTITUTION: - Central Asia Cancer Institute, Astana, Kazakhstan E-mail : nurbek.igisinov@mail.ru, n.igissinov@gmail.com.

RESUMEN / SUMMARY: - In the article were observed the epidemiological aspects of malignant tumors of the central nervous system (MT CNS) in Kazakhstan in a retrospective study for the years 2004-2011. The material of the study was consolidated accounting data of oncology centers on patients with MT CNS (C70-72) with first time established diagnosis. Calculated were crude, age, standardized (world standard), aligned and predicted incidence of MT CNS among both male and female populations. It was found that over the studied period, there were 4,604 cases of MT CNS. The average annual crude incidence rate of MT CNS in total population was 3.7+/- 0.10/0000. Trends in aligned incidence rates in the whole country had a tendency to increase (T=+0.9%). Defined levels of morbidity MT CNS in the whole population in different regions of Kazakhstan: low up to 2.870/0000, the average from 2.87 to 4.450/0000 and high from 4.450/0000 and above on the basis of which was given the space-time estimate. Age and sex differences in MT CNS incidence were also clearly established.

[603]

TÍTULO / TITLE: - High-grade glioma: refined diagnostics steering stratified therapy.

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

REVISTA / JOURNAL: - Case Rep Oncol. 2013 Jul 13;6(2):387-90. doi: 10.1159/000353887. Print 2013 May.

●● Enlace al texto completo (gratis o de pago) [1159/000353887](https://doi.org/10.1159/000353887)

AUTORES / AUTHORS: - Uhl M; Hau P

INSTITUCIÓN / INSTITUTION: - Department of Neurology and Wilhelm Sander NeuroOncology Unit, University Hospital Regensburg, Regensburg, Germany.

RESUMEN / SUMMARY: - An adequately sampled tumor histology that is evaluated by an experienced neuropathologist is the current international standard for the diagnosis of high-grade gliomas. We present the case of a 30-year-old female for whom clinical and

radiological information dramatically changed the histological diagnosis. We suggest a new algorithm including these parameters to refine the accuracy of histological diagnosis both for standard treatment and centrally reviewed clinical trials.

[604]

TÍTULO / TITLE: - A headache presenting in the emergency room, a clinical manifestation of an unfortunate diagnosis (grade III left frontal anaplastic ependymoma with 1p deletion).

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmj.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Aug 2;2013. pii: bcr2013010217. doi: 10.1136/bcr-2013-010217.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-010217

AUTORES / AUTHORS: - Flores-Robles BJ; Hurtarte-Sandoval AR; Harrison RM; Cuevas CC

INSTITUCIÓN / INSTITUTION: - Department of Rheumatology Service, Puerta de Hierro Hospital Majadahonda, Madrid, España. aldolasa@hotmail.com

RESUMEN / SUMMARY: - An 18-year-old girl presented with a headache and behavioural changes. She was found to have a frontal mass. Neuroimaging revealed an intra-axial mass, located at the left frontal cortical/subcortical region approximately 6x7, 5x7, 5 cm (TxApXL), having a heterogeneous density with cysts and calcification. She had total gross excision of the neoplasm. Histopathological examination revealed an anaplastic ependymoma. Fluorescence in situ hybridisation, a molecular cytogenetic test, reported deletion of 1p without deletion of 19q. The patient had a good postoperative improvement.

[605]

TÍTULO / TITLE: - Resection versus biopsy of glioblastomas in eloquent brain areas.

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

REVISTA / JOURNAL: - Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub. 2013 Jul 29. doi: 10.5507/bp.2013.052.

●● Enlace al texto completo (gratis o de pago) 5507/bp.2013.052

AUTORES / AUTHORS: - Hrabalek L; Kalita O; Vaverka M; Zlevorova M; Ehrmann Jr J; Cechakova E; Adamus M; Novak V; Langova K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Faculty of Medicine and Dentistry, Palacky University Olomouc and University Hospital Olomouc, Czech Republic.

RESUMEN / SUMMARY: - AIM: The aim of this study was to compare resection and biopsy of glioblastoma (GBM) in eloquent brain areas (EBA). METHODS: This was a prospective evaluation of 38 patients with GBM in EBA. 22 were treated by surgical resection and 16 by biopsy. Preoperative KPS, neurological status and size of lesion on MRI were assessed. One week and three months postoperatively KPS, neurological

status and Performance Status (PS) WHO were evaluated. Extent of resection (EOR) and overall survival (OS) were described. Overall mean age of the patients was 64.3 years, the mean lesion size in the resection group was 47.7 mm and in the biopsy group 51.0 mm. RESULTS: Worsening or development of permanent neurological deficits 3 months after surgery were significantly lower in the resection group (23%), than the biopsy group (94%). In the resection group the median pre and postoperative KPS three months after surgery was 80.0. In the biopsy group the median pre and postoperative KPS was 68.1 one week after the procedure. In the resection group, 3 months after surgery, the median PS was 1, in the biopsy group one week after surgery the median PS was 2. The difference was statistically insignificant. The mean OS after resection was 12.2 months, and after biopsy 3.5 months. The difference was highly statistically significant. The mean EOR was 90%. CONCLUSION: This is the first prospective study, to our knowledge, that compares the results of resection and biopsy of primary GBM in EBA. For patients in good clinical condition with tumors in or near EBA, recommended is as radical resection of GBM as possible.

[606]

TÍTULO / TITLE: - Identifying new small molecule anti-invasive compounds for glioma treatment.

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

REVISTA / JOURNAL: - Cell Cycle. 2013 Jul 15;12(14):2200-9. doi: 10.4161/cc.25334.

●● [Enlace al texto completo \(gratis o de pago\) 4161/cc.25334](#)

AUTORES / AUTHORS: - Munson J; Bonner M; Fried L; Hofmekler J; Arbiser J; Bellamkonda R

INSTITUCIÓN / INSTITUTION: - Wallace H. Coulter Department of Biomedical Engineering; Georgia Institute of Technology; Atlanta, GA, USA.

RESUMEN / SUMMARY: - Glioblastoma is a disease with poor survival rates after diagnosis. Treatment of the disease involves debulking of the tumor, which is limited by the degree of invasiveness of the disease. Therefore, a treatment to halt the invasion of glioma is desirable for clinical implementation. There have been several candidate compounds targeting specific aspects of invasion, including cell adhesions, matrix degradation, and cytoskeletal rearrangement, but they have failed clinically for a variety of reasons. New targets against glioma invasion include upstream mediators of these classical targets in an effort to better inhibit invasion with more specificity for cancer. Included in these treatments is a new class of compounds inhibiting the generation of reactive oxygen species by targeting the NADPH oxidases. These compounds stand to inhibit multiple pathways, including nuclear factor kappa B and Akt. By conducting a screen of compounds thought to inhibit these pathways, a new compound to halt invasion was found that may have a beneficial effect against glioma, based on recent publications. Further, there are still limitations to the treatment of

glioblastoma regardless of the discovery of new targets and compounds that should be addressed to better the therapies against this deadly cancer.

[607]

TÍTULO / TITLE: - Mathematical modeling of glioma therapy using oncolytic viruses.

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

REVISTA / JOURNAL: - Math Biosci Eng. 2013 Jun;10(3):565-78. doi: 10.3934/mbe.2013.10.565.

AUTORES / AUTHORS: - Camara BI; Mokrani H; Afenya EK

INSTITUCIÓN / INSTITUTION: - Laboratoire Interdisciplinaire des Environnements Continentaux, Université de Lorraine, CNRS UMR 7360, 8 rue du General Delestraint, 57070 METZ, France. baba-issa.camara@univ-lorraine.fr

RESUMEN / SUMMARY: - Diffuse infiltrative gliomas are adjudged to be the most common primary brain tumors in adults and they tend to blend in extensively in the brain micro-environment. This makes it difficult for medical practitioners to successfully plan effective treatments. In attempts to prolong the lengths of survival times for patients with malignant brain tumors, novel therapeutic alternatives such as gene therapy with oncolytic viruses are currently being explored. Based on such approaches and existing work, a spatio-temporal model that describes interaction between tumor cells and oncolytic viruses is developed. Conditions that lead to optimal therapy in minimizing cancer cell proliferation and otherwise are analytically demonstrated. Numerical simulations are conducted with the aim of showing the impact of virotherapy on proliferation or invasion of cancer cells and of estimating survival times.

[608]

TÍTULO / TITLE: - Meningothelial meningioma in a Malayan sun bear (*Helarctos malayanus*).

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

REVISTA / JOURNAL: - J Vet Diagn Invest. 2013 Sep;25(5):636-40. doi: 10.1177/1040638713499342. Epub 2013 Aug 13.

●● [Enlace al texto completo \(gratis o de pago\) 1177/1040638713499342](#)

AUTORES / AUTHORS: - Chien YC; Lien CY; Guo JC; Chin SC; Chang YP; Liu CH

INSTITUCIÓN / INSTITUTION: - 1Chen-Hsuan Liu, Graduate Institute of Molecular and Comparative Pathobiology, School of Veterinary Medicine, National Taiwan University, No. 1 Section 4, Roosevelt Road, Taipei 106, Taiwan. chhsuliu@ntu.edu.tw.

RESUMEN / SUMMARY: - A 24-year-old, spayed female Malayan sun bear (*Helarctos malayanus*) in the Taipei Zoo (Taipei, Taiwan) showed clinical signs of slowly progressive anorexia, dullness, compulsive pacing, and circling. The animal subsequently developed acute severe stupor and persistent recumbency. Postcontrast study of computed tomography revealed a spheroid, extra-axial mass with strong but

heterogeneous hyperattenuation in the left temporal lobe of the cerebrum. At necropsy, a solitary, well-circumscribed intracranial mass measuring 3 cm x 2.5 cm x 2 cm was attached to the left pyriform lobe with compression of the adjacent neuroparenchyma. Cytological examination obtained from the mass revealed large clumps and sheets of cohesive polyhedral cells with round nuclei, wispy cytoplasm, and indistinct cell borders. Microscopically, the mass was composed of densely packed round to polygonal cells arranged in lobules and small nests. Psammoma bodies, xanthomatous change, and cholesterol deposition were also noted. Immunohistochemical staining of the tumor was positive for vimentin, pancytokeratin, cytokeratin (CK)34BE12, neuron-specific enolase, and epithelial membrane antigen, but negative for glial fibrillary acidic protein and S100 protein. The cytological, histological, and immunohistochemical features were compatible with a meningothelial meningioma.

[609]

TÍTULO / TITLE: - Intracranial arachnoid cysts: Epileptic seizures.

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

REVISTA / JOURNAL: - Neurol India. 2013 Jul-Aug;61(4):343-4. doi: 10.4103/0028-3886.117580.

●● Enlace al texto completo (gratis o de pago) [4103/0028-3886.117580](#)

AUTORES / AUTHORS: - Murthy JM

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Continental Institute of Neuroscience and Rehabilitation, Continental Hospitals, Gachibowli, Hyderabad, Andhra Pradesh, India.

[610]

TÍTULO / TITLE: - Correlation between Cerebral Blood Volume Measurements by Perfusion-Weighted Magnetic Resonance Imaging and Two-Year Progression-Free Survival in Gliomas.

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

REVISTA / JOURNAL: - Neuroradiol J. 2013 Aug 30;26(4):385-95. Epub 2013 Aug 27.

AUTORES / AUTHORS: - Spampinato MV; Schiarelli C; Cianfoni A; Giglio P; Welsh CT; Bisdas S; Rumboldt Z

INSTITUCIÓN / INSTITUTION: - Department of Radiology and Radiological Science, Medical University of South Carolina; Charleston, SC, USA - spampin@musc.edu.

RESUMEN / SUMMARY: - Our goal was to determine whether relative cerebral blood volume (rCBV) can serve as an adjunct to histopathologic grading in the assessment of gliomas, with the hypothesis that rCBV can predict two-year survival. We evaluated 29 newly diagnosed gliomas (13 WHO grade II, seven grade III, nine grade IV; 17

astrocytomas, 12 oligodendroglial tumors). Dynamic susceptibility-weighted contrast-enhanced perfusion MR images and CBV maps were obtained. rCBVmax measurements (maximum tumor CBV/contralateral normal tissue CBV) and progression-free survival (PFS) were recorded. Receiver operating characteristic curves and Kaplan-Meier survival curves were calculated for rCBVmax and histologic grade. rCBVmax measurements differed between gliomas without (2.38 +/- 1.22) and with progression (5.57 +/- 2.84) over two years. The optimal rCBVmax cut-off value to predict progression was 2.95. rCBVmax < 2.95 was a significant predictor of two-year PFS, almost as accurate as WHO grade II. In the pure astrocytoma subgroup, the optimal rCBVmax cut-off value to predict progression was 2.85. In this group rCBVmax < 2.85 was a significant predictor of two-year PFS, an even better predictor of two-year PFS than WHO grade II. rCBVmax can be used to predict two-year PFS in patients with gliomas, independent of pathologic findings, especially in tumors without oligodendroglial components.

[611]

TÍTULO / TITLE: - Expression of heat shock proteins in medulloblastoma.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Aug 30.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.7.PEDS1376](#)

AUTORES / AUTHORS: - Alexiou GA; Vartholomatos G; Stefanaki K; Patereli A; Dova L; Karamoutsios A; Lallas G; Sfakianos G; Moschovi M; Prodromou N

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Children's Hospital "Agia Sofia," Athens;

RESUMEN / SUMMARY: - Object Medulloblastoma (MB) is the most common malignant brain tumor in children. Heat shock proteins (HSPs) comprise a superfamily of proteins that serve as molecular chaperones and are overexpressed in a wide range of human cancers. The purpose of the present study was to investigate the expression of HSP27 (pSer82), HSP27 (pSer15), HSP40, HSP60, HSP70, HSP90-alpha, Akt, and phospho-Akt by multiplex bead array assay of MBs. The results of HSP and Akt expression were correlated with MB subtype; immunohistochemical expression of Ki-67 index, bcl-2, and p53; and patients' prognosis. Methods The authors retrospectively evaluated 25 children with MB who underwent surgery. Immunohistochemical analysis of Ki-67, p53, and bcl-2 expression was performed in all cases. By using multiplex bead array assay, a simultaneous detection of HSP27 (pSer82), HSP27 (pSer15), HSP40, HSP60, HSP70, HSP90-alpha, Akt, and phospho-Akt was performed. Results Medulloblastoma with extensive nodularity had significantly lower HSP27 (pSer15) expression (p = 0.039) but significantly higher HSP60 expression (p = 0.021) than classic MB. Large-cell MB had significantly higher HSP70 expression (p = 0.028) than classic MB. No significant difference was found between HSP27 (pSer82), HSP40, HSP90-alpha, Akt, or phospho-Akt expression and MB subtype. Large-cell MBs had significantly higher Ki-67

index compared with classic MBs ($p = 0.033$). When analyzing all MBs, there was a significant negative correlation between HSP27 (pSer15) and Ki-67 index ($r = -0.475$, $p = 0.016$); a significant positive correlation between HSP70 expression and Ki-67 index ($r = 0.407$, $p = 0.043$); and a significant positive correlation between HSP70 expression and bcl-2 index ($r = 0.491$, $p = 0.023$). Patients with large-cell MB had a worse survival than those with classic MB, but the difference did not reach statistical significance ($p = 0.076$). Conclusions A substantial expression of several HSPs in MB was observed. Given that HSPs represent an attractive strategy for anticancer therapy, further studies, involving larger series of patients, are obviously necessary to clarify the relationship of HSPs with tumor aggressiveness and prognosis.

[612]

TÍTULO / TITLE: - Preclinical evaluation of dipotassium bisperoxo (picolinato) oxovanadate V for the treatment of pediatric low-grade gliomas.

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

REVISTA / JOURNAL: - Future Oncol. 2013 Aug;9(8):1215-29. doi: 10.2217/fon.13.73.

●● [Enlace al texto completo \(gratis o de pago\) 2217/fon.13.73](#)

AUTORES / AUTHORS: - Ajeawung NF; Faure R; Jones C; Kamnasaran D

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, Laval University, 2705 Boulevard Laurier, Local RC9800, Quebec, QC, G1V 4G2, Canada.

RESUMEN / SUMMARY: - AIM: The treatment of pediatric low-grade gliomas with current treatment modalities still remains ineffective among a subset of patients; hence, justifying the need to further investigate more effective therapies. Dipotassium bisperoxo (picolinato) oxovanadate V (Bpv[pic]), is a derivative of the trace metal vanadium and a potent inhibitor of protein tyrosine phosphatases, which are important mediators of oncogenic and tumor suppressive activities in cancers. In this study, we undertook a preclinical evaluation of the antineoplastic functions of Bpv(pic) in the treatment of pediatric low-grade gliomas. MATERIALS & METHODS: We utilized pediatric low-grade glioma cell lines (Res186, Res259 and R286) in a wide variety of cancer assays to determine whether Bpv(pic) can abrogate the neoplastic properties of these cells. RESULTS: Our preclinical evaluation of the antineoplastic properties of Bpv(pic) in pediatric low-grade gliomas reveals a significant dose-dependent decrease in cell viability as a consequence of decreased proliferation and sustained induction of growth arrest and apoptosis. Bpv(pic) significantly decreases cell migration/invasion and anchorage-independent growth in soft agarose. Within cells, Bpv(pic) functions by attenuating CDC25A activity, and by decreasing the expression of multiple protein tyrosine phosphatases, DNA repair genes, microtubule-associated genes, such as PLK1, AURKA and HDAC6, and conversely augmenting the expression of proapoptotic mediators such as BAK, AIFM and CTSL1. CONCLUSION: Collectively, our data strongly suggest novel evidence of Bpv(pic) being a potent antineoplastic drug and a suitable alternative for the treatment of pediatric low-grade gliomas.

[613]

TÍTULO / TITLE: - Lipomatous ganglioneuroma of the retroperitoneum.

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

REVISTA / JOURNAL: - Asian J Surg. 2013 Aug 23. pii: S1015-9584(13)00068-7. doi: 10.1016/j.asjsur.2013.07.011.

●● Enlace al texto completo (gratis o de pago) [1016/j.asjsur.2013.07.011](#)

AUTORES / AUTHORS: - Meng QD; Ma XN; Wei H; Pan RH; Jiang W; Chen FS

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Sixth People's Hospital of Jinan City, Zhangqiu, Shandong Province, China. Electronic address: nosixh@hotmail.com.

RESUMEN / SUMMARY: - Lipomatous ganglioneuroma (LG) is a rare variant of ganglioneuroma that is histologically characterized by a mature adipocytic component admixed with a conventional ganglioneuroma. We report the clinicopathological and immunohistochemical features of an LG in a 44-year-old Chinese male; additionally, we review the literature regarding this type of tumor. Magnetic resonance imaging revealed a left paravertebral soft-tissue mass at the T11-L3 levels. Grossly, the encapsulated neoplasm had a white to yellowish cut surface and rubbery consistency. Microscopic evaluation revealed an encapsulated lesion that consisted of areas of ganglioneuroma admixed with areas of mature fat. By immunohistochemistry, the ganglion cells were positive for chromogranin and synaptophysin, whereas the Schwann cells were positive for vimentin, S-100 protein, and glial fibrillary acidic protein (GFAP). This is the second known report of a retroperitoneal LG. The patient was well and without evidence of disease at 2 years' follow-up.

[614]

TÍTULO / TITLE: - Arachnoid cyst in oculomotor cistern.

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

REVISTA / JOURNAL: - Korean J Radiol. 2013 Sep;14(5):829-31. doi: 10.3348/kjr.2013.14.5.829. Epub 2013 Aug 30.

●● Enlace al texto completo (gratis o de pago) [3348/kjr.2013.14.5.829](#)

AUTORES / AUTHORS: - Kim MK; Choi HS; Jeun SS; Jung SL; Ahn KJ; Kim BS

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul 137-701, Korea.

RESUMEN / SUMMARY: - Oculomotor cistern is normal anatomic structure that is like an arachnoid-lined cerebrospinal fluid-filled sleeve, containing oculomotor nerve. We report a case of arachnoid cyst in oculomotor cistern, manifesting as oculomotor nerve palsy. The oblique sagittal MRI, parallel to the oculomotor nerve, showed well-defined and enlarged subarachnoid spaces along the course of oculomotor nerve. Simple fenestration was done with immediate regression of symptom. When a disease develops in oculomotor cistern, precise evaluation with proper MRI sequence should

be performed to rule out tumorous condition and prevent injury of the oculomotor nerve.

[615]

TÍTULO / TITLE: - 'Double Midbrain' Sign in Extensive Optic Pathway Glioma in Neurofibromatosis-1.

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

REVISTA / JOURNAL: - Indian J Pediatr. 2013 Aug 14.

●● Enlace al texto completo (gratis o de pago) [1007/s12098-013-1186-5](#)

AUTORES / AUTHORS: - Jain P; Sehgal R; Kannan L; Kumar A; Gulati S

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Neurology, Department of Pediatrics, All India Institute of Medical Sciences, New Delhi, 110 029, India.

[616]

TÍTULO / TITLE: - Autoimmune Hypothyroidism Presenting as Pituitary Hyperplasia.

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

REVISTA / JOURNAL: - Indian J Pediatr. 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [1007/s12098-013-1221-6](#)

AUTORES / AUTHORS: - Namburi RP; Karthik TS; Ponnala AR

INSTITUCIÓN / INSTITUTION: - Department of Endocrinology and Metabolism, Narayana Medical College and Superspeciality Hospital, Nellore, 524003, India.

RESUMEN / SUMMARY: - Pituitary hyperplasia with hyperprolactinemia has been described as a rare presentation of primary hypothyroidism. A 12-y-old child presented with intermittent headache, easy fatigability, coarseness of facial features, and hoarseness of voice for 6 mo duration. Brain imaging findings showed pituitary hyperplasia; hormonal assessment revealed primary hypothyroidism and hyperprolactinemia. Pituitary hyperplasia regressed with thyroid hormone replacement therapy. This report describes an unusual case of pituitary hyperplasia with hyperprolactinemia secondary to primary hypothyroidism.

[617]

TÍTULO / TITLE: - Spontaneous remission of hypercortisolism presumed due to asymptomatic tumor apoplexy in ACTH-producing pituitary macroadenoma.

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

REVISTA / JOURNAL: - Arq Bras Endocrinol Metabol. 2013 Aug;57(6):486-9.

AUTORES / AUTHORS: - Machado MC; Gadelha PS; Bronstein MD; Fragoso MC

RESUMEN / SUMMARY: - Cushing's disease (CD) is usually caused by secretion of ACTH by a pituitary corticotroph microadenoma. Nevertheless, 7%-20% of patients present with

ACTH-secreting macroadenomas. Our aim is to report a 36-year-old female patient with CD due to solid-cystic ACTH-macroadenoma followed up during 34 months. The patient presented spontaneous remission due to presumed asymptomatic tumor apoplexy. She showed typical signs and symptoms of Cushing's syndrome (CS). Initial tests were consistent with ACTH-dependent CS: elevated urinary free cortisol, abnormal serum cortisol after low dose dexamethasone suppression test, and elevated midnight salivary cortisol, associated with high plasma ACTH levels. Pituitary magnetic resonance imaging (MRI) showed a sellar mass of 1.2 x 0.8 x 0.8 cm of diameter with supra-sellar extension leading to slight chiasmatic impingement, and showing hyperintensity on T2-weighted imaging, suggesting a cystic component. She had no visual impairment. After two months, while waiting for pituitary surgery, she presented spontaneous resolution of CS. Tests were consistent with remission of hypercortisolism: normal 24-h total urinary cortisol and normal midnight salivary cortisol. Pituitary MRI showed shrinkage of the tumor with disappearance of the chiasmatic compression. She has been free from the disease for 28 months (without hypercortisolism or hypopituitarism). The hormonal and imaging data suggested that silent apoplexy of pituitary tumor led to spontaneous remission of CS. However, recurrence of CS was described in cases following pituitary apoplexy. Therefore, careful long-term follow-up is required.

[618]

TÍTULO / TITLE: - Toward 3D biomimetic models to understand the behavior of glioblastoma multiforme cells.

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

REVISTA / JOURNAL: - Tissue Eng Part B Rev. 2013 Sep 17.

●● Enlace al texto completo (gratis o de pago) [1089/ten.TEB.2013.0227](#)

AUTORES / AUTHORS: - Rao SS; Lannutti J; Viapiano MS; Sarkar A; Winter JO

INSTITUCIÓN / INSTITUTION: - The Ohio State University, William G. Lowrie Department of Chemical Engineering, Columbus, Ohio, United States ; rao.104@osu.edu.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) tumors are one of the most deadly forms of human cancer and despite improved treatments, median survival time for the majority of patients is a dismal 12-15 months. A hallmark of these aggressive tumors is their unique ability to diffusively infiltrate normal brain tissue. To understand this behavior and successfully target the mechanisms underlying tumor progression, it is crucial to develop robust experimental ex vivo disease models. This review discusses current two dimensional (2D) experimental models as well as animal-based models used to examine GBM cell migration, including their advantages and disadvantages. Recent attempts to develop three dimensional (3D) tissue engineering-inspired models and their utility in unraveling the role of microenvironment on tumor cell behaviors are also highlighted. Further, the use of 3D models to bridge the gap between 2D and

animal models is explored. Finally, the broad utility of such models in the context of brain cancer research is examined.

[619]

TÍTULO / TITLE: - Nrf2 is required to maintain the self-renewal of glioma stem cells.

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

REVISTA / JOURNAL: - BMC Cancer. 2013 Aug 10;13:380. doi: 10.1186/1471-2407-13-380.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-380](#)

AUTORES / AUTHORS: - Zhu J; Wang H; Sun Q; Ji X; Zhu L; Cong Z; Zhou Y; Liu H; Zhou M

INSTITUCIÓN / INSTITUTION: - Medical School of Nanjing University, Nanjing, Jiangsu 210089, China.

RESUMEN / SUMMARY: - BACKGROUND: Glioblastomas are deadly cancers that display a functional cellular hierarchy maintained by self-renewing glioma stem cells (GSCs). Self-renewal is a complex biological process necessary for maintaining the glioma stem cells. Nuclear factor erythroid 2-related factor 2 (Nrf2) plays a significant role in protecting cells from endogenous and exogenous stresses. Nrf2 is a key nuclear transcription factor that regulates antioxidant response element (ARE)-containing genes. Previous studies have demonstrated the significant role of Nrf2 in the proliferation of glioblastoma, and in their resistance to radioactive therapies. We examined the effect of knocking down Nrf2 in GSCs. METHODS: Nrf2 expression was down-regulated by shRNA transfected with lentivirus. Expression levels of Nestin, Nrf2, BMI-1, Sox2 and Cyclin E were assessed by western blotting, quantitative polymerase chain reaction (qPCR) and immunohistochemistry analysis. The capacity for self-renewal in vitro was assessed by genesis of colonies. The capacity for self-renewal in vivo was analyzed by tumor genesis of xenografts in nude mice. RESULTS: Knockdown of Nrf2 inhibited the proliferation of GSCs, and significantly reduced the expression of BMI-1, Sox2 and Cyclin E. Knocking down of Nrf2 changed the cell cycle distribution of GSCs by causing an uncharacteristic increase in the proportion of cells in the G2 phase and a decrease in the proportion of cells in the S phase of the cell cycle. CONCLUSIONS: Nrf2 is required to maintain the self-renewal of GSCs, and its down-regulation can attenuate the self-renewal of GSCs significantly.

[620]

TÍTULO / TITLE: - Thymoquinone inhibits autophagy and induces cathepsin-mediated, caspase-independent cell death in glioblastoma cells.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 9;8(9):e72882. doi: 10.1371/journal.pone.0072882.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0072882](#)

AUTORES / AUTHORS: - Racoma IO; Meisen WH; Wang QE; Kaur B; Wani AA

INSTITUCIÓN / INSTITUTION: - Department of Radiology, The Ohio State University Wexner Medical Center, Columbus, Ohio, United States of America.

RESUMEN / SUMMARY: - Glioblastoma is the most aggressive and common type of malignant brain tumor in humans, with a median survival of 15 months. There is a great need for more therapies for the treatment of glioblastoma. Naturally occurring phytochemicals have received much scientific attention because many exhibit potent tumor killing action. Thymoquinone (TQ) is the bioactive compound of the *Nigella sativa* seed oil. TQ has anti-oxidant, anti-inflammatory and anti-neoplastic actions with selective cytotoxicity for human cancer cells compared to normal cells. Here, we show that TQ selectively inhibits the clonogenicity of glioblastoma cells as compared to normal human astrocytes. Also, glioblastoma cell proliferation could be impaired by chloroquine, an autophagy inhibitor, suggesting that glioblastoma cells may be dependent on the autophagic pathway for survival. Exposure to TQ caused an increase in the recruitment and accumulation of the microtubule-associated protein light chain 3-II (LC3-II). TQ also caused an accumulation of the LC3-associated protein p62, confirming the inhibition of autophagy. Furthermore, the levels of Beclin-1 protein expression were unchanged, indicating that TQ interferes with a later stage of autophagy. Finally, treatment with TQ induces lysosome membrane permeabilization, as determined by a specific loss of red acridine orange staining. Lysosome membrane permeabilization resulted in a leakage of cathepsin B into the cytosol, which mediates caspase-independent cell death that can be prevented by pre-treatment with a cathepsin B inhibitor. TQ induced apoptosis, as determined by an increase in PI and Annexin V positive cells. However, apoptosis appears to be caspase-independent due to failure of the caspase inhibitor z-VAD-FMK to prevent cell death and absence of the typical apoptosis related signature DNA fragmentation. Inhibition of autophagy is an exciting and emerging strategy in cancer therapy. In this vein, our results describe a novel mechanism of action for TQ as an autophagy inhibitor selectively targeting glioblastoma cells.

[621]

TÍTULO / TITLE: - Functional Cross Talk between CXCR4 and PDGFR on Glioblastoma Cells Is Essential for Migration.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 2;8(9):e73426. doi: 10.1371/journal.pone.0073426.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0073426](https://doi.org/10.1371/journal.pone.0073426)

AUTORES / AUTHORS: - Sciacaluga M; D'Alessandro G; Pagani F; Ferrara G; Lopez N; Warr T; Gorello P; Porzia A; Mainiero F; Santoro A; Esposito V; Cantore G; Castigli E; Limatola C

INSTITUCIÓN / INSTITUTION: - IRCCS Neuromed, Venafro, Italy.

RESUMEN / SUMMARY: - Glioblastoma (GBM) is the most common and aggressive form of brain tumor, characterized by high migratory behavior and infiltration in brain parenchyma which render classic therapeutic approach ineffective. The migratory behaviour of GBM cells could be conditioned by a number of tissue- and glioma-derived cytokines and growth factors. Although the pro-migratory action of CXCL12 on GBM cells in vitro and in vivo is recognized, the molecular mechanisms involved are not clearly identified. In fact the signaling pathways involved in the pro-migratory action of CXCL12 may differ in individual glioblastoma and integrate with those resulting from abnormal expression and activation of growth factor receptors. In this study we investigated whether some of the receptor tyrosine kinases commonly expressed in GBM cells could cooperate with CXCL12/CXCR4 in their migratory behavior. Our results show a functional cross-talk between CXCR4 and PDGFR which appears to be essential for GBM chemotaxis.

[622]

TÍTULO / TITLE: - Efficacy of rapamycin against glioblastoma cancer stem cells.

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

REVISTA / JOURNAL: - Clin Transl Oncol. 2013 Sep 17.

●● Enlace al texto completo (gratis o de pago) [1007/s12094-013-1109-y](#)

AUTORES / AUTHORS: - Mendiburu-Elicabe M; Gil-Ranedo J; Izquierdo M

INSTITUCIÓN / INSTITUTION: - Centro de Biología Molecular Severo Ochoa (CSIC), Departamento de Biología Molecular, Universidad Autónoma de Madrid, Cantoblanco, 28049, Madrid, España.

RESUMEN / SUMMARY: - **PURPOSE:** The cancer stem cell (CSC) hypothesis suggests a hierarchical organization of cells within the tumor, in which only a subpopulation of stem-like cells is responsible for the rise and progression of the tumor. Glioblastomas (GBM), a lethal brain tumor, may contain a variable proportion of active CSCs. On the other hand, the phosphatidylinositol 3-kinase (PI3 K)/Akt/mammalian target of rapamycin (mTOR) pathway is highly active in up to 70 % of GBM. The kinase mTOR is a key component of the PI3K pathway that mediates the regulation of growth and cell survival signaling. However, clinical trials with rapamycin, an effective inhibitor of mTOR, have not been up to the created expectations and a plausible explanation is missing. In this work, we analyze the effect of rapamycin on the GBM-CSC population. **METHODS:** The efficacy of rapamycin in vitro was tested on two primary cell lines derived from human GBM surgical resections that fulfill the criteria to be considered as CSCs. We confirmed the inhibition state of the PI3K/Akt/mTOR pathway analyzing the mTOR direct target ribosomal protein S6. We assayed the growth rate, CD133 expression and ability of forming colonies in soft agar of the CSCs under different doses of rapamycin. The efficacy of rapamycin in vivo was assayed in a CSCs-based orthotopic xenograft. **RESULTS AND CONCLUSIONS:** We report the efficacy of rapamycin by reducing CSCs proliferation and tumorigenic potential in vitro. Despite

these encouraging results, the efficacy in vivo was very poor. This finding confirms the limited use of rapamycin as a monotherapy for glioblastomas.

[623]

TÍTULO / TITLE: - Suberoylanilide hydroxamic acid (SAHA) causes tumor growth slowdown and triggers autophagy in glioblastoma stem cells.

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

REVISTA / JOURNAL: - Autophagy. 2013 Aug 15;9(10).

AUTORES / AUTHORS: - Chiao MT; Cheng WY; Yang YC; Shen CC; Ko JL

INSTITUCIÓN / INSTITUTION: - Institute of Medicine; Chung Shan Medical University; Taichung, Taiwan; Institute of Medical and Molecular Toxicology; Chung Shan Medical University; Taichung, Taiwan.

RESUMEN / SUMMARY: - Although suberoylanilide hydroxamic acid (SAHA), a histone deacetylase inhibitor, has been used in clinical trials for cancer therapies, its pharmacological effects occur through a poorly understood mechanism. Here, we report that SAHA specifically triggers autophagy and reduces cell viability via promotion of apoptosis in the late phase of glioblastoma stem cells (GSCs). Using a cell line cultured from a glioblastoma biopsy, we investigated the properties and effects of GSCs under SAHA treatment in vitro. In vivo xenograft assays revealed that SAHA effectively caused tumor growth slowdown and the induction of autophagy. SAHA was sufficient to increase formation of intracellular acidic vesicle organelles, recruitment of LC3-II to the autophagosomes, potentiation of BECN1 protein levels and reduced SQSTM1 levels. We determined that SAHA triggered autophagy through the downregulation of AKT-MTOR signaling, a major suppressive cascade of autophagy. Interestingly, upon depletion or pharmacological inhibition of autophagy, SAHA facilitates apoptosis and results in cell death at the early phase, suggesting that SAHA-induced autophagy functions probably act as a prosurvival mechanism. Furthermore, our results also indicated that the inhibition of SAHA-induced autophagy using chloroquine has synergistic effects that further increase apoptosis. Moreover, we found that a reduced dose of SAHA functioned as a potent modulator of differentiation and senescence. Taken together, our results provide a new perspective on the treatment of GSCs, indicating that SAHA is a promising agent for targeting GSCs through the induction of autophagy.

[624]

TÍTULO / TITLE: - Can RNAi-mediated hsp90alpha knockdown in combination with 17-AAG be a therapy for glioma?

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

REVISTA / JOURNAL: - FEBS Open Bio. 2013 Jun 20;3:271-8. doi: 10.1016/j.fob.2013.06.002. Print 2013.

- Enlace al texto completo (gratis o de pago) [1016/j.fob.2013.06.002](https://doi.org/10.1016/j.fob.2013.06.002)

AUTORES / AUTHORS: - Mehta A; Shervington A; Howl J; Jones S; Shervington L

INSTITUCIÓN / INSTITUTION: - Brain Tumour North West (BTNW), Faculty of Science and Technology, University of Central Lancashire (UCLan), Preston PR1 2HE, UK.

RESUMEN / SUMMARY: - Heat shock protein 90 promotes tumor progression and survival and has emerged as a vital therapeutic target. Previously we reported that the combinatorial treatment of 17AAG/sihsp90alpha significantly downregulated Hsp90alpha mRNA and protein levels in Glioblastoma Multiforme (GBM). Here we investigated the ability of cell penetrating peptide (Tat48-60 CPP)-mediated siRNA-induced hsp90alpha knockdown as a single agent and in combination with 17-allylamino-17-demethoxygeldanamycin (17-AAG) to induce tumor growth inhibition in GBM and whether it possessed therapeutic implications. GBM and non-tumorigenic cells exposed to siRNA and/or 17-AAG were subsequently assessed by qRT-PCR, immunofluorescence, FACS analysis, quantitative Akt, LDH leakage and cell viability assays. PAGE was performed for serum stability assessment. A combination of siRNA/17-AAG treatment significantly induced Hsp90alpha gene and protein knockdown by 95% and 98%, respectively, concomitant to 84% Akt kinase activity attenuation, induced cell cycle arrest and tumor-specific cytotoxicity by 88%. Efficient complex formation between CPP and siRNA exhibited improved serum stability of the siRNA with minimal intrinsic toxicity in vitro. The preliminary in vivo results showed that combination therapy induced hsp90alpha knockdown and attenuated Akt kinase activity in intracranial glioblastoma mouse models. The results imply that RNAi-mediated hsp90alpha knockdown increases 17-AAG treatment efficacy in GBM. In addition, the cytotoxic response observed was the consequence of downregulation of hsp90alpha gene expression, reduced Akt kinase activity and S-G2/M cell cycle arrest. These results are novel and highlight the ability of Tat to efficiently deliver siRNA in GBM and suggest that the dual inhibition of Hsp90 has therapeutic potentials.

[625]

TÍTULO / TITLE: - Antihistamine use and immunoglobulin E levels in glioma risk and prognosis.

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

REVISTA / JOURNAL: - Cancer Epidemiol. 2013 Aug 29. pii: S1877-7821(13)00119-7. doi: 10.1016/j.canep.2013.08.004.

●● Enlace al texto completo (gratis o de pago) [1016/j.canep.2013.08.004](#)

AUTORES / AUTHORS: - Amirian ES; Marquez-Do D; Bondy ML; Scheurer ME

INSTITUCIÓN / INSTITUTION: - Dan L. Duncan Cancer Center, Baylor College of Medicine, One Baylor Plaza MS:BCM305, Houston, TX 77030, USA; Department of Pediatrics, Baylor College of Medicine, One Baylor Plaza MS:BCM305, Houston, TX 77030, USA. Electronic address: amirian@bcm.edu.

RESUMEN / SUMMARY: - Objective: An inverse association between personal history of allergies/asthma and glioma risk has been fairly consistently reported in the

epidemiologic literature. However, the role of regular antihistamine use remains controversial due to a small number of studies reporting contradictory findings. We evaluated the association between regular use of oral antihistamines and glioma risk, adjusting for a number of relevant factors (e.g., immunoglobulin E levels and history of chickenpox). Methods: We used a subset of the Harris County Case-Control Study, which included 362 pathologically confirmed glioma cases and 462 cancer-free controls, to evaluate this association using unconditional multivariable logistic regression. These models were run among the overall study population and stratified by allergy status. Cox regression was utilized to examine whether antihistamine use was associated with mortality among all cases and separately among high-grade cases. Results: Antihistamine use was strongly associated with glioma risk among those with a positive allergy/asthma history (OR: 4.19, 95% CI: 2.06-8.51), but not among those with a negative history (OR: 1.59, 95% CI: 0.95-2.67). There were no significant associations between antihistamine use and survival among cases. Conclusion: The current study implies that regular antihistamine use may increase glioma risk. However, several larger studies are necessary before definitive conclusions can be drawn.

[626]

TÍTULO / TITLE: - Differentiation of Primary Central Nervous System Lymphomas from High-Grade Gliomas by rCBV and Percentage of Signal Intensity Recovery Derived from Dynamic Susceptibility-Weighted Contrast-Enhanced Perfusion MR Imaging.

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

REVISTA / JOURNAL: - Clin Neuroradiol. 2013 Aug 31.

●● Enlace al texto completo (gratis o de pago) [1007/s00062-013-0255-5](#)

AUTORES / AUTHORS: - Xing Z; You RX; Li J; Liu Y; Cao DR

INSTITUCIÓN / INSTITUTION: - Department of Radiology, First Affiliated Hospital, Fujian Medical University, 20 Cha-Zhong Road, 350005, Fuzhou, Fujian, P.R. China.

RESUMEN / SUMMARY: - PURPOSE: Primary central nervous system lymphoma (PCNSL) and high-grade glioma (HGG) may have similar enhancement patterns on magnetic resonance imaging (MRI), making the differential diagnosis difficult or even impractical. Relative cerebral blood volume (rCBV) and percentage of signal intensity recovery derived from dynamic susceptibility-weighted contrast-enhanced (DSC) perfusion MR imaging may help distinguish PCNSL from HGG. The purpose of this study was to evaluate the sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and accuracy of these two imaging parameters used alone or in combination for differentiating PCNSL from HGG. METHODS: A total of 12 patients with PCNSL and 26 patients with HGG were examined using a 3T scanner. rCBV and percentage of signal intensity recovery were obtained and receiver operating characteristic (ROC) analysis was performed to determine optimum thresholds for tumor differentiation. Sensitivity, specificity, PPV, NPV, and accuracy for identifying the

tumor types were also calculated. RESULTS: The optimum threshold of 2.56 for rCBV provided sensitivity, specificity, PPV, NPV, and accuracy of 96.2, 90, 92.6, 94.7, and 93.5 %, respectively, for determining PCNSL. A threshold value of 0.89 for percentage of signal intensity recovery optimized differentiation of PCNSL and HGG with a sensitivity, specificity, PPV, NPV, and accuracy of 100, 88.5, 87, 100, and 93.5 %, respectively. Combining rCBV with the percentage of signal intensity recovery further improved the differentiation of PCNSL and HGG with a specificity of 98.5 % and an accuracy of 95.7 %. CONCLUSIONS: The combination of rCBV measurement with percentage of signal intensity recovery can help in more accurate differentiation of PCNSL from HGG.

[627]

TÍTULO / TITLE: - KCa3.1 channels are involved in the infiltrative behavior of glioblastoma in vivo.

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

REVISTA / JOURNAL: - Cell Death Dis. 2013 Aug 15;4:e773. doi: 10.1038/cddis.2013.279.

AUTORES / AUTHORS: - D'Alessandro G; Catalano M; Sciacaluga M; Chece G; Cipriani R; Rosito M; Grimaldi A; Lauro C; Cantore G; Santoro A; Fioretti B; Franciolini F; Wulff H; Limatola C

INSTITUCIÓN / INSTITUTION: - Institute Pasteur, Cenci Bolognetti Foundation, Department of Physiology and Pharmacology, Sapienza University of Rome, Rome, Italy.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is a diffuse brain tumor characterized by high infiltration in the brain parenchyma rendering the tumor difficult to eradicate by neurosurgery. Efforts to identify molecular targets involved in the invasive behavior of GBM suggested ion channel inhibition as a promising therapeutic approach. To determine if the Ca(2+)-dependent K(+) channel KCa3.1 could represent a key element for GBM brain infiltration, human GL-15 cells were xenografted into the brain of SCID mice that were then treated with the specific KCa3.1 blocker TRAM-34 (1-((2-chlorophenyl) (diphenyl)methyl)-1H-pyrazole). After 5 weeks of treatment, immunofluorescence analyses of cerebral slices revealed reduced tumor infiltration and astrogliosis surrounding the tumor, compared with untreated mice. Significant reduction of tumor infiltration was also observed in the brain of mice transplanted with KCa3.1-silenced GL-15 cells, indicating a direct effect of TRAM-34 on GBM-expressed KCa3.1 channels. As KCa3.1 channels are also expressed on microglia, we investigated the effects of TRAM-34 on microglia activation in GL-15 transplanted mice and found a reduction of CD68 staining in treated mice. Similar results were observed in vitro where TRAM-34 reduced both phagocytosis and chemotactic activity of primary microglia exposed to GBM-conditioned medium. Taken together, these results indicate that KCa3.1 activity has an important role in GBM invasiveness in vivo and that its inhibition directly affects glioma cell migration and reduces astrocytosis and microglia activation in response to tumor-released factors. KCa3.1 channel

inhibition therefore constitutes a potential novel therapeutic approach to reduce GBM spreading into the surrounding tissue.

[628]

TÍTULO / TITLE: - Frameless stereotactic radiosurgery for the treatment of primary intracranial tumours in dogs.

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

REVISTA / JOURNAL: - Vet Comp Oncol. 2013 Sep 6. doi: 10.1111/vco.12056.

●● Enlace al texto completo (gratis o de pago) [1111/vco.12056](#)

AUTORES / AUTHORS: - Mariani CL; Schubert TA; House RA; Wong MA; Hopkins AL; Barnes Heller HL; Milner RJ; Lester NV; Lurie DM; Rajon DA; Friedman WA; Bova FJ

INSTITUCIÓN / INSTITUTION: - Department of Small Animal Clinical Sciences, College of Veterinary Medicine, University of Florida, Gainesville, FL, USA.

RESUMEN / SUMMARY: - Stereotactic radiosurgery (SRS) is a procedure that delivers a single large radiation dose to a well-defined target. Here, we describe a frameless SRS technique suitable for intracranial targets in canines. Medical records of dogs diagnosed with a primary intracranial tumour by imaging or histopathology that underwent SRS were retrospectively reviewed. Frameless SRS was used successfully to treat tumours in 51 dogs with a variety of head sizes and shapes. Tumours diagnosed included 38 meningiomas, 4 pituitary tumours, 4 trigeminal nerve tumours, 3 gliomas, 1 histiocytic sarcoma and 1 choroid plexus tumour. Median survival time was 399 days for all tumours and for dogs with meningiomas; cause-specific survival was 493 days for both cohorts. Acute grade III central nervous system toxicity (altered mentation) occurred in two dogs. Frameless SRS resulted in survival times comparable to conventional radiation therapy, but with fewer acute adverse effects and only a single anaesthetic episode required for therapy.

[629]

TÍTULO / TITLE: - Exploitation of adaptive evolution in glioma treatment.

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

REVISTA / JOURNAL: - CNS Oncol. 2013 Mar;2(2):171-179.

●● Enlace al texto completo (gratis o de pago) [2217/cns.12.46](#)

AUTORES / AUTHORS: - Corder R; Black KL; Wheeler CJ

INSTITUCIÓN / INSTITUTION: - Graduate Program in Biomedical Science & Translational Medicine, Maxine Dunitz Neurosurgical Institute, Department of Neurosurgery, Cedars-Sinai Medical Center, 110 N George Burns Road, Davis 2097, Los Angeles, CA 90048, USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is a malignant neoplasm of the CNS with almost uniform lethality. Even with standard-of-care treatments, the prognosis for patients remains dismal. GBM, as with other malignancies, often acquires treatment resistance after an initial response to therapy. Treatment resistance may

come about through the adaptive evolution of tumors in response to selection pressures from treatment interventions and the microenvironment. This review discusses how adaptive evolution might potentially be exploited as a new paradigm in GBM treatment.

[630]

TÍTULO / TITLE: - Robotic-arm stereotactic radiosurgery as a definitive treatment for gelastic epilepsy associated with hypothalamic hamartoma.

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmj.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Sep 11;2013. pii: bcr2013200538. doi: 10.1136/bcr-2013-200538.

●● [Enlace al texto completo \(gratis o de pago\) 1136/bcr-2013-200538](#)

AUTORES / AUTHORS: - Susheela SP; Revannasiddaiah S; Mallarajapatna GJ; Basavalingaiah A

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, HealthCare Global-Bangalore Institute of Oncology, Bengaluru, Karnataka, India.

RESUMEN / SUMMARY: - Gelastic seizures, characterised by paroxysms of pathological laughter, are most often associated with an underlying hypothalamic hamartoma. This report describes the definitive treatment using stereotactic-radiosurgery for a teenaged child whose gelastic epilepsy was found refractory to various antiepileptic drugs. Since surgery was not consented to, the child was referred to us for stereotactic radiosurgery (SRS), which was delivered with robotic-arm -SRS to a dose of 30 Gy in five fractions in five consecutive days. A decrease in the frequency of seizures was noticeable as early as within a week, and at 12 months after the procedure, there has been a total cessation of seizures.

[631]

TÍTULO / TITLE: - Encephalocraniocutaneous lipomatosis: congenital alopecia treatment in a rare neurocutaneous syndrome.

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

REVISTA / JOURNAL: - J Plast Surg Hand Surg. 2013 Sep 27.

●● [Enlace al texto completo \(gratis o de pago\) 3109/2000656X.2013.842293](#)

AUTORES / AUTHORS: - Borgognoni L; Brandani P; Reali F; Gerlini G; Sestini S; Maio V; Reali UM

INSTITUCIÓN / INSTITUTION: - Plastic Surgery Unit, Santa Maria Annunziata Hospital, Health Unit 10 , Florence , Italy.

RESUMEN / SUMMARY: - Abstract Encephalocraniocutaneous lipomatosis (ECCL) is a rare neurocutaneous syndrome that include skin, ocular, and neurological disorders. This study describes the case of a 16-year-old girl that came to observation for the treatment of a congenital alopecia causing great psychological distress. After two

expansion procedures the hairless patch was restored with high patient satisfaction. The case met all the criteria for definite diagnosis of ECCL.

[632]

TÍTULO / TITLE: - Functional changes after treatment of optic pathway paediatric low-grade gliomas.

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

REVISTA / JOURNAL: - Eye (Lond). 2013 Aug 23. doi: 10.1038/eye.2013.186.

●● Enlace al texto completo (gratis o de pago) [1038/eye.2013.186](#)

AUTORES / AUTHORS: - Magli A; Forte R; Cinalli G; Esposito F; Parisi S; Capasso M; Papparella A

INSTITUCIÓN / INSTITUTION: - Pediatric Eye Department, University of Salerno, Salerno, Italy.

RESUMEN / SUMMARY: - Objective To evaluate the functional changes after treatment of paediatric optic pathway gliomas (OPGs). Methods All patients with monofocal OPG seen from January 2004 to January 2011 were included. Best corrected visual acuity (BCVA, LogMAR), contrast sensitivity (Hiding-Heidi low-contrast 'face' test (HH) and Pelli-Robson (PR) contrast sensitivity test), and the Color Test (Ishihara plate) were obtained. Results Twenty-one patients (10 boys and 11 girls with a mean age of 5.5+/-4.4 years at diagnosis) were included in the study. Neurofibromatosis was present in four cases. Eighteen patients (85.7%) were treated with initial surgery and three patients (14.3%) with initial chemotherapy. BCVA was 0.67+/-0.8 LogMAR at baseline and 0.62+/-0.9 LogMAR at last visit (P=0.41). The Color test was not significantly changed at last visit (P=0.62). Contrast sensitivity with the HH test was 9.1+/-11.1% at baseline and 3.8+/-6.4% at last visit (P=0.03). Contrast sensitivity with PR chart was 1.33+/-0.9log at baseline and 1.05+/-0.7 log at last visit (P=0.005). A reduction in contrast sensitivity at both tests was significantly greater in patients who relapsed than in patients who did not relapse (P=0.001). Conclusion After the treatment of paediatric optic pathway low-grade gliomas, a reduction in contrast sensitivity during follow-up was observed and may be correlated with tumour relapses. Eye advance online publication, 23 August 2013; doi:10.1038/eye.2013.186.

[633]

TÍTULO / TITLE: - Bevacizumab for the treatment of glioblastoma.

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

REVISTA / JOURNAL: - Expert Rev Neurother. 2013 Aug;13(8):937-49. doi: 10.1586/14737175.2013.827414. Epub 2013 Aug 16.

●● Enlace al texto completo (gratis o de pago) [1586/14737175.2013.827414](#)

AUTORES / AUTHORS: - Chowdhary S; Chamberlain M

INSTITUCIÓN / INSTITUTION: - Florida Hospital Cancer Institute, Orlando, FL, USA.

RESUMEN / SUMMARY: - Glioblastoma (GB) is the most common adult malignant primary brain tumor that arises from glial precursor cells. Survival in GB is variable ranging from 6 to 20 months notwithstanding current standard of care (SOC) treatment. Therapy has improved, but nonetheless GB is still invariably recurrent and incurable. Treatment options at recurrence include re-operation with or without carmustine (BCNU) wafer implantation (Gliadel), re-irradiation and standard/experimental chemo- or targeted therapy. Recurrent GB radiographic response rates to cytotoxic chemotherapy are less than 10% and median 6-month progression-free survival (PFS6) is 15%. With the recognition of the importance of tumor angiogenesis and the development of targeted therapy based on angiogenic inhibition, two pivotal trials of the VEGF-directed monoclonal antibody, bevacizumab (BEV, Avastin), were conducted in recurrent GB. Based upon the results of these two prospective US trials (median radiographic response rate: 25%; PFS6: 40%), BEV as a single agent was granted accelerated approval in the USA for recurrent GB. This review is a summary of current literature and clinical trials research in the role of BEV for the treatment of newly diagnosed and recurrent GB and potential future use of anti-angiogenic therapies in the management of GB.

[634]

TÍTULO / TITLE: - Sympathetic innervation induced in engrafted engineered cardiomyocyte sheets by glial cell line derived neurotrophic factor in vivo.

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

REVISTA / JOURNAL: - Biomed Res Int. 2013;2013:532720. doi: 10.1155/2013/532720. Epub 2013 Aug 28.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/532720](#)

AUTORES / AUTHORS: - Fu XM; Lee JK; Miwa K; Shimizu T; Takagishi Y; Hirabayashi M; Watabe K; Usui A; Kodama I; Ueda Y

INSTITUCIÓN / INSTITUTION: - Department of Cardiac Surgery, Graduate School of Medicine, Nagoya University, 65 Tsurumai, Showa-ku, Nagoya, Aichi 466-8550, Japan.

RESUMEN / SUMMARY: - The aim of myocardial tissue engineering is to repair or regenerate damaged myocardium with engineered cardiac tissue. However, this strategy has been hampered by lack of functional integration of grafts with native myocardium. Autonomic innervation may be crucial for grafts to function properly with host myocardium. In this study, we explored the feasibility of in vivo induction of autonomic innervation to engineered myocardial tissue using genetic modulation by adenovirus encoding glial cell line derived neurotrophic factor (GDNF). GFP-transgene (control group) or GDNF overexpressing (GDNF group) engineered cardiomyocyte sheets were transplanted on cryoinjured hearts in rats. Nerve fibers in the grafts were examined by immunohistochemistry at 1, 2, and 4 weeks postoperatively. Growth associated protein-43 positive growing nerves and tyrosine hydroxylase positive sympathetic nerves were first detected in the grafts at 2 weeks postoperatively in

control group and 1 week in GDNF group. The densities of growing nerve and sympathetic nerve in grafts were significantly increased in GDNF group. No choline acetyltransferase immunopositive parasympathetic nerves were observed in grafts. In conclusion, sympathetic innervation could be effectively induced into engrafted engineered cardiomyocyte sheets using GDNF.

[635]

TÍTULO / TITLE: - Expression of p53, epidermal growth factor receptor, Ki-67 and O-methylguanine-DNA methyltransferase in human gliomas.

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

REVISTA / JOURNAL: - Oncol Lett. 2013 Jul;6(1):130-134. Epub 2013 Apr 24.

●● [Enlace al texto completo \(gratis o de pago\) 3892/ol.2013.1317](#)

AUTORES / AUTHORS: - Hu X; Miao W; Zou Y; Zhang W; Zhang Y; Liu H

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Brain Hospital Affiliated to Nanjing Medical University, Nanjing, Jiangsu 210029, P.R. China.

RESUMEN / SUMMARY: - The present study aimed to evaluate the expression of p53, Ki-67, epidermal growth factor receptor (EGFR) and O6-methylguanine-DNA methyltransferase (MGMT), and to analyze the correlation between their expression and the histological grade of the tumors in 152 patients with gliomas. The tumors were classified according to the recommendations of the World Health Organization (WHO; 2007) into grade I (n=9), grade II (n=56), grade III (n=52) and grade IV (n=35). The expression of p53, Ki-67, EGFR and MGMT was analyzed using immunohistochemistry. The frequency of p53 immunopositivity was significantly lower in grade I gliomas than in grades II, III and IV. The frequency of EGFR immunopositivity was significantly higher in grade III and IV gliomas compared with grades I and II. The mean Ki-67 labelling index (LI) significantly increased in the higher glioma grades. The expression of MGMT in grade I and II tumors was not significantly different from that of grade III and IV tumors. The present data indicate that the expression of EGFR and Ki-67 is significantly correlated with the histological grade of the glioma, but that the expression of p53 and MGMT is not associated with the tumor grade.

[636]

TÍTULO / TITLE: - Chordoid meningioma, part of a multiple intracranial meningioma: a case report & review.

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

REVISTA / JOURNAL: - Malays J Med Sci. 2013 Jul;20(4):91-4.

AUTORES / AUTHORS: - Sriram PR

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Queen Elizabeth Hospital 2, Lorong Bersatu, Off Jalan Damai, 88300 Luyang, Kota Kinabalu, Sabah, Malaysia.

RESUMEN / SUMMARY: - Chordoid meningioma, classified as atypical meningioma according to the World Health Organisation (WHO) classification, is a rare subtype,

which represents only 0.5% of all meningiomas and is associated with a high incidence of recurrence. Multiple intracranial meningiomas are rare in non-neurofibromatosis patients. We present a female patient with both of these rare types of meningioma. The patient presented with two concurrent intracranial meningiomas, with one a meningotheliomatous subtype and the other a chordoid meningioma. Given the wide array of histological differential diagnoses in chordoid meningioma, immunohistochemistry has a significant role to play in differentiating them. Recurrence in chordoid meningioma can be generally predicted based on the extent of resection, the percentage of chordoid element, and proliferation indices.

[637]

TÍTULO / TITLE: - Pomalidomide Shows Significant Therapeutic Activity against CNS Lymphoma with a Major Impact on the Tumor Microenvironment in Murine Models.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 5;8(8):e71754. doi: 10.1371/journal.pone.0071754. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0071754](https://doi.org/10.1371/journal.pone.0071754)

AUTORES / AUTHORS: - Li Z; Qiu Y; Personett D; Huang P; Edenfield B; Katz J; Babusis D; Tang Y; Shirely MA; Moghaddam MF; Copland JA; Tun HW

INSTITUCIÓN / INSTITUTION: - Department of Cancer Biology, Mayo Clinic, Jacksonville, Florida, United States of America.

RESUMEN / SUMMARY: - Primary CNS lymphoma carries a poor prognosis. Novel therapeutic agents are urgently needed. Pomalidomide (POM) is a novel immunomodulatory drug with anti-lymphoma activity. CNS pharmacokinetic analysis was performed in rats to assess the CNS penetration of POM. Preclinical evaluation of POM was performed in two murine models to assess its therapeutic activity against CNS lymphoma. The impact of POM on the CNS lymphoma immune microenvironment was evaluated by immunohistochemistry and immunofluorescence. In vitro cell culture experiments were carried out to further investigate the impact of POM on the biology of macrophages. POM crosses the blood brain barrier with CNS penetration of ~ 39%. Preclinical evaluations showed that it had significant therapeutic activity against CNS lymphoma with significant reduction in tumor growth rate and prolongation of survival, that it had a major impact on the tumor microenvironment with an increase in macrophages and natural killer cells, and that it decreased M2-polarized tumor-associated macrophages and increased M1-polarized macrophages when macrophages were evaluated based on polarization status. In vitro studies using various macrophage models showed that POM converted the polarization status of IL4-stimulated macrophages from M2 to M1, that M2 to M1 conversion by POM in the polarization status of lymphoma-associated macrophages is dependent on the presence of NK cells, that POM induced M2 to M1 conversion in the polarization of macrophages by inactivating STAT6 signaling and activating STAT1 signaling, and that POM functionally

increased the phagocytic activity of macrophages. Based on our findings, POM is a promising therapeutic agent for CNS lymphoma with excellent CNS penetration, significant preclinical therapeutic activity, and a major impact on the tumor microenvironment. It can induce significant biological changes in tumor-associated macrophages, which likely play a major role in its therapeutic activity against CNS lymphoma. POM should be further evaluated in clinical trials.

[638]

TÍTULO / TITLE: - Neuro-oncology: The long and winding road-gene therapy for glioma.

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

REVISTA / JOURNAL: - Nat Rev Neurol. 2013 Sep 24. doi: 10.1038/nrneurol.2013.198.

●● [Enlace al texto completo \(gratis o de pago\) 1038/nrneurol.2013.198](#)

AUTORES / AUTHORS: - Castro MG; Lowenstein PR

INSTITUCIÓN / INSTITUTION: - The University of Michigan, School of Medicine, Departments of Neurosurgery and Cell & Developmental Biology, 1150 West Medical Center Drive, MSRB-II, Room 4570, Ann Arbor, MI 48109-5689, USA.

[639]

TÍTULO / TITLE: - Central nervous system cancers.

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

REVISTA / JOURNAL: - J Natl Compr Canc Netw. 2013 Sep 1;11(9):1114-51.

AUTORES / AUTHORS: - Nabors LB; Ammirati M; Bierman PJ; Brem H; Butowski N; Chamberlain MC; Deangelis LM; Fenstermaker RA; Friedman A; Gilbert MR; Hesser D; Holdhoff M; Junck L; Lawson R; Loeffler JS; Maor MH; Moots PL; Morrison T; Mrugala MM; Newton HB; Portnow J; Raizer JJ; Recht L; Shrieve DC; Sills AK Jr; Tran D; Tran N; Vrionis FD; Wen PY; McMillian N; Ho M

RESUMEN / SUMMARY: - Primary and metastatic tumors of the central nervous system are a heterogeneous group of neoplasms with varied outcomes and management strategies. Recently, improved survival observed in 2 randomized clinical trials established combined chemotherapy and radiation as the new standard for treating patients with pure or mixed anaplastic oligodendroglioma harboring the 1p/19q codeletion. For metastatic disease, increasing evidence supports the efficacy of stereotactic radiosurgery in treating patients with multiple metastatic lesions but low overall tumor volume. These guidelines provide recommendations on the diagnosis and management of this group of diseases based on clinical evidence and panel consensus. This version includes expert advice on the management of low-grade infiltrative astrocytomas, oligodendrogliomas, anaplastic gliomas, glioblastomas, medulloblastomas, supratentorial primitive neuroectodermal tumors, and brain metastases. The full online version, available at NCCN.org, contains recommendations on additional subtypes.

TÍTULO / TITLE: - Imaging of cervical extradural en-plaque meningioma. A case report.

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

REVISTA / JOURNAL: - Neuroradiol J. 2012 Nov;25(5):598-603. Epub 2012 Nov 9.

AUTORES / AUTHORS: - D'Amico A; Napoli M; Cirillo M; D'Arco F; D'Anna G; Caranci F; Mariniello G; Brunetti A

INSTITUCIÓN / INSTITUTION: - Department of Neurological Sciences, Neuroradiology Division, "Federico II" University of Naples; Naples, Italy - damicoalex@tiscali.it.

RESUMEN / SUMMARY: - Meningioma is one of the most common spinal extramedullary tumors, largely intradural. An extradural localization is possible but less frequent. There are two morphologically different types of meningioma: one is round, and the other is the "en-plaque" form, that grows along the dura mater like a sheet. The "en-plaque" form, is unusual. We report on an unusual case of epidural and extraspinal "en-plaque" meningioma, describing the MRI and CT features and discussing the possible principal differential diagnosis (neurolymphomatosis, plexiform neurofibromas/schwannomas and metastasis).

[640]

TÍTULO / TITLE: - Isolated synchronous meningioma of the external ear canal and the temporal lobe.

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

REVISTA / JOURNAL: - B-ENT. 2013;9(2):157-60.

AUTORES / AUTHORS: - Bruninx L; Govaere F; Van Dorpe J; Forton GE

INSTITUCIÓN / INSTITUTION: - Department of Otolaryngology, Head & Neck Surgery, Heilig Hart General Hospital, Roeselare, Belgium.

RESUMEN / SUMMARY: - BACKGROUND: Extracranial meningiomas are common tumours but may occur in unexpected locations. Awareness can avoid misdiagnosis and inappropriate management of these tumours. We report the case of a 54-year-old Caucasian male with en plaque meningioma of the external ear canal and an intracranial temporal lobe meningioma. INTERVENTION: The patient underwent extended canal wall down atticotomy with preservation of the ossicular chain and tympanic membrane and en bloc resection of the bony posterior canal wall, tumour, and overlying skin. RESULTS: Radical removal of a grade I meningothelial meningioma was achieved. The tegmen tympani and dura were not breached. No connection with the temporal lobe meningioma was demonstrated. The patient recovered completely and experienced a marked improvement in hearing. No clinical signs of recurrent or residual tumour have occurred. CONCLUSION: Careful clinical examination and extensive radiological workup is required to avoid missing the unusual diagnosis of concurrent meningioma of the temporal bone and temporal lobe, and miss the chance to treat this disease adequately.

[641]

TÍTULO / TITLE: - Intradural Extramedullary Ewing's Sarcoma. Recurrence with Acute Clinical Presentation and Literature Review.

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

REVISTA / JOURNAL: - Neuroradiol J. 2013 Aug 30;26(4):476-81. Epub 2013 Aug 27.

AUTORES / AUTHORS: - Bazzocchi A; Bacci A; Serchi E; Salerno A; Salizzoni E; Leonardi M

INSTITUCIÓN / INSTITUTION: - Department of Specialized, Diagnostic, and Experimental Medicine, University of Bologna, Sant'Orsola-Malpighi Hospital; Bologna, Italy - Diagnostic and Interventional Radiology, The "Rizzoli" Institute, IRCCS - Institute of Neurological Sciences of Bologna, UOC of Neuroradiology; Bologna, Italy - abazzo@inwind.it.

RESUMEN / SUMMARY: - The intradural extramedullary space is an extremely unusual site for the onset of Ewing's sarcoma. We describe a case of recurrence of intradural extramedullary Ewing's sarcoma and review the literature available on this topic.

[642]

TÍTULO / TITLE: - Knockdown a water channel protein, aquaporin-4, induced glioblastoma cell apoptosis.

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

REVISTA / JOURNAL: - PLoS One. 2013;8(8):e66751. doi: 10.1371/journal.pone.0066751.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0066751](#)

AUTORES / AUTHORS: - Ding T; Zhou Y; Sun K; Jiang W; Li W; Liu X; Tian C; Li Z; Ying G; Fu L; Gu F; Li W; Ma Y

INSTITUCIÓN / INSTITUTION: - Tianjin Medical University Cancer Institute and Hospital, Key Laboratory of Breast Cancer Prevention and Therapy of the Ministry of Education; Key Laboratory of Cancer Prevention and Therapy of Tianjin, Tianjin, China.

RESUMEN / SUMMARY: - Glioblastomas are the most aggressive forms of primary brain tumors due to their tendency to invade surrounding healthy brain tissues, rendering them largely incurable. The water channel protein, Aquaporin-4 (AQP4) is a key molecule for maintaining water and ion homeostasis in the central nervous system and has recently been reported with cell survival except for its well-known function in brain edema. An increased AQP4 expression has been demonstrated in glioblastoma multiforme (GBM), suggesting it is also involved in malignant brain tumors. In this study, we show that siRNA-mediated down regulation of AQP4 induced glioblastoma cell apoptosis in vitro and in vivo. We further show that several apoptotic key proteins, Cytochrome C, Bcl-2 and Bad are involved in AQP4 signaling pathways. Our results indicate that AQP4 may serve as an anti-apoptosis target for therapy of glioblastoma.

[643]

TÍTULO / TITLE: - Retinoblastoma protein regulates the crosstalk between autophagy and apoptosis, and favors glioblastoma resistance to etoposide.

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

REVISTA / JOURNAL: - Cell Death Dis. 2013 Aug 15;4:e767. doi: 10.1038/cddis.2013.283.

●● Enlace al texto completo (gratis o de pago) [1038/cddis.2013.283](https://doi.org/10.1038/cddis.2013.283)

AUTORES / AUTHORS: - Biasoli D; Kahn SA; Cornelio TA; Furtado M; Campanati L; Chneiweiss H; Moura-Neto V; Borges HL

INSTITUCIÓN / INSTITUTION: - Instituto de Ciencias Biomedicas, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil.

RESUMEN / SUMMARY: - Glioblastomas (GBMs) are devastating tumors of the central nervous system, with a poor prognosis of 1-year survival. This results from a high resistance of GBM tumor cells to current therapeutic options, including etoposide (VP-16). Understanding resistance mechanisms may thus open new therapeutic avenues. VP-16 is a topoisomerase inhibitor that causes replication fork stalling and, ultimately, the formation of DNA double-strand breaks and apoptotic cell death. Autophagy has been identified as a VP-16 treatment resistance mechanism in tumor cells.

Retinoblastoma protein (RB) is a classical tumor suppressor owing to its role in G1/S cell cycle checkpoint, but recent data have shown RB participation in many other cellular functions, including, counterintuitively, negative regulation of apoptosis. As GBMs usually display an amplification of the EGFR signaling involving the RB protein pathway, we questioned whether RB might be involved in mechanisms of resistance of GBM cells to VP-16. We observed that RB silencing increased VP-16-induced DNA double-strand breaks and p53 activation. Moreover, RB knockdown increased VP-16-induced apoptosis in GBM cell lines and cancer stem cells, the latter being now recognized essential to resistance to treatments and recurrence. We also showed that VP-16 treatment induced autophagy, and that RB silencing impaired this process by inhibiting the fusion of autophagosomes with lysosomes. Taken together, our data suggest that RB silencing causes a blockage on the VP-16-induced autophagic flux, which is followed by apoptosis in GBM cell lines and in cancer stem cells. Therefore, we show here, for the first time, that RB represents a molecular link between autophagy and apoptosis, and a resistance marker in GBM, a discovery with potential importance for anticancer treatment.

[644]

TÍTULO / TITLE: - Neuro-oncology: Glioblastoma prognosis linked to neuronal PD-L1 expression in tumour-adjacent tissue.

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

REVISTA / JOURNAL: - Nat Rev Neurol. 2013 Sep 17. doi: 10.1038/nrneurol.2013.197.

●● Enlace al texto completo (gratis o de pago) [1038/nrneurol.2013.197](https://doi.org/10.1038/nrneurol.2013.197)

AUTORES / AUTHORS: - Kingwell K

[645]

TÍTULO / TITLE: - Expression of steroidogenic factor 1 and pituitary specific transcription factor 1 in rat pituitary adenomas.

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

REVISTA / JOURNAL: - J Toxicol Pathol. 2013 Jun;26(2):209-13. doi: 10.1293/tox.26.209. Epub 2013 Jul 10.

●● Enlace al texto completo (gratis o de pago) [1293/tox.26.209](#)

AUTORES / AUTHORS: - Yasuno H; Watanabe T; Miyamoto Y; Kandori H; Yamasaki H; Fukuda R

INSTITUCIÓN / INSTITUTION: - Drug Safety Research Laboratories, Takeda Pharmaceutical Company Limited, 26-1 Muraoka-Higashi 2-Chome, Fujisawa, Kanagawa 251-8555, Japan.

RESUMEN / SUMMARY: - The protein expressions of steroidogenic factor I (SF-I) and pituitary-specific transcription factor 1 (Pit-1) were investigated immunohistochemically for 53 spontaneous pituitary adenomas of the pars distalis from male Crl:CD(SD) rats. Luteinizing hormone (LH)-positive/prolactin (PRL)-negative and LH-negative/PRL-positive adenomas showed that the expression of SF-1 and Pit-1 was exclusively related to the immunoreactivity of LH and PRL, respectively. All double-positive adenomas (positive for both LH and PRL) were positive for Pit-1 and were supposed to be derived from PRL cells, although some of them also showed SF-1 immunoreactivity. In addition, all null cell adenomas (negative for all anterior pituitary hormones) were positive for SF-1 and negative for Pit-1, indicating that they originated from the gonadotroph cell lineage. This is the first report focusing on the application of transcription factors for the classification of rat pituitary adenomas.

[646]

TÍTULO / TITLE: - Microglial ramification and redistribution concomitant with the attenuation of choroidal neovascularization by neuroprotectin D1.

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

REVISTA / JOURNAL: - Mol Vis. 2013 Aug 4;19:1747-59. Print 2013.

AUTORES / AUTHORS: - Sheets KG; Jun B; Zhou Y; Zhu M; Petasis NA; Gordon WC; Bazan NG

INSTITUCIÓN / INSTITUTION: - Neuroscience Center of Excellence, Louisiana State University Health Sciences Center, School of Medicine, New Orleans, LA, USA.

RESUMEN / SUMMARY: - PURPOSE: Neuroprotectin D1 (NPD1) attenuates laser-induced choroidal neovascularization (CNV) when administered intraperitoneally. Due to its lipophilicity and low molecular weight, NPD1 is well suited for topical delivery; thus, we investigated the efficacy of topically applied NPD1 in attenuating CNV. We also examined the effect of NPD1 on the recruitment and activation of microglia surrounding CNV lesions. METHODS: Mice were given laser-induced CNV and treated with NPD1 eye drops. CNV was evaluated by fluorescein leakage using a novel image analysis method and by isolectin B4 immunofluorescence of neovasculature. Microglia recruitment was assessed by quantification. Using form factor, solidity, convexity, and fractal dimension, microglial activation was quantitatively assessed by two-

dimensional, and for the first time, three-dimensional morphology. An ImageJ plugin, 3D Shape, was developed to enable this analysis. RESULTS: NPD1 attenuated leakage and neovascularization. The proximity of microglia to CNV lesions was significantly closer with NPD1. Consistent with the cellular ramification, microglia in NPD1-treated eyes were larger and exhibited a lower form factor and higher fractal dimension. CONCLUSIONS: Our data show that NPD1 signaling induces a ramified, non-injury-inducing microglial phenotype coincident with attenuation of CNV. Since microglia are crucial participants in neurodegenerative diseases, the discovery that microglia are potential targets of NPD1 signaling warrants further investigation.

[647]

TÍTULO / TITLE: - Giant Pituitary Adenomas: surgical outcomes of 50 cases operated by the endonasal endoscopic approach.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Aug 29. pii: S1878-8750(13)01049-8. doi: 10.1016/j.wneu.2013.08.028.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.08.028](http://dx.doi.org/10.1016/j.wneu.2013.08.028)

AUTORES / AUTHORS: - Gondim JA; Almeida JP; Albuquerque LA; Gomes EF; Schops M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Hospital Geral de Fortaleza, Fortaleza - CE, Brazil.

RESUMEN / SUMMARY: - OBJECTIVE: Present our experience with the surgical management of giant pituitary adenomas in a series of 50 cases operated on through an endoscopic endonasal approach. METHODS: Retrospective data analysis of all patients submitted to transsphenoidal endonasal endoscopic surgery at the General Hospital of Fortaleza, Brazil, between January 1998 and November 2011 was performed. Patients who presented with pituitary adenomas larger than 4 cm were included in the study. Analysis of factors related to the choice of the operative approach, hormonal and visual status, extent of resection, tumor control rates, clinical outcome and complications were evaluated. RESULTS: Fifty cases (10.41%) matched our inclusion criteria. Non-functioning tumors were present in 42 patients (84%); among functioning adenomas, 5 patients (10%) had GH-secreting adenomas and 3 patients (6%) had prolactinomas. Total removal of the tumor occurred in 19 cases (38%), near total removal in 9 cases (18%) and partial removal in 22 cases (44%). Postoperative CSF leaks occurred in 4 cases (8%). Postoperative diabetes insipidus was present in 10% and new anterior pituitary insufficiency affecting one axis or more than one axis was observed in 22% and 14%, respectively. The presence of Knosp score ≥ 3 was associated with subtotal resection. Patients harboring hormonally active adenomas were submitted to adjuvant medical therapy for long term clinical control. Vision improved in 38 patients (76%) with only one case of visual deterioration. CONCLUSION: Transsphenoidal endoscopic endonasal surgery may provide effective treatment for patients with giant adenomas when performed by a pituitary surgery

specialized team. In cases where total resection by the endoscopic approach may be associated with important complications, we advocate the use of partial resections followed by adjuvant drug therapy or radiotherapy. In cases of progressive enlargement of residual lesions, a second endoscopic debulking of the tumor may be considered for control of the disease.

[648]

TÍTULO / TITLE: - The Mechanisms of In Vitro Cytotoxicity of Mountain Tea, *Sideritis scardica*, against the C6 Glioma Cell Line.

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

REVISTA / JOURNAL: - *Planta Med.* 2013 Sep 26.

●● [Enlace al texto completo \(gratis o de pago\) 1055/s-0033-1350809](#)

AUTORES / AUTHORS: - Jeremic I; Tadic V; Isakovic A; Trajkovic V; Markovic I; Redzic Z; Isakovic A

INSTITUCIÓN / INSTITUTION: - Institute of Biochemistry, School of Medicine, University of Belgrade, Belgrade, Serbia.

RESUMEN / SUMMARY: - *Sideritis scardica* (mountain tea) is an endemic plant on the Balkan Peninsula traditionally used for treating different conditions, mainly of inflammatory nature. This study was aimed to examine the cytotoxic activity of different *S. scardica* extracts against the rat glioma C6 line and rat astrocytes in primary culture. The obtained data revealed that diethyl ether (extract 2) and ethyl acetate (extract 3) extracts of *S. scardica* exerted a cytotoxic effect on C6 rat glioma cells. Diethyl ether extract induced an increase in reactive oxygen species production, leading to apoptotic and autophagic cell death. Ethyl acetate extract induced G2 M cell cycle arrest and autophagy. None of the tested extracts was cytotoxic to rat astrocytes in primary culture. Cytotoxic effects of *S. scardica* extracts were, at least in part, mediated by their flavonoid constituents apigenin and luteolin that, when applied alone, induced cell cycle arrest, apoptosis, and autophagy.

[649]

TÍTULO / TITLE: - Molecular classification of diffuse gliomas.

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

REVISTA / JOURNAL: - *Oncology (Williston Park).* 2013 Jun;27(6):514, 518, 520.

AUTORES / AUTHORS: - Olar A; Prabhu SS

INSTITUCIÓN / INSTITUTION: - Department of Pathology and Genomic Medicine, The Methodist Hospital, Houston, Texas, USA.

[650]

TÍTULO / TITLE: - c-Src and Neural Wiskott-Aldrich Syndrome Protein (N-WASP) Promote Low Oxygen-Induced Accelerated Brain Invasion by Gliomas.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 19;8(9):e75436. doi: 10.1371/journal.pone.0075436.

●● Enlace al texto completo (gratis o de pago) 1371/journal.pone.0075436

AUTORES / AUTHORS: - Tang Z; Araysi LM; Fathallah-Shaykh HM

INSTITUCIÓN / INSTITUTION: - Department of Neurology, The University of Alabama at Birmingham, Birmingham, Alabama, United States of America.

RESUMEN / SUMMARY: - Malignant gliomas remain associated with poor prognosis and high morbidity because of their ability to invade the brain; furthermore, human gliomas exhibit a phenotype of accelerated brain invasion in response to anti-angiogenic drugs. Here, we study 8 human glioblastoma cell lines; U251, U87, D54 and LN229 show accelerated motility in low ambient oxygen. Src inhibition by Dasatinib abrogates this phenotype. Molecular discovery and validation studies evaluate 46 molecules related to motility or the src pathway in U251 cells. Demanding that the molecular changes induced by low ambient oxygen are reversed by Dasatinib in U251 cells, identifies neural Wiskott-Aldrich syndrome protein (NWASP), Focal adhesion Kinase (FAK), [Formula: see text]-Catenin, and Cofilin. However, only Src-mediated NWASP phosphorylation distinguishes the four cell lines that exhibit enhanced motility in low ambient oxygen. Downregulating c-Src or NWASP by RNA interference abrogates the low-oxygen-induced enhancement in motility by in vitro assays and in organotypic brain slice cultures. The findings support the idea that c-Src and NWASP play key roles in mediating the molecular pathogenesis of low oxygen-induced accelerated brain invasion by gliomas.

[651]

TÍTULO / TITLE: - Canine intracranial gliomas: Relationship between magnetic resonance imaging criteria and tumor type and grade.

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

REVISTA / JOURNAL: - Vet J. 2013 Aug 17. pii: S1090-0233(13)00390-0. doi: 10.1016/j.tvjl.2013.08.015.

●● Enlace al texto completo (gratis o de pago) 1016/j.tvjl.2013.08.015

AUTORES / AUTHORS: - Bentley RT; Ober CP; Anderson KL; Feeney DA; Naughton JF; Ohlfest JR; O'Sullivan MG; Miller MA; Constable PD; Pluhar GE

INSTITUCIÓN / INSTITUTION: - Department of Veterinary Clinical Sciences, Purdue University, West Lafayette, IN 47907, USA. Electronic address: rbentley@purdue.edu.

RESUMEN / SUMMARY: - Limited information is available to assist in the ante-mortem prediction of tumor type and grade for dogs with primary brain tumors. The objective of the current study was to identify magnetic resonance imaging (MRI) criteria related to the histopathological type and grade of gliomas in dogs. A convenience sample utilizing client-owned dogs (n=31) with gliomas was used. Medical records of dogs with intracranial lesions admitted to two veterinary referral hospitals were reviewed and

cases with a complete brain MRI and definitive histopathological diagnosis were retrieved for analysis. Each MRI was independently interpreted by five investigators who were provided with standardized grading instructions and remained blinded to the histopathological diagnosis. Mild to no contrast enhancement, an absence of cystic structures (single or multiple), and a tumor location other than the thalamo-capsular region were independently associated with grade II tumors compared to higher grade tumors. In comparison to oligodendrogliomas, astrocytomas were independently associated with the presence of moderate to extensive peri-tumoral edema, a lack of ventricular distortion, and an isointense or hyper-intense T1W-signal. When clinical and MRI features indicate that a glioma is most likely, certain MRI criteria can be used to inform the level of suspicion for low tumor grade, particularly poor contrast enhancement. Information obtained from the MRI of such dogs can also assist in predicting an astrocytoma or an oligodendroglioma, but no single imaging characteristic allows for a particular tumor type to be ruled out.

[652]

TÍTULO / TITLE: - Genetics: Glioblastoma landscape revealed.

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

REVISTA / JOURNAL: - Nat Rev Clin Oncol. 2013 Oct;10(10):547. doi: 10.1038/nrclinonc.2013.157. Epub 2013 Aug 20.

●● Enlace al texto completo (gratis o de pago) [1038/nrclinonc.2013.157](#)

AUTORES / AUTHORS: - Kirk R

[653]

TÍTULO / TITLE: - FNa-fluoride has a higher extraction with respect to Tc-methylene diphosphonate: Mismatch in a case of meningioma.

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 publicación; - <http://db.doyma.es/> +Revista Española de Medicina Nuclear: <> Imagen Mol. 2013 Aug 31. pii: S2253-654X(13)00056-5. doi: 10.1016/j.remn.2013.04.004.

●● Enlace al texto completo (gratis o de pago) [1016/j.remn.2013.04.004](#)

AUTORES / AUTHORS: - Cascini GL; Cuccurullo V; Mansi L

INSTITUCIÓN / INSTITUTION: - Department of Radiological Sciences, University of Catanzaro, Catanzaro, Italy.

[654]

TÍTULO / TITLE: - An extracranial invasive meningioma mimicking malignant bone tumor - "carpet meningioma".

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

REVISTA / JOURNAL: - J Clin Diagn Res. 2013 Jun;7(6):1159-62. doi: 10.7860/JCDR/2013/5394.3100. Epub 2013 Jun 1.

●● Enlace al texto completo (gratis o de pago) [7860/JCDR/2013/5394.3100](https://doi.org/10.7860/JCDR/2013/5394.3100)

AUTORES / AUTHORS: - Panjvani SI; Gandhi MB; Sarvaiya AN; Chaudhari BR; Gupta GS

INSTITUCIÓN / INSTITUTION: - 3 Year Resident, Department of Pathology, Smt. NHL Municipal Medical College, Ahmedabad, Gujarat, India.

RESUMEN / SUMMARY: - Meningioma is a common benign intracranial neoplasm. The incidence of an extracranial extension to other sites is rare. Due to the neglected intracranial component, the chances of an under diagnosis or a misdiagnosis of the extracranial component is there, which may adversely affect the management and therefore, the prognosis. Here, we are reporting a case of a 39 years old male patient with a preoperative probable diagnosis of a malignant bone tumour which involved the skull bone, which was made, based on the imaging studies, which was histopathologically found to be an invasive meningioma with an extensive extracranial skull vault involvement and was confirmed by immunohistochemistry. We have proposed a term, "carpet meningioma" for this extracranial invasive meningioma, because it had covered the skull vault like a carpet. The follow up studies after 1 year have revealed no evidence of a recurrence.

[655]

TÍTULO / TITLE: - Differences between brainstem gliomas in juvenile and adult rats.

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

REVISTA / JOURNAL: - Oncol Lett. 2013 Jul;6(1):246-250. Epub 2013 Apr 25.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1319](https://doi.org/10.3892/ol.2013.1319)

AUTORES / AUTHORS: - Wang Y; Tian Y; Wan H; Li D; Wu W; Yin L; Jiang J; Wan W; Zhang L

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tian Tan Hospital, Capital Medical University, Beijing 100050, P.R. China.

RESUMEN / SUMMARY: - Clinical studies have shown that gliomas of the brainstem behave differently in children and adults. The aim of the present study was to compare and analyze the differences between these gliomas in juvenile and adult rats with regard to tumor growth, survival, pathology and magnetic resonance imaging (MRI). A total of 25 juvenile and 25 adult Wistar rats were divided into groups A (15 juvenile rats), B (10 juvenile rats), C (15 adult rats) and D (10 adult rats). The rats of groups A and C (experimental) were injected with glioma cells, while groups B and D (control) were injected with a physiological saline solution. Rat neurological signs, survival time, tumor size, hematoxylin and eosin (HE) staining and immunohistochemical staining for MMP-2, MMP-9 and beta-catenin were compared. The survival time of group A was 19.47±2.232 days, whereas that of group C was 21.47±2.232 days (P<0.05). The tumor sizes were 4.55 and 4.62 mm (P>0.05) in groups A and C, respectively. HE and immunohistochemical staining revealed no differences between the groups. The

results suggest that the growth patterns and invasiveness of brainstem gliomas may vary in children compared with adults due to the varied biological behaviors of the tumor cells.

[656]

TÍTULO / TITLE: - Lyn facilitates glioblastoma cell survival under conditions of nutrient deprivation by promoting autophagy.

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

REVISTA / JOURNAL: - PLoS One. 2013 Aug 2;8(8):e70804. doi: 10.1371/journal.pone.0070804. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0070804](https://doi.org/10.1371/journal.pone.0070804)

AUTORES / AUTHORS: - Liu WM; Huang P; Kar N; Burgett M; Muller-Greven G; Nowacki AS; Distelhorst CW; Lathia JD; Rich JN; Kappes JC; Gladson CL

INSTITUCIÓN / INSTITUTION: - Department of Cancer Biology, The Lerner Research Institute, Cleveland Clinic, Cleveland, Ohio, United States of America.

RESUMEN / SUMMARY: - Members of the Src family kinases (SFK) can modulate diverse cellular processes, including division, death and survival, but their role in autophagy has been minimally explored. Here, we investigated the roles of Lyn, a SFK, in promoting the survival of human glioblastoma tumor (GBM) cells in vitro and in vivo using lentiviral vector-mediated expression of constitutively-active Lyn (CA-Lyn) or dominant-negative Lyn (DN-Lyn). Expression of either CA-Lyn or DN-Lyn had no effect on the survival of U87 GBM cells grown under nutrient-rich conditions. In contrast, under nutrient-deprived conditions (absence of supplementation with L-glutamine, which is essential for growth of GBM cells, and FBS) CA-Lyn expression enhanced survival and promoted autophagy as well as inhibiting cell death and promoting proliferation. Expression of DN-Lyn promoted cell death. In the nutrient-deprived GBM cells, CA-Lyn expression enhanced AMPK activity and reduced the levels of pS6 kinase whereas DN-Lyn enhanced the levels of pS6 kinase. Similar results were obtained in vitro using another cultured GBM cell line and primary glioma stem cells. On propagation of the transduced GBM cells in the brains of nude mice, the CA-Lyn xenografts formed larger tumors than control cells and autophagosomes were detectable in the tumor cells. The DN-Lyn xenografts formed smaller tumors and contained more apoptotic cells. Our findings suggest that on nutrient deprivation in vitro Lyn acts to enhance the survival of GBM cells by promoting autophagy and proliferation as well as inhibiting cell death, and Lyn promotes the same effects in vivo in xenograft tumors. As the levels of Lyn protein or its activity are elevated in several cancers these findings may be of broad relevance to cancer biology.

[657]

TÍTULO / TITLE: - Network signatures of survival in glioblastoma multiforme.

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

REVISTA / JOURNAL: - PLoS Comput Biol. 2013 Sep;9(9):e1003237. doi: 10.1371/journal.pcbi.1003237. Epub 2013 Sep 19.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pcbi.1003237](https://doi.org/10.1371/journal.pcbi.1003237)

AUTORES / AUTHORS: - Patel VN; Gokulrangan G; Chowdhury SA; Chen Y; Sloan AE; Koyuturk M; Barnholtz-Sloan J; Chance MR

INSTITUCIÓN / INSTITUTION: - Center for Proteomics and Bioinformatics, Case Western Reserve University, Cleveland, Ohio, United States of America.

RESUMEN / SUMMARY: - To determine a molecular basis for prognostic differences in glioblastoma multiforme (GBM), we employed a combinatorial network analysis framework to exhaustively search for molecular patterns in protein-protein interaction (PPI) networks. We identified a dysregulated molecular signature distinguishing short-term (survival<225 days) from long-term (survival>635 days) survivors of GBM using whole genome expression data from The Cancer Genome Atlas (TCGA). A 50-gene subnetwork signature achieved 80% prediction accuracy when tested against an independent gene expression dataset. Functional annotations for the subnetwork signature included “protein kinase cascade,” “IkappaB kinase/NFkappaB cascade,” and “regulation of programmed cell death” - all of which were not significant in signatures of existing subtypes. Finally, we used label-free proteomics to examine how our subnetwork signature predicted protein level expression differences in an independent GBM cohort of 16 patients. We found that the genes discovered using network biology had a higher probability of dysregulated protein expression than either genes exhibiting individual differential expression or genes derived from known GBM subtypes. In particular, the long-term survivor subtype was characterized by increased protein expression of DNMT1 and MAPK1 and decreased expression of HSPA9, PSMD3, and CANX. Overall, we demonstrate that the combinatorial analysis of gene expression data constrained by PPIs outlines an approach for the discovery of robust and translatable molecular signatures in GBM.

[658]

TÍTULO / TITLE: - Cerebral Blood Volume Analysis in Glioblastomas Using Dynamic Susceptibility Contrast-Enhanced Perfusion MRI: A Comparison of Manual and Semiautomatic Segmentation Methods.

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

REVISTA / JOURNAL: - PLoS One. 2013;8(8):e69323. doi: 10.1371/journal.pone.0069323.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0069323](https://doi.org/10.1371/journal.pone.0069323)

AUTORES / AUTHORS: - Jung SC; Choi SH; Yeom JA; Kim JH; Ryoo I; Kim SC; Shin H; 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: - PURPOSE: To compare the reproducibilities of manual and semiautomatic segmentation method for the measurement of normalized cerebral

blood volume (nCBV) using dynamic susceptibility contrast-enhanced (DSC) perfusion MR imaging in glioblastomas. MATERIALS AND METHODS: Twenty-two patients (11 male, 11 female; 27 tumors) with histologically confirmed glioblastoma (WHO grade IV) were examined with conventional MR imaging and DSC imaging at 3T before surgery or biopsy. Then nCBV (means and standard deviations) in each mass was measured using two DSC MR perfusion analysis methods including manual and semiautomatic segmentation method, in which contrast-enhanced (CE)-T1WI and T2WI were used as structural imaging. Intraobserver and interobserver reproducibility were assessed according to each perfusion analysis method or each structural imaging. Interclass correlation coefficient (ICC), Bland-Altman plot, and coefficient of variation (CV) were used to evaluate reproducibility. RESULTS: Intraobserver reproducibilities on CE-T1WI and T2WI were ICC of 0.74-0.89 and CV of 20.39-36.83% in manual segmentation method, and ICC of 0.95-0.99 and CV of 8.53-16.19% in semiautomatic segmentation method, respectively. Interobserver reproducibilities on CE-T1WI and T2WI were ICC of 0.86-0.94 and CV of 19.67-35.15% in manual segmentation method, and ICC of 0.74-1.0 and CV of 5.48-49.38% in semiautomatic segmentation method, respectively. Bland-Altman plots showed a good correlation with ICC or CV in each method. The semiautomatic segmentation method showed higher intraobserver and interobserver reproducibilities at CE-T1WI-based study than other methods. CONCLUSION: The best reproducibility was found using the semiautomatic segmentation method based on CE-T1WI for structural imaging in the measurement of the nCBV of glioblastomas.

[659]

TÍTULO / TITLE: - Reducing excess radiation from portal imaging of pediatric brain tumors.

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

REVISTA / JOURNAL: - J Appl Clin Med Phys. 2013 Sep 6;14(5):4364. doi: 10.1120/jacmp.v14i5.4364.

AUTORES / AUTHORS: - Tam M; Mathew M; Hitchen CJ; Narayana A

INSTITUCIÓN / INSTITUTION: - New York University Langone Medical Center.
mosesmt@gmail.com.

RESUMEN / SUMMARY: - Previously we have shown that our routine portal imaging (PI) of the craniofacial region in pediatric brain tumor patients contributed an additional 2%-3% of the prescribed dose and up to 200 cGy to the planning target volume (PTV) and nearby organs at risk (OARs). The purpose of this study is to quantify the reduction in dose to PTV and OARs from portal imaging (PI) of the craniofacial region of pediatric patients treated after the implementation of changes in our portal imaging practices. Twenty consecutive pediatric patients were retrospectively studied since the implementation of changes to our portal imaging procedure. Each received portal imaging of treatment fields and orthogonal setup fields to the craniofacial region. PI

modifications included a reduction in the field size of setup orthogonal fields without loss of radiographic information needed for treatment verification. In addition, treatment fields were imaged using a single exposure, rather than double exposure. Dose-volume histograms were generated to quantify the dose to the target and critical structures through PI acquisition. These results were compared with our previous cohort of 20 patients who were treated using the former portal imaging practices. The mean additional target dose from portal imaging following the new guidelines was 1.5% of the prescribed dose compared to 2.5% prior to the new portal image practices ($p < 0.001$). With the new portal imaging practices, the percentage decrease in portal imaging dose to the brainstem, optic structures, cochlea, hypothalamus, temporal lobes, thyroid, and eyes were 25%, 35%, 35%, 51%, 45%, 80%, and 55%, respectively. Reductions in portal imaging doses were significant in all OARs with exception of the brainstem, which showed a trend towards significance. Changes to portal imaging practices can reduce the radiation dose contribution from portal imaging to surrounding OARs by up to 80%. This may have implications on both late toxicity and second cancer development in pediatric brain tumors.

[660]

TÍTULO / TITLE: - Sphenoid Wing en plaque meningiomas: Surgical results and recurrence rates.

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

REVISTA / JOURNAL: - Surg Neurol Int. 2013;4:86. doi: 10.4103/2152-7806.114796.

●● [Enlace al texto completo \(gratis o de pago\) 4103/2152-7806.114796](#)

AUTORES / AUTHORS: - Simas NM; Farias JP

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Santa Maria Hospital, Lisboa, Portugal.

RESUMEN / SUMMARY: - BACKGROUND: Sphenoid wing en plaque meningiomas are a subgroup of meningiomas defined by its particular sheet-like dural involvement and its disproportionately large bone hyperostosis. En plaque meningiomas represent 2-9% of all meningiomas and they are mainly located in the sphenoid wing. Total surgical resection is difficult and therefore these tumors have high recurrence rates.

METHODS: Eighteen patients with sphenoid wing en plaque meningiomas surgically treated between January 1998 and December 2008 were included. Clinical, surgical, and follow-up data were retrospectively analyzed. RESULTS: Mean age was 52.2 years and 83% were female. Five patients presented extension of dural component into the orbit and six patients presented cavernous sinus infiltration. Adjuvant radiation therapy was performed in three patients. After a mean follow-up of 4.6 years, five patients developed tumor recurrence - two patients were submitted to surgical treatment and the other three were submitted to radiation therapy. No patient presented recurrence after radiation therapy, whether performed immediately in the postoperative period or performed after recurrence. Patients without tumor extension

to cavernous sinus or orbital cavity have the best prognosis treated with surgery alone. When tumor extension involves these locations the recurrence rate is high, especially in cases not submitted to adjuvant radiation therapy. CONCLUSION: Cavernous sinus and superior orbital fissure involvement are frequent and should be considered surgical limits. Postoperative radiation therapy is indicated in cases with residual tumor in these locations.

[661]

TÍTULO / TITLE: - A Case Report of Feline Pituitary Carcinoma with Hypercortisolism.

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

REVISTA / JOURNAL: - J Vet Med Sci. 2013 Sep 10.

AUTORES / AUTHORS: - Kimitsuki K; Boonsriroj H; Kojima D; Park CH

INSTITUCIÓN / INSTITUTION: - Departments of Veterinary Pathology, School of Veterinary Medicine, Kitasato University.

RESUMEN / SUMMARY: - Feline pituitary tumors are rare. An 8-year-old male Japanese domestic cat presented with anorexia and emaciation. The cat died 17 days after admission from progressive neurological symptoms. At necropsy, a pituitary tumor measuring 25 x 18 x 15 mm was found. Microscopically, the tumor was divided into multiple lobules and had grown invasively into the adjacent brain tissue and sphenoid bone. Tumor cells had pleomorphic nuclei with prominent centrally located nucleoli and abundant amphophilic polygonal cytoplasm. Immunohistochemically, the tumor cells stained with anti-adrenocorticotrophic hormone (ACTH), alpha-melanin-stimulating hormone (MSH) and beta-endorphin antibodies. Ultrastructurally, the cytoplasm of the tumor cells contained various sized secretory granules. Based on these pathological findings, this tumor was diagnosed as pituitary carcinoma originated from pars intermedia cells.

[662]

TÍTULO / TITLE: - Radiation-induced intracranial meningioma and multiple cavernomas.

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmi.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Sep 19;2013. pii:

bcr2013010041. doi: 10.1136/bcr-2013-010041.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-010041

AUTORES / AUTHORS: - Chourmouzi D; Papadopoulou E; Kontopoulos A; Drevelegas A

INSTITUCIÓN / INSTITUTION: - Department of Diagnostic Radiology, Interbalcan Medical Centre, Thessaloniki, Greece.

RESUMEN / SUMMARY: - Brain irradiation has several well-known long-term side effects, including radiation-induced neoplasms and vasculopathy. In this case report, we describe an extremely rare case of meningioma and 15 cavernomas developing in a 29-

year-old man, 19 years after cranial irradiation for posterior cranial fossa medulloblastoma. To our knowledge, this is the first case of a radiation-induced meningioma accompanied by this many radiation-induced cavernous angiomas.

[663]

TÍTULO / TITLE: - Neuroimaging findings of the post-treatment effects of radiation and chemotherapy of malignant primary glial neoplasms.

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

REVISTA / JOURNAL: - Neuroradiol J. 2013 Aug 30;26(4):396-412. Epub 2013 Aug 27.

AUTORES / AUTHORS: - Mamlouk MD; Handwerker J; Ospina J; Hasso AN

INSTITUCIÓN / INSTITUTION: - Department of Radiology, University of California; Irvine, Orange, CA, USA - mamlouk@gmail.com.

RESUMEN / SUMMARY: - Post-treatment radiation and chemotherapy of malignant primary glial neoplasms present a wide spectrum of tumor appearances and treatment-related entities. Radiologic findings of these post-treatment effects overlap, making it difficult to distinguish treatment response and failure. The purposes of this article are to illustrate and contrast the imaging appearances of recurrent tumor from necrosis and to discuss other radiologic effects of cancer treatments. It is critical for radiologists to recognize these treatment-related effects to help direct clinical management.

[664]

TÍTULO / TITLE: - Role of rapid sequence whole-body MRI screening in SDH-associated hereditary paraganglioma families.

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

REVISTA / JOURNAL: - Fam Cancer. 2013 Aug 11.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10689-013-9639-6](#)

AUTORES / AUTHORS: - Jasperson KW; Kohlmann W; Gammon A; Slack H; Buchmann L; Hunt J; Kirchhoff AC; Baskin H; Shaaban A; Schiffman JD

INSTITUCIÓN / INSTITUTION: - Huntsman Cancer Institute, University of Utah, 2000 Circle of Hope, Rm 1166, Salt Lake City, UT, 84112, USA, kory.jasperson@hci.utah.edu.

RESUMEN / SUMMARY: - Patients with germline mutations in one of the SDH genes are at substantially increased risk of developing paragangliomas, pheochromocytomas (pheos), and other tumors (all combined referred to as SDH-related tumors). However, limited data exist on screening in SDH mutation carriers and no studies have evaluated whole-body MRI as a screening tool in asymptomatic patients. This was a single-center observational study. We evaluated the results of screening in 37 SDH carriers who underwent 45 whole-body MRIs and 47 biochemical tests. Screening included annual biochemical testing (catecholamines, metanephrines and chromogranin A) and biennial or annual rapid sequence whole-body MRI from the base of the skull to the pelvis beginning at age 10 years old. Six tumors (paragangliomas of the organ of

Zuckerkindl, the aortocaval/vas deferens, of the carotid body times three, and a renal cell carcinoma) were diagnosed in five patients. In total, 13.5 % of all patients screened were diagnosed with SDH-related tumors. Whole-body MRI missed one tumor, while biochemical testing was normal in five patients with SDH-related tumors. The sensitivity of whole-body MRI was 87.5 % and the specificity was 94.7 %, while the sensitivity of biochemical testing was 37.5 % and the specificity was 94.9 %. Whole-body MRI had a higher sensitivity for SDH-related tumors than biochemical testing in patients undergoing screening due to their SDHB or SDHC mutation status. Whole-body MRI reduces radiation exposure compared to computed tomography scan and time compared to dedicated MRI of the head/neck, thorax, and abdomen/pelvis.

[665]

TÍTULO / TITLE: - Functional MRI studies in non-CNS cancers.

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

REVISTA / JOURNAL: - Brain Imaging Behav. 2013 Aug 11.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11682-013-9249-9](#)

AUTORES / AUTHORS: - de Ruiter MB; Schagen SB

INSTITUCIÓN / INSTITUTION: - Division of Psychosocial Research and Epidemiology, Netherlands Cancer Institute, Amsterdam, The Netherlands, m.d.ruiter@nki.nl.

RESUMEN / SUMMARY: - With increasing survival, cognitive problems after systemic treatment for non-CNS cancers are a growing concern. Functional magnetic resonance imaging (fMRI) is a noninvasive neuroimaging technique that has the potential to uncover the neural circuitry underlying cognitive problems after systemic treatment in cancer patients. Here, we provide an in depth review of the 14 fMRI studies that have been published to date on potential neurotoxic side effects of systemic treatment for non-CNS cancers. Cross-sectional studies in breast cancer survivors show a consistent pattern of hypoactivation in prefrontal and parietal brain regions during various executive functioning tasks 5 to 10 years after completion of adjuvant chemotherapy that are sometimes associated with worse cognitive performance compared to cancer-specific or no-cancer controls. These findings suggest reduced neural functioning as a result of chemotherapy in brain regions that support cognitive functioning. With regard to episodic memory, hypoactivation at encoding is followed by hyperactivation at retrieval, suggestive of impairments in memory encoding that are compensated by neural hyperactivation to perform adequate memory retrieval. Prospective studies of executive functioning and episodic memory show a more complex picture of hypo- and hyperactivation that is possibly due to various counteracting mechanisms relatively shortly after chemotherapy. Two small studies in prostate cancer patients, finally, provide preliminary evidence for reduced activation in task-relevant brain regions after androgen deprivation therapy, suggestive of reduction of neural function. Statistical correction for multiple comparisons in the reviewed studies is typically quite lenient. We suggest that future studies should preferably include larger sample sizes to allow

proper statistical correction for multiple comparisons and include comprehensive neurocognitive tests and multimodal MRI to facilitate the interpretation of the observed fMRI findings.

[666]

TÍTULO / TITLE: - miR-218 is downregulated and directly targets SH3GL1 in childhood medulloblastoma.

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

REVISTA / JOURNAL: - Mol Med Rep. 2013 Oct;8(4):1111-7. doi: 10.3892/mmr.2013.1639. Epub 2013 Aug 16.

●● [Enlace al texto completo \(gratis o de pago\) 3892/mmr.2013.1639](#)

AUTORES / AUTHORS: - Shi J; Yang L; Wang T; Zhang J; Guo X; Huo X; Niu H

INSTITUCIÓN / INSTITUTION: - Department of Neonatology, The First Affiliated Hospital of Xinxiang Medical University, Weihui, Henan 453100, P.R. China.

RESUMEN / SUMMARY: - An increasing number of studies have suggested that microRNAs (miRNAs) are aberrantly expressed in numerous types of tumors and that a deregulation in miRNA expression may lead to carcinogenesis. Although miR218 has been demonstrated to be downregulated in several types of cancer, including medulloblastoma (MB), its involvement in MB is unclear. In the present study, the expression of miR218 and SH3GL1 were assessed in four MB cell lines and normal cerebellum by qPCR. The ectopic expression of miR218 induced by lentiviral transfection in MB cells on proliferation was evaluated by MTT assay, and cell migration and invasion were determined by transwell assays. Analysis of the target protein expression and related protein expression was determined by western blot analysis. The targeting of SH3GL1 by miR218 was identified using a luciferase reporter assay. The results demonstrated that miR218 was significantly downregulated in MB cell lines. MiR218 significantly inhibited SH3GL1 mRNA and protein expression and reduced the luciferase activity of a SH3GL1 3' untranslated region based reporter. Furthermore, overexpression of miR218 induced by transfection with lentivirus significantly suppressed MB cell growth, migration and invasion in vitro. Small interfering RNA mediated SH3GL1 downregulation partially phenocopied the effect of miR218 overexpression in the MB cell lines. The results indicated that miR218 was significantly downregulated in MB cancer cell lines. Furthermore, miR218 functioned as a tumor suppressor by regulating SH3GL1 expression in MB cancer cells.

[667]

TÍTULO / TITLE: - Spontaneous subdural haemorrhage in a child with bilateral middle cranial fossa arachnoid cysts.

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmj.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Aug 28;2013. pii: bcr2013200802. doi: 10.1136/bcr-2013-200802.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-200802

AUTORES / AUTHORS: - Patel RA; Levy ML; Crawford JR

INSTITUCIÓN / INSTITUTION: - Department of Neurosciences, University of California San Diego, San Diego, California, USA.

[668]

TÍTULO / TITLE: - At a glance: brain tumours in children.

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

REVISTA / JOURNAL: - J Fam Health Care. 2013 Jul-Aug;23(5):29-32.

AUTORES / AUTHORS: - Paul SP; Walker D

INSTITUCIÓN / INSTITUTION: - Bristol Royal Hospital for Children.

[669]

TÍTULO / TITLE: - Mediastinal ganglioneuroma: An incidentaloma of childhood.

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

REVISTA / JOURNAL: - Indian J Med Paediatr Oncol. 2013 Apr;34(2):130-1. doi: 10.4103/0971-5851.116218.

●● Enlace al texto completo (gratis o de pago) 4103/0971-5851.116218

AUTORES / AUTHORS: - Shukla RM; Mukhopadhyay B; Mukhopadhyay M; Mandal KC

INSTITUCIÓN / INSTITUTION: - Department of Pediatric Surgery, Nil Ratan Sircar Medical College and Hospital, Kolkata, West Bengal, India.

RESUMEN / SUMMARY: - Ganglioneuroma is a rare benign neurogenic tumor which represents the final maturation stage of neuroblast tumors. Here, we are discussing an interesting case of incidentally detected posterior mediastinal ganglioneuroma which should be kept in mind when dealing with any child with respiratory distress.

[670]

TÍTULO / TITLE: - Post-traumatic basal ganglia haemorrhage in a child with primary central nervous system lymphoma.

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmj.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Jul 31;2013. pii: bcr2013200025. doi: 10.1136/bcr-2013-200025.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-200025

AUTORES / AUTHORS: - Jankowski PP; Levy ML; Crawford JR

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of California San Diego, San Diego, California, USA.

RESUMEN / SUMMARY: - Primary central nervous system lymphoma (PCNSL) is a rare tumour of childhood with 15-20 cases reported yearly in North America. We present a case of a 13-year-old boy diagnosed with PCNSL who presented more than one-and-a-half years post-treatment with high dose cytosine arabinoside and methotrexate with a right-sided basal ganglia haemorrhage on MRI following a concussion while playing organised football against medical advice. There was no evidence of an underlying vascular malformation or recurrent disease by MRI, cerebrospinal fluid analysis or positron emission tomography computed tomography (PET-CT). However, 6 months post-injury he presented with asymptomatic disease recurrence of the frontal lobe. Our case reports an unusual MRI pattern of post-traumatic injury in a child previously treated for PCNSL that would support a recommendation for the avoidance of contact sports in this population.

[671]

TÍTULO / TITLE: - In 2013 should we pursue in superior sagittal sinus grafting in parasagittal meningiomas?

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Aug 3. pii: S1878-8750(13)00921-2. doi: 10.1016/j.wneu.2013.07.107.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.07.107](#)

AUTORES / AUTHORS: - Brotchi J

INSTITUCIÓN / INSTITUTION: - Emeritus Professor, Erasme Hospital Univ. Brussels, Department of Neurosurgery, 5 box 14, avenue Den Doorn, Brussels, B-1180, BELGIUM. Electronic address: jb.wfns@erasme.ulb.ac.be.

[672]

TÍTULO / TITLE: - Dual-Modality Micro-Positron Emission Tomography/Computed Tomography and Near-Infrared Fluorescence Imaging of EphB4 in Orthotopic Glioblastoma Xenograft Models.

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

REVISTA / JOURNAL: - Mol Imaging Biol. 2013 Aug 6.

●● Enlace al texto completo (gratis o de pago) [1007/s11307-013-0674-3](#)

AUTORES / AUTHORS: - Huang M; Xiong C; Lu W; Zhang R; Zhou M; Huang Q; Weinberg J; Li C

INSTITUCIÓN / INSTITUTION: - Department of Cancer Systems Imaging, The University of Texas MD Anderson Cancer Center, Unit 59, 1515 Holcombe Boulevard, Houston, TX, 77030, USA.

RESUMEN / SUMMARY: - PURPOSE: In glioblastoma, EphB4 receptors, a member of the largest family of receptor tyrosine kinases, are overexpressed in both tumor cells and angiogenic blood vessels. The purpose of this study was to examine whether the EphB4-binding peptide TNYL-RAW labeled with both ⁶⁴Cu and near-infrared

fluorescence dye Cy5.5 could be used as a molecular imaging agent for dual-modality positron emission tomography/computed tomography [PET/CT] and optical imaging of human glioblastoma in orthotopic brain tumor models. MATERIALS AND METHODS: TNYL-RAW was conjugated to Cy5.5 and the radiometal chelator 1,4,7,10-tetraazadodecane-N,N',N'',N'''-tetraacetic acid. The conjugate was then labeled with ⁶⁴Cu for in vitro binding and in vivo dual muPET/CT and optical imaging studies in nude mice implanted with EphB4-expressing U251 and EphB4-negative U87 human glioblastoma cells. Tumors and brains were removed at the end of the imaging sessions for immunohistochemical staining and fluorescence microscopic examinations. RESULTS: muPET/CT and near-infrared optical imaging clearly showed specific uptake of the dual-labeled TNYL-RAW peptide in both U251 and U87 tumors in the brains of the nude mice after intravenous injection of the peptide. In U251 tumors, the Cy5.5-labeled peptide colocalized with both tumor blood vessels and tumor cells; in U87 tumors, the tracer colocalized only with tumor blood vessels, not with tumor cells. CONCLUSIONS: Dual-labeled EphB4-specific peptide could be used as a noninvasive molecular imaging agent for PET/CT and optical imaging of glioblastoma owing to its ability to bind to both EphB4-expressing angiogenic blood vessels and EphB4-expressing tumor cells.

[673]

TÍTULO / TITLE: - Cyclic RGD-Linked Polymeric Micelles for Targeted Delivery of Platinum Anticancer Drugs to Glioblastoma through the Blood-Brain Tumor Barrier.

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

REVISTA / JOURNAL: - ACS Nano. 2013 Sep 18.

●● Enlace al texto completo (gratis o de pago) [1021/nn402662d](#)

AUTORES / AUTHORS: - Miura Y; Takenaka T; Toh K; Wu S; Nishihara H; Kano MR; Ino Y; Nomoto T; Matsumoto Y; Koyama H; Cabral H; Nishiyama N; Kataoka K

INSTITUCIÓN / INSTITUTION: - Department of Materials Engineering, Graduate School of Engineering, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan.

RESUMEN / SUMMARY: - Ligand-mediated drug delivery systems have enormous potential for improving the efficacy of cancer treatment. In particular, Arg-Gly-Asp peptides are promising ligand molecules for targeting $\alpha_3\beta_3/\alpha_5\beta_5$ integrins, which are overexpressed in angiogenic sites and tumors, such as intractable human glioblastoma (U87MG). We here achieved highly efficient drug delivery to U87MG tumors by using a platinum anticancer drug-incorporating polymeric micelle (PM) with cyclic Arg-Gly-Asp (cRGD) ligand molecules. Intravital confocal laser scanning microscopy revealed that the cRGD-linked polymeric micelles (cRGD/m) accumulated rapidly and had high permeability from vessels into the tumor parenchyma compared with the PM having nontargeted ligand, "cyclic-Arg-Ala-Asp" (cRAD). As both cRGD/m- and cRAD-linked polymeric micelles have similar characteristics, including their size,

surface charge, and the amount of incorporated drugs, it is likely that the selective and accelerated accumulation of cRGD/m into tumors occurred via an active internalization pathway, possibly transcytosis, thereby producing significant antitumor effects in an orthotopic mouse model of U87MG human glioblastoma.

[674]

TÍTULO / TITLE: - Identification of aberrant microRNA expression pattern in pediatric gliomas by microarray.

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

REVISTA / JOURNAL: - Diagn Pathol. 2013 Sep 20;8(1):158.

●● Enlace al texto completo (gratis o de pago) [1186/1746-1596-8-158](#)

AUTORES / AUTHORS: - Liu F; Xiong Y; Zhao Y; Tao L; Zhang Z; Zhang H; Liu Y; Feng G; Li B; He L; Ma J; Qin S; Yang Y

RESUMEN / SUMMARY: - BACKGROUND: Brain tumor remains the leading cause of disease-related death in children. Many studies have focused on the complex biological process involved in pediatric brain tumors but little is known about the possible role of microRNAs in the genesis of these tumors. METHODS: In this study, we used a microRNA microarray assay to study the expression pattern of microRNAs in pediatric gliomas and matched normal tissues. RESULTS: We found 40 differentially expressed microRNAs, among which miR-1321, miR-513b, miR-769-3p were found to be related to cancer genesis for the first time. The expression of selected microRNAs was then confirmed by qRT-PCR. Furthermore, GO and pathway analysis showed that the target genes of the 40 differentially expressed microRNAs were significantly enriched in nervous system-related and tumor-related biological processes and signaling pathways. Additionally, an apoptosis-related network of microRNA—mRNA interaction, representing the critical microRNAs and their targets, was constructed based on microRNA status. CONCLUSIONS: In the present study we identified the changed expression pattern of microRNAs in pediatric gliomas. Our study also provides a better understanding of pediatric brain tumor biology and may assist in the development of less toxic therapies and in the search for better markers for disease stratification. Virtual slides: The virtual slide(s) for this article can be found here: diagnosticpathology.diagnomx.eu/vs/1323049861105720.

[675]

TÍTULO / TITLE: - Immature teratoma of the posterior cranial fossa in a 4-month-old infant: A case report.

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

REVISTA / JOURNAL: - Oncol Lett. 2013 Jul;6(1):19-22. Epub 2013 Apr 29.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1325](#)

AUTORES / AUTHORS: - Gao J; Zheng Z

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Fuzhou General Hospital of Nanjing Military Command, Fuzhou, Fujian 350025, P.R. China.

RESUMEN / SUMMARY: - The present study analyzed a case of immature teratoma in the posterior cranial fossa of an infant and compared the clinical data with the associated literature. Ventricular drainage was initially performed upon the patient's admission to the hospital. Following adequate pre-operative preparations, the tumor in the posterior cranial fossa was resected on the third day. No significant neurological function deficiency was observed following the surgery and no recurrence was noted within an 18-month follow-up period. In such cases, treatment should be conducted in a stepwise manner, with the hydrocephalus relieved first, followed by complete tumor resection subsequent to full preparation. Post-operative chemotherapy was not performed by conventional means as the infant was too weak, therefore, periodic reviews and long-term follow-up were required.

[676]

TÍTULO / TITLE: - Prognostic Significance of EDN/RB, HJURP, p60/CAF-1 and PDLI4, Four New Markers in High-Grade Gliomas.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 11;8(9):e73332. doi: 10.1371/journal.pone.0073332.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0073332](#)

AUTORES / AUTHORS: - de Tayrac M; Saikali S; Aubry M; Bellaud P; Boniface R; Quillien V; Mosser J

INSTITUCIÓN / INSTITUTION: - Centre National de la Recherche Scientifique (CNRS), Unite mixte de recherche - UMR 6290, Institut Genetique et Developpement de Rennes, Rennes, France ; Universite Rennes 1, UEB - Universite europeenne de Bretagne, Biosit, Faculte de Medecine, Rennes, France ; CHU - Centre Hospitalier universitaire de Rennes, Service de Genetique Moleculaire et Genomique, Rennes, France.

RESUMEN / SUMMARY: - BACKGROUND: Recent studies have highlighted the heterogeneity of gliomas and demonstrated that molecular and genetic analysis could help in their classification and in the design of treatment protocols. In a previous study we have identified a 4-gene signature highly correlated with survival of glioma patients. The aim of this study is to confirm and extend these findings by investigating the expression of these genes at the protein level and their association with outcome of patients with high grade gliomas. METHODOLOGY/PRINCIPAL FINDINGS:

Immunohistochemical staining for EDN/RB, HJURP, p60/CAF-1 and PDLI4 was studied on archive materials from 96 patients (64 glioblastomas and 32 grade III gliomas). The levels of all four proteins differed significantly between grade III and grade IV tumours. The levels of the EDN/RB, HJURP and p60/CAF-1 proteins were strongly associated with overall survival ($p < 0.001$, $p < 0.001$ and $p = 0.002$, respectively), whereas the one of PDLI4 was not ($P = 0.11$). A risk criterion defined as high levels of at least two of the

EDN/RB, HJURP and p60/CAF-1 proteins accurately predicted the prognosis of patients. Multivariate analysis confirmed that this criterion was an independent negative prognostic marker (hazard ratio = 2.225; 95% CI, 1.248 to 3.966, p=0.007). CONCLUSIONS: The expression of the EDN/RB, HJURP, p60/CAF-1 and PDLI4 proteins is disrupted in high grade gliomas and increases in the levels of these proteins are closely linked to tumour aggressiveness and poor outcome.

[677]

TÍTULO / TITLE: - Parasellar arachnoid cyst presenting with a nonpupil sparing third nerve palsy mimicking a posterior communicating artery aneurysm in an adult.

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

REVISTA / JOURNAL: - Surg Neurol Int. 2013;4:87. doi: 10.4103/2152-7806.114799.

●● [Enlace al texto completo \(gratis o de pago\) 4103/2152-7806.114799](#)

AUTORES / AUTHORS: - Tempel ZJ; Johnson SA; Richard PS; Friedlander RM; Rothfus WE; Hamilton RL

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, UPMC Presbyterian Hospital, M8709 South Tower, 200 Lothrop Street, Pittsburgh, PA 15213, USA.

RESUMEN / SUMMARY: - BACKGROUND: Arachnoid cysts are congenital lesions that contain fluid identical to cerebrospinal fluid (CSF). They usually do not communicate with CSF spaces. The vast majority of arachnoid cysts are congenital asymptomatic lesions that are discovered incidentally. Those lesions that do become symptomatic typically present in childhood with signs and symptoms of intracranial hypertension, seizures, and focal neurologic deficits specific to cyst location. CASE DESCRIPTION: A rare case of a parasellar arachnoid cyst presenting with oculomotor palsy is presented. The patient is a 45-year-old male who presented with acute onset diplopia and frontal headache. Neurologic examination revealed right ptosis, pupillary dilation, and ophthalmoparesis consistent with an oculomotor palsy. Computed tomography (CT) scan and lumbar puncture failed to reveal evidence of a subarachnoid hemorrhage. Magnetic resonance imaging (MRI) of the brain demonstrated a 1 cm right parasellar nonenhancing mass that was hyperintense on T2 flair and with a fluid-fluid level concerning for a thrombosed posterior communicating artery (PCommA) aneurysm. There was an additional finding of a left occipital pole intraparenchymal hemorrhage in the setting of multiple hereditary cavernomas. Formal cerebral angiography revealed normal intracranial and extracranial vasculature. The patient was taken to the operating room for a right frontotemporal craniotomy, which revealed compression of the right oculomotor nerve by an arachnoid cyst. The cyst was fenestrated and resected with decompression of the oculomotor nerve. Postoperatively, the third nerve palsy had completely resolved. CONCLUSIONS: The above case demonstrates that arachnoid cysts should be considered in the differential for patients presenting with nonpupil sparing third nerve palsy and require timely surgical intervention. As is

the case for an expanding PCommA aneurysm, prompt decompression results in the best chance for recovery of oculomotor nerve function.

[678]

TÍTULO / TITLE: - Meningioma in a Bengal tiger (*Panthera tigris tigris*).

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

REVISTA / JOURNAL: - J Zoo Wildl Med. 2013 Sep;44(3):761-4.

AUTORES / AUTHORS: - Akin EY; Baumgartner WA; Lee JK; Beasley MJ

INSTITUCIÓN / INSTITUTION: - Department of Clinical Sciences, College of Veterinary Medicine, Mississippi State University, Starkville, Mississippi 39762, USA.

erinyakin@gmail.com

RESUMEN / SUMMARY: - A 17-yr-old female ovariectomized Bengal tiger (*Panthera tigris tigris*) was presented dead on arrival to the Mississippi State University College of Veterinary Medicine. The tiger was a resident of a sanctuary for big cats and had a history of juvenile-onset blindness of unknown cause. The tiger suffered two seizures the morning of presentation and expired shortly after resolution of the second seizure. Gross necropsy findings included a meningioma attached to the left frontal bone and associated with the left frontal lobe. Histologically, the mass was composed of meningothelial cells arising from the meninges, forming whorls and streams. Cells often formed syncytia and psammoma bodies were present. Neoplastic cells were immunohistochemically positive for vimentin, S100, and cytokeratin, but negative for GFAP. All findings were consistent with a meningioma. This is the first documentation of a meningioma in a Bengal tiger.

[679]

TÍTULO / TITLE: - Pituitary macroadenoma presenting with pituitary apoplexy, acromegaly and secondary diabetes mellitus - a case report.

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

REVISTA / JOURNAL: - Pan Afr Med J. 2013 May 31;15:39. doi: 10.11604/pamj.2013.15.39.2054.

●● [Enlace al texto completo \(gratis o de pago\) 11604/pamj.2013.15.39.2054](#)

AUTORES / AUTHORS: - Nganga HK; Lubanga RP

INSTITUCIÓN / INSTITUTION: - University of Nairobi, Medical Officer, Outpatient department, Consolata Hospital, Nyeri, Kenya.

RESUMEN / SUMMARY: - Pituitary adenomas are associated with significant morbidity. The usual symptoms on presentation are of endocrine dysfunction and mass effects. A 31-year-old African female presented with headache, irregular menses, blurring of vision in the right eye and complete loss of vision in the left eye for 1 year. She had coarse facial features, enlarged hands and feet. Her right eye had temporal hemianopia with decreased visual acuity and her left eye had no perception of light.

Investigations revealed an elevated fasting blood sugar and an elevated prolactin and growth hormone level. A CT scan and MRI done showed a hemorrhagic pituitary macroadenoma. She was put on bromocriptine, ocreotide, analgesics and insulin. Thereafter, she underwent transphenoidal surgery, where near total resection of the tumor was achieved. Patient is doing well post-operatively. This case highlights the importance of the use of a high clinical index of suspicion and radiological findings in diagnosis.

[680]

TÍTULO / TITLE: - Parasellar Meningiomas in Pregnancy.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Sep 3. pii: S1878-8750(13)01076-0. doi: 10.1016/j.wneu.2013.08.045.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.08.045](#)

AUTORES / AUTHORS: - Gonen L; Ram Z

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tel-Aviv Sourasky Medical Center, Tel Aviv, Israel.

[681]

TÍTULO / TITLE: - Case Report: Glioblastoma Multiforme Complicating Familial Cavernous Malformations.

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

REVISTA / JOURNAL: - Clin Neuroradiol. 2013 Aug 14.

●● Enlace al texto completo (gratis o de pago) [1007/s00062-013-0249-3](#)

AUTORES / AUTHORS: - Wilson DM; Cohen B; Keshari K; Vogel H; Steinberg G; Dillon W

INSTITUCIÓN / INSTITUTION: - Department of Radiology and Biomedical Imaging, University of California, San Francisco, 505 Parnassus Avenue, Room L-371, Box 0628, San Francisco, CA, 94143-0628, USA, David.M.Wilson@ucsf.edu.

[682]

TÍTULO / TITLE: - Analysis of single-staged resection of a fourth ventricular tumor via a combined infratentorial-supracerebellar and telovelar approach: Case report and review of the literature.

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

REVISTA / JOURNAL: - Int J Surg Case Rep. 2013;4(10):842-5. doi:

10.1016/j.ijscr.2013.07.005. Epub 2013 Jul 16.

●● Enlace al texto completo (gratis o de pago) [1016/j.ijscr.2013.07.005](#)

AUTORES / AUTHORS: - Griessenauer CJ; Tubbs RS; Cohen-Gadol AA

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Department of Surgery, University of Alabama at Birmingham, Birmingham, AL, USA. Electronic address:

Cgriessenauer@uabmc.edu.

RESUMEN / SUMMARY: - INTRODUCTION: The authors explore a combined infratentorial-supracerebellar and telovelar approach in an adult, while avoiding vermian-splitting methods for a large, midline, fourth-ventricular tumor, unapproachable through a single traditional route. Experience with a combined surgical approach for pediatric patients has been published, but the authors believe that describing this combined method in an adult will provide a preliminary experience for further exploration of this approach in other adult patients. PRESENTATION OF CASE: The authors present a review of the literature along with the case of a 60-year-old man with slight ataxia who presented with a 1-month history of gait difficulty and memory lapse. His MRI of the brain showed mild hydrocephalus and a large tumor of the fourth ventricle. Surgical removal through a suboccipital craniotomy was attempted, and part of the tumor overlying the tectum and the superior cerebellar velum was removed without difficulty. However, despite inferior retraction of the vermis, which allowed further resection of the tumor from the fourth ventricle, residual tumor in the caudal surgical resection cavity was present. Partial transection of the vermis was considered, but avoided because of potential neurological deficits. Instead, the authors redirected their approach and exposed the residual tumor by transecting the inferior medullary velum and removed additional tumor while avoiding the floor of the fourth ventricle. The infratentorial-supracerebellar and telovelar approach resulted in total gross resection of the tumor. DISCUSSION: For patients with large midline tumors that arise from the superior vermis or the quadrigeminal plate and fill the upper third of the fourth ventricular space, this combined approach may offer a unique possibility of safe tumor removal. CONCLUSION: This case demonstrates the benefit of a combined approach for a select group of patients.

[683]

TÍTULO / TITLE: - Reconstruction of nerve root sheaths for sacral extradural spinal meningeal cysts with spinal nerve root fibers.

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

REVISTA / JOURNAL: - Sci China Life Sci. 2013 Sep 5.

●● Enlace al texto completo (gratis o de pago) [1007/s11427-013-4536-7](http://dx.doi.org/10.1007/s11427-013-4536-7)

AUTORES / AUTHORS: - Sun J; Wang Z; Li Z; Wu H; Yen R; Zheng M; Chang Q; Liu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Peking University Third Hospital, Peking University, Beijing, 100191, China, sunjj2008@gmail.com.

RESUMEN / SUMMARY: - This prospective study analyzed the clinical characteristics and outcomes of sacral extradural spinal meningeal cysts with spinal nerve root fibers treated by reconstruction of the nerve root sheaths. The relationships between the cysts and spinal nerve root fibers were examined microscopically, the cysts were partially excised, and the defects were oversewn to reconstruct the nerve root sheaths. The Improved Japanese Orthopedic Association (IJOA) scoring system was used to evaluate preoperative and postoperative neurological function. Thirty-eight

patients were included in this study, with a mean age of 41.4+/-15.57 years. The mean IJOA score was 18.8+/-1.32 preoperatively and 19.6+/-0.65 postoperatively, which was a significant difference between the preoperative and postoperative scores (t=-3.77, P=0.001). These results indicate a significant improvement in neurological function after surgery. The most significant area of improvement in neurological function was sensation (z=-2.86, P=0.004), followed by bowel/bladder function (z=-2.31, P=0.02).

[684]

TÍTULO / TITLE: - Practical Use of a Simple Technique, Insertion of Wet Cotton Pledgets into the Tumor Resection Cavity in Transsphenoidal Surgery of Pituitary Tumors, for a Better Comparison between Pre- and Intraoperative High-Field Magnetic Resonance Images.

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

REVISTA / JOURNAL: - J Neurol Surg A Cent Eur Neurosurg. 2013 Aug 8.

●● [Enlace al texto completo \(gratis o de pago\) 1055/s-0033-1349342](#)

AUTORES / AUTHORS: - Kuge A; Kikuchi Z; Sato S; Sakurada K; Takemura S; Kayama T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Yamagata University Faculty of Medicine, Iidani, Yamagata, Japan.

RESUMEN / SUMMARY: - Background Intraoperative high-field magnetic resonance imaging (iMRI) is a useful modality for immediate intraoperative quality control. With iMRI, a surgeon can confirm whether tumor remnants exist during surgery; which makes it possible to add further resection, obtain a higher resection rate, and improve the cure rate. It is sometimes difficult to evaluate the existence of tumor remnants when the tumor resection cavity is collapsed. In this study, we reported a simple technique for comparing pre- and intraoperative MR images. Patients and Methods Thirty-five consecutive patients with pituitary adenoma underwent endoscopic endonasal transsphenoidal surgery using iMRI. Twenty-six patients had adenomas with suprasellar extension, and 9 had intrasellar adenomas. Nine adenomas had cavernous sinus invasion. Eight patients had endocrine-active, and 27 endocrine-inactive tumors. The simple technique included wet cotton pledgets inserted into the resection cavity to easily and precisely compare pre- and intraoperative MR images. Furthermore, we evaluated the efficacy of iMRI using our method on determining the extent of tumor resection in this study. Results The first iMRI scan showed that 12 of 35 patients had some tumor remnants, and 23 patients did not. Eight of these 12 patients with tumor remnants had cavernous sinus invasion. Three cases received further tumor resection after iMRI and had a gross total removal. Conclusions We presented our initial results after using a simple method in high-field iMRI during endoscopic transnasal transsphenoidal pituitary surgery. This procedure allowed us to obtain valuable information to determine the extent of tumor resection and to precisely visualize the parasellar structures.

[685]

TÍTULO / TITLE: - Multi-study integration of brain cancer transcriptomes reveals organ-level molecular signatures.

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

REVISTA / JOURNAL: - PLoS Comput Biol. 2013 Jul;9(7):e1003148. doi:

10.1371/journal.pcbi.1003148. Epub 2013 Jul 25.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pcbi.1003148](#)

AUTORES / AUTHORS: - Sung J; Kim PJ; Ma S; Funk CC; Magis AT; Wang Y; Hood L; Geman D; Price ND

INSTITUCIÓN / INSTITUTION: - Institute for Systems Biology, Seattle, Washington, United States of America.

RESUMEN / SUMMARY: - We utilized abundant transcriptomic data for the primary classes of brain cancers to study the feasibility of separating all of these diseases simultaneously based on molecular data alone. These signatures were based on a new method reported herein—Identification of Structured Signatures and Classifiers (ISSAC)—that resulted in a brain cancer marker panel of 44 unique genes. Many of these genes have established relevance to the brain cancers examined herein, with others having known roles in cancer biology. Analyses on large-scale data from multiple sources must deal with significant challenges associated with heterogeneity between different published studies, for it was observed that the variation among individual studies often had a larger effect on the transcriptome than did phenotype differences, as is typical. For this reason, we restricted ourselves to studying only cases where we had at least two independent studies performed for each phenotype, and also reprocessed all the raw data from the studies using a unified pre-processing pipeline. We found that learning signatures across multiple datasets greatly enhanced reproducibility and accuracy in predictive performance on truly independent validation sets, even when keeping the size of the training set the same. This was most likely due to the meta-signature encompassing more of the heterogeneity across different sources and conditions, while amplifying signal from the repeated global characteristics of the phenotype. When molecular signatures of brain cancers were constructed from all currently available microarray data, 90% phenotype prediction accuracy, or the accuracy of identifying a particular brain cancer from the background of all phenotypes, was found. Looking forward, we discuss our approach in the context of the eventual development of organ-specific molecular signatures from peripheral fluids such as the blood.

[686]

TÍTULO / TITLE: - Magmas overexpression inhibits staurosporine induced apoptosis in rat pituitary adenoma cell lines.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 17;8(9):e75194. doi: 10.1371/journal.pone.0075194.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0075194](https://doi.org/10.1371/journal.pone.0075194)

AUTORES / AUTHORS: - Tagliati F; Gagliano T; Gentilin E; Minoia M; Mole D; Delgi Uberti EC; Zatelli MC

INSTITUCIÓN / INSTITUTION: - Section of Endocrinology, Department of Medical Sciences, University of Ferrara, Ferrara, Italy.

RESUMEN / SUMMARY: - Magmas is a nuclear gene that encodes for the mitochondrial import inner membrane translocase subunit Tim16. Magmas is overexpressed in the majority of human pituitary adenomas and in a mouse ACTH-secreting pituitary adenoma cell line. Here we report that Magmas is highly expressed in two out of four rat pituitary adenoma cell lines and its expression levels inversely correlate to the extent of cellular response to staurosporine in terms of apoptosis activation and cell viability. Magmas over-expression in rat GH/PRL-secreting pituitary adenoma GH4C1 cells leads to an increase in cell viability and to a reduction in staurosporine-induced apoptosis and DNA fragmentation, in parallel with the increase in Magmas protein expression. These results indicate that Magmas plays a pivotal role in response to pro-apoptotic stimuli and confirm and extend the finding that Magmas protects pituitary cells from staurosporine-induced apoptosis, suggesting its possible involvement in pituitary adenoma development.

[687]

TÍTULO / TITLE: - Parapharyngeal ganglioneuroma of hypoglossal nerve in a 4 year old girl: a rare case report.

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

REVISTA / JOURNAL: - J Maxillofac Oral Surg. 2012 Sep;11(3):343-6. doi: 10.1007/s12663-011-0192-2. Epub 2011 May 6.

●● Enlace al texto completo (gratis o de pago) [1007/s12663-011-0192-2](https://doi.org/10.1007/s12663-011-0192-2)

AUTORES / AUTHORS: - Hallur N; Sikkerimath BC; Gudi SS; Chour G; Ginimav S; Nidoni M

INSTITUCIÓN / INSTITUTION: - Department of Oral and Maxillofacial Surgery, PMNM Dental College and Hospital, Bagalkot, Karnataka India.

RESUMEN / SUMMARY: - Parapharyngeal ganglioneuroma of hypoglossal nerve is very rare benign tumor arising from sympathetic nervous system producing mass and functional effect. We present a rare case in 4 year old girl with history of swelling and odynophagia in left side of neck. Extensive clinical, immunohistochemistry, and imaging of the swelling confirmed the diagnosis of ganglioneuroma after surgical excision.

[688]

TÍTULO / TITLE: - Sudden death due to medulloblastoma: a case report.

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

REVISTA / JOURNAL: - Acta Neurol Taiwan. 2013 Jun;22(2):76-80.

AUTORES / AUTHORS: - Ho CH; Chen SJ; Juan CJ; Lee HS; Tsai SH; Fan HC

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan.

RESUMEN / SUMMARY: - Purpose: Medulloblastoma is one of the notorious CNS malignancies for subtle and atypical clinical presentations, causing rapid neurological deterioration and death, especially in pediatric patients. The delay in diagnosis leads to painful remorse, conflicts, and lawsuits for parents and medical staff. Case Report: We report a 2 year old girl with initial presentation of febrile pyuria. Soon after admission, a generalized clonic-tonic seizure attacked to her and led to an impression of febrile convulsion. However, an unusual postical slowness of pupils to light stimulation propelled a further investigation. A contrast enhanced brain computer tomography (CT) unexpectedly showed a mass occupied the fourth ventricle resulting in obstructive hydrocephalus and compressed adjacent brain stem and cerebellum. The disease rapidly progressed and she died 18 hours after an emergent decompression with extraventricular drainage (EVD) installation. Cytology of cerebrospinal fluid proved medulloblastoma. Conclusion: This case report highlights the importance of clinical suspicion, such as a trivial but unusual presentation, a lagged pupil response to light stimulation. A brain CT scan should be done to rule out any possibility of an organic lesion. Close monitor is required in order to catch and treat medulloblastoma early. However, once discovered, the cancer has spread.

[689]

TÍTULO / TITLE: - A Case Report of CLIPPERS (Chronic Lymphocytic Inflammation with Pontocerebellar Perivascular Enhancement Responsive to Steroids) Syndrome.

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

REVISTA / JOURNAL: - Clin Neuroradiol. 2013 Sep 26.

●● Enlace al texto completo (gratis o de pago) 1007/s00062-013-0260-8

AUTORES / AUTHORS: - Suer D; Yusifova L; Arsava EM; Ekin G; Us O; Uluc K

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Marmara University Hospital, Fevzi Cakmak Mah., Mimar Sinan Cad. Ust Kaynarca, Pendik, 34899, Istanbul, Turkey.

[690]

TÍTULO / TITLE: - A tentorial venous hemangioma presenting as an extra-axial mass in the ambient cistern: a case report.

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

REVISTA / JOURNAL: - J Neurol Surg Rep. 2012 Oct;73(1):37-40. doi: 10.1055/s-0032-1312680. Epub 2012 May 17.

●● Enlace al texto completo (gratis o de pago) 1055/s-0032-1312680

AUTORES / AUTHORS: - Oya S; Prayson RA; Lee JH

INSTITUCIÓN / INSTITUTION: - Brain Tumor and Neuro-Oncology Center, Neurological Institute, Cleveland Clinic, Cleveland, Ohio, United States ; Department of Neurosurgery, Neurological Institute, Cleveland Clinic, Cleveland, Ohio, United States.

RESUMEN / SUMMARY: - Although venous hemangiomas are one of the most common soft-tissue tumors, venous hemangiomas in the central nervous system are extremely rare. We present an unusual case of venous hemangioma originating from the interdural space of the tentorium. A 32-year-old woman was incidentally found to have extra-axial mass occupying the left ambient cistern. This tumor was observed for the first 4 years as it was completely asymptomatic. Surgical resection was later recommended when the tumor grew. The mass originated from between the two layers of the anteromedial tentorial incisura. There were no findings indicative of previous hemorrhage inside the mass. The matrix of the mass was firm and vascular, resembling a fibrous meningioma. Gross total resection was achieved without any neurological deficit. Pathological examination revealed a dense fibrous connective tissue with a proliferation of vessels marked by thickened walls. A spindle cell proliferation in the vessel walls did not stain with the antibody to S-100 protein. Movat stain demonstrated the venous character of the vessels. These results were histologically compatible with a venous hemangioma. Albeit extremely rare, a venous hemangioma, a distinct clinical and pathological entity from a venous angioma, can present an intracranial mass lesion.

[691]

TÍTULO / TITLE: - Solitary intracranial osteoma with attachment to the falx: a case report.

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

REVISTA / JOURNAL: - World J Surg Oncol. 2013 Sep 8;11(1):221.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1477-7819-11-221](#)

AUTORES / AUTHORS: - Chen SM; Chuang CC; Toh CH; Jung SM; Lui TN

RESUMEN / SUMMARY: - BACKGROUND: Intracranial osteomas are uncommon lesions that usually arise from the inner table of the cranium. There are few reports in the literature of intracranial osteomas with meninges attachment and without direct relation with the skull bone; these osteomas were mostly attached with dura. We report a rare osteoma with falx attachment. Case: A 64-year-old woman presented with a 3-month history of intermittent tinnitus and dizziness. The scout film of petrous bone computed tomography scan revealed a high-density lesion in the frontal area. Magnetic resonance imaging showed a 2.5-cm mass attached to the surface of the falx in the right frontal parasagittal area. The patient underwent right frontal craniotomy, and a bony hard mass was found located in the right frontal parasagittal region extra-axially, with its medial surface attached to the falx. It could not be broken down by the cavitron ultrasonic surgical aspirator or even the cutting loop and was detached from the falx and removed in one piece. Histopathological examination showed a nodule with bony trabeculae and bone marrow tissue, compatible with osteoma. The

postoperative course was uneventful, and the patient was discharged from the hospital with no neurological deficits one week after operation. CONCLUSIONS: This is the first case report in the English literature of an intracranial osteoma arising from the falx. Because of their slow growth and their locations in silent brain areas, intracranial osteomas are usually diagnosed incidentally. Surgical resection is the primary treatment choice.

[692]

TÍTULO / TITLE: - Posttraumatic glioma: report of a case.

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

REVISTA / JOURNAL: - Case Rep Oncol. 2013 Aug 7;6(2):403-9. doi: 10.1159/000354340.

●● Enlace al texto completo (gratis o de pago) [1159/000354340](#)

AUTORES / AUTHORS: - Spallone A; Izzo C; Orlandi A

INSTITUCIÓN / INSTITUTION: - Section of Neurosurgery, Department of Clinical Neurosciences, Neurological Centre of Latium 'NCL', Rome, Italy ; Department of Biopathology, Institute of Anatomical Pathology, Tor Vergata University of Rome, Rome, Italy.

RESUMEN / SUMMARY: - For a long time, head injury has been considered as a possible causative factor for later development of brain tumors. However, the actual role of previous head trauma in the pathogenesis of intracranial tumors is still a matter of debate, also due to the possible medico-legal implications. Some authors have suggested several criteria for establishing a possible causal relationship between the aforementioned factors. We report a case of a left posterior paraventricular high-grade glioma which developed 20 years after a posttraumatic hematoma occurring in the same area. This case is reported in detail and the relevant literature is reviewed.

[693]

TÍTULO / TITLE: - A Case of Primary Non-Hodgkin's Lymphoma of the External Auditory Canal.

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

REVISTA / JOURNAL: - Case Rep Otolaryngol. 2013;2013:138397. doi: 10.1155/2013/138397. Epub 2013 Aug 4.

●● Enlace al texto completo (gratis o de pago) [1155/2013/138397](#)

AUTORES / AUTHORS: - Bruschini L; De Vito A; Fortunato S; Pelosini M; Cervetti G; Petrini M; Berrettini S

INSTITUCIÓN / INSTITUTION: - Head-Neck Department, ENT Audiology and Phoniatry Unit, University Hospital of Pisa, Via Paradisa 2, 56100 Pisa, Italy.

RESUMEN / SUMMARY: - Lymphomas represent the second most frequent malignant tumor (incidence 2.5%) in the head and neck region. Non-Hodgkin lymphomas (NHLs) present with cervical lymph node involvement, but in 40% extranodal site could be primary involved: nasopharynx, the lacrimal sac, the temporal bone, or the others

areas. NHLs of the ear are rarely reported. In this report, we described a patient with primary NHL of the external ear canal who was successfully treated with surgical excision and chemotherapy.

[694]

TÍTULO / TITLE: - Case report of the extramedullary hematopoiesis presented as a hypervascular intracranial mass.

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

REVISTA / JOURNAL: - Adv Biomed Res. 2013 Mar 30;2:34. doi: 10.4103/2277-9175.109719.

●● Enlace al texto completo (gratis o de pago) [4103/2277-9175.109719](#)

AUTORES / AUTHORS: - Tayari N; Ahrar MH; Jafarpishe MS

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Al-Zahra Hospital, Isfahan University of Medical Sciences, Isfahan, Iran.

RESUMEN / SUMMARY: - Thalassemia is a hematologic disorder that causes ineffective hematopoiesis and is related to severe anemia, iron overload, extramedullary hematopoiesis, and hepatomegaly. Hepatomegaly is related to significant extramedullary hematopoiesis. The other sites that are involved in extramedullary hematopoiesis are spleen, lymph nodes, paraspinal regions, kidney, pleura, and intestine, but intracranial involvement is a rare presentation. We discuss about a case with intracranial medullary hematopoiesis in a thalassemic patient.

[695]

TÍTULO / TITLE: - A rare case of an extra-axial cavernous angioma in the cerebellopontine angle.

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

REVISTA / JOURNAL: - J Neurosci Rural Pract. 2013 Apr;4(2):210-2. doi: 10.4103/0976-3147.112772.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.112772](#)

AUTORES / AUTHORS: - Ghanta RK; Tangella P; Koti K; Dandamudi S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Suraksha Hospital, Vijayawada, Andhra Pradesh, India.

RESUMEN / SUMMARY: - Intracranial extra-axial cavernous angiomas are rare lesions. We report a rare case of extra-axial cavernous angioma in the cerebellopontine angle (CPA) in a 50-year-old male, who presented with lower cranial nerve palsy and gait ataxia. Computed tomography (CT) scan of the brain showed a hyperdense lesion in the left cerebellopontine angle. The lesion was totally excised by the retrosigmoid approach and a pathological examination confirmed the lesion to be a cavernous angioma. Following surgery, the lower cranial nerve palsy recovered significantly.

[696]

TÍTULO / TITLE: - Episodic itch in a case of spinal glioma.

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

REVISTA / JOURNAL: - BMC Neurol. 2013 Sep 23;13(1):124.

- Enlace al texto completo (gratis o de pago) [1186/1471-2377-13-124](#)

AUTORES / AUTHORS: - Wolking S; Lerche H; Dihne M

RESUMEN / SUMMARY: - BACKGROUND: Itch is a frequent complaint reported by patients and is usually ascribed to dermatological or metabolic causes. In neurological disorders, however, it is a very unusual symptom and thus its neurological aetiology is likely to be overlooked. There are only very few reports about permanent itch related to lesions of the central nervous system. To our knowledge we report the first case of episodic itch associated with a central nervous lesion. CASE PRESENTATION: A 74-year-old female suffered from long-standing episodes of itch of the dermatomes C2 to C6 on the right side that was refractory to any treatment. On occurrence it propagated in a proximal to distal fashion. Between the episodes the patient was asymptomatic. MRI of the cervical spine uncovered a spinal glioma that matched the location of the symptoms. Treatment with gabapentin led to a prompt reduction of the symptoms. CONCLUSION: Patients with intractable pruritus and dermatomal presentation ought to undergo neurological examination and spinal cord imaging. Thus, ongoing frustrating and sometimes even harmful treatment trials could be avoided.

[697]

TÍTULO / TITLE: - Paraneoplastic and other autoimmune disorders of the central nervous system.

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

REVISTA / JOURNAL: - Neurohospitalist. 2013 Apr;3(2):53-64. doi: 10.1177/1941874412453339.

- Enlace al texto completo (gratis o de pago) [1177_1941874412453339](#) [pii]
- Enlace al texto completo (gratis o de pago) [1177/1941874412453339](#)

AUTORES / AUTHORS: - McKeon A

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Mayo Clinic College of Medicine, Rochester, MN, USA ; Department of Laboratory Medicine and Pathology, Mayo Clinic College of Medicine, Rochester, MN, USA.

RESUMEN / SUMMARY: - As a result of the burgeoning growth of disease-specific neural autoantibody markers available for diagnostic patient evaluation, there has been increasing awareness of autoimmune central nervous system (CNS) disorders in hospital practice. Hospital-based neurologists have also taken great interest in these disorders since many occur in the setting of an occult systemic cancer which can be detected and treated at an early stage, and many affected patients are responsive to immunotherapy. Associated neurological disorders are typically subacute in onset, some are common or classic (eg, limbic encephalitis, cerebellar degeneration), but others have atypical or multifocal presentations. For patients with a suspected

paraneoplastic disorder, many and costly oncological evaluations may be required for diagnosis. Comprehensive serological and cerebrospinal fluid (CSF) evaluation for neural autoantibodies may permit a focused cancer evaluation (eg, antineuronal nuclear antibody type 1 [ANNA-1] is associated with small cell lung carcinoma), and in some circumstances may indicate the likelihood of a good response to therapy (eg, voltage-gated potassium channel complex antibody) or poor neurological prognosis (eg, purkinje cell cytoplasmic antibody type 1 [antiYo]). Positron-emission tomography-computed tomography (PET-CT) imaging of trunk may increase the diagnostic yield for certain cancers where other modalities have been negative. For some patients, rapid treatment with immunotherapy may facilitate marked improvement, or full recovery; multiple sequential trials of one or more of steroids, intravenous immunoglobulin or plasma exchange, or combination therapy are often required. For patients with N-methyl-d-aspartate receptor antibody encephalitis, early treatment with immunosuppressants and weeks or months of supportive intensive care may additionally be required. One or more of clinical examination, electroencephalogram (including video telemetry), and imaging provide objective parameters to which posttreatment outcomes can be compared.

[698]

TÍTULO / TITLE: - Intracranial arachnoid cysts in a chimpanzee (*Pan troglodytes*).

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

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

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10329-013-0384-0](#)

AUTORES / AUTHORS: - Miyabe-Nishiwaki T; Kaneko T; Sakai T; Kaneko A; Watanabe A; Watanabe S; Maeda N; Kumazaki K; Suzuki J; Fujiwara R; Makishima H; Nishimura T; Hayashi M; Tomonaga M; Matsuzawa T; Mikami A

INSTITUCIÓN / INSTITUTION: - Primate Research Institute, Kyoto University, 41-2 Kanrin, Inuyama, Aichi, 484-8506, Japan.

RESUMEN / SUMMARY: - An intracranial arachnoid cyst was detected in a 32-year-old, 44.6-kg, female chimpanzee at the Primate Research Institute, Kyoto University. Magnetic resonance imaging (MRI) and computed tomography (CT) were performed and the cognitive studies in which she participated were reviewed. MRI revealed that the cyst was present in the chimpanzee's right occipital convexity, and was located in close proximity to the posterior horn of the right lateral ventricle without ventriculomegaly. CT confirmed the presence of the cyst and no apparent signs indicating previous skull fractures were found. The thickness of the mandible was asymmetrical, whereas the temporomandibular joints and dentition were symmetrical. She showed no abnormalities in various cognitive studies since she was 3 years old, except a different behavioural pattern during a recent study, indicating a possible visual field defect. Detailed cognitive studies, long-term observation of her physical condition and follow-up MRI will be continued.

[699]

TÍTULO / TITLE: - Five fraction image-guided radiosurgery for primary and recurrent meningiomas.

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

REVISTA / JOURNAL: - Front Oncol. 2013 Aug 20;3:213. doi: 10.3389/fonc.2013.00213.

●● Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00213](#)

AUTORES / AUTHORS: - Oermann EK; Bhandari R; Chen VJ; Lebec G; Gurka M; Lei S; Chen L; Suy S; Azumi N; Berkowitz F; Kalthorn C; McGrail K; Collins BT; Jean WC; Collins SP

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Georgetown University Hospital , Washington, DC , USA ; Department of Radiation Medicine, Georgetown University Hospital , Washington, DC , USA.

RESUMEN / SUMMARY: - Purpose: Benign tumors that arise from the meninges can be difficult to treat due to their potentially large size and proximity to critical structures such as cranial nerves and sinuses. Single fraction radiosurgery may increase the risk of symptomatic peritumoral edema. In this study, we report our results on the efficacy and safety of five fraction image-guided radiosurgery for benign meningiomas. Materials/Methods: Clinical and radiographic data from 38 patients treated with five fraction radiosurgery were reviewed retrospectively. Mean tumor volume was 3.83 mm³ (range, 1.08-20.79 mm³). Radiation was delivered using the CyberKnife, a frameless robotic image-guided radiosurgery system with a median total dose of 25 Gy (range, 25-35 Gy). Results: The median follow-up was 20 months. Acute toxicity was minimal with eight patients (21%) requiring a short course of steroids for headache at the end of treatment. Pre-treatment neurological symptoms were present in 24 patients (63.2%). Post treatment, neurological symptoms resolved completely in 14 patients (58.3%), and were persistent in eight patients (33.3%). There were no local failures, 24 tumors remained stable (64%) and 14 regressed (36%). Pre-treatment peritumoral edema was observed in five patients (13.2%). Post-treatment asymptomatic peritumoral edema developed in five additional patients (13.2%). On multivariate analysis, pre-treatment peritumoral edema and location adjacent to a large vein were significant risk factors for radiographic post-treatment edema (p = 0.001 and p = 0.026 respectively). Conclusion: These results suggest that five fraction image-guided radiosurgery is well tolerated with a response rate for neurologic symptoms that is similar to other standard treatment options. Rates of peritumoral edema and new cranial nerve deficits following five fraction radiosurgery were low. Longer follow-up is required to validate the safety and long-term effectiveness of this treatment approach.

[700]

TÍTULO / TITLE: - Intracranial neurenteric cyst: A rare cause of chemical meningitis.

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

REVISTA / JOURNAL: - Ann Indian Acad Neurol. 2013 Apr;16(2):286-8. doi: 10.4103/0972-2327.112501.

●● Enlace al texto completo (gratis o de pago) [4103/0972-2327.112501](#)

AUTORES / AUTHORS: - Choh NA; Wani M; Nazir P; Saleem SM; Shaheen F; Rabbani I; Gojwari T

INSTITUCIÓN / INSTITUTION: - Department of Radiodiagnosis, Sheri Kashmir Institute of Medical Sciences, Srinagar, India.

RESUMEN / SUMMARY: - Intracranial neurenteric cysts are exceedingly rare congenital intracranial lesions that result from disorder of gastrulation. Still, more rarely, the cyst contents may leak into the CSF and give rise to recurrent episodes of chemical meningitis. We present a case of chemical meningitis due to a leaking posterior fossa neurenteric cyst in a young female, with emphasis on its imaging features. The final diagnosis was achieved by sufficiently characteristic imaging features; histopathologic documentation could not be achieved as the patient denied surgery.

[701]

TÍTULO / TITLE: - Multiple intracranial meningiomas and cavernous hemangiomas.

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

REVISTA / JOURNAL: - Neuroradiol J. 2012 Sep;25(4):423-6. Epub 2012 Sep 6.

AUTORES / AUTHORS: - Becker AS; Gala F; Kollias S

INSTITUCIÓN / INSTITUTION: - Clinic of Neuroradiology, University Hospital of Zurich; Zurich, Switzerland - anton.becker@usz.ch.

RESUMEN / SUMMARY: - Intracerebral meningiomas and cavernous hemangiomas (hemangiomas, cavernomas) are entities frequently encountered by neuroradiologists and neurosurgeons. Even multiple tumors can often be observed in patients with certain congenital conditions, eg. multiple meningiomas in neurofibromatosis type 2 or multiple cavernous hemangiomas in familial cavernous malformations. However, there are only very few reported cases of concurrent meningiomas and cavernous hemangiomas, all but one related to prior radiotherapy. We describe the second case of concurrent multiple meningiomas and cavernous hemangiomas occurring de novo without a history of radiation.

[702]

TÍTULO / TITLE: - Meningiomas involving major dural sinuses: should we attempt at radical removal and venous repair?

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Aug 4. pii: S1878-8750(13)00933-9. doi: 10.1016/j.wneu.2013.07.119.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.07.119](#)

AUTORES / AUTHORS: - Sindou M

INSTITUCIÓN / INSTITUTION: - Hopital Neurologique Pierre Wertheimer, University of Lyon 1, GHE, 59 boulevard Pinel, 69003 LYON, France. Electronic address: marc.sindou@chu-lyon.fr.

[703]

TÍTULO / TITLE: - Infected intracranial meningiomas.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Aug 2. pii: S1878-8750(13)00895-4. doi: 10.1016/j.wneu.2013.07.081.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.07.081](https://doi.org/10.1016/j.wneu.2013.07.081)

AUTORES / AUTHORS: - Lo WB; Cahill J; Carey M; Mehta H; Shad A

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery, Clifford Bridge Road, Coventry CV2 2DX, United Kingdom. Electronic address: williamlo@doctors.org.uk.

RESUMEN / SUMMARY: - BACKGROUND: Infection associated with an intracranial meningioma is an extremely rare condition. Only six cases have been described in the literature. Due to its dual pathologies, initial radiological diagnosis can be difficult. We describe the first reported case of multiple infected intracranial meningiomas, and correlate the radiological and histological findings. CASE DESCRIPTION: A seventy year old woman presented with sepsis and a left hemiparesis following uretero-lithotripsy. She was diagnosed as having a large right parietal and a smaller left frontal lesion on magnetic resonance imaging (MRI). Diffusion weighted imaging (DWI) and an apparent diffusion coefficient (ADC) map demonstrated features of cerebral metastases. A two stage excision confirmed atypical meningiomas containing an intratumoral abscess secondary to Escherichia coli. She made a full neurological recovery. Despite the additional techniques, the radiological diagnosis was initially challenging due to the dual pathologies. Nonetheless, the radiological appearance was consistent with the complex histological findings. CONCLUSION: Under the appropriate clinical context, diffusion weighted imaging and apparent diffusion coefficient map aid the diagnosis of infected intracranial meningiomas.

[704]

TÍTULO / TITLE: - Growth hormone secreting pituitary macroadenoma and meningioma: An association or coincidence?

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

REVISTA / JOURNAL: - Indian J Endocrinol Metab. 2013 Jul;17(4):770-1. doi: 10.4103/2230-8210.113785.

●● Enlace al texto completo (gratis o de pago) [4103/2230-8210.113785](https://doi.org/10.4103/2230-8210.113785)

AUTORES / AUTHORS: - Masoodi SR; Mir SA; Farooqui KJ; Bhat AR; Wani AI; Bhat MA

INSTITUCIÓN / INSTITUTION: - Department of Endocrinology, Sher-I-Kashmir Institute of Medical Sciences, Soura, Srinagar, Jammu and Kashmir, India.

[705]

TÍTULO / TITLE: - Evaluation of linear accelerator-based stereotactic radiosurgery in the management of meningiomas: a single center experience.

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

REVISTA / JOURNAL: - J BUON. 2013 Jul-Sep;18(3):717-22.

AUTORES / AUTHORS: - Dincoglan F; Beyzadeoglu M; Sager O; Uysal B; Demiral S; Gamsiz H; Dirican B

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Gulhane Military Medical Academy, Ankara, Turkey.

RESUMEN / SUMMARY: - Purpose: Stereotactic radiosurgery (SRS) has emerged as a viable alternative to surgery in the management of meningioma through exploiting the advantage of being minimally invasive with few complications and acceptable local control rates. The aim of this study was to evaluate the efficiency of linear accelerator (LINAC)-based SRS in the management of meningiomas and to report our experience using this sophisticated technique. Methods: Between July 1998 and March 2012, 79 patients (42 female, 37 male) were treated using LINAC-based SRS in the Department of Radiation Oncology, Gulhane Military Medical Academy. Median dose was 13 Gy (range 10- 16) prescribed to the 80-95% isodose line encompassing the target. Results: Median follow-up time was 53 months (range 9-112). Median tumor volume was 3.43 cc (range 0.3-14.1). Local tumor control was 89.7% in the 68 patients with adequate follow-up. Conclusion: LINAC-based SRS offers a safe and effective treatment alternative to surgery in intracranial meningiomas with high local control rates and low morbidity.

[706]

TÍTULO / TITLE: - Is “en-bloc” excision, an option for select large vascular meningiomas?

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

REVISTA / JOURNAL: - Surg Neurol Int. 2013 Aug 8;4:102. doi: 10.4103/2152-7806.116307.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.116307](#)

AUTORES / AUTHORS: - Dhandapani S; Sharma K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Post Graduate Institute of Medical Education and Research, Chandigarh, India.

RESUMEN / SUMMARY: - BACKGROUND: Large highly vascular meningiomas surgically challenging when preoperative embolization is not feasible. CASE DESCRIPTION: We present an illustrative case of ‘en bloc’ excision of a highly vascular giant lateral sphenoid wing meningioma using the technique of 4 D’s. After ruling out neurovascular encasement and significant brain interposition, our technique consisted of devascularization, diminutive dural opening, early detachment, and progressively deeper circumferential dissection. “En bloc” delivery was aided by the underlying brain pulsations and edema with no retraction or manipulation. This was successfully

employed in a series of seven more patients with large meningiomas with less blood loss. All the patients recovered well with no clinical or radiological sequelae.
CONCLUSION: In select large vascular meningiomas, en bloc excision appears to be a simple, safe, and effective alternative to piecemeal excision, which can be performed in any set-up.

[707]

TÍTULO / TITLE: - An unusual metastasis from a breast carcinoma to a psammomatous tuberculum sella meningioma.

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

REVISTA / JOURNAL: - J Neurosci Rural Pract. 2013 Apr;4(2):233-4. doi: 10.4103/0976-3147.112780.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.112780](#)

AUTORES / AUTHORS: - Dadlani R; Ghosal N; Hegde AS

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Sri Satya Sai Institute of Higher Medical Sciences, Bangalore, India.

[708]

TÍTULO / TITLE: - An EGFRvIII-targeted bispecific T-cell engager overcomes limitations of the standard of care for glioblastoma.

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

REVISTA / JOURNAL: - Expert Rev Clin Pharmacol. 2013 Jul;6(4):375-86. doi: 10.1586/17512433.2013.811806.

●● Enlace al texto completo (gratis o de pago) [1586/17512433.2013.811806](#)

AUTORES / AUTHORS: - Gedeon PC; Choi BD; Hodges TR; Mitchell DA; 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. patrick.gedeon@duke.edu

RESUMEN / SUMMARY: - While advanced surgical techniques, radiation therapy and chemotherapeutic regimens provide a tangible benefit for patients with glioblastoma (GBM), the average survival from the time of diagnosis remains less than 15 months. Current therapy for GBM is limited by the nonspecific nature of treatment, prohibiting therapy that is aggressive and prolonged enough to eliminate all malignant cells. As an alternative, bispecific antibodies can redirect the immune system to eliminate malignant cells with exquisite potency and specificity. We have recently developed an EGF receptor variant III (EGFRvIII)-targeted bispecific antibody that redirects T cells to eliminate EGFRvIII-expressing GBM. The absolute tumor specificity of EGFRvIII and the lack of immunologic crossreactivity with healthy cells allow this therapeutic to overcome limitations associated with the nonspecific nature of the current standard of care for GBM. Evidence indicates that the molecule can exert therapeutically

significant effects in the CNS following systemic administration. Additional advantages in terms of ease-of-production and off-the-shelf availability further the clinical utility of this class of therapeutics.

[709]

TÍTULO / TITLE: - Overexpression of integrin-linked kinase (ILK) promotes glioma cell invasion and migration and down-regulates E-cadherin via the NF-kappaB pathway.

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

REVISTA / JOURNAL: - J Mol Histol. 2013 Sep 13.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10735-013-9540-5](#)

AUTORES / AUTHORS: - Liang F; Zhang S; Wang B; Qiu J; Wang Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of China Medical University, 155 North Nanjing Street, Shenyang, 110001, Liaoning, People's Republic of China.

RESUMEN / SUMMARY: - Integrin-linked kinase (ILK) is a ubiquitously expressed serine/threonine protein kinase that has been implicated in cancer development, progression and metastasis. The aim of the present study was to characterize the role of ILK in glioma cell invasion and migration. We generated a recombinant eukaryotic expression vector containing the human ILK gene and transfected it into human glioma SHG-44 cells. Real-time PCR and western blot analysis were used to identify the stable transformants. The wound healing and Transwell invasion assays showed that ectopic overexpression of ILK in SHG-44 cells significantly promoted their migration and invasion capabilities in culture. This was accompanied by a decrease in expression of E-cadherin and an increase in expression of Snail and Slug. Moreover, the decrease in E-cadherin expression induced by ILK overexpression was greatly restored by the nuclear factor-kappaB (NF-kappaB) inhibitor BAY 11-7028 or small interfering RNA targeting NF-kappaB p65, indicating an involvement of NF-kappaB in ILK-induced down-regulation of E-cadherin. In conclusion, our data underscore a novel role for ILK in glioma invasion and metastasis processes, implicating potential for therapeutic interference.

[710]

TÍTULO / TITLE: - Dynamic Quantitative Intravital Imaging of Glioblastoma Progression Reveals a Lack of Correlation between Tumor Growth and Blood Vessel Density.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 12;8(9):e72655. doi: 10.1371/journal.pone.0072655.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0072655](#)

AUTORES / AUTHORS: - Ricard C; Stanchi F; Rodriguez T; Amoureux MC; Rougon G; Debarbieux F

INSTITUCIÓN / INSTITUTION: - Developmental Biology Institute of Marseille-Luminy (IBDML), Aix Marseille University-CNRS 7288, Marseille, France ; European Center for Medical Imaging (CERIMED), Marseille, France.

RESUMEN / SUMMARY: - The spatiotemporal and longitudinal monitoring of cellular processes occurring in tumors is critical for oncological research. We focused on glioblastoma multiforme (GBM), an untreatable highly vascularized brain tumor whose progression is thought to critically depend on the oxygen and metabolites supplied by blood vessels. We optimized protocols for orthotopic GBM grafting in mice that were able to recapitulate the biophysical constraints normally governing tumor progression and were suitable for intravital multiphoton microscopy. We repeatedly imaged tumor cells and blood vessels during GBM development. We established methods for quantitative correlative analyses of dynamic imaging data over wide fields in order to cover the entire tumor. We searched whether correlations existed between blood vessel density, tumor cell density and proliferation in control tumors. Extensive vascular remodeling and the formation of new vessels accompanied U87 tumor cell growth, but no strong correlation was found between local cell density and the extent of local blood vessel density irrespective of the tumor area or time points. The technique moreover proves useful for comparative analysis of mice subjected either to Bevacizumab anti-angiogenic treatment that targets VEGF or to AMD3100, an antagonist of CXCR4 receptor. Bevacizumab treatment massively reduced tumoral vessel densities but only transiently reduced U87 tumor growth rate. Again, there was no correlation between local blood vessel density and local cell density. Moreover, Bevacizumab applied only prior to tumor implantation inhibited tumor growth to the same extent as post-grafting treatment. AMD3100 achieved a potent inhibition of tumor growth without significant reduction in blood vessel density. These results indicate that in the brain, in this model, tumor growth can be sustained without an increase in blood vessel density and suggest that GBM growth is rather governed by stromal properties.

[711]

TÍTULO / TITLE: - Insights into the prognostic value of DJ-1 and MIB-1 in astrocytic tumors.

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

REVISTA / JOURNAL: - Diagn Pathol. 2013 Jul 31;8(1):126.

●● Enlace al texto completo (gratis o de pago) [1186/1746-1596-8-126](#)

AUTORES / AUTHORS: - Abd El Atti RM; Abou Gabal HH; Osman WM; Saad AS

RESUMEN / SUMMARY: - BACKGROUND: The histological grade is the gold standard for the evaluation of prognosis of astrocytic tumors. Nevertheless, morphologic criteria are not always accurate prognostic indicators. Aim: The research investigates the expression of MIB-1 and DJ-1 in different grades of astrocytomas and evaluates the possible prognostic role of DJ-1 in these tumors in relation to other prognostic parameters including the MIB-1 labeling index Materials and methods:

Immunohistochemical expression of MIB-1 and DJ-1 was evaluated in 111 samples of astrocytic tumors comprising 28 diffuse astrocytomas, 38 anaplastic astrocytomas and 45 glioblastomas. The univariate survival analysis was done using the Kaplan-Meier method and the multivariate survival analysis was done using Cox proportional hazard model. RESULTS: The statistical analysis revealed a significant correlation between each of DJ-1 and MIB-1 and the histological grade of astrocytomas. The univariate analysis showed that high grade, high DJ-1 score and MIB-1 labeling index [greater than or equal to] 10.1 were associated with poor survival. Multivariate analysis for all the studied astrocytomas proved the independent prognostic significance of the histological grade and DJ-1 score. Meanwhile, the multivariate analysis for each grade emphasized that DJ-1 was the only independent prognostic indicator in high-grade astrocytomas. CONCLUSION: This study emphasized the effectiveness of high DJ-1 expression in predicting poor survival of astrocytoma patients, when compared to MIB-1. DJ-1 could be particularly important in cases with discrepancies between the morphologic criteria and clinical parameters. Virtual slides: The virtual slide(s) for this article can be found here: diagnosticpathology.diagnomx.eu/vs/1070116023943146.

[712]

TÍTULO / TITLE: - Lrig2-Deficient Mice Are Protected against PDGFB-Induced Glioma.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 4;8(9):e73635. doi: 10.1371/journal.pone.0073635.

●● Enlace al texto completo (gratis o de pago) 1371/journal.pone.0073635

AUTORES / AUTHORS: - Rondahl V; Holmlund C; Karlsson T; Wang B; Faraz M; Henriksson R; Hedman H

INSTITUCIÓN / INSTITUTION: - Department of Radiation Sciences, Oncology, Umea University, Umea, Sweden.

RESUMEN / SUMMARY: - BACKGROUND: The leucine-rich repeats and immunoglobulin-like domains (LRIG) proteins constitute an integral membrane protein family that has three members: LRIG1, LRIG2, and LRIG3. LRIG1 negatively regulates growth factor signaling, but little is known regarding the functions of LRIG2 and LRIG3. In oligodendroglial brain tumors, high expression of LRIG2 correlates with poor patient survival. Lrig1 and Lrig3 knockout mice are viable, but there have been no reports on Lrig2-deficient mice to date. METHODOLOGY/PRINCIPAL FINDINGS: Lrig2-deficient mice were generated by the ablation of Lrig2 exon 12 (Lrig2E12). The Lrig2E12^{-/-} mice showed a transiently reduced growth rate and an increased spontaneous mortality rate; 20-25% of these mice died before 130 days of age, with the majority of the deaths occurring before 50 days. Ntv-a transgenic mice with different Lrig2 genotypes were transduced by intracranial injection with platelet-derived growth factor (PDGF) B-encoding replication-competent avian retrovirus (RCAS)-producing DF-1 cells. All injected Lrig2E12^{+/+} mice developed Lrig2 expressing oligodendroglial brain tumors of

lower grade (82%) or glioblastoma-like tumors of higher grade (18%). Lrig2E12^{-/-} mice, in contrast, only developed lower grade tumors (77%) or had no detectable tumors (23%). Lrig2E12^{-/-} mouse embryonic fibroblasts (MEF) showed altered induction-kinetics of immediate-early genes Fos and Egr2 in response to PDGF-BB stimulation. However, Lrig2E12^{-/-} MEFs showed no changes in Pdgfralpha or Pdgfrbeta levels or in levels of PDGF-BB-induced phosphorylation of Pdgfralpha, Pdgfrbeta, Akt, or extracellular signal-regulated protein kinases 1 and 2 (ERK1/2). Overexpression of LRIG1, but not of LRIG2, downregulated PDGFRalpha levels in HEK-293T cells. CONCLUSIONS: The phenotype of Lrig2E12^{-/-} mice showed that Lrig2 was a promoter of PDGFB-induced glioma, and Lrig2 appeared to have important molecular and developmental functions that were distinct from those of Lrig1 and Lrig3.

[713]

TÍTULO / TITLE: - Whole transcriptome sequencing enables discovery and analysis of viruses in archived primary central nervous system lymphomas.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 4;8(9):e73956. doi: 10.1371/journal.pone.0073956.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0073956](#)

AUTORES / AUTHORS: - Deboever C; Reid EG; Smith EN; Wang X; Dumaop W; Harismendy O; Carson D; Richman D; Masliah E; Frazer KA

INSTITUCIÓN / INSTITUTION: - Moores Cancer Center, University of California San Diego, La Jolla, California, United States of America ; Bioinformatics and Systems Biology Graduate Program, University of California San Diego, La Jolla, California, United States of America.

RESUMEN / SUMMARY: - Primary central nervous system lymphomas (PCNSL) have a dramatically increased prevalence among persons living with AIDS and are known to be associated with human Epstein Barr virus (EBV) infection. Previous work suggests that in some cases, co-infection with other viruses may be important for PCNSL pathogenesis. Viral transcription in tumor samples can be measured using next generation transcriptome sequencing. We demonstrate the ability of transcriptome sequencing to identify viruses, characterize viral expression, and identify viral variants by sequencing four archived AIDS-related PCNSL tissue samples and analyzing raw sequencing reads. EBV was detected in all four PCNSL samples and cytomegalovirus (CMV), JC polyomavirus (JCV), and HIV were also discovered, consistent with clinical diagnoses. CMV was found to express three long non-coding RNAs recently reported as expressed during active infection. Single nucleotide variants were observed in each of the viruses observed and three indels were found in CMV. No viruses were found in several control tumor types including 32 diffuse large B-cell lymphoma samples. This study demonstrates the ability of next generation transcriptome sequencing to

accurately identify viruses, including DNA viruses, in solid human cancer tissue samples.

[714]

TÍTULO / TITLE: - Primary Cerebral T-Cell Lymphoma in a Sea Otter (*Enhydra lutris*).

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

REVISTA / JOURNAL: - J Vet Med Sci. 2013 Aug 13.

AUTORES / AUTHORS: - Tanaka N; Izawa T; Kashiwagi-Yamamoto E; Kuwamura M; Ozaki M; Nakao T; Yamate J

INSTITUCIÓN / INSTITUTION: - Laboratory of Veterinary Pathology, Division of Veterinary Sciences, Graduate School of Life and Environmental Sciences, Osaka Prefecture University.

RESUMEN / SUMMARY: - A 10-year-old female sea otter exhibited convulsions, arrhythmia, hyperthermia, forced breathing and anorexia, and died after a week. Histopathological examination revealed neoplastic proliferation of small round cells with scant cytoplasm and round or oval nuclei distributed mainly in the thalamus. The proliferation of neoplastic cells was observed in the cerebral parenchyma and perivascular areas. The neoplastic cells were immunopositive for CD3, but not CD20. No neoplastic proliferation of T-cells was found in other organs. Taken together, we diagnosed this case as a primary cerebral T-cell lymphoma. To our knowledge, this is the first case of primary cerebral T-cell lymphoma in a sea otter.

[715]

TÍTULO / TITLE: - The impact of computed tomography slice thickness on the assessment of stereotactic, 3D conformal and intensity-modulated radiotherapy of brain tumors.

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

REVISTA / JOURNAL: - Clin Transl Oncol. 2013 Sep 20.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s12094-013-1111-4](#)

AUTORES / AUTHORS: - Caivano R; Fiorentino A; Pedicini P; Califano G; Fusco V

INSTITUCIÓN / INSTITUTION: - Radiation Oncology Department, I.R.C.C.S. - C.R.O.B., Via San Pio 1, 85028, Rionero in Vulture (Pz), Italy, rocchina.caivano@gmail.com.

RESUMEN / SUMMARY: - **PURPOSE:** To evaluate radiotherapy treatment planning accuracy by varying computed tomography (CT) slice thickness and tumor size. **METHODS:** CT datasets from patients with primary brain disease and metastatic brain disease were selected. Tumor volumes ranging from about 2.5 to 100 cc and CT scan at different slice thicknesses (1, 2, 4, 6 and 10 mm) were used to perform treatment planning (1-, 2-, 4-, 6- and 10-CT, respectively). For any slice thickness, a conformity index (CI) referring to 100, 98, 95 and 90 % isodoses and tumor size was computed. All the CI and volumes obtained were compared to evaluate the impact of CT slice thickness on treatment plans. **RESULTS:** The smallest volumes reduce significantly if

defined on 1-CT with respect to 4- and 6-CT, while the CT slice thickness does not affect target definition for the largest volumes. The mean CI for all the considered isodoses and CT slice thickness shows no statistical differences when 1-CT is compared to 2-CT. Comparing the mean CI of 1- with 4-CT and 1- with 6-CT, statistical differences appear only for the smallest volumes with respect to 100, 98 and 95 % isodoses-the CI for 90 % isodose being not statistically significant for all the considered PTVs.

CONCLUSIONS: The accuracy of radiotherapy tumor volume definition depends on CT slice thickness. To achieve a better tumor definition and dose coverage, 1- and 2-CT would be suitable for small targets, while 4- and 6-CT are suitable for the other volumes.

[716]

TÍTULO / TITLE: - Resection Probability Maps for Quality Assessment of Glioma Surgery without Brain Location Bias.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 6;8(9):e73353. doi: 10.1371/journal.pone.0073353.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0073353](#)

AUTORES / AUTHORS: - De Witt Hamer PC; Hendriks EJ; Mandonnet E; Barkhof F; Zwinderman AH; Duffau H

INSTITUCIÓN / INSTITUTION: - Neurosurgical Center Amsterdam, VU University Medical Center, Amsterdam, The Netherlands.

RESUMEN / SUMMARY: - **BACKGROUND:** Intraoperative brain stimulation mapping reduces permanent postoperative deficits and extends tumor removal in resective surgery for glioma patients. Successful functional mapping is assumed to depend on the surgical team's expertise. In this study, glioma resection results are quantified and compared using a novel approach, so-called resection probability maps (RPM), exemplified by a surgical team comparison, here with long and short experience in mapping. **METHODS:** Adult patients with glioma were included by two centers with two and fifteen years of mapping experience. Resective surgery was targeted at non-enhanced MRI extension and was limited by functional boundaries. Neurological outcome was compared. To compare resection results, we applied RPMs to quantify and compare the resection probability throughout the brain at 1 mm resolution. Considerations for spatial dependence and multiple comparisons were taken into account. **RESULTS:** The senior surgical team contributed 56, and the junior team 52 patients. The patient cohorts were comparable in age, preoperative tumor volume, lateralization, and lobe localization. Neurological outcome was similar between teams. The resection probability on the RPMs was very similar, with none (0%) of 703,967 voxels in left-sided tumors being differentially resected, and 124 (0.02%) of 644,153 voxels in right-sided tumors. **CONCLUSION:** RPMs provide a quantitative volumetric method to compare resection results, which we present as standard for quality

assessment of resective glioma surgery because brain location bias is avoided. Stimulation mapping is a robust surgical technique, because the neurological outcome and functional-based resection results using stimulation mapping are independent of surgical experience, supporting wider implementation.

[717]

TÍTULO / TITLE: - Protective Effect of Melatonin on Methamphetamine-Induced Apoptosis in Glioma Cell Line.

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

REVISTA / JOURNAL: - Neurotox Res. 2013 Aug 23.

●● Enlace al texto completo (gratis o de pago) [1007/s12640-013-9419-y](https://doi.org/10.1007/s12640-013-9419-y)

AUTORES / AUTHORS: - Jumnonprakon P; Govitrapong P; Tocharus C; Tungkum W; Tocharus J

INSTITUCIÓN / INSTITUTION: - Department of Anatomy, Faculty of Medicine, Chiang Mai University, Chiang Mai, 50200, Thailand.

RESUMEN / SUMMARY: - Methamphetamine (METH) is a highly addictive drug causing neurodegenerative diseases. METH has been known to be neurotoxic by inducing oxidative stress, free radical, and pro-inflammatory cytokines. Previous studies have shown that METH could induce neuron and glial cell death, especially inducing glial cell-mediated neurotoxicity that plays a critical role in stress-induced central nervous system damage. Therefore, the aim of the present study is to explore the mechanisms of METH-induced cell death in the glial cell. METH-induced glial cells death is mediated via mitochondrial damage pathway. METH activates the upregulation of the Bax, cytochrome c, cleavage caspase 9 and 3 proteins, and downregulation of Bcl-XL protein in cascade. Pretreatment with melatonin, a neurohormone secreted by the pineal gland, effectively reduced glial cell death. Moreover, melatonin increased the Bcl-XL/Bax ratio but reduced the level of cytochrome c, cleavage caspase 9 and 3 proteins. Therefore, these results demonstrated that melatonin could reduce the cytotoxic effect of METH by decreasing the mitochondrial death pathway activation in glial cells. This outcome suggests that melatonin might be beneficial as the neuroprotection in neurodegenerative diseases caused by METH or other pathogens.

[718]

TÍTULO / TITLE: - The anatomo-functional connectivity of word repetition: insights provided by awake brain tumor surgery.

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

REVISTA / JOURNAL: - Front Hum Neurosci. 2013;7:405. doi: 10.3389/fnhum.2013.00405.

●● Enlace al texto completo (gratis o de pago) [3389/fnhum.2013.00405](https://doi.org/10.3389/fnhum.2013.00405)

AUTORES / AUTHORS: - Moritz-Gasser S; Duffau H

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Hopital Gui de Chauliac, Centre Hospitalier Universitaire Montpellier Montpellier, France ; Team "Plasticity of

Central Nervous System, Stem Cells and Glial Tumors," INSERM U1051, Institute for Neuroscience of Montpellier, Hopital Saint Eloi Montpellier, France.

[719]

TÍTULO / TITLE: - Molecular fingerprinting reflects different histotypes and brain region in low grade gliomas.

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

REVISTA / JOURNAL: - BMC Cancer. 2013 Aug 15;13(1):387.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-387](#)

AUTORES / AUTHORS: - Mascelli S; Barla A; Raso A; Mosci S; Nozza P; Biassoni R; Morana G; Huber M; Mircean C; Fasulo D; Noy K; Wittemberg G; Pignatelli S; Piatelli G; Cama A; Garre ML; Capra V; Verri A

RESUMEN / SUMMARY: - **BACKGROUND:** Paediatric low-grade gliomas (LGGs) encompass a heterogeneous set of tumours of different histologies, site of lesion, age and gender distribution, growth potential, morphological features, tendency to progression and clinical course. Among LGGs, Pilocytic astrocytomas (PAs) are the most common central nervous system (CNS) tumours in children. They are typically well-circumscribed, classified as grade I by the World Health Organization (WHO), but recurrence or progressive disease occurs in about 10-20% of cases. Despite radiological and neuropathological features deemed as classic are acknowledged, PA may present a bewildering variety of microscopic features. Indeed, tumours containing both neoplastic ganglion and astrocytic cells occur at a lower frequency. **METHODS:** Gene expression profiling on 40 primary LGGs including PAs and mixed glial-neuronal tumours comprising gangliogliomas (GG) and desmoplastic infantile gangliogliomas (DIG) using Affymetrix array platform was performed. A biologically validated machine learning workflow for the identification of microarray-based gene signatures was devised. The method is based on a sparsity inducing regularization algorithm l1l2 that selects relevant variables and takes into account their correlation. The most significant genetic signatures emerging from gene-chip analysis were confirmed and validated by qPCR. **RESULTS:** We identified an expression signature composed by a biologically validated list of 15 genes, able to distinguish infratentorial from supratentorial LGGs. In addition, a specific molecular fingerprinting distinguishes the supratentorial PAs from those originating in the posterior fossa. Lastly, within supratentorial tumours, we also identified a gene expression pattern composed by neurogenesis, cell motility and cell growth genes which dichotomize mixed glial-neuronal tumours versus PAs. Our results reinforce previous observations about aberrant activation of the mitogen-activated protein kinase (MAPK) pathway in LGGs, but still point to an active involvement of TGF-beta signaling pathway in the PA development and pick out some hitherto unreported genes worthy of further investigation for the mixed glial-neuronal tumours. **CONCLUSIONS:** The identification of a brain region-specific gene signature suggests that LGGs, with similar pathological features but located at different sites, may be

distinguishable on the basis of cancer genetics. Molecular fingerprinting seems to be able to better sub-classify such morphologically heterogeneous tumours and it is remarkable that mixed glial-neuronal tumours are strikingly separated from PAs.

[720]

TÍTULO / TITLE: - Molecular status of pituitary carcinoma and atypical adenoma that contributes the effectiveness of temozolomide.

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

REVISTA / JOURNAL: - Med Mol Morphol. 2013 Aug 17.

●● Enlace al texto completo (gratis o de pago) [1007/s00795-013-0050-z](#)

AUTORES / AUTHORS: - Matsuno A; Murakami M; Hoya K; Yamada SM; Miyamoto S; Yamada S; Son JH; Nishido H; Ide F; Nagashima H; Sugaya M; Hirohata T; Mizutani A; Okinaga H; Ishii Y; Tahara S; Teramoto A; Osamura RY

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Teikyo University Chiba Medical Center, 3426-3 Anesaki, Ichihara, Chiba, 299-0111, Japan, akirakun@med.teikyo-u.ac.jp.

RESUMEN / SUMMARY: - There have been several reports of temozolomide (TMZ) treatment of pituitary carcinomas and atypical adenomas. O6-methyl-guanine-DNA methyltransferase is not the sole molecule determining the sensitivity to TMZ in pituitary carcinomas and atypical adenomas. The Japan Society of Hypothalamic and Pituitary Tumors study suggests that MSH6, one of mismatch repair pathway enzyme, fulfills a contributory role to the efficacy of TMZ treatment for pituitary carcinomas and atypical adenomas. The preserved MSH6 function might be essential for the responsiveness to TMZ treatment in pituitary carcinomas and atypical adenomas.

[721]

TÍTULO / TITLE: - Structural and logical analysis of a comprehensive hedgehog signaling pathway to identify alternative drug targets for glioma, colon and pancreatic cancer.

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

REVISTA / JOURNAL: - PLoS One. 2013 Jul 23;8(7):e69132. doi: 10.1371/journal.pone.0069132. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0069132](#)

AUTORES / AUTHORS: - Chowdhury S; Pradhan RN; Sarkar RR

INSTITUCIÓN / INSTITUTION: - Chemical Engineering and Process Development, CSIR-National Chemical Laboratory, Pune, Maharashtra, India.

RESUMEN / SUMMARY: - Hedgehog is an evolutionarily conserved developmental pathway, widely implicated in controlling various cellular responses such as cellular proliferation and stem cell renewal in human and other organisms, through external stimuli. Aberrant activation of this pathway in human adult stem cell line may cause different types of cancers. Hence, targeting this pathway in cancer therapy has become indispensable, but the non availability of detailed molecular interactions,

complex regulations by extra- and intra-cellular proteins and cross talks with other pathways pose a serious challenge to get a coherent understanding of this signaling pathway for making therapeutic strategy. This motivated us to perform a computational study of the pathway and to identify probable drug targets. In this work, from available databases and literature, we reconstructed a complete hedgehog pathway which reports the largest number of molecules and interactions to date. Using recently developed computational techniques, we further performed structural and logical analysis of this pathway. In structural analysis, the connectivity and centrality parameters were calculated to identify the important proteins from the network. To capture the regulations of the molecules, we developed a master Boolean model of all the interactions between the proteins and created different cancer scenarios, such as Glioma, Colon and Pancreatic. We performed perturbation analysis on these cancer conditions to identify the important and minimal combinations of proteins that can be used as drug targets. From our study we observed the under expressions of various oncoproteins in Hedgehog pathway while perturbing at a time the combinations of the proteins GLI1, GLI2 and SMO in Glioma; SMO, HFU, ULK3 and RAS in Colon cancer; SMO, HFU, ULK3, RAS and ERK12 in Pancreatic cancer. This reconstructed Hedgehog signaling pathway and the computational analysis for identifying new combinatory drug targets will be useful for future in-vitro and in-vivo analysis to control different cancers.

[722]

TÍTULO / TITLE: - Tumor necrosis factor alpha antagonism improves neurological recovery in murine intracerebral hemorrhage.

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

REVISTA / JOURNAL: - J Neuroinflammation. 2013 Aug 20;10(1):103. doi: 10.1186/1742-2094-10-103.

●● Enlace al texto completo (gratis o de pago) [1186/1742-2094-10-103](#)

AUTORES / AUTHORS: - Lei B; Dawson HN; Roulhac-Wilson B; Wang H; Laskowitz DT; James ML

INSTITUCIÓN / INSTITUTION: - Multidisciplinary Neuroprotection Laboratories, Durham, NC 27710, USA.

RESUMEN / SUMMARY: - BACKGROUND: Intracerebral hemorrhage (ICH) is a devastating stroke subtype characterized by a prominent neuroinflammatory response. Antagonism of pro-inflammatory cytokines by specific antibodies represents a compelling therapeutic strategy to improve neurological outcome in patients after ICH. To test this hypothesis, the tumor necrosis factor alpha (TNF-alpha) antibody CNTO5048 was administered to mice after ICH induction, and histological and functional endpoints were assessed. METHODS: Using 10 to 12-week-old C57BL/6J male mice, ICH was induced by collagenase injection into the left basal ganglia. Brain TNF-alpha concentration, microglia activation/macrophage recruitment, hematoma

volume, cerebral edema, and rotorod latency were assessed in mice treated with the TNF-alpha antibody, CNTO5048, or vehicle. RESULTS: After ICH induction, mice treated with CNTO5048 demonstrated reduction in microglial activation/macrophage recruitment compared to vehicle-treated animals, as assessed by unbiased stereology (P = 0.049). This reduction in F4/80-positive cells was associated with a reduction in cleaved caspase-3 (P = 0.046) and cerebral edema (P = 0.026) despite similar hematoma volumes, when compared to mice treated with vehicle control. Treatment with CNTO5048 after ICH induction was associated with a reduction in functional deficit when compared to mice treated with vehicle control, as assessed by rotorod latencies (P = 0.024). CONCLUSIONS: Post-injury treatment with the TNF-alpha antibody CNTO5048 results in less neuroinflammation and improved functional outcomes in a murine model of ICH.

[723]

TÍTULO / TITLE: - Myxoid neurothekeoma: a rare soft tissue tumor of hand in a male toddler.

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

REVISTA / JOURNAL: - Niger J Surg. 2013 Jan;19(1):32-4. doi: 10.4103/1117-6806.111508.

●● Enlace al texto completo (gratis o de pago) [4103/1117-6806.111508](#)

AUTORES / AUTHORS: - Akhtar K; Zaheer S; Ray PS; Sherwani RK

INSTITUCIÓN / INSTITUTION: - Department of Pathology, J. N. Medical College, Aligarh Muslim University, Aligarh, Uttar Pradesh, India.

RESUMEN / SUMMARY: - Neurothekeomas are rare benign neoplasms, typically occurring in young patients with a remarkable predilection for the female population. Patients usually present with a small nodule in different anatomical sites, commonly involving the face and the upper limb. We report a case of a three-year-old boy, who presented with a nontender nodule on the left thumb. Surgical biopsy and immunostaining confirmed the diagnosis as myxoid neurothekeoma. The rarity of this unusual skin tumor in a toddler prompted the following report.

[724]

TÍTULO / TITLE: - Short Interval Infield Sarcoma Development following Resection of Glioblastoma and Adjuvant Radiotherapy and Temozolomide.

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

REVISTA / JOURNAL: - Case Rep Med. 2013;2013:591272. doi: 10.1155/2013/591272. Epub 2013 Aug 29.

●● Enlace al texto completo (gratis o de pago) [1155/2013/591272](#)

AUTORES / AUTHORS: - Alotaibi FE; Petrecca K

INSTITUCIÓN / INSTITUTION: - Department of Neurology and Neurosurgery, Montreal Neurological Institute and Hospital, McGill University and Department of

Neurosurgery, McGill University Health Centre, 3801 University Avenue, 109 Montreal, QC, Canada H3A 2B4.

RESUMEN / SUMMARY: - Background. The development of 2 unassociated brain cancers in the same patient is a rare occurrence. Secondary cancers are generally thought to develop as an oncogenic consequence of the radiation therapy delivered to treat the primary cancers, always requiring a significant time interval between radiation treatment and secondary cancer development. Case Description. We report the development of an undifferentiated myxoid sarcoma only 13 months following radiation therapy for a glioblastoma. Conclusion. This case represents the shortest time interval reported between radiation therapy and secondary brain cancer development.

[725]

TÍTULO / TITLE: - Intracranial arachnoid cysts: impairment of higher cognitive functions and postoperative improvement.

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

REVISTA / JOURNAL: - J Neurodev Disord. 2013 Aug 28;5(1):21.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1866-1955-5-21](#)

AUTORES / AUTHORS: - Gjerde PB; Schmid M; Hammar A; Wester K

RESUMEN / SUMMARY: - BACKGROUND: Intracranial arachnoid cysts have been shown to yield cognitive impairment over a range of basic mental functions, and these functions normalize after surgical cyst decompression. We wanted to investigate whether such cysts may also impair executive cognitive functions, and whether surgical cyst decompression leads to an improvement. METHODS: This study included 22 patients with arachnoid cysts and 13 control patients scheduled for low back surgery. All subjects were tested with Delis-Kaplan Executive Function System (D-KEFS) tests, assessing executive function 1 day before surgery and a minimum of 3 months after surgery. The data were analyzed according to scaled score computations based on raw scores provided by D-KEFS, adjusted for age, gender, and educational norms. RESULTS: Preoperatively, the patients with cysts group performed worse than the control group in verbal knowledge, mental flexibility, inhibitory capacity, problem solving, and planning skills. Postoperatively, the patients with cysts group significantly improved performance and were no longer different from the control group in the following subtests: inhibition, inhibition/switching, letter fluency, category switching, and total switching accuracy. The patients with cysts group also significantly improved performance in color naming, category fluency, and in the Tower test, but nevertheless remained impaired at follow-up compared with the control group. The control group did not show a similar improvement, except for the Tower test. Cyst size or postoperative volume reduction did not correlate with cognitive performance or postoperative improvement. Patients with left-sided temporal cysts performed poorer than patients with right-sided cysts on a complex verbal task demanding mental

flexibility. CONCLUSIONS: Arachnoid cysts seem to impair not only basic cognition, but also executive functions. Most of this impairment appears to be reversible after surgical cyst decompression. These results may have implications for future preoperative considerations for patients with intracranial arachnoid cysts.

[726]

TÍTULO / TITLE: - Tackling gliomas with nanoformulated antineoplastic drugs: suitability of hyaluronic acid nanoparticles.

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

REVISTA / JOURNAL: - Clin Transl Oncol. 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) 1007/s12094-013-1114-1

AUTORES / AUTHORS: - Ganau M

INSTITUCIÓN / INSTITUTION: - Department of Biomedical Engineering, University of Cagliari, Cagliari, Italy, mario.ganau@singularityu.org.

[727]

TÍTULO / TITLE: - Sex differences in the pituitary transforming growth factor-beta1 (TGF-beta1) system. Studies in a model of resistant prolactinomas.

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

REVISTA / JOURNAL: - Endocrinology. 2013 Sep 5.

●● Enlace al texto completo (gratis o de pago) 1210/en.2013-1433

AUTORES / AUTHORS: - Recouvreux MV; Lapyckyj L; Camilletti MA; Guida MC; Ornstein A; Rifkin DB; Becu-Villalobos D; Diaz-Torga G

INSTITUCIÓN / INSTITUTION: - 1Instituto de Biología y Medicina Experimental, Consejo Nacional de Investigaciones Científicas y Técnicas. V. Obligado 2490. (1428), Buenos Aires, Argentina.;

RESUMEN / SUMMARY: - Dopamine and estradiol interact in the regulation of lactotroph cell proliferation and prolactin secretion. Ablation of the dopamine D2 receptor gene (Drd2^{-/-}) in mice leads to a sexually dimorphic phenotype of hyperprolactinemia and pituitary hyperplasia, which is stronger in females. Transforming growth factor beta 1 (TGF-beta1) is a known inhibitor of lactotroph proliferation. TGF-beta1 is regulated by dopamine and estradiol, and it is usually down-regulated in prolactinoma experimental models. To understand the role of TGF-beta1 in the gender-specific development of prolactinomas in Drd2^{-/-} mice, we compared the expression of different components of the pituitary TGF-beta1 system, including active cytokine content, latent TGF-beta binding protein (LTBP) isoforms, and possible local TGF-beta1 activators, in males and females in this model. Furthermore, we also evaluated the effect of dopamine or estradiol administration, to elucidate their role on TGF-beta1 system regulation. The expression of active TGF-beta1, LTBP isoforms and several putative TGF-beta1 activators evaluated was higher in male than in female mouse pituitaries. However, Drd2^{-/-} female mice were more sensitive to the decrease in active TGF-ss1 content, as

reflected by the down-regulation of TGF-beta1 target genes. Estrogen and dopamine caused a differential regulation of several components of TGF-beta1 system. Particularly we found a sex- and genotype- dependent regulation of active TGF-beta1 content and a similar expression pattern of two of the putative TGF-beta1 activators, TSP1 and KLK1, suggesting that these proteins could mediate TGF-beta1 activation elicited by dopamine and estradiol. Our results indicate that: 1- the loss of dopaminergic tone affects more strongly the pituitary TGF-beta1 system in females than in males. 2- Males express higher levels of pituitary TGF-beta1 system components including active cytokine. 3- Estradiol negatively controls most of the components of the system. Since TGF-beta1 inhibits lactotroph proliferation, we propose that the higher levels of the TGF-beta1 system in males could protect or delay the development of prolactinomas in Drd2^{-/-} male mice.

[728]

TÍTULO / TITLE: - Endoscopic endonasal transclival approach to a ventral pontine pediatric ependymoma.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Aug 30.

●● Enlace al texto completo (gratis o de pago) [3171/2013.8.PEDS12183](#)

AUTORES / AUTHORS: - Rajappa P; Margetis K; Sigounas D; Anand V; Schwartz TH; Greenfield JP

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery and.

RESUMEN / SUMMARY: - The authors report a case of a recurrent pediatric ventral pontine ependymoma that they resected through an endonasal endoscopic transclival approach. Regarding the options for a surgical approach to ventral pontine tumors, traditional far-lateral approaches are associated with considerable morbidity due to the required muscle mobilization, brain retraction, and in-line obstruction of cranial nerves before reaching the target. The endoscopic endonasal transclival approach was made appealing by eliminating all of these concerns. The patient's fully pneumatized sphenoid sinus, laterally displaced basilar artery, and the direct ventral location of the bulky disease all further supported this unconventional choice of surgical corridor to achieve a palliative brainstem decompression of an incurable recurrence.

[729]

TÍTULO / TITLE: - Unique anti-glioblastoma activities of hypericin are at the crossroad of biochemical and epigenetic events and culminate in tumor cell differentiation.

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

REVISTA / JOURNAL: - PLoS One. 2013 Sep 16;8(9):e73625. doi: 10.1371/journal.pone.0073625.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0073625](#)

AUTORES / AUTHORS: - Dror N; Mandel M; Lavie G

INSTITUCIÓN / INSTITUTION: - Department of Cellular and Developmental Biology, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel.

RESUMEN / SUMMARY: - Failure of conventional therapies to alleviate glioblastoma (GBM) fosters search for novel therapeutic strategies. These include epigenetic modulators as histone deacetylase inhibitors (HDACi), which relax abnormally compact tumor cell chromatin organization, enabling cells to overcome blockage in differentiation. However, in clinical settings, HDACi efficacy is confined to subsets of hematologic malignancies. We reasoned that molecules targeting multiple epigenetic mechanisms may exhibit superior anti-cancer activities. We focused on the redox perylene-quinone Hypericin (HYP) and showed that HYP targets Hsp90 for polyubiquitination, degradation and inactivation. Hsp90 is implicated in mediating inheritable epigenetic modifications transferable to progeny. We therefore examined if HYP can induce epigenetic alterations in GBM cells and show here that HYP indeed, targets multiple mechanisms in human glioblastoma tumor cell lines via unique manners. These elicit major epigenetic signature changes in key developmentally regulated genes. HYP induces neuroglial tumor cell differentiation modulating the cytoarchitecture, neuroglial differentiation antigen expression and causes exit from cell proliferation cycles. Such activities characterize HDACi however HYP is not an HDAC inhibitor. Instead, HYP effectively down-regulates expression of Class-I HDACs, creating marked deficiencies in HDACs cellular contents, leading to histones H3 and H4 hyperacetylation. Expression of EZH2, the Polycomb repressor complex-2 catalytic subunit, which trimethylates histone H3K27 is also suppressed. The resulting histone hyperacetylation and diminished H3K27-trimethylation relax chromatin structure, activating gene transcription including differentiation-promoting genes. DNMT profiles are also modulated increasing global DNA methylation. HYP induces unique epigenetic down-regulations of HDACs, EZH2 and DNMTs, remodeling chromatin structure and culminating in tumor cell differentiation. These modulations generate clinically significant anti-GBM effects obtained in a clinical trial performed in patients with recurrent, progressive disease. Despite this advanced disease stage, patients responded to HYP, displaying stable disease and partial responses; patients on compassionate therapy survived for up to 34 months. Hypericin may constitute a novel anti-glioblastoma therapeutic paradigm.

[730]

TÍTULO / TITLE: - Pediatric high-grade astrocytomas: a distinct neuro-oncological paradigm.

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

REVISTA / JOURNAL: - Genome Med. 2013 Jul 30;5(7):66.

●● [Enlace al texto completo \(gratuito o de pago\) 1186/gm470](#)

AUTORES / AUTHORS: - Gerges N; Fontebasso AM; Albrecht S; Faury D; Jabado N

INSTITUCIÓN / INSTITUTION: - Departments of Pediatrics and Human Genetics, McGill University and McGill University Health Centre, Montreal, Quebec, Canada, H3Z2Z3.
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RESUMEN / SUMMARY: - Brain tumors are the leading cause of cancer-related death in children. High-grade astrocytomas (HGAs), in particular, are lethal in children across all ages. Integrative genome-wide analyses of the tumor's genome, transcriptome and epigenome, using next-generation sequencing technologies and genome-wide DNA methylation arrays, have provided valuable breakthroughs in our understanding of the pathogenesis of HGAs across all ages. Recent profiling studies have provided insight into the epigenetic nature of gliomas in young adults and HGAs in children, particularly with the identification of recurrent gain-of-function driver mutations in the isocitrate dehydrogenase 1 and 2 genes (IDH1/2) and the epigenetic influence of their oncometabolite 2-hydroxyglutarate, as well as mutations in the histone 3 variant 3 gene (H3F3A) and loss-of-function mutations in the histone 3 lysine 36 trimethyltransferase gene (SETD2). Mutations in H3F3A result in amino acid substitutions at residues thought to directly (K27M) or indirectly (G34R/V) affect histone post-translational modifications, suggesting they have the capacity to affect the epigenome in a profound manner. Here, we review recent genomic studies, and discuss evidence supporting the molecular characterization of pediatric HGAs to complement traditional approaches, such as histology of resected tumors. We also describe newly identified molecular mechanisms and discuss putative therapeutic approaches for HGAs specific to pediatrics, highlighting the necessity for the evolution of HGA disease management approaches.

[731]

TÍTULO / TITLE: - Pediatric spinal pilomyxoid astrocytoma.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Sep 20.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.8.PEDS1397](#)

AUTORES / AUTHORS: - Garber ST; Bollo RJ; Riva-Cambrin JK

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Clinical Neurosciences Center, University of Utah, Salt Lake City, Utah.

RESUMEN / SUMMARY: - Pediatric spinal pilomyxoid astrocytoma (PMA) is an extremely rare tumor that merits recognition as a specific, unique entity. The authors present the case of an intramedullary PMA in the thoracic spinal cord of an 11-year-old boy who presented with back pain, scoliosis, and multiple lung nodules. The patient underwent T5-11 laminoplasty and near-total resection of the spinal tumor. The final pathological diagnosis was WHO Grade II PMA. The patient did well for 14 months until the tumor progressed both clinically and radiographically. A literature review focusing on the clinical characteristics, histology, and treatment of PMAs provides a better understanding of these rare lesions. Because of the small number of cases optimal

treatment guidelines have not been established, but gross-total resection and adjuvant chemotherapy with alkylating agents appear to confer a better long-term prognosis. Pediatric patients with PMAs can remain recurrence free at least 5 years after surgery, although these tumors may disseminate or dedifferentiate into more malignant gliomas. Recognition of intramedullary PMA as a unique entity in children is vital to the development of specific surgical and adjuvant treatment regimens.

[732]

TÍTULO / TITLE: - Pediatric cerebellopontine angle and internal auditory canal tumors.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Oct;12(4):317-324. Epub 2013 Aug 2.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.6.PEDS1383](#)

AUTORES / AUTHORS: - Holman MA; Schmitt WR; Carlson ML; Driscoll CL; Beatty CW; Link MJ

INSTITUCIÓN / INSTITUTION: - Departments of Otolaryngology-Head and Neck Surgery and.

RESUMEN / SUMMARY: - Object The aim in this study was to describe the clinical presentation, differential diagnosis, and risk for neurofibromatosis Type 2 (NF2) in pediatric patients presenting with cerebellopontine angle (CPA) and internal auditory canal (IAC) tumors. Methods The authors conducted a retrospective study at a tertiary care academic referral center. All patients with an age \leq 18 years who had presented with an extraaxial CPA or IAC tumor between 1987 and 2012 were included in the study cohort. Data regarding symptoms, diagnosis, tumor characteristics, and NF2 status were collected and analyzed. Results Sixty patients (55% female, 45% male) harboring 87 tumors were identified. The mean age at diagnosis was 12.8 years (median 14.0 years, range 0.9-18.9 years). Schwannomas were the most commonly identified lesions (57 of 87 tumors, including 52 vestibular, 3 facial, and 2 trigeminal schwannomas), followed by meningiomas (5 of 87) and epidermoid cysts (4 of 87). Six malignant tumors were diagnosed, including small-cell sarcoma, squamous cell carcinoma, malignant meningioma, atypical rhabdoid-teratoid tumor, endolymphatic sac tumor, and malignant ganglioglioma. Headache, followed by hearing loss and imbalance, was the most common presenting symptom, whereas dysphagia, otalgia, and facial pain were uncommon. Neurofibromatosis Type 2 was diagnosed in 20 (61%) of 33 patients with vestibular schwannoma (VS), while the other 13 patients (39%) had sporadic tumors. Nineteen of the 20 patients with NF2 met the diagnostic criteria for that disorder on initial presentation, and 15 of them presented with bilateral VS. At the last follow-up, 19 of the 20 patients subsequently diagnosed with NF2 demonstrated bilateral VSs, whereas 1 patient with a unilateral VS and multiple other NF2-associated tumors has yet to demonstrate a contralateral VS to date. Only 1 patient presenting with an isolated unilateral VS and no family history of NF2 demonstrated a contralateral VS on subsequent radiological screening. Conclusions Cerebellopontine

angle and IAC tumors in the pediatric population are rare. There are several noteworthy differences between the adult and pediatric populations harboring these lesions. While VS is the most common pathology in both age groups, the lesion was found in only 60% of the pediatric patients in the present study. Unlike in adults, VSs in the pediatric population were associated with NF2 in over one-half of all cases. The majority of pediatric patients with NF2 fulfilled the diagnostic criteria at initial presentation; however, approximately 7% of patients presenting with a seemingly sporadic (no family history of NF2) unilateral VS will meet the criteria for NF2 later in life. Finally, malignancies account for a significantly higher percentage (10%) of cases among pediatric patients. These findings underscore the importance of early screening and close radiological follow-up and may be helpful in patient counseling.

[733]

TÍTULO / TITLE: - A proteomic approach of pediatric astrocytomas: MiRNAs and network insight.

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

REVISTA / JOURNAL: - J Proteomics. 2013 Sep 20. pii: S1874-3919(13)00475-2. doi: 10.1016/j.jprot.2013.09.009.

●● Enlace al texto completo (gratis o de pago) [1016/j.jprot.2013.09.009](#)

AUTORES / AUTHORS: - Esparza-Garrido RR; Velazquez-Flores MA; Diegoperez-Ramirez J; Lopez-Aguilar E; Siordia Reyes G; Hernandez-Ortiz M; Martinez-Batallar AG; Encarnacion-Guevara S; Salamanca-Gomez F; Arenas-Aranda DJ

INSTITUCIÓN / INSTITUTION: - Unidad de Investigacion Medica en Genetica Humana, Hospital de Pediatria, Centro Medico Nacional Siglo XXI, IMSS, 06720 Mexico, D.F., Mexico; Posgrado en Ciencias Biologicas, Universidad Nacional Autonoma de Mexico, Av. Universidad 3000, C.P. 04510 Coyoacan, D. F., Mexico.

RESUMEN / SUMMARY: - Pediatric astrocytomas, a leading cause of death associated with cancer, are the most common primary central nervous system tumors found in children. Most studies of these tumors focus on adults, not on children. We examined the global protein and microRNA expression pattern by 2D SDS-PAGE, mass spectrometry (MALDI-TOF), and RT2 miRNA PCR Array System. Proteomic studies revealed 49 proteins with changes on the expression. Interactome showed that vimentin, calreticulin, and 14-3-3 epsilon protein are hub proteins in these neoplasms. MicroRNA analyses demonstrated for the first time novel microRNAs involved in the astrocytoma biology. In conclusion, our results show that novel proteins and microRNAs with expression changes on pediatric astrocytoma could serve as biomarkers of tumor progression. **BIOLOGICAL SIGNIFICANCE:** Astrocytomas are tumors that progress rapidly and that invade surrounding tissues. Although some drugs have been developed to treat these neoplasms, the mortality of patients is still very high. In this study, we describe for the first time, to our knowledge, some proteins and miRNAs associated with the biology of astrocytic tumors that could be postulated

as possible diagnostic or prognostic biomarkers. Altogether, our results indicate that large-scale analyses allow making a fairly accurate prediction of different cellular processes altered in astrocytic tumors.

[734]

TÍTULO / TITLE: - Results of Immunohistochemical staining of cell cycle regulators - the prediction of recurrence of functioning pituitary adenoma.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Sep 22. pii: S1878-8750(13)01220-5. doi: 10.1016/j.wneu.2013.09.035.

●● Enlace al texto completo (gratis o de pago) 1016/j.wneu.2013.09.035

AUTORES / AUTHORS: - Lee EH; Kim KH; Kwon JH; Kim HD; Kim YZ

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Samsung Changwon Hospital, Sungkyunkwan University School of Medicine, Changwon, South Korea.

RESUMEN / SUMMARY: - OBJECT: This study was undertaken primarily to investigate the possible prognostic values of several cell-cycle regulators for the prediction of functioning pituitary adenoma (FPA) recurrence after surgical resection by immunohistochemically analyzing tumor samples obtained by surgical resection. METHODS: The medical records of the patients with FPA diagnosed from January 2000 to December 2009 at the Department of Neurosurgery at Samsung Changwon Hospital and Dong-A University Medical Center. Immunohistochemical staining was performed on archived paraffin-embedded tissues obtained by surgical resection for adenohypophysial cells, cell-cycle regulatory proteins (p16, p15, p21, cyclin-dependent kinase (CDK) 4 and 6, phosphorylated retinoblastoma (pRB) protein, and cyclin D1), MIB-1 antigen, and p53. RESULTS: Of the 174 FPAs, 62 (35.6%) recurred during follow-up period (mean duration 62.4 months, range 24.2 to 118.9 months). Immunohistochemically, overstaining for p16 in 89 samples (51.1%), p15 in 27 samples (15.5%), p21 in 20 samples (11.5%), CDK4 in 54 samples (31.0%), CDK6 in 18 samples (10.3%), pRB protein in 69 samples (39.7%), and cyclin D1 in 87 samples (50.0%). Multivariate analysis using the Cox proportional hazard regression model showed that invasion into cavernous sinus (Hazard Ratio (HR) of 4.02; P<0.001), immunohistochemical normostaining for p16 (HR of 3.16; P<0.001), immunohistochemical overstaining for pRB protein (HR of 2.45; P=0.008), cyclin D1 (HR of 2.13; P=0.029), MIB-1 antigen (HR of 2.74; P=0.002), and p53 (HR of 2.21; P=0.002), predicted the recurrence of FPA after surgical resection. CONCLUSIONS: Our findings indicate that p16, pRB protein, and cyclin D1 are associated with recurrence FPA after surgical resection.

[735]

TÍTULO / TITLE: - PTEN loss represses glioblastoma tumor initiating cell differentiation via inactivation of Lgl1.

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

REVISTA / JOURNAL: - Oncotarget. 2013 Aug;4(8):1266-79.

AUTORES / AUTHORS: - Gont A; Hanson JE; Lavictoire SJ; Parolin DA; Daneshmand M; Restall IJ; Soucie M; Nicholas G; Kassam A; Da Silva VF; Lorimer IA

INSTITUCIÓN / INSTITUTION: - Centre for Cancer Therapeutics, Ottawa Hospital Research Institute, 501 Smyth Road, Ottawa, K1H 8L6, Canada.

RESUMEN / SUMMARY: - Glioblastoma multiforme is an aggressive and incurable type of brain tumor. A subset of undifferentiated glioblastoma cells, known as glioblastoma tumor initiating cells (GTICs), has an essential role in the malignancy of this disease and also appears to mediate resistance to radiation therapy and chemotherapy. GTICs retain the ability to differentiate into cells with reduced malignant potential, but the signaling pathways controlling differentiation are not fully understood at this time. PTEN loss is a very common in glioblastoma multiforme and leads to aberrant activation of the phosphoinositide 3-kinase pathway. Increased signalling through this pathway leads to activation of multiple protein kinases, including atypical protein kinase C. In Drosophila, active atypical protein kinase C has been shown to promote the self-renewal of neuroblasts, inhibiting their differentiation along a neuronal lineage. This effect is mediated by atypical protein kinase c-mediated phosphorylation and inactivation of Lgl, a protein that was first characterized as a tumour suppressor in Drosophila. The effects of the atypical protein kinase C/Lgl pathway on the differentiation status of GTICs, and its potential link to PTEN loss, have not been assessed previously. Here we show that PTEN loss leads to the phosphorylation and inactivation of Lgl by atypical protein kinase C in glioblastoma cells. Re-expression of PTEN in GTICs promoted their differentiation along a neuronal lineage. This effect was also seen when atypical protein kinase C was knocked down using RNA interference, and when a non-phosphorylatable, constitutively active form of Lgl was expressed in GTICs. Thus PTEN loss, acting via atypical protein kinase C activation and Lgl inactivation, helps to maintain GTICs in an undifferentiated state.

[736]

TÍTULO / TITLE: - Pathological neural attractor dynamics in slowly growing gliomas supports an optimal time frame for white matter plasticity.

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

REVISTA / JOURNAL: - PLoS One. 2013 Jul 26;8(7):e69798. doi: 10.1371/journal.pone.0069798. Print 2013.

●● [Enlace al texto completo \(gratis o de pago\) 1371/journal.pone.0069798](#)

AUTORES / AUTHORS: - Szalischnyo K; Silverstein DN; Duffau H; Smits A

INSTITUCIÓN / INSTITUTION: - Department of Neuroscience, Neurology, Uppsala University, Uppsala, Sweden.

RESUMEN / SUMMARY: - Neurological function in patients with slowly growing brain tumors can be preserved even after extensive tumor resection. However, the global

process of cortical reshaping and cerebral redistribution cannot be understood without taking into account the white matter tracts. The aim of this study was to predict the functional consequences of tumor-induced white matter damage by computer simulation. A computational model was proposed, incorporating two cortical patches and the white matter connections of the uncinate fasciculus. Tumor-induced structural changes were modeled such that different aspects of the connectivity were altered, mimicking the biological heterogeneity of gliomas. The network performance was quantified by comparing memory pattern recall and the plastic compensatory capacity of the network was analyzed. The model predicts an optimal level of synaptic conductance boost that compensates for tumor-induced connectivity loss. Tumor density appears to change the optimal plasticity regime, but tumor size does not. Compensatory conductance values that are too high lead to performance loss in the network and eventually to epileptic activity. Tumors of different configurations show differences in memory recall performance with slightly lower plasticity values for dense tumors compared to more diffuse tumors. Simulation results also suggest an optimal noise level that is capable of increasing the recall performance in tumor-induced white matter damage. In conclusion, the model presented here is able to capture the influence of different tumor-related parameters on memory pattern recall decline and provides a new way to study the functional consequences of white matter invasion by slowly growing brain tumors.

[737]

TÍTULO / TITLE: - Tumor-penetrating peptide functionalization enhances the anti-glioblastoma effect of doxorubicin liposomes.

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

REVISTA / JOURNAL: - Nanotechnology. 2013 Oct 11;24(40):405101. doi: 10.1088/0957-4484/24/40/405101. Epub 2013 Sep 12.

●● Enlace al texto completo (gratis o de pago) [1088/0957-](#)

[4484/24/40/405101](#)

AUTORES / AUTHORS: - Yang Y; Yan Z; Wei D; Zhong J; Liu L; Zhang L; Wang F; Wei X; Xie C; Lu W; He D

INSTITUCIÓN / INSTITUTION: - School of Materials Science and Engineering, Shanghai Jiao Tong University, Shanghai 200240, People's Republic of China. National Engineering Research Center for Nanotechnology, Shanghai 200241, People's Republic of China.

RESUMEN / SUMMARY: - The targeted therapeutic effect of nano drug delivery system for glioblastoma has been hampered by the weak enhanced permeability and retention (EPR) effect of glioblastoma and the low delivering efficiency of NDSS in glioblastoma tissue. In this study, a tumor-penetrating peptide (RGERPPR), the specific ligand of neuropilin-1 overexpressed on glioblastoma and endothelial cells, was used as a targeting moiety to enhance the anti-glioblastoma effect of doxorubicin liposomes. Firstly, RGERPPR-PEG-DSPE was synthesized and used to prepare the RGERPPR

peptide-functionalized liposomes (RGE-LS), which showed vesicle sizes of around 90 nm and narrow size distributions. The cellular uptake and in vivo near-infrared fluorescence imaging test displayed that RGE-LS exhibited increased uptake by glioblastoma cells and intracranial glioblastoma tissues. The cytotoxicity assay and anti-glioblastoma study proved that RGERPPR functionalization significantly enhanced the in vitro inhibitory effect of doxorubicin liposomes on glioblastoma cells and prolonged the median survival time of nude mice bearing intracranial glioblastoma. Finally, the immunofluorescence analysis evidenced that RGE-LS were able to penetrate through tumor vessels and stroma and deep into the whole tumor tissue. The results indicated that tumor-penetrating peptide functionalization is an effective strategy for enhancing the anti-glioblastoma effect of doxorubicin liposomes.

[738]

TÍTULO / TITLE: - Parallel Insertion Endoscopic Technique for Precise Catheter Placement in Cystic Craniopharyngiomas.

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

REVISTA / JOURNAL: - J Neurol Surg A Cent Eur Neurosurg. 2013 Aug 19.

●● Enlace al texto completo (gratis o de pago) [1055/s-0033-1349341](#)

AUTORES / AUTHORS: - Mori R; Joki T; Nonaka Y; Ikeuchi S; Abe T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Jikei University School of Medicine, Tokyo, Japan.

RESUMEN / SUMMARY: - Background Total removal of craniopharyngioma is the most acceptable therapeutic modality; however, there are cases in which radical excision is not possible. To reduce the cystic component volume, an Ommaya reservoir catheter can be placed endoscopically. However, there are certain complications and risks with this type of maneuver, such as misplacement of the catheter, which may result in leakage of cyst contents or installed fluids such as bleomycin. Thus, accurate placement of intracystic catheter is extremely important. Patients and Methods The authors placed Ommaya reservoir catheters running over the outer surface of a transparent endoscopic sheath in three cases. Results This neuroendoscopic procedure permits easier manipulation of the catheter and precise placement of the catheter tip. This technique was useful for placement of Ommaya reservoir catheters. Conclusions This new technique of catheter placement with neuroendoscopy is more accurate, safer, and less invasive.

[739]

TÍTULO / TITLE: - Regional disparities and practice patterns in surgical approaches to pituitary tumors in the United States.

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

REVISTA / JOURNAL: - Int Forum Allergy Rhinol. 2013 Aug 26. doi: 10.1002/alr.21216.

●● Enlace al texto completo (gratis o de pago) [1002/alr.21216](#)

AUTORES / AUTHORS: - Svider PF; Keeley BR; Husain Q; Mauro KM; Setzen M; Liu JK; Eloy JA

INSTITUCIÓN / INSTITUTION: - Department of Otolaryngology-Head and Neck Surgery, Rutgers New Jersey Medical School, Newark, NJ.

RESUMEN / SUMMARY: - BACKGROUND: Traditional microscopic and endoscopic transsphenoidal approaches (TSAs) are the most common surgical techniques in pituitary surgery. Examining regional practice patterns in pituitary surgery can provide valuable insights into which surgical strategies are most accessible, effective, and cost-efficient. In this study we investigated regional variations in surgical approaches to pituitary tumors and evaluated evolving practice patterns in pituitary surgery. METHODS: The 2010 Medicare Part B Carrier Summary Database and Medicare Part B National Summary Database from 2003-2010 were examined using pituitary surgery Current Procedure Terminology (CPT) codes 61548 (microscopic transsphenoidal approach), 62165 (endoscopic transsphenoidal approach), and 61546 (transcranial approach). RESULTS: Endoscopic TSAs increased by over 10-fold in the past decade, while usage of microscopic TSAs decreased by 23.3%. Nevertheless, the microscopic approach was still the most common TSA (64.7%) in 2010 compared to the endoscopic approach (35.3%). The microscopic TSA was predominant in the Southern and Western United States (74% and 69%, respectively). In the Northeast and Midwest, the rates of microscopic and endoscopic TSAs were roughly equivalent. However, the rate of endoscopic TSAs was statistically significantly higher ($p < 0.05$) in the Northeast and Midwest (47% and 45%, respectively) than in the South and West (26% and 31%, respectively). Transcranial approaches continued to decline from 4% to 2% over the last decade. CONCLUSION: Regional disparities in transsphenoidal practice patterns exist in the United States. Although the microscopic approach is still more common overall, there has been an evolving shift toward endoscopic TSAs in the last decade.

[740]

TÍTULO / TITLE: - Surgical approaches to brain stem Cavernous Hemangiomas.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Aug 3. pii: S1878-8750(13)00918-2. doi: 10.1016/j.wneu.2013.07.104.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.07.104](#)

AUTORES / AUTHORS: - Sekhar LN; Mantovani A

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery. University of Washington. Seattle, Washington, USA. Electronic address: lsekhar@u.washington.edu.

[741]

TÍTULO / TITLE: - A 12-year epidemiologic study on primary spinal cord tumors in Isfahan, Iran.

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

REVISTA / JOURNAL: - J Res Med Sci. 2013 Jan;18(1):17-21.

AUTORES / AUTHORS: - Moein P; Behnamfar O; Khalighinejad N; Farajzadegan Z; Fard SA; Razavi M; Mahzouni P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Al Zahra Hospital, Isfahan University of Medical Sciences, Isfahan, Iran.

RESUMEN / SUMMARY: - **BACKGROUND:** Although primary spinal cord tumors (PSCTs) comprise a minority of primary central nervous system tumors, they often impose a great deal of morbidity on their victims. Few epidemiologic studies have addressed PSCTs in Iran. **MATERIALS AND METHODS:** We analyzed the demographic/clinical features of all primary intraspinal tumors (with a specific focus on primary intradural spinal cord tumors) identified between 1992 and 2004 in three of the major related hospitals in Isfahan, Iran. We also tracked the malignant cases until 2012. **RESULTS:** 102 patients with primary intraspinal tumors were found; 82 tumors were Intradural (36 intramedullary and 46 extramedullary) and 20 extradural. The principal intradural histological subtypes were nerve sheath tumor (33%), ependymoma (22%), astrocytoma (16%), and meningioma (15%). 20 (19%) of the tumors were malignant. Local pain (43%) and motor disabilities (36%) were the most common first-presenting symptoms in the patients. Male-to-female ratio was significant only in ependymoma (male:female ratio = 3.6, $P < 0.05$). The mean age in meningioma (57 years, standard error [SE]: 15.7) was significantly higher than other types (one-way ANOVA, $P < 0.05$). **CONCLUSION:** Our results reflect analogous frequency of distribution for PSCTs compared with most of the previous counterpart studies worldwide. The only notable exception was the comparatively fewer frequency of spinal cord meningioma in our study.

[742]

TÍTULO / TITLE: - Ligand modified nanoparticles increases cell uptake, alters endocytosis and elevates glioma distribution and internalization.

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

REVISTA / JOURNAL: - Sci Rep. 2013 Aug 28;3:2534. doi: 10.1038/srep02534.

●● [Enlace al texto completo \(gratis o de pago\) 1038/srep02534](#)

AUTORES / AUTHORS: - Gao H; Yang Z; Zhang S; Cao S; Shen S; Pang Z; Jiang X

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Smart Drug Delivery (Fudan University), Ministry of Education; School of Pharmacy, Fudan University; 826 Zhangheng Road, Shanghai, 201203, China.

RESUMEN / SUMMARY: - Nanoparticles (NPs) were widely used in drugs/probes delivery for improved disease diagnosis and/or treatment. Targeted delivery to cancer cells is a highly attractive application of NPs. However, few studies have been performed on the targeting mechanisms of these ligand-modified delivery systems. Additional studies are needed to understand the transport of nanoparticles in the cancer site, the

interactions between nanoparticles and cancer cells, the intracellular trafficking of nanoparticles within the cancer cells and the subcellular destiny and potential toxicity. Interleukin 13 (IL-13) peptide can specifically bind IL-13R α 2, a receptor that is highly expressed on glioma cells but is expressed at low levels on other normal cells. It was shown that the nanoparticles modification with the IL-13 peptide could improve glioma treatment by selectively increasing cellular uptake, facilitating cell internalization, altering the uptake pathway and increasing glioma localization.

[743]

TÍTULO / TITLE: - Sirtuin-2 Activity is Required for Glioma Stem Cell Proliferation Arrest but not Necrosis Induced by Resveratrol.

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

REVISTA / JOURNAL: - Stem Cell Rev. 2013 Aug 18.

●● Enlace al texto completo (gratis o de pago) [1007/s12015-013-9465-0](#)

AUTORES / AUTHORS: - Sayd S; Thirant C; El-Habr EA; Lipecka J; Bogeas A; Tahiri-Jouti N; Chneiweiss H; Junier MP

INSTITUCIÓN / INSTITUTION: - Team Glial Plasticity, U894 Inserm, Université Paris Descartes, Paris, France.

RESUMEN / SUMMARY: - Glioblastomas, the most common form of primary brain tumors, are the fourth cause of death by cancer in adults. Increasing evidences suggest that glioblastoma resistance to existing radio- and chemotherapies rely on glioblastoma stem cells (GSCs). GSCs are endowed with a unique combination of stem-like properties alike to normal neural stem cells (NSCs), and of tumor initiating properties. The natural polyphenol resveratrol is known to exert opposite actions on neural cells according to their normal or cancerous status. Here, we used resveratrol to explore the molecular mechanisms differing between GSCs and NSCs. We observed a dual action of resveratrol on GSCs: resveratrol blocked GSC proliferation up to 150 μ M and induced their necrosis at higher doses. On the opposite, resveratrol had no effect on NSC behavior. To determine the mechanisms underlying resveratrol effects, we focused our attention on the family of NAD-dependent deacetylases sirtuins (SIRT). A member of this family, SIRT1, has been repetitively shown to constitute a preferential resveratrol target, at least in normal cells. Western blot analysis showed that SIRT1 and SIRT3 were expressed by both GSCs and NSCs whereas SIRT2 expression was restricted to GSCs. Pharmacological blockade of SIRT2 activity or down-regulation of SIRT2 expression with siRNAs counteracted the inhibitory effect of resveratrol on cell proliferation. On the contrary, inhibition of SIRT2 activity or expression did not counteract GSC necrosis observed in presence of high doses of resveratrol. Our results highlight SIRT2 as a novel target for altering GSC properties.

[744]

TÍTULO / TITLE: - Spinal ependymoma complicated by superficial siderosis.

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmj.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Sep 24;2013. pii:

bcr2013201036. doi: 10.1136/bcr-2013-201036.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-201036

AUTORES / AUTHORS: - Grech R; Galvin L; Looby S; Thornton J

INSTITUCIÓN / INSTITUTION: - Department of Neuroradiology, Beaumont Hospital, Dublin, Ireland.

[745]

TÍTULO / TITLE: - CNS cancer: Metabolic changes in brain tumours.

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

REVISTA / JOURNAL: - Nat Rev Clin Oncol. 2013 Sep 17. doi: 10.1038/nrclinonc.2013.172.

●● Enlace al texto completo (gratis o de pago) 1038/nrclinonc.2013.172

AUTORES / AUTHORS: - Marchesi V

[746]

TÍTULO / TITLE: - Searching for the light: Fluorescence guidance in glioma resection.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Aug 3. pii: S1878-8750(13)00925-X. doi: 10.1016/j.wneu.2013.07.111.

●● Enlace al texto completo (gratis o de pago) 1016/j.wneu.2013.07.111

AUTORES / AUTHORS: - Bi WL; Laws ER Jr

INSTITUCIÓN / INSTITUTION: - Harvard Medical School, Boston, MA.

[747]

TÍTULO / TITLE: - Unusual behaviour of a pineal germinoma mimicking neurosarcoidosis and metastasising along the endoscopic route.

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmj.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Aug 2;2013. pii: bcr2013200278. doi: 10.1136/bcr-2013-200278.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-200278

AUTORES / AUTHORS: - Talamonti G; Ligarotti GK; Bramerio M; Imbesi F

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, AO Niguarda, Milan, Italy.

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RESUMEN / SUMMARY: - A previously healthy man underwent endoscopic biopsy for a suspected pineal germinoma. Histology and immunohistochemistry did not confirm the preoperative diagnosis, and neurosarcoidosis was hypothesised because of the presence of granulomatous reaction. The patient remained in good health for 3 years and was still asymptomatic when a control MRI showed metastasis implantation along

the endoscopic route. A redobiopsy provided the diagnosis of germinoma, but was complicated by severe ventricular haemorrhage requiring emergency clot excision. Postoperative clinical conditions were so severe that the treatment of germinoma was postponed. Three months later, repeated MRI showed tumour progression. Chemotherapy promoted good tumour regression so that the treatment was completed by radiation therapy. The tumour completely disappeared on MRI, but the patient remained severely disabled because of the haemorrhage.

[748]

TÍTULO / TITLE: - microRNA-124 inhibits migration and invasion by down-regulating ROCK1 in glioma.

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

REVISTA / JOURNAL: - PLoS One. 2013 Jul 23;8(7):e69478. doi: 10.1371/journal.pone.0069478. Print 2013.

●● Enlace al texto completo (gratis o de pago) 1371/journal.pone.0069478

AUTORES / AUTHORS: - An L; Liu Y; Wu A; Guan Y

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Medical Cell Biology, Ministry of Education, Department of Biochemistry and Molecular Biology, China Medical University, Shenyang, China.

RESUMEN / SUMMARY: - BACKGROUND: The extraordinary invasive capability is a major cause of treatment failure and tumor recurrence in glioma, however, the molecular and cellular mechanisms governing glioma invasion remain poorly understood. Evidence in other cell systems has implicated the regulatory role of microRNA in cell motility and invasion, which promotes us to investigate the biological functions of miR-124 in glioma in this regard. RESULTS: We have found that miR-124 is dramatically downregulated in clinical specimen of glioma and is negatively correlated with the tumor pathological grading in the current study. The cells transfected by miR-124 expression vector have demonstrated retarded cell mobility. Using a bioinformatics analysis approach, rho-associated coiled-coil containing protein kinase 1 (ROCK1), a well-known cell mobility-related gene, has been identified as the target of miR-124. A dual-luciferase reporter assay was used to confirm that miR-124 targeted directly the 3'UTR of ROCK1 gene and repressed the ROCK1 expression in U87MG human glioma cell line. Furthermore, experiments have shown that the decreased cell mobility was due to the actin cytoskeleton rearrangements and the reduced cell surface ruffle in U87MG glioma cells. These results are similar to the cellular responses of U87MG glioma cells to the treatment of Y-27632, an inhibitor of ROCK protein. Moreover, a constitutively active ROCK1 in miR-124 over-expressed glioma cells reversed the effects of miR-124. Our results revealed a novel mechanism that miR-124 inhibits glioma cells migration and invasion via ROCK1 downregulation. CONCLUSIONS: These results suggest that miR-124 may function as anti-migration and anti-invasion

influence in glioma and provides a potential approach for developing miR-124-based therapeutic strategies for malignant glioma therapy.

[749]

TÍTULO / TITLE: - Lumbar extradural dumbbell cavernous hemangioma: A rare lesion.

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

REVISTA / JOURNAL: - J Neurosci Rural Pract. 2013 Apr;4(2):207-9. doi: 10.4103/0976-3147.112771.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.112771](#)

AUTORES / AUTHORS: - Shukla D; Rao VS; Rajesh A; Uppin MS; Purohit AK

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Nizam's Institute of Medical Sciences, Hyderabad, Andhra Pradesh, India.

RESUMEN / SUMMARY: - A 52-year-old female presented with slowly progressive left lower limb polyradiculopathy. MRI of the lumbar region revealed an extradural dumbbell mass at L3 vertebral level, isointense on T1W and hyperintense on T2W images with homogenous contrast enhancement and extending into paraspinal region through left L3/4 foramen. L2 to L4 left hemilaminectomy and excision of intraspinal part of tumor was performed. Histopathological examination revealed presence of cavernous hemangioma. This case is reported because of its rarity, unusual dumbbell shape of lesion and difficulty in making a preoperative diagnosis without a coexisting bone lesion.

[750]

TÍTULO / TITLE: - The JAK2/STAT3 and mitochondrial pathways are essential for quercetin nanoliposome-induced C6 glioma cell death.

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

REVISTA / JOURNAL: - Cell Death Dis. 2013 Aug 1;4:e746. doi: 10.1038/cddis.2013.242.

●● Enlace al texto completo (gratis o de pago) [1038/cddis.2013.242](#)

AUTORES / AUTHORS: - Wang G; Wang JJ; Chen XL; Du SM; Li DS; Pei ZJ; Lan H; Wu LB

INSTITUCIÓN / INSTITUTION: - Department of Pharmacy, Taihe Hospital, Hubei University of Medicine, Shiyan City, Hubei Province, People's Republic of China.

RESUMEN / SUMMARY: - The formulation of quercetin nanoliposomes (QUE-NLs) has been shown to enhance QUE antitumor activity in C6 glioma cells. At high concentrations, QUE-NLs induce necrotic cell death. In this study, we probed the molecular mechanisms of QUE-NL-induced C6 glioma cell death and examined whether QUE-NL-induced programmed cell death involved Bcl-2 family and mitochondrial pathway through STAT3 signal transduction pathway. Downregulation of Bcl-2 and the overexpression of Bax by QUE-NL supported the involvement of Bcl-2 family proteins upstream of C6 glioma cell death. In addition, the activation of JAK2 and STAT3 were altered following exposure to QUE-NLs in C6 glioma cells, suggesting that QUE-NLs downregulated Bcl-2 mRNAs expression and enhanced the expression of mitochondrial

mRNAs through STAT3-mediated signaling pathways either via direct or indirect mechanisms. There are several components such as ROS, mitochondrial, and Bcl-2 family shared by the necrotic and apoptotic pathways. Our studies indicate that the signaling cross point of the mitochondrial pathway and the JAK2/STAT3 signaling pathway in C6 glioma cell death is modulated by QUE-NLs. In conclusion, regulation of JAK2/STAT3 and ROS-mediated mitochondrial pathway agonists alone or in combination with treatment by QUE-NLs could be a more effective method of treating chemical-resistant glioma.

[751]

TÍTULO / TITLE: - Xanthogranulomatous colloid cyst of the third ventricle.

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

REVISTA / JOURNAL: - J Neurosci Rural Pract. 2013 Apr;4(2):183-6. doi: 10.4103/0976-3147.112761.

●● Enlace al texto completo (gratis o de pago) [4103/0976-3147.112761](#)

AUTORES / AUTHORS: - Alugolu R; Chandrasekhar YB; Shukla D; Sahu BP; Srinivas BH

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Nizam's Institute of Medical Sciences, Punjagutta, Hyderabad, India.

RESUMEN / SUMMARY: - Colloid cyst in the third ventricle is a common entity, whereas a variant of it, namely xanthogranulomatous, is quite rare. The closest imaging differential diagnosis is a purely third ventricular craniopharyngioma. We herein describe a case of xanthogranulomatous colloid cyst presenting with hydrocephalus.

[752]

TÍTULO / TITLE: - Identification of small compound biomarkers of pituitary adenoma: a bilateral inferior petrosal sinus sampling study.

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

REVISTA / JOURNAL: - J Neurointerv Surg. 2013 Sep 4. doi: 10.1136/neurintsurg-2013-010821.

●● Enlace al texto completo (gratis o de pago) [1136/neurintsurg-2013-010821](#)

AUTORES / AUTHORS: - Oklu R; Deipolyi AR; Wicky S; Ergul E; Deik AA; Chen JW; Hirsch JA; Wojtkiewicz GR; Clish CB

INSTITUCIÓN / INSTITUTION: - Division of Vascular Imaging and Intervention, Harvard Medical School, Massachusetts General Hospital, Boston, Massachusetts, USA.

RESUMEN / SUMMARY: - Evaluation of the pathogenic mechanisms underlying Cushing disease (CD) is limited partly by the inaccessibility of the pituitary gland for biopsy. We used bilateral inferior petrosal sinus sampling (BIPSS), the gold standard in diagnosing pituitary sources of CD, to obtain central blood samples for in vivo metabolomic analysis of pathways involved in pituitary adenomas. We evaluated 16 samples from eight patients who underwent BIPSS to measure adrenocorticotrophic hormone (ACTH)

levels in the inferior petrosal sinus (IPS) bilaterally. Seven patients had CD with concordant BIPSS, surgical, and pathologic findings. Samples from the IPS contralateral to histologically proven lesions were used as controls. BIPSS of the eighth patient revealed no central pituitary ACTH source, and these samples were also included as controls. Plasma samples were profiled using a combination of three liquid chromatography tandem mass spectrometry methods, which assessed 259 metabolites. Following Bonferroni correction for multiple comparisons, three small compound biomarkers of CD (pyridoxate, deoxycholic acid, and 3-methyladipate) were identified to be significantly altered in pituitary adenomas. The pathway most significantly impacted in CD samples is one previously shown to be upregulated in other cancers. Exploiting the BIPSS technique, we showed a complete metabolite and lipid profile of pituitary adenomas in CD. These potential biomarkers of CD may elucidate tumor biology and suggest possible diagnostic molecular imaging probes as well as therapeutic targets in patients with recurrent disease after surgery.

[753]

TÍTULO / TITLE: - A 22-year-old man with severe osteoporosis due to prolactinoma.

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

REVISTA / JOURNAL: - J Clin Rheumatol. 2013 Sep;19(6):341-3. doi: 10.1097/RHU.0b013e31829ce57c.

●● Enlace al texto completo (gratis o de pago) [1097/RHU.0b013e31829ce57c](#)

AUTORES / AUTHORS: - Dandinoglu T; Akarsu S; Tekin L; Arbal S; Dincer U

INSTITUCIÓN / INSTITUTION: - From the Departments of *Physical Medicine and Rehabilitation; and daggerRadiology, Haydarpasa Training Hospital, Gulhane Military Medical Academy, Istanbul, Turkey.

RESUMEN / SUMMARY: - Prolactin-secreting adenomas represent nearly 40% to 60% of all pituitary adenomas. Prolactin inhibits the secretion of gonadotropin-releasing hormone that is responsible for the synthesis and secretion of gonadotropins. Sex steroids have an important effect on the regulation of bone metabolism in men. Decreased libido and impotence are the most common presenting symptoms of hyperprolactinemia in males. These symptoms are easily neglected by both patients and some physicians. We present a 22-year-old man with multiple osteoporotic fractures associated with prolactinoma despite the use of teriparatide for 18 months. We emphasize and highlight the importance of hyperprolactinemia and fractures caused by high prolactin levels.

[754]

TÍTULO / TITLE: - The pericallosal lipoma mimicking deep cerebral vein thrombus.

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmi.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Aug 20;2013. pii:
bcr2013010025. doi: 10.1136/bcr-2013-010025.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-010025

AUTORES / AUTHORS: - Ogul H; Pirmoglu B; Ozbek S; Kantarci M

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Medical Faculty, Ataturk University, Erzurum, Turkey.

[755]

TÍTULO / TITLE: - Primary paraganglioma of seminal vesicle.

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

REVISTA / JOURNAL: - Int J Surg Case Rep. 2013;4(10):822-4. doi:
10.1016/j.ijscr.2013.07.009. Epub 2013 Jul 26.

●● Enlace al texto completo (gratis o de pago) 1016/j.ijscr.2013.07.009

AUTORES / AUTHORS: - Alharbi B; Al-Ghamdi A

INSTITUCIÓN / INSTITUTION: - Department of Urology, Prince Sultan Military Medical City, Riyadh, Saudi Arabia. Electronic address: dr_badr@hotmail.com.

RESUMEN / SUMMARY: - INTRODUCTION: Paragangliomas are rare tumors arising from neural crest tissue located outside the adrenal gland. Primary seminal vesicle paraganglioma is extremely rare entity. PRESENTATION OF CASE: A 26-year-old male patient presented with symptoms and signs of acute appendicitis where a CT of abdomen and pelvis showed an inflamed appendix and incidental finding of left seminal vesicle mass. The patient underwent uneventful laparoscopic appendectomy followed by transrectal ultrasound (TRUS) guided seminal vesicle biopsies. Histopathology revealed a neuroendocrine neoplasm consistent with paraganglioma. Surgical excision of the left seminal vesicle was carried out. DISCUSSION: Paraganglioma of genitourinary tract is rare. The urinary bladder is the most common site, followed by the urethra, pelvis and ureter. Seminal vesicle paragangliomas were reported in association with other genitourinary organ involvement such as bladder and prostate. Isolated seminal vesicle paraganglioma is extremely rare and surgical excision remains the standard treatment for localized paraganglioma. CONCLUSION: Primary tumors of seminal vesicle are rare and represent a diagnostic challenge. Differential diagnosis includes a list of benign and malignant tumors. Primary seminal vesicle paraganglioma is a rare but important diagnosis to be included in the differential diagnosis.

[756]

TÍTULO / TITLE: - Intradural, Extramedullary Anaplastic Astrocytoma Arising From the First Sacral Nerve Root.

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

REVISTA / JOURNAL: - JAMA. %8?(3k+]3s <http://jama.ama-assn.org/search.dtl> ●●

JAMA: <> Neurol. 2013 Sep 16. doi: 10.1001/2013.jamaneurol.368.

●● Enlace al texto completo (gratis o de pago) 1001/2013.jamaneurol.368

AUTORES / AUTHORS: - Tiebel N; Lichota A; Scharbrodt W; Foerster AF; Toedt C; Reifenberger G; Malzkorn B

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Community Hospital Herdecke, Herdecke, Germany2now with the Department of Neurosurgery, Klinikum Solingen, Solingen, Germany.

[757]

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

REVISTA / JOURNAL: - Cell Cycle. 2013 Aug 15;12(16):2546-52. doi: 10.4161/cc.25625. Epub 2013 Jul 10.

●● Enlace al texto completo (gratis o de pago) 4161/cc.25625

AUTORES / AUTHORS: - Chan KM; Han J; Fang D; Gan H; Zhang Z

INSTITUCIÓN / INSTITUTION: - Department of Biochemistry and Molecular Biology; Epigenomic Developmental Program; Center of Individualized Medicine; Mayo Clinic; Rochester, MN USA.

RESUMEN / SUMMARY: - Glioblastoma (GBM) is the most aggressive primary brain tumor in human. Recent studies on high-grade pediatric GBM have identified two recurrent mutations (K27M and G34R/V) in genes encoding histone H3 (H3F3A for H3.3 and HIST1H3B for H3.1). (1), (2) The two histone H3 mutations are mutually exclusive and give rise to tumors in different brain compartments. (3) Recently, we (4) and others (5) have shown that the histone H3 K27M mutation specifically altered the di- and tri-methylation of endogenous histone H3 at Lys27. Genome-wide studies using ChIP-seq on H3.3K27M patient samples indicate a global reduction of H3K27me3 on chromatin. Remarkably, we also found a dramatic enrichment of H3K27me3 and EZH2 (the catalytic subunit H3K27 methyltransferase) at hundreds of gene loci in H3.3K27M patient cells. Here, we discuss potential mechanisms whereby H3K27me3 is enriched at chromatin loci in cells expressing the H3.3K27M mutation and report effects of Lys-to-Met mutations of other well-studied lysine residues of histone H3.1/H3.3 and H4 on the corresponding endogenous lysine methylation. We suggest that mutation(s) on histones may be found in a variety of human diseases, and the expression of mutant histones may help to address the function of histone lysine methylation and possibly other modifications in mammalian cells.

[758]

TÍTULO / TITLE: - The controversial role of microglia in malignant gliomas.

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

REVISTA / JOURNAL: - Clin Dev Immunol. 2013;2013:285246. doi: 10.1155/2013/285246. Epub 2013 Jul 24.

●● Enlace al texto completo (gratis o de pago) [1155/2013/285246](#)

AUTORES / AUTHORS: - Wei J; Gabrusiewicz K; Heimberger A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The University of Texas MD Anderson Cancer Center, Houston, TX 77030-1402, USA.

RESUMEN / SUMMARY: - Malignant gliomas contain stroma and a variety of immune cells including abundant activated microglia/macrophages. Mounting evidence indicates that the glioma microenvironment converts the glioma-associated microglia/macrophages (GAMs) into glioma-supportive, immunosuppressive cells; however, GAMs can retain intrinsic anti-tumor properties. Here, we review and discuss this duality and the potential therapeutic strategies that may inhibit their glioma-supportive and propagating functions.

[759]

TÍTULO / TITLE: - Perspective Comment: Management Paradigms Along A Histological Spectrum of Pineal Cell Tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Aug 5. pii: S1878-8750(13)00910-8. doi: 10.1016/j.wneu.2013.07.096.

●● Enlace al texto completo (gratis o de pago) [1016/j.wneu.2013.07.096](#)

AUTORES / AUTHORS: - Sonabend AM; Bruce JN

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, Neurological Institute of New York, College of Physicians and Surgeons, Columbia University Medical Center.

[760]

TÍTULO / TITLE: - Crystal storing histiocytosis presenting as a temporal lobe mass lesion.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Surg Neurol Int. 2013 Aug 31;4:112. doi: 10.4103/2152-7806.117412.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.117412](#)

AUTORES / AUTHORS: - Johnson M; Mazariegos J; Lewis PJ; Pomakova D

INSTITUCIÓN / INSTITUTION: - Department of Pathology and Laboratory Medicine, University of Rochester Medical Center, 601 Elmwood Ave. Box 626, Rochester, NY 14642, USA.

RESUMEN / SUMMARY: - BACKGROUND: Crystal storing histiocytosis (CSH) is a disorder characterized by local or diffuse infiltration of histiocytes containing crystalline inclusions most commonly of immunoglobulin light chain. Involvement of the central nervous system is extremely rare. CSH may be misdiagnosed as an infection or tumor. In patients with involvement of other organs, it is frequently associated with lymphoplasmacytic diseases. CASE DESCRIPTION: A 20-year-old female was evaluated for 2 weeks of progressively worsening headaches. At presentation, she had no history of fevers but reported a sore throat without cough 3-4 days prior. Her past medical

history was unremarkable. She denied intravenous drug use or sexually transmitted diseases but lived with an individual with a history of fungal meningitis. On examination she was afebrile, alert, and oriented with a blood pressure of 110/70 mmHg. She had no adenopathy or neurological deficits. Her white blood cell count was minimally elevated. Magnetic resonance imaging revealed a 3.5 x 1.3 x 1.9 cm contrast enhancing lesion of the left temporal lobe with a mild midline shift. Evaluation by multiple specialists suggested a differential diagnosis of an infectious or neoplastic process. Cultures for infectious agents were negative. The biopsy showed CSH. Postoperatively and at 1 month follow up, she was neurologically intact. CONCLUSION: Radiographically and intraoperatively, CSH may mimic an infectious process or neoplasm. Its recognition is critical to facilitate appropriate therapy and prompt screening for an occult lymphoplasmacytic neoplasm, plasma cell dyscrasia or other underlying disease.

[761]

TÍTULO / TITLE: - Management of subdural hygromas associated with arachnoid cysts.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [3171/2013.8.PEDS13206](#)

AUTORES / AUTHORS: - Maher CO; Garton HJ; Al-Holou WN; Trobe JD; Muraszko KM; Jackson EM

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery and.

RESUMEN / SUMMARY: - Object Arachnoid cysts may occasionally be associated with subdural hygromas. The management of these concurrent findings is controversial. Methods The authors reviewed their experience with arachnoid cysts and identified 8 patients with intracranial arachnoid cysts and an associated subdural hygroma. The medical records and images for these patients were also examined. Results In total, 8 patients presented with concurrent subdural hygroma and arachnoid cyst. Of these 8 patients, 6 presented with headaches and 4 had nausea and vomiting. Six patients had a history of trauma. One patient was treated surgically at the time of initial presentation, and 7 patients were managed without surgery. All patients experienced complete resolution of their presenting signs and symptoms. Conclusions Subdural hygroma may lead to symptomatic presentation for otherwise asymptomatic arachnoid cysts. The natural course of cyst-associated subdural hygromas, even when symptomatic, is generally benign, and symptom resolution can be expected in most cases. The authors suggest that symptomatic hygroma is not an absolute indication for surgical treatment and that expectant management can result in good outcomes in many cases.

[762]

TÍTULO / TITLE: - Autotaxin Inhibition with PF-8380 Enhances the Radiosensitivity of Human and Murine Glioblastoma Cell Lines.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Front Oncol. 2013 Sep 17;3:236. doi: 10.3389/fonc.2013.00236.

●● Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00236](#)

AUTORES / AUTHORS: - Bhave SR; Dadey DY; Karvas RM; Ferraro DJ; Kotipatruni RP; Jaboin JJ; Hallahan AN; Dewees TA; Linkous AG; Hallahan DE; Thotala D

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Washington University in Saint Louis , St. Louis, MO , USA ; School of Medicine, Washington University in Saint Louis , St. Louis, MO , USA.

RESUMEN / SUMMARY: - Purpose: Glioblastoma multiforme (GBM) is an aggressive primary brain tumor that is radio-resistant and recurs despite aggressive surgery, chemo, and radiotherapy. Autotaxin (ATX) is over expressed in various cancers including GBM and is implicated in tumor progression, invasion, and angiogenesis. Using the ATX specific inhibitor, PF-8380, we studied ATX as a potential target to enhance radiosensitivity in GBM. Methods and Materials: Mouse GL261 and Human U87-MG cells were used as GBM cell models. Clonogenic survival assays and tumor transwell invasion assays were performed using PF-8380 to evaluate role of ATX in survival and invasion. Radiation dependent activation of Akt was analyzed by immunoblotting. Tumor induced angiogenesis was studied using the dorsal skin fold model in GL261. Heterotopic mouse GL261 tumors were used to evaluate the efficacy of PF-8380 as a radiosensitizer. Results: Pre-treatment of GL261 and U87-MG cells with 1 μM PF-8380 followed by 4 Gy irradiation resulted in decreased clonogenic survival, decreased migration (33% in GL261; P = 0.002 and 17.9% in U87-MG; P = 0.012), decreased invasion (35.6% in GL261; P = 0.0037 and 31.8% in U87-MG; P = 0.002), and attenuated radiation-induced Akt phosphorylation. In the tumor window model, inhibition of ATX abrogated radiation induced tumor neovascularization (65%; P = 0.011). In a heterotopic mouse GL261 tumors untreated mice took 11.2 days to reach a tumor volume of 7000 mm³, however combination of PF-8380 (10 mg/kg) with irradiation (five fractions of 2 Gy) took more than 32 days to reach a tumor volume of 7000 mm³. Conclusion: Inhibition of ATX by PF-8380 led to decreased invasion and enhanced radiosensitization of GBM cells. Radiation-induced activation of Akt was abrogated by inhibition of ATX. Furthermore, inhibition of ATX led to diminished tumor vascularity and delayed tumor growth. These results suggest that inhibition of ATX may ameliorate GBM response to radiotherapy.

[763]

TÍTULO / TITLE: - Gangliocytic paraganglioma of duodenum.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Pathol. 2013;2013:378582. doi: 10.1155/2013/378582. Epub 2013 Aug 29.

●● Enlace al texto completo (gratuito o de pago) [1155/2013/378582](#)

AUTORES / AUTHORS: - Narang V; Behl N; Sood N; Puri H

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Dayanand Medical College Hospital, Ludhiana 141001, India.

RESUMEN / SUMMARY: - Gangliocytic paragangliomas are rare benign tumors which are usually encountered in the second portion of the duodenum. Histogenesis of these tumors is incompletely understood. Patients usually present with upper gastrointestinal bleeding. The endoscopic features of gangliocytic paraganglioma do not differ from those of other submucosal tumors. Therefore, they can be diagnosed histologically by the presence of epithelioid, spindle, and ganglion cells, which is similar to that observed for paraganglioma. We herein report a case of gangliocytic paraganglioma due to the rarity of the lesion and the characteristic histopathologic findings.

[764]

TÍTULO / TITLE: - Perspectives on the immunologic microenvironment of astrocytomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cancer Manag Res. 2013 Aug 30;5:293-9. doi: 10.2147/CMAR.S48942.

●● Enlace al texto completo (gratuito o de pago) [2147/CMAR.S48942](#)

AUTORES / AUTHORS: - Hewedi IH; Radwan NA; Shash LS; Elserry TH

INSTITUCIÓN / INSTITUTION: - Departments of Pathology, Ain Shams University, Cairo, Egypt.

RESUMEN / SUMMARY: - BACKGROUND: The microenvironment of astrocytomas includes infiltrative inflammatory cells that are dynamic in nature, possibly reflecting tumor biology. We evaluated the inflammatory cell infiltrate in astrocytic tumors aiming for a better understanding of their immunobiology. METHODS: Immunohistochemical expression of CD68, CD3, and CD20 was investigated in 21 glioblastomas, 21 anaplastic astrocytomas, 13 diffuse astrocytomas, and 18 pilocytic astrocytomas. The inflammatory infiltrate was classified based on microanatomic location as perivascular and intratumoral, and subsequently graded semiquantitatively. RESULTS: Perivascularly, CD68-positive infiltrate was noted in 71.4% of glioblastomas compared with 14.3% of anaplastic astrocytomas ($P = 0.0001$), 7.7% of diffuse astrocytomas ($P = 0.0001$), and 33.3% of pilocytic astrocytomas ($P = 0.017$). Intratumorally, 85.7% of glioblastomas exhibited CD68-positive infiltrate compared with 42.9% of anaplastic astrocytomas ($P = 0.004$), 38.5% of diffuse astrocytomas ($P = 0.008$), and 33.3% of pilocytic astrocytomas ($P = 0.001$). Among diffusely infiltrating astrocytomas, intratumoral CD3-positive infiltrate was only associated with glioblastoma. A CD20-positive infiltrate was only detected in the perivascular space of a single case of diffuse astrocytoma. CONCLUSION: These data indicate a distinct immune profile in the glioblastoma microenvironment primarily related to the prevalence of macrophages.

Thus, novel glioblastoma therapies should address this key CD68-positive population and its possible role in generating an antitumor immune response.

[765]

TÍTULO / TITLE: - Cerebral Tuberculoma Mimicking Brain Tumor.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Clin Neuroradiol. 2013 Sep 4.

●● Enlace al texto completo (gratis o de pago) 1007/s00062-013-0258-2

AUTORES / AUTHORS: - Greschus S; Kuchelmeister K; Oeynhausens S; Fischer HP; Urbach H

INSTITUCIÓN / INSTITUTION: - Department of Radiology, University of Bonn, Sigmund-Freud-Strasse 25, 53127, Bonn, Germany, Susanne.Greschus@ukb.uni-bonn.de.

[766]

TÍTULO / TITLE: - Integrated analysis of mismatch repair system in malignant astrocytomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Sep 20;8(9):e76401. doi: 10.1371/journal.pone.0076401.

●● Enlace al texto completo (gratis o de pago) 1371/journal.pone.0076401

AUTORES / AUTHORS: - Rodriguez-Hernandez I; Garcia JL; Santos-Briz A; Hernandez-Lain A; Gonzalez-Valero JM; Gomez-Moreta JA; Toldos-Gonzalez O; Cruz JJ; Martin-Vallejo J; Gonzalez-Sarmiento R

INSTITUCIÓN / INSTITUTION: - Molecular Medicine Unit, Department of Medicine, University of Salamanca, Salamanca, España ; IBMCC and IBSAL, (USAL/CSIC/University Hospital), Salamanca, España.

RESUMEN / SUMMARY: - Malignant astrocytomas are the most aggressive primary brain tumors with a poor prognosis despite optimal treatment. Dysfunction of mismatch repair (MMR) system accelerates the accumulation of mutations throughout the genome causing uncontrolled cell growth. The aim of this study was to characterize the MMR system defects that could be involved in malignant astrocytoma pathogenesis. We analyzed protein expression and promoter methylation of MLH1, MSH2 and MSH6 as well as microsatellite instability (MSI) and MMR gene mutations in a set of 96 low- and high-grade astrocytomas. Forty-one astrocytomas failed to express at least one MMR protein. Loss of MSH2 expression was more frequent in low-grade astrocytomas. Loss of MLH1 expression was associated with MLH1 promoter hypermethylation and MLH1-93G>A promoter polymorphism. However, MSI was not related with MMR protein expression and only 5% of tumors were MSI-High. Furthermore, the incidence of tumors carrying germline mutations in MMR genes was low and only one glioblastoma was associated with Lynch syndrome. Interestingly, survival analysis identified that tumors lacking MSH6 expression presented longer overall survival in high-grade astrocytoma patients treated only with radiotherapy while MSH6

expression did not modify the prognosis of those patients treated with both radiotherapy and chemotherapy. Our findings suggest that MMR system alterations are a frequent event in malignant astrocytomas and might help to define a subgroup of patients with different outcome.

[767]

TÍTULO / TITLE: - Chemoradiation for glioblastoma multiforme: the national cancer institute experience.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Aug 5;8(8):e70745. doi: 10.1371/journal.pone.0070745. Print 2013.

●● Enlace al texto completo (gratis o de pago) 1371/journal.pone.0070745

AUTORES / AUTHORS: - Ho J; Ondos J; Ning H; Smith S; Kreisl T; Iwamoto F; Sul J; Kim L; McNeil K; Krauze A; Shankavaram U; Fine HA; Camphausen K

INSTITUCIÓN / INSTITUTION: - Radiation Oncology Branch, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, United States of America.

RESUMEN / SUMMARY: - PURPOSE: Standard treatment for glioblastoma (GBM) is surgery followed by radiation (RT) and temozolomide (TMZ). While there is variability in survival based on several established prognostic factors, the prognostic utility of other factors such as tumor size and location are not well established. EXPERIMENTAL DESIGN: The charts of ninety two patients with GBM treated with RT at the National Cancer Institute (NCI) between 1998 and 2012 were retrospectively reviewed. Most patients received RT with concurrent and adjuvant TMZ. Topographic locations were classified using preoperative imaging. Gross tumor volumes were contoured using treatment planning systems utilizing both pre-operative and post-operative MR imaging. RESULTS: At a median follow-up of 18.7 months, the median overall survival (OS) and progression-free survival (PFS) for all patients was 17.9 and 7.6 months. Patients with the smallest tumors had a median OS of 52.3 months compared to 16.3 months among patients with the largest tumors, P = 0.006. The patients who received bevacizumab after recurrence had a median OS of 23.3 months, compared to 16.3 months in patients who did not receive it, P = 0.0284. The median PFS and OS in patients with periventricular tumors was 5.7 and 17.5 months, versus 8.9 and 23.3 months in patients with non-periventricular tumors, P = 0.005. CONCLUSIONS: Survival in our cohort was comparable to the outcome of the defining EORTC-NCIC trial establishing the use of RT+TMZ. This study also identifies several potential prognostic factors that may be useful in stratifying patients.

[768]

TÍTULO / TITLE: - Human Glioblastoma Multiforme: p53 Reactivation by a Novel MDM2 Inhibitor.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Aug 19;8(8):e72281. doi:
10.1371/journal.pone.0072281.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0072281](https://doi.org/10.1371/journal.pone.0072281)

AUTORES / AUTHORS: - Costa B; Bendinelli S; Gabelloni P; Da Pozzo E; Daniele S; Scatena F; Vanacore R; Campiglia P; Bertamino A; Gomez-Monterrey I; Sorriento D; Del Giudice C; Iaccarino G; Novellino E; Martini C

INSTITUCIÓN / INSTITUTION: - Department of Pharmacy, University of Pisa, Pisa, Italy.

RESUMEN / SUMMARY: - Cancer development and chemo-resistance are often due to impaired functioning of the p53 tumor suppressor through genetic mutation or sequestration by other proteins. In glioblastoma multiforme (GBM), p53 availability is frequently reduced because it binds to the Murine Double Minute-2 (MDM2) oncoprotein, which accumulates at high concentrations in tumor cells. The use of MDM2 inhibitors that interfere with the binding of p53 and MDM2 has become a valid approach to inhibit cell growth in a number of cancers; however little is known about the efficacy of these inhibitors in GBM. We report that a new small-molecule inhibitor of MDM2 with a spirooxindolepyrrolidine core structure, named ISA27, effectively reactivated p53 function and inhibited human GBM cell growth in vitro by inducing cell cycle arrest and apoptosis. In immunoincompetent BALB/c nude mice bearing a human GBM xenograft, the administration of ISA27 in vivo activated p53, inhibited cell proliferation and induced apoptosis in tumor tissue. Significantly, ISA27 was non-toxic in an in vitro normal human cell model and an in vivo mouse model. ISA27 administration in combination with temozolomide (TMZ) produced a synergistic inhibitory effect on GBM cell viability in vitro, suggesting the possibility of lowering the dose of TMZ used in the treatment of GBM. In conclusion, our data show that ISA27 releases the powerful antitumor capacities of p53 in GBM cells. The use of this MDM2 inhibitor could become a novel therapy for the treatment of GBM patients.

[769]

TÍTULO / TITLE: - Bevacizumab is Effective for Recurrent Papillary Tumor of the Pineal Region: First Report.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Oncol. 2013 Aug 24;6(2):434-40. doi:
10.1159/000354753.

●● Enlace al texto completo (gratis o de pago) [1159/000354753](https://doi.org/10.1159/000354753)

AUTORES / AUTHORS: - Cohen AL; Salzman K; Palmer C; Jensen R; Colman H

INSTITUCIÓN / INSTITUTION: - Huntsman Cancer Institute, University of Utah, Salt Lake City, Utah, USA.

RESUMEN / SUMMARY: - Papillary tumor of the pineal region (PTPR) is a rare brain tumor that probably arises from ependymal cells. There are no known systemic treatments for PTPR once it is refractory to surgery and radiation. We present the first case of a durable radiographic and clinical response of a PTPR to bevacizumab, an antibody

against vascular endothelial growth factor, despite multiple prior treatments. Bevacizumab may be an effective treatment for PTPR.

[770]

TÍTULO / TITLE: - Massive transcranial parotid pleomorphic adenoma: recurrence after 30 years.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurol Surg Rep. 2012 Oct;73(1):1-5. doi: 10.1055/s-0032-1329189.

●● Enlace al texto completo (gratis o de pago) [1055/s-0032-1329189](#)

AUTORES / AUTHORS: - Strub GM; Georgolios A; Graham RS; Powers CN; Coelho DH

INSTITUCIÓN / INSTITUTION: - Department of Otolaryngology-Head and Neck Surgery, Virginia Commonwealth University Medical Center, Richmond, Virginia.

RESUMEN / SUMMARY: - Pleomorphic adenoma, also known as benign mixed tumor, is the most common tumor affecting the parotid gland and can reach massive size; however, intracranial invasion is rare. Recurrence of pleomorphic adenoma after excision is a well-known phenomenon and can present decades after resection of the primary tumor. Here we present the case of a 53-year-old man who presented to our clinic with ear fullness, otalgia, and hearing loss 30 years after undergoing total parotidectomy and external beam radiotherapy for pleomorphic adenoma. Magnetic resonance imaging revealed a massive transcranial tumor invading the mastoid cavity, the dura of the posterior fossa, the fallopian and semicircular canals, the jugular foramen, the lateral infratemporal fossa skull base, the sigmoid and transverse sinuses, and the superior parapharyngeal region. Gross examination and histopathological studies confirmed that the mass was a recurrent pleomorphic adenoma. Here we discuss the features of recurrent pleomorphic adenoma and review the current literature.

[771]

TÍTULO / TITLE: - Controlling tumor invasion: bevacizumab and BMP4 for glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Future Oncol. 2013 Sep;9(9):1389-96. doi: 10.2217/fon.13.96.

●● Enlace al texto completo (gratis o de pago) [2217/fon.13.96](#)

AUTORES / AUTHORS: - Rahman M; Azari H; Deleyrolle L; Millette S; Zeng H; Reynolds BA

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Florida, Gainesville, FL, USA.

RESUMEN / SUMMARY: - Aim: Bevacizumab has been reported to result in increased tumor invasion when used to treat malignant glioma. We hypothesized that BMP4 would prevent diffuse tumor infiltration induced by bevacizumab for malignant glioma in a xenograft model. Methods: Human glioblastoma (GBM) tumor cells were implanted in the striatum of immunocompromised mice. The animals were treated

with bevacizumab and BMP4. Tumor growth and invasion were measured. Results: The bevacizumab-treated mice had increased survival compared with control animals ($p = 0.02$). BMP4 alone did not result in improved survival ($p = 1.0$). The bevacizumab ($p = 0.006$) and bevacizumab plus BMP4 ($p = 0.006$) groups demonstrated significantly decreased total tumor size compared with control. Tumor invasion was significantly decreased in the bevacizumab ($p = 0.005$), BMP4 ($p = 0.04$) alone and bevacizumab plus BMP4 ($p = 0.002$) groups compared with control. No synergistic effect between bevacizumab and BMP4 was observed. Conclusion: Bevacizumab treatment did not result in diffuse infiltration of human GBM in a mouse xenograft model. BMP4 did have an independent favorable effect on GBM that was not synergistic with bevacizumab treatment.

[772]

TÍTULO / TITLE: - Collision tumors of the sella: coexistence of pituitary adenoma and craniopharyngioma in the sellar region.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World J Surg Oncol. 2013 Aug 7;11:178. doi: 10.1186/1477-7819-11-178.

●● Enlace al texto completo (gratis o de pago) [1186/1477-7819-11-178](#)

AUTORES / AUTHORS: - Jin G; Hao S; Xie J; Mi R; Liu F

INSTITUCIÓN / INSTITUTION: - Brain Tumor Research Center, Beijing Neurosurgical Institute & Department of Neurosurgery, Beijing Tian Tan Hospital, Capital Medical University, Beijing 100050, China.

RESUMEN / SUMMARY: - Collision tumors of the sellar region are relatively uncommon and consist mainly of more than one type of pituitary adenoma or a cyst or cystic tumor. The association of a pituitary adenoma and a craniopharyngioma is particularly rare. This study describes a rare occurrence in which a pituitary adenoma and a craniopharyngioma coexisted in the sellar region. The case involves a 47-year-old woman who underwent transsphenoidal surgery with subtotal tumor resection and reoperation using an interhemispheric transcallosal approach for total microsurgical resection of the tumor because the visual acuity in her left eye had re-deteriorated. Histopathological and immunohistochemical examinations of the excised tissue revealed a pituitary adenoma in the first operation and a craniopharyngioma in the second operation. Retrospective analysis found the coexistence of a pituitary adenoma and a craniopharyngioma, known as a collision tumor. Instead of the transsphenoidal approach, a craniotomy should be performed, to explore the suprasellar region.

[773]

TÍTULO / TITLE: - Primary extradural non-hodgkin's lymphoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Indian J Nucl Med. 2012 Jul;27(3):185-6. doi: 10.4103/0972-3919.112727.

●● Enlace al texto completo (gratis o de pago) [4103/0972-3919.112727](https://doi.org/10.4103/0972-3919.112727)

AUTORES / AUTHORS: - Sachdev RK; Sen A; Pathak A; Jangid DR

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine and PET/CT, Medanta the Medicity, Gurgaon, India.

RESUMEN / SUMMARY: - A 67-year-old male presented to our institute with history of paraparesis with decreased sensation and loss of bladder and bowel control. The diagnostic work up revealed an extradural mass at spinal level D7-D12. He had laminectomy and the tumor was sub totally resected. Histological examination revealed non-hodgkin's lymphoma (NHL). The patient was worked up for disease anywhere else in the body and was confirmed to have primary extradural non-hodgkin's lymphoma.

[774]

TÍTULO / TITLE: - Glioblastoma Behaviors in Three-Dimensional Collagen-Hyaluronan Composite Hydrogels.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - ACS Appl Mater Interfaces. 2013 Sep 6.

●● Enlace al texto completo (gratis o de pago) [1021/am402097j](https://doi.org/10.1021/am402097j)

AUTORES / AUTHORS: - Rao SS; Dejesus J; Short AR; Otero JJ; Sarkar A; Winter JO

INSTITUCIÓN / INSTITUTION: - William G. Lowrie Department of Chemical and Biomolecular Engineering, double daggerDepartment of Neurological Surgery, section signDepartment of Biomedical Engineering, perpendicularDepartment of Pathology, The Ohio State University , Columbus, Ohio, 43210, United States.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) tumors, which arise from glia in the central nervous system (CNS), are one of the most deadly forms of human cancer with a median survival time of approximately 1 year. Their high infiltrative capacity makes them extremely difficult to treat, and even with aggressive multimodal clinical therapies, outcomes are dismal. To improve understanding of cell migration in these tumors, three-dimensional (3D) multicomponent composite hydrogels consisting of collagen and hyaluronic acid, or hyaluronan (HA), were developed. Collagen is a component of blood vessels known to be associated with GBM migration; whereas, HA is one of the major components of the native brain extracellular matrix (ECM). We characterized hydrogel microstructural features and utilized these materials to investigate patient tumor-derived, single cell morphology, spreading, and migration in 3D culture. GBM morphology was influenced by collagen type with cells adopting a rounded morphology in collagen-IV versus a spindle-shaped morphology in collagen-I/III. GBM spreading and migration were inversely dependent on HA concentration; with higher concentrations promoting little or no migration. Further, noncancerous astrocytes primarily displayed rounded morphologies at lower concentrations of HA; in

contrast to the spindle-shaped (spread) morphologies of GBMs. These results suggest that GBM behaviors are sensitive to ECM mimetic materials in 3D and that these composite hydrogels could be used to develop 3D brain mimetic models for studying migration processes.

[775]

TÍTULO / TITLE: - Utility of nuclear morphometry in predicting grades of diffusely infiltrating gliomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - ISRN Oncol. 2013 Aug 26;2013:760653. doi: 10.1155/2013/760653.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/760653](#)

AUTORES / AUTHORS: - Boruah D; Deb P

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Armed Forces Medical College, Pune, Maharashtra 411040, India.

RESUMEN / SUMMARY: - Introduction. The ability to reliably differentiate neoplastic from nonneoplastic specimen and ascertain the tumour grade of diffusely infiltrating gliomas (DIGs) is often challenging. Aims and Objective. To evaluate utility of image morphometry in identifying DIG areas and to predict tumour grade. Materials and Methods. Image morphometry was used to analyze the following nuclear features of 30 DIGs and 10 controls (CG): major axis of nucleus (MAJX), minor axis of nucleus (MINX), nuclear area (NA), nuclear perimeter (NP), nuclear roundness (NR), nuclear density (ND), and percentage of total nuclear area (%TNA). Results. Statistically significant differences in all parameters, except NR, were observed between all groups, with strong positive correlation with tumour grade ($r > 0.7$). The mean values were maximum for HGG and minimum for CG. For NR, the difference between CG/HGG was statistically significant, unlike CG/LGG and LGG/HGG. It was observed that NA distributions for CG were nearly Gaussian type with smaller range, while gliomas displayed erratic pattern with larger range. NA and NP exhibited strong positive correlation with ND. Conclusion. Image morphometry has immense potential in being a powerful tool to distinguish normal from neoplastic tissue and also to differentiate LGG from HGG cases, especially in tiny stereotactic biopsies.

[776]

TÍTULO / TITLE: - Papilloedema secondary to a spinal paraganglioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Pract Neurol. 2013 Aug 5. doi: 10.1136/practneurol-2013-000620.

●● [Enlace al texto completo \(gratis o de pago\) 1136/practneurol-2013-](#)

[000620](#)

AUTORES / AUTHORS: - Bush K; Bateman DE

INSTITUCIÓN / INSTITUTION: - Neurology Department, Chester Lodge, Sunderland Royal Hospital, , Sunderland, UK.

RESUMEN / SUMMARY: - An asymptomatic 72-year-old man presented with bilateral papilloedema. Cranial CT imaging was normal, but lumbar puncture found an opening pressure of 320 mmH₂O (120-250) with raised cerebrospinal fluid protein, increased red blood cells and xanthochromia. MR scan of spine showed a cauda equina tumour, histologically defined as a paraganglioma. The papilloedema resolved after surgery.

[777]

TÍTULO / TITLE: - Medulloblastoma invading the transverse sinus.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Oct;12(4):325-327. Epub 2013 Aug 16.

●● Enlace al texto completo (gratis o de pago) [3171/2013.7.PEDS1363](#)

AUTORES / AUTHORS: - Nadi M; Khezri N; Ahmad T; Ellis M; Bouffet E; Rutka JT; Taylor MD

INSTITUCIÓN / INSTITUTION: - Divisions of Neurosurgery.

RESUMEN / SUMMARY: - Medulloblastoma is a highly malignant brain tumor of childhood. Although craniospinal dissemination within the subarachnoid space is common, invasion of the dural sinuses is rare. Here, the authors report on a 15-year-old girl who presented with a right cerebellar mass, obstructive hydrocephalus, and radiographic evidence of tumor invasion into the right transverse-sigmoid sinus junction. The patient underwent posterior fossa craniotomy, gross-total resection of the intraparenchymal component of the right cerebellar tumor, and coagulation of the tumor invading the transverse sinus. After pathological confirmation of anaplastic medulloblastoma, the patient underwent craniospinal radiation therapy and high-dose chemotherapy. At 2 years posttreatment, the child was neurologically intact with no radiographic evidence of residual disease or recurrence. The implications for disease prognosis and management are discussed.

[778]

TÍTULO / TITLE: - Living with a pituitary tumour: A narrative analysis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Psychol Health. 2013 Sep 27.

●● Enlace al texto completo (gratis o de pago) [1080/08870446.2013.840784](#)

AUTORES / AUTHORS: - Simpson J; Heath J; Wall G

INSTITUCIÓN / INSTITUTION: - a Clinical Psychology , School of Health and Medicine, Lancaster University , Lancaster , UK.

RESUMEN / SUMMARY: - This study aimed to synthesise the illness narratives of individuals living with a pituitary tumour. Eight adults with a pituitary tumour were recruited from an endocrinology service in the north-west of England. A narrative methodology was adopted which investigated elements of the individual narratives such as metaphor and structure but which also aimed to produce a joint account of experience in this particular illness context by extracting themes across the stories;

these are presented as part of a chronological narrative. However, the resulting group story was also analysed in terms of different types of narrative plots. The group narrative started from the recognition of symptoms and then diagnosis though treatment to post-treatment and future plans. In terms of narrative plots, one notable element of the joint narrative was the flow between the culturally dominant restitution narrative, where participants focused on treatment and recovery and the chaos narrative when recovery did not seem possible. The findings contain many elements consistent with previous research; however, the use of a celebrity figure to communicate about the illness experience and a perception that objects or individuals should not be taken at face value emerged as more novel findings.

§!979.95§!" TATATAT - Psychol Health

[779]

- CASTELLANO -

TÍTULO / TITLE: Tumores hipofisarios no funcionantes: actualización 2012.

TÍTULO / TITLE: - Non-functioning pituitary tumors: 2012 update.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Endocrinol Nutr. 2013 Sep 12. pii: S1575-0922(13)00178-2. doi: 10.1016/j.endonu.2013.04.009.

●● Enlace al texto completo (gratis o de pago) 1016/j.endonu.2013.04.009

AUTORES / AUTHORS: - Camara Gomez R

INSTITUCIÓN / INSTITUTION: - Servicio de Endocrinología y Nutrición, Hospital Universitario y Politécnico La Fe, Valencia, España. Electronic address: camara_ros@gva.es.

RESUMEN / SUMMARY: - Non-functioning pituitary adenomas are the most common pituitary macroadenomas in adults, accounting for approximately 14%-28% of all clinically relevant pituitary tumors. They are a heterogeneous group of tumors that cause symptoms by compression and/or hormone deficiencies. The possibility of tumor growth is increased in macroadenomas and solid tumors as compared to microadenomas and cystic tumors. Diagnosis is based on imaging procedures (magnetic resonance imaging), but there are studies reporting promising potential biomarkers. Transsphenoidal surgery remains the first therapeutic option for large tumors with compressive symptoms. There is no evidence that endoscopic procedures improve outcomes, but they decrease morbidity. There is no unanimity in finding prognostic predictors of recurrence. Radiosurgery achieves tumor control and, sometimes, adenoma size reduction. Its adverse effects increase with higher doses and tumor sizes >4cm³. Drug treatment is of little value. In aggressive non-functioning tumors, temozolomide (TMZ) may be used with caution because no controlled studies are available. TMZ achieves tumor control in 38%-40% of aggressive non-functioning tumors. The optimal treatment regimen and duration have not been defined yet. Lack of response to TMZ after 3 cycles predicts for treatment resistance, but initial response

does not ensure optimal mid or long-term results. O6-methylguanine-DNA methyltransferase expression has a limited predictive value of response to treatment with TMZ in aggressive non-functioning tumors. It should therefore not be a determinant factor in selection of patients to be treated with TMZ.

[780]

TÍTULO / TITLE: - Sonic hedgehog-induced histone deacetylase activation is required for cerebellar granule precursor hyperplasia in medulloblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013;8(8):e71455. doi: 10.1371/journal.pone.0071455.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0071455](https://doi.org/10.1371/journal.pone.0071455)

AUTORES / AUTHORS: - Lee SJ; Lindsey S; Graves B; Yoo S; Olson JM; Langhans SA

INSTITUCIÓN / INSTITUTION: - Nemours/Alfred I. duPont Hospital for Children, Wilmington, Delaware, United States of America.

RESUMEN / SUMMARY: - Medulloblastoma, the most common pediatric brain tumor, is thought to arise from deregulated proliferation of cerebellar granule precursor (CGP) cells. Sonic hedgehog (Shh) is the primary mitogen that regulates proliferation of CGP cells during the early stages of postnatal cerebellum development. Aberrant activation of Shh signaling during this time has been associated with hyperplasia of CGP cells and eventually may lead to the development of medulloblastoma. The molecular targets of Shh signaling involved in medulloblastoma formation are still not well-understood. Here, we show that Shh regulates sustained activation of histone deacetylases (HDACs) and that this activity is required for continued proliferation of CGP cells. Suppression of HDAC activity not only blocked the Shh-induced CGP proliferation in primary cell cultures, but also ameliorated aberrant CGP proliferation at the external germinal layer (EGL) in a medulloblastoma mouse model. Increased levels of mRNA and protein of several HDAC family members were found in medulloblastoma compared to wild type cerebellum suggesting that HDAC activity is required for the survival/progression of tumor cells. The identification of a role of HDACs in the early steps of medulloblastoma formation suggests there may be a therapeutic potential for HDAC inhibitors in this disease.

[781]

TÍTULO / TITLE: - Establishment and characterization of primary glioblastoma cell lines from fresh and frozen material: a detailed comparison.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013;8(8):e71070. doi: 10.1371/journal.pone.0071070.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0071070](https://doi.org/10.1371/journal.pone.0071070)

AUTORES / AUTHORS: - Mullins CS; Schneider B; Stockhammer F; Krohn M; Classen CF; Linnebacher M

INSTITUCIÓN / INSTITUTION: - Pediatrics Department, University Hospital Rostock, Rostock, Germany ; Department of Surgery, University Hospital Rostock, Rostock, Germany.

RESUMEN / SUMMARY: - BACKGROUND: Development of clinically relevant tumor model systems for glioblastoma multiforme (GBM) is important for advancement of basic and translational biology. High molecular heterogeneity of GBM tumors is well recognized, forming the rationale for molecular tests required before administration of several of the novel therapeutics rapidly entering the clinics. One model that has gained wide acceptance is the primary cell culture model. The laborious and time consuming process is rewarded with a relative high success rate (about 60%). We here describe and evaluate a very simple cryopreservation procedure for GBM tissue prior to model establishment that will considerably reduce the logistic complexity. METHODS: Twenty-seven GBM samples collected ad hoc were prepared for primary cell culture freshly from surgery (#1) and after cryopreservation (#2). RESULTS: Take rates after cryopreservation (59%) were as satisfactory as from fresh tissue (63%; $p = 1.000$). We did not observe any relevant molecular or phenotypic differences between cell lines established from fresh or vitally frozen tissue. Further, sensitivity both towards standard chemotherapeutic agents (Temozolomide, BCNU and Vincristine) and novel agents like the receptor tyrosine kinase inhibitor Imatinib did not differ. CONCLUSIONS: Our simple cryopreservation procedure facilitates collection, long-time storage and propagation (modeling) of clinical GBM specimens (potentially also from distant centers) for basic research, (pre-) clinical studies of novel therapies and individual response prediction.

[782]

TÍTULO / TITLE: - Tumor cohesion and glioblastoma cell dispersal.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Future Oncol. 2013 Aug;9(8):1121-32. doi: 10.2217/fon.13.66.

●● Enlace al texto completo (gratis o de pago) [2217/fon.13.66](#)

AUTORES / AUTHORS: - Foty RA

INSTITUCIÓN / INSTITUTION: - Department of Surgery, University of Medicine & Dentistry, New Jersey Robert Wood Johnson Medical School, New Brunswick, NJ 08901, USA.

fotyra@umdnj.edu

RESUMEN / SUMMARY: - Patients with glioblastoma typically present when tumors are at an advanced stage. Surgical resection, radiotherapy and adjuvant chemotherapy are currently the standard of care for glioblastoma. However, due to the infiltrative and dispersive nature of the tumor, recurrence rate remains high and typically results in very poor prognosis. Efforts to treat the primary tumor are, therefore, palliative rather than curative. From a practical perspective, controlling growth and dispersal of the recurrence may have a greater impact on disease-free survival. In order for cells to disperse, they must first detach from the mass. Preventing detachment may keep

tumors that recur more localized and perhaps more amenable to therapy. Here we introduce a new perspective in which a quantifiable mechanical property, namely tissue surface tension, can provide novel information on tumor behavior. The overall theme of the discussion will attempt to integrate how adhesion molecules can alter a tumor's mechanical properties and how, in turn, these properties can be modified to prevent tumor cell detachment and dispersal.

[783]

TÍTULO / TITLE: - Paraganglioma of urinary bladder.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmi.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Aug 5;2013. pii: bcr2013010063. doi: 10.1136/bcr-2013-010063.

●● Enlace al texto completo (gratis o de pago) [1136/bcr-2013-010063](#)

AUTORES / AUTHORS: - Malik AA; Afandi B; Jamil G; Akhter SM

INSTITUCIÓN / INSTITUTION: - Division of Endocrinology, Tawam Hospital, Al-ain, Abu Dhabi, UAE. aamalik_06@yahoo.com

RESUMEN / SUMMARY: - Paraganglioma of the urinary bladder is extremely rare. In this report of a young man, hypertensive crisis and ventricular arrhythmia was provoked during cystoscopic evaluation of a bladder mass. A diagnosis of pheochromocytoma was considered following detection of high serum and urinary catecholamine levels. A preoperative meta-iodobenzylguanidine scan was, however, negative. The bladder mass was surgically removed following initiation of antihypertensive therapy. Pathological confirmation of extraadrenal pheochromocytoma was established. During a serial follow-up, serum and urine catecholamine levels were persistently elevated. This was explained by abnormalities on fluorodeoxyglucose positron emission tomography scan, which were considered to represent a metastatic malignant neuroendocrine tumour. The patient is on palliative chemotherapy for malignant paraganglioma. This case highlights variable presentation of pheochromocytoma, importance of having a high index of clinical suspicion for early recognition and prompt management and serious adverse consequence of a delayed diagnosis.

[784]

TÍTULO / TITLE: - Cadherin-11 regulates motility in normal cortical neural precursors and glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013;8(8):e70962. doi: 10.1371/journal.pone.0070962.

●● Enlace al texto completo (gratis o de pago) [1371/journal.pone.0070962](#)

AUTORES / AUTHORS: - Schulte JD; Srikanth M; Das S; Zhang J; Lathia JD; Yin L; Rich JN; Olson EC; Kessler JA; Chenn A

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Feinberg School of Medicine, Northwestern University, Chicago, Illinois, United States of America.

RESUMEN / SUMMARY: - Metastasizing tumor cells undergo a transformation that resembles a process in normal development when non-migratory epithelial cells modulate the expression of cytoskeletal and adhesion proteins to promote cell motility. Here we find a mesenchymal cadherin, Cadherin-11 (CDH11), is increased in cells exiting the ventricular zone (VZ) neuroepithelium during normal cerebral cortical development. When overexpressed in cortical progenitors in vivo, CDH11 causes premature exit from the neuroepithelium and increased cell migration. CDH11 expression is elevated in human brain tumors, correlating with higher tumor grade and decreased patient survival. In glioblastoma, CDH11-expressing tumor cells can be found localized near tumor vasculature. Endothelial cells stimulate TGFbeta signaling and CDH11 expression in glioblastoma cells. TGFbeta promotes glioblastoma cell motility, and knockdown of CDH11 expression in primary human glioblastoma cells inhibits TGFbeta-stimulated migration. Together, these findings show that Cadherin-11 can promote cell migration in neural precursors and glioblastoma cells and suggest that endothelial cells increase tumor aggressiveness by co-opting mechanisms that regulate normal neural development.

[785]

TÍTULO / TITLE: - Brain Tumor Classification Using AFM in Combination with Data Mining Techniques.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Biomed Res Int. 2013;2013:176519. doi: 10.1155/2013/176519. Epub 2013 Aug 25.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/176519](#)

AUTORES / AUTHORS: - Huml M; Silye R; Zauner G; Hutterer S; Schilcher K

INSTITUCIÓN / INSTITUTION: - School of Applied Health and Social Sciences, University of Applied Sciences Upper Austria, Garnisonstrasse 21, 4020 Linz, Austria.

RESUMEN / SUMMARY: - Although classification of astrocytic tumors is standardized by the WHO grading system, which is mainly based on microscopy-derived, histomorphological features, there is great interobserver variability. The main causes are thought to be the complexity of morphological details varying from tumor to tumor and from patient to patient, variations in the technical histopathological procedures like staining protocols, and finally the individual experience of the diagnosing pathologist. Thus, to raise astrocytoma grading to a more objective standard, this paper proposes a methodology based on atomic force microscopy (AFM) derived images made from histopathological samples in combination with data mining techniques. By comparing AFM images with corresponding light microscopy images of the same area, the progressive formation of cavities due to cell necrosis was identified as a typical morphological marker for a computer-assisted analysis. Using genetic

programming as a tool for feature analysis, a best model was created that achieved 94.74% classification accuracy in distinguishing grade II tumors from grade IV ones. While utilizing modern image analysis techniques, AFM may become an important tool in astrocytic tumor diagnosis. By this way patients suffering from grade II tumors are identified unambiguously, having a less risk for malignant transformation. They would benefit from early adjuvant therapies.

[786]

TÍTULO / TITLE: - Isolated cerebellar tuberculoma mimicking posterior cranial fossa tumour.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+]3s <http://bmi.com/search.dtl>

●● British Medical J. (BMJ): <> Case Rep. 2013 Aug 21;2013. pii: bcr2013009965. doi: 10.1136/bcr-2013-009965.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-009965

AUTORES / AUTHORS: - Binesh F; Taghipour Zahir S; Roshan Bovanlu T

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

RESUMEN / SUMMARY: - Isolated central nervous system (CNS) tuberculoma is a rare disease. This disease is associated with high morbidity and mortality, despite modern methods of detection and treatment. CNS tuberculosis can present as meningitis, arachnoiditis, tuberculomas or the uncommon form of tuberculous subdural empyema and brain abscess. We present the clinical, radiological and pathological findings of cerebellar tuberculoma in an Iranian immunocompetent patient mimicking a malignant tumour.

[787]

TÍTULO / TITLE: - Affinity-matured recombinant immunotoxin targeting gangliosides 3'-isoLM1 and 3',6'-isoLD1 on malignant gliomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - MAbs. 2013 Sep 1;5(5):748-62. doi: 10.4161/mabs.25860. Epub 2013 Jul 25.

●● Enlace al texto completo (gratis o de pago) 4161/mabs.25860

AUTORES / AUTHORS: - Piao H; Kuan CT; Chandramohan V; Keir ST; Pegram CN; Bao X; Mansson JE; Pastan IH; Bigner DD

INSTITUCIÓN / INSTITUTION: - Preston Robert Tisch Brain Tumor Center at Duke and Department of Pathology; Duke University Medical Center; Durham, NC USA.

RESUMEN / SUMMARY: - About 60 percent of glioblastomas highly express the gangliosides 3'-isoLM1 and 3',6'-isoLD1 on the cell surface, providing ideal targets for brain tumor immunotherapy. A novel recombinant immunotoxin, DmAb14m-(scFv)-PE38KDEL (DmAb14m-IT), specific for the gangliosides 3'-isoLM1 and 3',6'-isoLD1, was

constructed with improved affinity and increased cytotoxicity for immunotherapeutic targeting of glioblastoma. We isolated an scFv parental clone from a previously established murine hybridoma, DmAb14, that is specific to both 3'-isoLM1 and 3',6'-isoLD1. We then performed in vitro affinity maturation by CDR hotspot random mutagenesis. The binding affinity and specificity of affinity-matured DmAb14m-IT were measured by surface-plasmon resonance, flow cytometry, and immunohistochemical analysis. In vitro cytotoxicity of DmAb14m-IT was measured by protein synthesis inhibition and cell death assays in human cell lines expressing gangliosides 3'-isoLM1 and 3',6'-isoLD1 (D54MG and D336MG) and xenograft-derived cells (D2224MG). As a result, the KD of DmAb14m-IT for gangliosides 3'-isoLM1 and 3',6'-isoLD1 was 2.6×10^{-9} M. Also, DmAb14m-IT showed a significantly higher internalization rate in cells expressing 3'-isoLM1 and 3',6'-isoLD1. The DmAb14m-IT IC₅₀ was 80 ng/mL (1194 pM) on the D54MG cell line, 5 ng/mL (75 pM) on the D336MG cell line, and 0.5 ng/mL (7.5 pM) on the D2224MG xenograft-derived cells. There was no cytotoxicity on ganglioside-negative HEK293 cells. Immunohistochemical analysis confirmed the specific apparent affinity of DmAb14m-IT with 3'-isoLM1 and 3',6'-isoLD1. In conclusion, DmAb14m-IT showed specific binding affinity, a significantly high internalization rate, and selective cytotoxicity on glioma cell lines and xenograft-derived cells expressing 3'-isoLM1 and 3',6'-isoLD1, thereby displaying robust therapeutic potential for testing the antitumor efficacy of DmAb14m-IT at the preclinical level and eventually in the clinical setting.

[788]

TÍTULO / TITLE: - Rapid, label-free detection of brain tumors with stimulated Raman scattering microscopy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Sci Transl Med. 2013 Sep 4;5(201):201ra119. doi: 10.1126/scitranslmed.3005954.

●● Enlace al texto completo (gratis o de pago) [1126/scitranslmed.3005954](#)

AUTORES / AUTHORS: - Ji M; Orringer DA; Freudiger CW; Ramkissoon S; Liu X; Lau D; Golby AJ; Norton I; Hayashi M; Agar NY; Young GS; Spino C; Santagata S; Camelo-Piragua S; Ligon KL; Sagher O; Xie XS

INSTITUCIÓN / INSTITUTION: - Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA 02138, USA.

RESUMEN / SUMMARY: - Surgery is an essential component in the treatment of brain tumors. However, delineating tumor from normal brain remains a major challenge. We describe the use of stimulated Raman scattering (SRS) microscopy for differentiating healthy human and mouse brain tissue from tumor-infiltrated brain based on histoarchitectural and biochemical differences. Unlike traditional histopathology, SRS is a label-free technique that can be rapidly performed in situ. SRS microscopy was able to differentiate tumor from nonneoplastic tissue in an infiltrative human

glioblastoma xenograft mouse model based on their different Raman spectra. We further demonstrated a correlation between SRS and hematoxylin and eosin microscopy for detection of glioma infiltration ($\kappa = 0.98$). Finally, we applied SRS microscopy in vivo in mice during surgery to reveal tumor margins that were undetectable under standard operative conditions. By providing rapid intraoperative assessment of brain tissue, SRS microscopy may ultimately improve the safety and accuracy of surgeries where tumor boundaries are visually indistinct.

[789]

TÍTULO / TITLE: - Diffuse anaplastic leptomeningeal oligodendrogliomatosis mimicking neurosarcoidosis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neurol Clin Pract. 2013 Jun;3(3):261-265.

●● Enlace al texto completo (gratis o de pago) [1212/CPJ.0b013e318296f23d](#)

AUTORES / AUTHORS: - Leep Hunderfund AN; Zabad RK; Aksamit AJ; Morris JM; Meyer FB; Thorell WE; Parisi JE; Giannini C

INSTITUCIÓN / INSTITUTION: - Departments of Neurology (A.N.L.H., A.J.A.), Neurosurgery (F.B.M.), Radiology (J.M.M.), and Pathology (J.E.P., C.G.), Mayo Clinic College of Medicine, Rochester, MN; and the Department of Neurological Sciences (R.K.Z.) and the Division of Neurosurgery (W.E.T.), Nebraska Medical Center, Omaha.

RESUMEN / SUMMARY: - Diffuse leptomeningeal oligodendrogliomatosis is a rare, frequently fatal CNS malignancy that most often affects children.¹ Although potentially treatable with chemotherapy and radiation, the radiologic findings are nonspecific and pathologic confirmation of the diagnosis is difficult. We describe an adult patient whose initial presentation mimicked neurosarcoidosis. Despite extensive imaging abnormalities, 3 biopsies were required before the diagnosis of diffuse leptomeningeal oligodendrogliomatosis was confirmed.

[790]

TÍTULO / TITLE: - Modeling Mass Transfer from Carmustine-Loaded Polymeric Implants for Malignant Gliomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Lab Autom. 2013 Aug 23.

●● Enlace al texto completo (gratis o de pago) [1177/2211068213499157](#)

AUTORES / AUTHORS: - Pereira DY; Yip AT; Lee BS; Kamei DT

INSTITUCIÓN / INSTITUTION: - 1Department of Bioengineering, University of California, Los Angeles, CA, USA.

RESUMEN / SUMMARY: - Significant advances in the encapsulation and release of drugs from degradable polymers have led to the Food and Drug Administration approval of Gliadel wafers for controlled local delivery of the chemotherapeutic drug carmustine to high-grade gliomas following surgical resection. Due to the localized nature of the

delivery method, no pharmacokinetic measurements have been taken in humans. Rather, pharmacokinetic studies in animals and associated modeling have indicated the capability of carmustine to be delivered in high concentrations within millimeters from the implant site over approximately 5 days. Mathematical models have indicated that diffusion has a primary role in transport, which may be complemented by enhanced fluid convection from postsurgical edema in the initial 3 days following implantation. Carmustine's penetration distance is also presumably limited by its lipophilicity and permeability in the capillaries. This review discusses the mathematical models that have been used to predict the release and distribution of carmustine from a polymeric implant. These models provide a theoretical framework for greater understanding of systems for localized drug delivery while highlighting factors that should be considered in clinical applications. In effect, Gliadel wafers and similar drug delivery implants can be optimized with reduction in required time and resources with such a quantitative and integrative approach.

[791]

TÍTULO / TITLE: - Loss of PDCD4 contributes to enhanced chemoresistance in Glioblastoma Multiforme through de-repression of Bcl-xL translation.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncotarget. 2013 Jul 28.

AUTORES / AUTHORS: - Liwak U; Jordan LE; Von-Holt SD; Singh P; Hanson JE; Lorimer IA; Roncaroli F; Holcik M

INSTITUCIÓN / INSTITUTION: - Apoptosis Research Centre, Children's Hospital of Eastern Ontario Research Institute, Ottawa, Canada.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common and aggressive form of tumor of the central nervous system. Despite significant efforts to improve treatments, patient survival rarely exceeds 18 months largely due to the highly chemoresistant nature of these tumors. Importantly, misregulation of the apoptotic machinery plays a key role in the development of drug resistance. We previously demonstrated that Bcl-xL, an important anti-apoptotic protein, is regulated at the level of translation by the tumor suppressor programmed cell death 4 (PDCD4). We report here a strong correlation between low expression of PDCD4 and high expression of Bcl-xL in adult de novo GBM, GBM tumor initiating cells, and established GBM cell lines. Importantly, high Bcl-xL expression correlated significantly with poor progression and patient survival. We demonstrate that re-expression of PDCD4 in GBM cells down-regulated Bcl-xL expression and decreased cell viability. Finally, we show that direct inhibition of Bcl-xL by small molecule antagonist ABT-737 sensitizes GBM cells to doxorubicin. Our results identify Bcl-xL as a novel marker of GBM chemoresistance and advocate for the combined use of Bcl-xL antagonists and existing chemotherapeutics as a treatment option for this aggressive tumor.
