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

GLIOMAS AND RELATED TUMORS

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

Julio - Agosto 2013 / July - August 2013

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[1]

TÍTULO / TITLE: - Systematic approximations of neural fields through networks of neural masses in the virtual brain.

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

REVISTA / JOURNAL: - Neuroimage. 2013 Jun 15. pii: S1053-8119(13)00655-1. doi: 10.1016/j.neuroimage.2013.06.018.

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

[1016/j.neuroimage.2013.06.018](#)

AUTORES / AUTHORS: - Spiegler A; Jirsa V

INSTITUCIÓN / INSTITUTION: - Institut de Neurosciences des Systemes, UMR INSERM 1106, Aix-Marseille Université, Faculté de Médecine, 27, Boulevard Jean Moulin, 13005 Marseille, France. Electronic address: andreas.spiegler@univ-amu.fr.

RESUMEN / SUMMARY: - Full brain network models comprise a large-scale connectivity (the connectome) and neural mass models as the network's nodes. Neural mass models absorb implicitly a variety of properties in their constant parameters to achieve a reduction in complexity. In situations, where the local network connectivity undergoes major changes, such as in development or epilepsy, it becomes crucial to model local connectivity explicitly. This leads naturally to a description of neural fields on folded cortical sheets with local and

global connectivities. The numerical approximation of neural fields in biologically realistic situations as addressed in Virtual Brain simulations (see <http://thevirtualbrain.org/app/> (version 1.0)) is challenging and requires a thorough evaluation if the Virtual Brain approach is to be adapted for systematic studies of disease and disorders. Here we analyze the sampling problem of neural fields for arbitrary dimensions and provide explicit results for one, two and three dimensions relevant to realistically folded cortical surfaces. We characterize (i) the error due to sampling of spatial distribution functions; (ii) useful sampling parameter ranges in the context of encephalographic (EEG, MEG, ECoG and functional MRI) signals; (iii) guidelines for choosing the right spatial distribution function for given anatomical and geometrical constraints.

TÍTULO / TITLE: - RHPN2 Drives Mesenchymal Transformation in Malignant Glioma by Triggering RhoA Activation.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) 1158/0008-5472.CAN-13-1168-T

AUTORES / AUTHORS: - Danussi C; Akavia UD; Niola F; Jovic A; Lasorella A; Pe'er D; Iavarone A

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Institute for Cancer Genetics, Department of Systems Biology, Department of Pediatrics, Pathology, Neurology, Columbia University Medical Center, and Department of Biological Sciences, Columbia University, New York, New York.

RESUMEN / SUMMARY: - Mesenchymal transformation is a hallmark of aggressive glioblastoma (GBM). Here, we report the development of an unbiased method for computational integration of copy number variation, expression, and mutation data from large datasets. Using this method, we identified rhophilin 2 (RHPN2) as a central genetic determinant of the mesenchymal phenotype of human GBM. Notably, amplification of the human RHPN2 gene on chromosome 19 correlates with a dramatic decrease in the survival of patients with glioma. Ectopic expression of RHPN2 in neural stem cells and astrocytes triggered the expression of mesenchymal genes and promoted an invasive phenotype without impacting cell proliferation. Mechanistically, these effects were implemented through RHPN2-mediated activation of RhoA, a master regulator of cell migration and invasion. Our results define RHPN2 amplification as a central genetic determinant of a highly aggressive phenotype that directs the worst clinical outcomes in patients with GBM. Cancer Res; 73(16); 1-11. ©2013 AACR.

[2]

TÍTULO / TITLE: - Adenosine potentiates the therapeutic effects of neural stem cells expressing cytosine deaminase against metastatic brain tumors.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Jul 3. doi: 10.3892/or.2013.2584.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2584](#)

AUTORES / AUTHORS: - Kang W; Seol HJ; Seong DH; Kim J; Kim Y; Kim SU; Nam DH; Joo KM

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea.

RESUMEN / SUMMARY: - Tumor-tropic properties of neural stem cells (NSCs) provide a novel approach with which to deliver targeting therapeutic genes to brain tumors. Previously, we developed a therapeutic strategy against metastatic brain tumors using a human NSC line (F3) expressing cytosine deaminase (F3.CD). F3.CD converts systemically administered 5-fluorocytosine (5-FC), a blood-brain barrier permeable nontoxic prodrug, into the anticancer agent 5-fluorouracil (5-FU). In this study, we potentiated a therapeutic strategy of treatment with nucleosides in order to chemically facilitate the endogenous conversion of 5-FU to its toxic metabolite 5-FU ribonucleoside (5-FUR). In vitro, 5-FUR showed superior cytotoxic activity against MDA-MB-435 cancer cells when compared to 5-FU. Although adenosine had little cytotoxic activity, the addition of adenosine significantly potentiated the in vitro cytotoxicity of 5-FU. When MDA-MB435 cells were co-cultured with F3.CD cells, F3.CD cells and 5-FC inhibited the growth of MDA-MB-435 cells more significantly in the presence of adenosine. Facilitated 5-FUR production by F3.CD was confirmed by an HPLC analysis of the conditioned media derived from F3.CD cells treated with 5-FC and adenosine. In vivo systemic adenosine treatment also significantly potentiated the therapeutic effects of F3.CD cells and 5-FC in an MDA-MB-435 metastatic brain tumor model. Simple adenosine addition improved the antitumor activity of the NSCs carrying the therapeutic gene. Our results demonstrated an increased therapeutic potential, and thereby, clinical applicability of NSC-based gene therapy.

TÍTULO / TITLE: - The integrin inhibitor cilengitide enhances the anti-glioma efficacy of vasculostatin-expressing oncolytic virus.

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

REVISTA / JOURNAL: - Cancer Gene Ther. 2013 Jul 5. doi: 10.1038/cgt.2013.38.

●● Enlace al texto completo (gratis o de pago) [1038/cgt.2013.38](#)

AUTORES / AUTHORS: - Fujii K; Kurozumi K; Ichikawa T; Onishi M; Shimazu Y; Ishida J; Chiocca EA; Kaur B; Date I

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan.

RESUMEN / SUMMARY: - Oncolytic viral (OV) therapy has been considered as a promising treatment modality for brain tumors. Vasculostatin, the fragment of brain-specific angiogenesis inhibitor-1, shows anti-angiogenic activity against malignant gliomas. Previously, a vasculostatin-expressing oncolytic herpes simplex virus-1, Rapid Antiangiogenesis Mediated By Oncolytic virus (RAMBO), was reported to have a potent antitumor effect. Here, we investigated the therapeutic efficacy of RAMBO and cilengitide, an integrin inhibitor, combination therapy for malignant glioma. In vitro, tube formation was significantly decreased in RAMBO and cilengitide combination treatment compared with RAMBO or cilengitide monotherapy. Moreover, combination treatment induced a synergistic suppressive effect on endothelial cell migration compared with the control virus. RAMBO, combined with cilengitide, induced synergistic cytotoxicity on glioma cells. In the caspase-8 and -9 assays, the relative absorption of U87DeltaEGFR cell clusters treated with cilengitide and with RAMBO was significantly higher than that of those treated with control. In addition, the activity of caspase 3/7 was significantly increased with combination therapy. In vivo, there was a significant increase in the survival of mice treated with combination therapy compared with RAMBO or cilengitide monotherapy. These results indicate that cilengitide enhanced vasculostatin-expressing OV therapy for malignant glioma and provide a rationale for designing future clinical trials combining these two agents. Cancer Gene Therapy advance online publication, 5 July 2013; doi:10.1038/cgt.2013.38.

[3]

TÍTULO / TITLE: - Case records of the Massachusetts General Hospital. Case 18-2013: a 32-year-old woman with recurrent episodes of altered consciousness.

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

REVISTA / JOURNAL: - N Engl J Med. 2013 Jun 13;368(24):2304-12. doi: 10.1056/NEJMcp1215969.

●● Enlace al texto completo (gratis o de pago) [1056/NEJMcp1215969](#)

AUTORES / AUTHORS: - Cole AJ; Eskandar E; Mela T; Noebels JL; Gonzalez RG; McGuone D

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Massachusetts General Hospital, Boston, USA.

[4]

TÍTULO / TITLE: - High-Risk Medulloblastoma: A Pediatric Oncology Group Randomized Trial of Chemotherapy Before or After Radiation Therapy (POG 9031).

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

REVISTA / JOURNAL: - J Clin Oncol. 2013 Aug 10;31(23):2936-41. doi: 10.1200/JCO.2012.43.9984. Epub 2013 Jul 15.

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

[1200/JCO.2012.43.9984](#)

AUTORES / AUTHORS: - Tarbell NJ; Friedman H; Polkinghorn WR; Yock T; Zhou T; Chen Z; Burger P; Barnes P; Kun L

INSTITUCIÓN / INSTITUTION: - Massachusetts General Hospital, 55 Fruit St, Boston, MA 02114; nancy_tarbell@hms.harvard.edu.

RESUMEN / SUMMARY: - **PURPOSE** To compare event-free survival (EFS) in children with high-risk medulloblastoma randomly assigned to receive either chemotherapy before radiation or chemotherapy after radiation. **PATIENTS AND METHODS** One hundred twelve patients were randomly assigned to each arm. Criteria used to categorize patients as high risk included M1-4 disease by modified Chang staging classification, T3b/T4 disease, or greater than 1.5 cm(3) of residual tumor after surgery. Postoperatively, children with high-risk medulloblastoma were randomly assigned to two arms, either chemotherapy entailing three cycles of cisplatin and etoposide before radiation (chemotherapy first [CT1]) or the same chemotherapy regimen after radiation (radiation therapy first [RT1]). Both groups received consolidation chemotherapy consisting of vincristine and cyclophosphamide. **Results** The median follow-up time was 6.4 years. Five-year EFS was 66.0% in the CT1 arm and 70.0% in the RT1 arm (P = .54), and 5-year overall survival in the two groups was 73.1% and 76.1%, respectively (P = .47). In the CT1 arm, 40 of the 62 patients with residual disease achieved either complete or partial remission. **CONCLUSION** Five-year EFS did not differ significantly whether, after surgery, patients received chemotherapy before or after radiotherapy.

[5]

TÍTULO / TITLE: - Efficacy of vagus nerve stimulation as a treatment for medically intractable epilepsy in brain tumor patients. A case-controlled study using the VNS therapy Patient Outcome Registry.

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

REVISTA / JOURNAL: - Seizure. 2013 Jun 11. pii: S1059-1311(13)00130-1. doi: 10.1016/j.seizure.2013.04.017.

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

[1016/j.seizure.2013.04.017](#)

AUTORES / AUTHORS: - Patel KS; Labar DR; Gordon CM; Hassnain KH; Schwartz TH

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Weill Cornell Medical College, New York Presbyterian Hospital, 1300 York Avenue, New York, NY 10065, USA.

RESUMEN / SUMMARY: - **PURPOSE:** Vagus nerve stimulation (VNS) therapy is a procedure to control seizure frequency in patients with medically intractable epilepsy. However, there is no data on efficacy in the subset of these patients with brain tumors. The purpose of this study is to evaluate the efficacy of VNS therapy in patients with brain tumor-associated medically intractable epilepsy. **METHODS:** Data from the VNS therapy Patient Outcome Registry, maintained by the manufacturer of the device, Cyberonics Inc. (Houston, TX, USA), was queried to characterize the response of patients in whom a brain tumor was listed as the etiology of epilepsy. A case-control analysis was implemented and patient outcome was measured by Engel classification, median seizure response and responder rate ($\geq 50\%$ seizure reduction) using t-tests and chi-squared tests. **RESULTS:** In 107 patients with an epilepsy etiology related to a brain tumor, seizure reduction was 45% at 3 months and 79% at 24 months with a responder rate of 48% at 3 months and 79% at 24 months. There was no statistical difference in seizure reduction compared with 326 case-control patients from the registry without brain tumors. There was no significant difference in anti-epileptic drug (AED) usage from baseline to 24 months post implant in either group. **CONCLUSIONS:** VNS therapy is equally effective in patients who suffer seizures secondary to brain tumors as in patients without history of a brain tumor. VNS therapy is a viable treatment option for patients with brain tumor associated medically intractable epilepsy, assuming cytoreductive and other adjuvant therapies have been fully explored.

[6]

TÍTULO / TITLE: - MAPping the genomic landscape of low-grade pediatric gliomas.

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

REVISTA / JOURNAL: - Nat Genet. 2013 Aug;45(8):847-9. doi: 10.1038/ng.2706.

●● Enlace al texto completo (gratis o de pago) [1038/ng.2706](#)

AUTORES / AUTHORS: - Turcan S; Chan TA

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

RESUMEN / SUMMARY: - Two recent large-scale sequencing studies have identified multiple genetic aberrations in pediatric low-grade gliomas. These findings offer substantial insights that may spur the development of new diagnostics and treatments for these cancers.

[7]

TÍTULO / TITLE: - Recurrent glioblastoma: Volumetric assessment and stratification of patient survival with early posttreatment magnetic resonance imaging in patients treated with bevacizumab.

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

REVISTA / JOURNAL: - Cancer. 2013 Jul 2. doi: 10.1002/cncr.28210.

●● Enlace al texto completo (gratis o de pago) [1002/cncr.28210](#)

AUTORES / AUTHORS: - Huang RY; Rahman R; Hamdan A; Kane C; Chen C; Norden AD; Reardon DA; Mukundun S; Wen PY

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Brigham and Women's Hospital, Boston, Massachusetts.

RESUMEN / SUMMARY: - BACKGROUND: Despite a high radiographic response rate in patients with recurrent glioblastoma following bevacizumab therapy, survival benefit has been relatively modest. We assess whether tumor volume measurements based on baseline and early posttreatment MRI can stratify patients in terms of progression-free survival (PFS) and overall survival (OS). METHODS: Baseline (-4 +/- 4 days) and posttreatment (30 +/- 6 days) MRI exams of 91 patients with recurrent glioblastoma treated with bevacizumab were retrospectively evaluated for volume of enhancing tumor as well as volume of the T2/FLAIR hyperintensity. Overall survival (OS) and progression-free survival (PFS) were assessed using volume parameters in a Cox regression model adjusted for significant clinical parameters. RESULTS: In univariable analysis, residual tumor volume, percentage change in tumor volume, steroid change from baseline to posttreatment scan, and number of recurrences were associated with both OS and PFS. With dichotomization by sample median of 52% change of enhancing volume can stratify OS (52 weeks vs. 31 weeks, P = .013) and PFS (21 weeks vs. 12 weeks, P = .009). Residual enhancing volume, dichotomized by sample median of 7.8 cm³, can also stratify for OS (64 weeks vs. 28 weeks, P < .001) and PFS (21 weeks vs. 12 weeks, P = .036). CONCLUSIONS: Volumetric percentage change and absolute early posttreatment volume of enhancing tumor can stratify survival for patients with recurrent glioblastoma receiving bevacizumab therapy. Cancer 2013. © 2013 American Cancer Society.

[8]

TÍTULO / TITLE: - Recurrent somatic alterations of FGFR1 and NTRK2 in pilocytic astrocytoma.

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

REVISTA / JOURNAL: - Nat Genet. 2013 Aug;45(8):927-32. doi: 10.1038/ng.2682. Epub 2013 Jun 30.

●● Enlace al texto completo (gratis o de pago) [1038/ng.2682](#)

AUTORES / AUTHORS: - Jones DT; Hutter B; Jager N; Korshunov A; Kool M; Warnatz HJ; Zichner T; Lambert SR; Ryzhova M; Quang DA; Fontebasso AM; Stutz AM; Hutter S; Zuckermann M; Sturm D; Gronych J; Lasitschka B; Schmidt

S; Seker-Cin H; Witt H; Sultan M; Ralser M; Northcott PA; Hovestadt V; Bender S; Pfaff E; Stark S; Faury D; Schwartzentruber J; Majewski J; Weber UD; Zapatka M; Raeder B; Schlesner M; Worth CL; Bartholomae CC; von Kalle C; Imbusch CD; Radomski S; Lawerenz C; van Sluis P; Koster J; Volckmann R; Versteeg R; Lehrach H; Monoranu C; Winkler B; Unterberg A; Herold-Mende C; Milde T; Kulozik AE; Ebinger M; Schuhmann MU; Cho YJ; Pomeroy SL; von Deimling A; Witt O; Taylor MD; Wolf S; Karajannis MA; Eberhart CG; Scheurlen W; Hasselblatt M; Ligon KL; Kieran MW; Korbel JO; Yaspo ML; Brors B; Felsberg J; Reifenberger G; Collins VP; Jabado N; Eils R; Lichter P; Pfister SM

INSTITUCIÓN / INSTITUTION: - 1] Division of Pediatric Neurooncology, German Cancer Research Center (DKFZ), Heidelberg, Germany. [2].

RESUMEN / SUMMARY: - Pilocytic astrocytoma, the most common childhood brain tumor, is typically associated with mitogen-activated protein kinase (MAPK) pathway alterations. Surgically inaccessible midline tumors are therapeutically challenging, showing sustained tendency for progression and often becoming a chronic disease with substantial morbidities. Here we describe whole-genome sequencing of 96 pilocytic astrocytomas, with matched RNA sequencing (n = 73), conducted by the International Cancer Genome Consortium (ICGC) PedBrain Tumor Project. We identified recurrent activating mutations in FGFR1 and PTPN11 and new NTRK2 fusion genes in non-cerebellar tumors. New BRAF-activating changes were also observed. MAPK pathway alterations affected all tumors analyzed, with no other significant mutations identified, indicating that pilocytic astrocytoma is predominantly a single-pathway disease. Notably, we identified the same FGFR1 mutations in a subset of H3F3A-mutated pediatric glioblastoma with additional alterations in the NF1 gene. Our findings thus identify new potential therapeutic targets in distinct subsets of pilocytic astrocytoma and childhood glioblastoma.

[9]

TÍTULO / TITLE: - Adenovirus-mediated gene therapy with sitimagene ceradenovec followed by intravenous ganciclovir for patients with operable high-grade glioma (ASPECT): a randomised, open-label, phase 3 trial.

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

REVISTA / JOURNAL: - Lancet Oncol. 2013 Aug;14(9):823-33. doi: 10.1016/S1470-2045(13)70274-2. Epub 2013 Jul 12.

●● Enlace al texto completo (gratis o de pago) [1016/S1470-2045\(13\)70274-2](#)

AUTORES / AUTHORS: - Westphal M; Yla-Herttuala S; Martin J; Warnke P; Menei P; Eckland D; Kinley J; Kay R; Ram Z

INSTITUCIÓN / INSTITUTION: - University Hospital Eppendorf, Hamburg, Germany. Electronic address: westphal@uke.de.

RESUMEN / SUMMARY: - BACKGROUND: Besides the use of temozolomide and radiotherapy for patients with favourable methylation status, little progress has

been made in the treatment of adult glioblastoma. Local control of the disease by complete removal increases time to progression and survival. We assessed the efficacy and safety of a locally applied adenovirus-mediated gene therapy with a prodrug converting enzyme (herpes-simplex-virus thymidine kinase; sitimagene ceradenovec) followed by intravenous ganciclovir in patients with newly diagnosed resectable glioblastoma. METHODS: For this international, open-label, randomised, parallel group multicentre phase 3 clinical trial, we recruited patients from 38 sites in Europe. Patients were eligible if they were aged 18-70 years, had newly diagnosed supratentorial glioblastoma multiforme amenable to complete resection, and had a Karnofsky score of 70 or more at screening. We used a computer-generated randomisation sequence to allocate patients in a one-to-one ratio (with block sizes of four) to receive either surgical resection of the tumour and intraoperative perilesional injection of sitimagene ceradenovec (1×10^{12}) viral particles) followed by ganciclovir (postoperatively, 5 mg/kg intravenously twice a day) in addition to standard care or resection and standard care alone. Temozolomide, not being standard in all participating countries at the time of the study, was allowed at the discretion of the treating physician. The primary endpoint was a composite of time to death or re-intervention, adjusted for temozolamide use, assessed by intention-to-treat (ITT) analysis. This trial is registered with EudraCT, number 2004-000464-28. FINDINGS: Between Nov 3, 2005, and April 16, 2007, 250 patients were recruited and randomly allocated: 124 to the experimental group and 126 to the standard care group, of whom 119 and 117 patients, respectively, were included in the ITT analyses. Median time to death or re-intervention was longer in the experimental group (308 days, 95% CI 283-373) than in the control group (268 days, 210-313; hazard ratio [HR] 1.53, 95% CI 1.13-2.07; $p=0.006$). In a subgroup of patients with non-methylated MGMT, the HR was 1.72 (95% CI 1.15-2.56; $p=0.008$). However, there was no difference between groups in terms of overall survival (median 497 days, 95% CI 369-574 for the experimental group vs 452 days, 95% CI 437-558 for the control group; HR 1.18, 95% CI 0.86-1.61, $p=0.31$). More patients in the experimental group had one or more treatment-related adverse events than those in the control group (88 [71%] vs 51 [43%]). The most common grade 3-4 adverse events were hemiparesis (eight in the experimental group vs three in the control group) and aphasia (six vs two). INTERPRETATION: Our findings suggest that use of sitimagene ceradenovec and ganciclovir after resection can increase time to death or re-intervention in patients with newly diagnosed supratentorial glioblastoma multiforme, although the intervention did not improve overall survival. Locally delivered gene therapy for glioblastoma should be further developed, especially for patients who are unlikely to respond to standard chemotherapy. FUNDING: Ark Therapeutics Ltd.

[10]

TÍTULO / TITLE: - EndMT contributes to the onset and progression of cerebral cavernous malformations.

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

REVISTA / JOURNAL: - Nature. 2013 Jun 27;498(7455):492-6. doi: 10.1038/nature12207. Epub 2013 Jun 9.

●● [Enlace al texto completo \(gratis o de pago\) 1038/nature12207](#)

AUTORES / AUTHORS: - Maddaluno L; Rudini N; Cuttano R; Bravi L; Giampietro C; Corada M; Ferrarini L; Orsenigo F; Papa E; Boulday G; Tournier-Lasserre E; Chapon F; Richichi C; Retta SF; Lampugnani MG; Dejana E

INSTITUCIÓN / INSTITUTION: - IFOM Fondazione, FIRC Institute of Molecular Oncology, 20139 Milan, Italy. uigi.maddaluno@ifom.eu

RESUMEN / SUMMARY: - Cerebral cavernous malformation (CCM) is a vascular dysplasia, mainly localized within the brain and affecting up to 0.5% of the human population. CCM lesions are formed by enlarged and irregular blood vessels that often result in cerebral haemorrhages. CCM is caused by loss-of-function mutations in one of three genes, namely CCM1 (also known as KRIT1), CCM2 (OSM) and CCM3 (PDCD10), and occurs in both sporadic and familial forms. Recent studies have investigated the cause of vascular dysplasia and fragility in CCM, but the in vivo functions of this ternary complex remain unclear. Postnatal deletion of any of the three Ccm genes in mouse endothelium results in a severe phenotype, characterized by multiple brain vascular malformations that are markedly similar to human CCM lesions. Endothelial-to-mesenchymal transition (EndMT) has been described in different pathologies, and it is defined as the acquisition of mesenchymal- and stem-cell-like characteristics by the endothelium. Here we show that endothelial-specific disruption of the Ccm1 gene in mice induces EndMT, which contributes to the development of vascular malformations. EndMT in CCM1-ablated endothelial cells is mediated by the upregulation of endogenous BMP6 that, in turn, activates the transforming growth factor-beta (TGF-beta) and bone morphogenetic protein (BMP) signalling pathway. Inhibitors of the TGF-beta and BMP pathway prevent EndMT both in vitro and in vivo and reduce the number and size of vascular lesions in CCM1-deficient mice. Thus, increased TGF-beta and BMP signalling, and the consequent EndMT of CCM1-null endothelial cells, are crucial events in the onset and progression of CCM disease. These studies offer novel therapeutic opportunities for this severe, and so far incurable, pathology.

[11]

TÍTULO / TITLE: - BCAT1 promotes cell proliferation through amino acid catabolism in gliomas carrying wild-type IDH1.

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

REVISTA / JOURNAL: - Nat Med. 2013 Jul;19(7):901-8. doi: 10.1038/nm.3217. Epub 2013 Jun 23.

●● Enlace al texto completo (gratis o de pago) [1038/nm.3217](#)

AUTORES / AUTHORS: - Tonjes M; Barbus S; Park YJ; Wang W; Schlotter M; Lindroth AM; Pleier SV; Bai AH; Karra D; Piro RM; Felsberg J; Addington A; Lemke D; Weibrecht I; Hovestadt V; Rolli CG; Campos B; Turcan S; Sturm D; Witt H; Chan TA; Herold-Mende C; Kemkemer R; Konig R; Schmidt K; Hull WE; Pfister SM; Jugold M; Hutson SM; Plass C; Okun JG; Reifenberger G; Lichter P; Radlwimmer B

INSTITUCIÓN / INSTITUTION: - 1] Division of Molecular Genetics, German Cancer Research Center (DKFZ), Heidelberg, Germany. [2].

RESUMEN / SUMMARY: - Here we show that glioblastoma express high levels of branched-chain amino acid transaminase 1 (BCAT1), the enzyme that initiates the catabolism of branched-chain amino acids (BCAAs). Expression of BCAT1 was exclusive to tumors carrying wild-type isocitrate dehydrogenase 1 (IDH1) and IDH2 genes and was highly correlated with methylation patterns in the BCAT1 promoter region. BCAT1 expression was dependent on the concentration of alpha-ketoglutarate substrate in glioma cell lines and could be suppressed by ectopic overexpression of mutant IDH1 in immortalized human astrocytes, providing a link between IDH1 function and BCAT1 expression. Suppression of BCAT1 in glioma cell lines blocked the excretion of glutamate and led to reduced proliferation and invasiveness in vitro, as well as significant decreases in tumor growth in a glioblastoma xenograft model. These findings suggest a central role for BCAT1 in glioma pathogenesis, making BCAT1 and BCAA metabolism attractive targets for the development of targeted therapeutic approaches to treat patients with glioblastoma.

[12]

TÍTULO / TITLE: - Prospective evaluation of health-related quality of life in patients with glioblastoma multiforme treated on a phase II trial of hypofractionated IMRT with temozolomide.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug;114(1):111-6. doi: 10.1007/s11060-013-1159-6. Epub 2013 Jun 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1159-](#)

[6](#)

AUTORES / AUTHORS: - Reddy K; Gaspar LE; Kavanagh BD; Waziri A; Damek DM; Ney D; Lillehei KO; Chen C

INSTITUCIÓN / INSTITUTION: - Departments of Radiation Oncology, University of Colorado School of Medicine, 1665 Aurora Court, Suite 1032, Aurora, CO, 80045-0508, USA, Krishna.Reddy@ucdenver.edu.

RESUMEN / SUMMARY: - To report health-related quality of life (HRQOL) in glioblastoma (GBM) patients treated on a phase II trial of hypofractionated intensity-modulated radiotherapy (hypo-IMRT) with temozolomide (TMZ). GBM patients received postoperative hypo-IMRT to 60 Gy in 10 fractions with TMZ.

HRQOL was assessed using the EORTC quality of life questionnaire core-30 and the EORTC brain cancer module, performed at baseline, RT completion, 1 mo post-RT, and every 3 mos thereafter. Changes from baseline were calculated for each specific HRQOL scale. A ≥ 10 point change in any HRQOL scale from the mean baseline score was significant. 24 patients were treated. Compliance with HRQOL assessments at baseline, RT completion, and 1, 3, 6, 9, and 12 mos post-RT was 100, 96, 92, 79, 70, 68 and 53 %, respectively. Up to 12 mos post-RT, no significant changes were seen in global health status, physical functioning, role functioning, emotional functioning, fatigue, nausea, vision, headache or seizure. Significant improvement was seen in insomnia, future uncertainty, motor dysfunction and drowsiness. Significant worsening was observed in cognitive functioning, social functioning, appetite loss and communication deficit. 60 Gy hypo-IMRT in 6-Gy fractions with TMZ does not appear to negatively impact overall HRQOL.

[13]

TÍTULO / TITLE: - BCAT1 defines gliomas by IDH status.

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

REVISTA / JOURNAL: - Nat Med. 2013 Jul;19(7):816-7. doi: 10.1038/nm.3263.

●● Enlace al texto completo (gratis o de pago) [1038/nm.3263](#)

AUTORES / AUTHORS: - Mayers JR; Vander Heiden MG

INSTITUCIÓN / INSTITUTION: - Koch Institute for Integrative Cancer Research and the Department of Biology, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA.

[14]

TÍTULO / TITLE: - Long-term decline in intelligence among adult survivors of childhood acute lymphoblastic leukemia treated with cranial radiation.

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

REVISTA / JOURNAL: - Blood. 2013 Jul 25;122(4):550-3. doi: 10.1182/blood-2013-03-487744. Epub 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago) [1182/blood-2013-03-487744](#)

AUTORES / AUTHORS: - Krull KR; Zhang N; Santucci A; Srivastava DK; Krasin MJ; Kun LE; Pui CH; Robison LL; Hudson MM; Armstrong GT

INSTITUCIÓN / INSTITUTION: - Department of Epidemiology and Cancer Control.

RESUMEN / SUMMARY: - Survivors of childhood acute lymphoblastic leukemia (ALL) treated with cranial radiation therapy (CRT) are at risk for cognitive impairment, although whether impairment progresses with age into adulthood is unknown. We report change in intelligence for 102 adult survivors of childhood ALL (age range, 26.6-54.7 years) during a median interval of 28.5 years. Survivors demonstrated lower Performance intelligence (mean, 95.3; standard

deviation, 16.5; $P = .005$) but not Verbal IQ (mean, 97.4; standard deviation, 15.44; $P = .09$) at initial testing. Verbal intelligence declined an average of 10.3 points ($P < .0001$) during the follow-up interval with no decline in Performance intelligence. Decline was associated with current attention problems ($P = .002$) but not gender, CRT dose, age at CRT exposure, or years between testing. Results suggest long-term survivors of childhood ALL treated with CRT are at risk for progressive decline in verbal intellect, which may be driven by attention deficits. This trial was registered at clinicaltrials.gov as no. NCT00760656.

[15]

TÍTULO / TITLE: - Therapeutic vaccination against autologous cancer stem cells with mRNA-transfected dendritic cells in patients with glioblastoma.

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

REVISTA / JOURNAL: - Cancer Immunol Immunother. 2013 Jul 2.

●● Enlace al texto completo (gratis o de pago) [1007/s00262-013-1453-](http://1007/s00262-013-1453-3)

[3](#)

AUTORES / AUTHORS: - Vik-Mo EO; Nyakas M; Mikkelsen BV; Moe MC; Due-Tonnesen P; Suso EM; Saeboe-Larssen S; Sandberg C; Brinchmann JE; Helseth E; Rasmussen AM; Lote K; Aamdal S; Gaudernack G; Kvalheim G; Langmoen IA

INSTITUCIÓN / INSTITUTION: - Vilhelm Magnus Laboratory for Neurosurgical Research, Institute for Surgical Research, University of Oslo, Oslo, Norway, e.o.vik-mo@medisin.uio.no.

RESUMEN / SUMMARY: - BACKGROUND: The growth and recurrence of several cancers appear to be driven by a population of cancer stem cells (CSCs). Glioblastoma, the most common primary brain tumor, is invariably fatal, with a median survival of approximately 1 year. Although experimental data have suggested the importance of CSCs, few data exist regarding the potential relevance and importance of these cells in a clinical setting. METHODS: We here present the first seven patients treated with a dendritic cell (DC)-based vaccine targeting CSCs in a solid tumor. Brain tumor biopsies were dissociated into single-cell suspensions, and autologous CSCs were expanded in vitro as tumorspheres. From these, CSC-mRNA was amplified and transfected into monocyte-derived autologous DCs. The DCs were aliquoted to 9-18 vaccines containing 107 cells each. These vaccines were injected intradermally at specified intervals after the patients had received a standard 6-week course of post-operative radio-chemotherapy. The study was registered with the ClinicalTrials.gov identifier NCT00846456. RESULTS: Autologous CSC cultures were established from ten out of eleven tumors. High-quality RNA was isolated, and mRNA was amplified in all cases. Seven patients were able to be weaned from corticosteroids to receive DC immunotherapy. An immune response induced by vaccination was identified in all seven patients. No patients developed adverse autoimmune events or other side effects. Compared to

matched controls, progression-free survival was 2.9 times longer in vaccinated patients (median 694 vs. 236 days, $p = 0.0018$, log-rank test). CONCLUSION: These findings suggest that vaccination against glioblastoma stem cells is safe, well-tolerated, and may prolong progression-free survival.

[16]

TÍTULO / TITLE: - A survey of intragenic breakpoints in glioblastoma identifies a distinct subset associated with poor survival.

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

REVISTA / JOURNAL: - Genes Dev. 2013 Jul 1;27(13):1462-72. doi: 10.1101/gad.213686.113. Epub 2013 Jun 24.

●● [Enlace al texto completo \(gratis o de pago\) 1101/gad.213686.113](#)

AUTORES / AUTHORS: - Zheng S; Fu J; Vegesna R; Mao Y; Heathcock LE; Torres-Garcia W; Ezhilarasan R; Wang S; McKenna A; Chin L; Brennan CW; Yung WK; Weinstein JN; Aldape KD; Sulman EP; Chen K; Koul D; Verhaak RG

INSTITUCIÓN / INSTITUTION: - Department of Bioinformatics and Computational Biology.

RESUMEN / SUMMARY: - With the advent of high-throughput sequencing technologies, much progress has been made in the identification of somatic structural rearrangements in cancer genomes. However, characterization of the complex alterations and their associated mechanisms remains inadequate. Here, we report a comprehensive analysis of whole-genome sequencing and DNA copy number data sets from The Cancer Genome Atlas to relate chromosomal alterations to imbalances in DNA dosage and describe the landscape of intragenic breakpoints in glioblastoma multiforme (GBM). Gene length, guanine-cytosine (GC) content, and local presence of a copy number alteration were closely associated with breakpoint susceptibility. A dense pattern of repeated focal amplifications involving the murine double minute 2 (MDM2)/cyclin-dependent kinase 4 (CDK4) oncogenes and associated with poor survival was identified in 5% of GBMs. Gene fusions and rearrangements were detected concomitant within the breakpoint-enriched region. At the gene level, we noted recurrent breakpoints in genes such as apoptosis regulator FAF1. Structural alterations of the FAF1 gene disrupted expression and led to protein depletion. Restoration of the FAF1 protein in glioma cell lines significantly increased the FAS-mediated apoptosis response. Our study uncovered a previously underappreciated genomic mechanism of gene deregulation that can confer growth advantages on tumor cells and may generate cancer-specific vulnerabilities in subsets of GBM.

[17]

TÍTULO / TITLE: - Phase II Study of Bevacizumab in Combination with Sorafenib in Recurrent Glioblastoma (N0776): A North Central Cancer Treatment Group Trial.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Jul 5.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-0708](#)

AUTORES / AUTHORS: - Galanis E; Anderson SK; Lafky JM; Uhm J; Giannini C; Kumar SK; Kimlinger T; Northfelt DW; Flynn PJ; Jaeckle K; Kaufmann TJ; Buckner JC

INSTITUCIÓN / INSTITUTION: - Oncology, Mayo Clinic.

RESUMEN / SUMMARY: - **PURPOSE:** We hypothesized that vertical blockade of VEGF signaling by combining bevacizumab with sorafenib in recurrent glioblastoma (rGBM) patients would result in a synergistic therapeutic effect. We also investigated whether VEGF, VEGFR2, and HIF-1alpha single nucleotide polymorphisms (SNPs), circulating biomarkers of angiogenesis and Magnetic Resonance (MR) imaging markers, such as apparent diffusion coefficient (ADC), correlated with treatment efficacy and/or toxicity. **Patients/Methods:** Patients received bevacizumab (5 mg/kg every 2 weeks) with sorafenib (200 mg bid, weekly, days 1-5) (Group A), but due to toxicity, the starting sorafenib dose was subsequently modified to 200 mg qd (Group B). **RESULTS:** 54 patients were enrolled: 19 patients in Group A and 35 in Group B. Objective response rate was 18.5% with median duration of 6.7 mo (range 0.5-24.1 mo). Six-month progression free survival (PFS6) was 20.4% (11/54), and median OS was 5.6 months (95% CI 4.7 - 8.2); outcome was similar between the two dose groups. We identified single nucleotide polymorphisms in the VEGF and VEGFR2 promoter regions which were associated with PFS6 ($p < 0.022$). Among molecular markers of angiogenesis, a higher log2 baseline level of stromal cell derived factor-1 was associated with PFS6 success ($p = 0.04$). The circulating endothelial cell log2-fold decreased during treatment with subsequent increase at disease progression ($p = 0.022$). Imaging analysis demonstrated a trend associating ADC-L with poor outcome. **CONCLUSIONS:** The bevacizumab/sorafenib combination did not improve outcome of recurrent GBM patients versus historic bevacizumab treated controls. Biologic markers of response and resistance to bevacizumab in gliomas were identified which merit prospective validation.

[18]

TÍTULO / TITLE: - New clinical, pathological and molecular prognostic models and calculators in patients with locally diagnosed anaplastic oligodendroglioma or oligoastrocytoma. A prognostic factor analysis of European Organisation for Research and Treatment of Cancer Brain Tumour Group Study 26951.

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

REVISTA / JOURNAL: - Eur J Cancer. 2013 Jul 26. pii: S0959-8049(13)00542-X. doi: 10.1016/j.ejca.2013.06.039.

●● Enlace al texto completo (gratis o de pago) 1016/j.ejca.2013.06.039

AUTORES / AUTHORS: - Gorlia T; Delattre JY; Brandes AA; Kros JM; Taphoorn MJ; Kouwenhoven MC; Bernsen HJ; Frenay M; Tijssen CC; Lacombe D; van den Bent MJ

INSTITUCIÓN / INSTITUTION: - EORTC Headquarters, Brussels, Belgium. Electronic address: thierry.gorlia@eortc.be.

RESUMEN / SUMMARY: - BACKGROUND: The prognosis of patients with anaplastic oligodendrogliomas (AOD) and oligoastrocytomas (AOA) is variable. Biomarkers might be helpful to identify more homogeneous disease subtypes and improve therapeutic index. The aim of this study is to develop new clinical, pathological and molecular prognostic models for locally diagnosed anaplastic gliomas with oligodendroglial features (AOD or AOA). METHODS: Data from 368 patients with AOD or AOA recruited in The European Organisation for Research and Treatment of Cancer (EORTC) trial 26951 on adjuvant PCV (Procarbazine, CCNU, Vincristine) chemotherapy in anaplastic oligodendroglial tumours were used to develop multifactor models to predict progression free survival (PFS) and overall survival (OS). Different models were compared by their percentage of explained variation (PEV). Prognostic calculators were derived from these new models. RESULTS: Treatment (for PFS only), younger age, confirmed absence of residual tumour on imaging, frontal location, good World Health Organisation (WHO) performance status, absence of endothelial abnormalities and/or necrosis, 1p/19q codeletion and Isocitrate dehydrogenase 1 (IDH1) mutation were independent factors that predicted better PFS and OS. CONCLUSIONS: We identified important prognostic factors for AOD and AOA and showed that molecular markers added a major contribution to clinical and pathological factors in explaining PFS and OS. With a positive predictive value of 92% for PFS and 94% for OS, our models allow physicians to precisely identify high risk patients and aid in making therapeutic decisions.

[19]

TÍTULO / TITLE: - The fat mass and obesity associated gene (Fto) regulates activity of the dopaminergic midbrain circuitry.

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

REVISTA / JOURNAL: - Nat Neurosci. 2013 Aug;16(8):1042-8. doi: 10.1038/nn.3449. Epub 2013 Jun 30.

●● Enlace al texto completo (gratis o de pago) 1038/nn.3449

AUTORES / AUTHORS: - Hess ME; Hess S; Meyer KD; Verhagen LA; Koch L; Bronneke HS; Dietrich MO; Jordan SD; Saletore Y; Elemento O; Belgardt BF; Franz T; Horvath TL; Ruther U; Jaffrey SR; Kloppenburg P; Bruning JC

INSTITUCIÓN / INSTITUTION: - [1] Max Planck Institute for Neurological Research, Cologne, Germany. [2] Department of Mouse Genetics and Metabolism,

Institute for Genetics, Cologne, Germany. [3] Center of Molecular Medicine Cologne (CMMC), Cologne, Germany. [4] Cologne Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD), Cologne, Germany. [5] Center for Endocrinology, Diabetes and Preventive Medicine, University Hospital of Cologne, Cologne, Germany. [6].

RESUMEN / SUMMARY: - Dopaminergic (DA) signaling governs the control of complex behaviors, and its deregulation has been implicated in a wide range of diseases. Here we demonstrate that inactivation of the Fto gene, encoding a nucleic acid demethylase, impairs dopamine receptor type 2 (D2R) and type 3 (D3R) (collectively, 'D2-like receptor')-dependent control of neuronal activity and behavioral responses. Conventional and DA neuron-specific Fto knockout mice show attenuated activation of G protein-coupled inwardly-rectifying potassium (GIRK) channel conductance by cocaine and quinpirole. Impaired D2-like receptor-mediated autoinhibition results in attenuated quinpirole-mediated reduction of locomotion and an enhanced sensitivity to the locomotor- and reward-stimulatory actions of cocaine. Analysis of global N(6)-methyladenosine (m(6)A) modification of mRNAs using methylated RNA immunoprecipitation coupled with next-generation sequencing in the midbrain and striatum of Fto-deficient mice revealed increased adenosine methylation in a subset of mRNAs important for neuronal signaling, including many in the DA signaling pathway. Several proteins encoded by these mRNAs had altered expression levels. Collectively, FTO regulates the demethylation of specific mRNAs in vivo, and this activity relates to the control of DA transmission.

[20]

TÍTULO / TITLE: - Health-related quality of life and psychiatric symptoms improve effectively within a short time in patients surgically treated for pituitary tumors-a longitudinal study of 106 patients.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Jul 9.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1809-](https://doi.org/10.1007/s00701-013-1809-7)

[7](#)

AUTORES / AUTHORS: - Milian M; Honegger J; Gerlach C; Psaras T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital Tuebingen, Hoppe-Seyler-Strasse 3, 72076, Tuebingen, Germany.

RESUMEN / SUMMARY: - BACKGROUND: Reduced health-related quality of life (HRQoL) is a common complaint in patients suffering from pituitary tumors. Although successful tumor treatment has been reported to lead to an improvement in perceived HRQoL, the temporal gradient at which these improvements occur has not been fully addressed. METHODS: Using three validated health-related questionnaires (SF-36, SCL-90-R, QLS-H), we assessed HRQoL in 106 adult patients harboring pituitary tumors (mean age 48.0 +/- 16.0 years) before as well as 3 and 12 months after initiation of

treatment. The AcroQoL questionnaire was additionally applied in acromegalic patients. RESULTS: There was a significant improvement in all but one scale (role-physical) of the SF-36 questionnaire and all but two scales (interpersonal sensitivity, paranoid ideation) of the SCL-90-R, the QLS-H score and the AcroQoL subscales within 3 months after surgical treatment. The trend to amelioration continued at the 12 month re-assessment, but did not reach statistical significance. Linear regression analyses revealed that younger age and male gender favor a more distinct improvement of HRQoL after treatment. CONCLUSIONS: HRQoL is considerably reduced before treatment for pituitary disease. Improvement is an early postoperative phenomenon and occurs within 3 months after treatment. Men and younger patients are more likely to improve within this time span.

[21]

TÍTULO / TITLE: - Effects of surgical resection on the evolution of quality of life in newly diagnosed patients with glioblastoma: a report on 19 patients surviving to follow-up.

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

REVISTA / JOURNAL: - Curr Med Res Opin. 2013 Jul 30.

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

[1185/03007995.2013.823858](https://doi.org/10.1185/03007995.2013.823858)

AUTORES / AUTHORS: - Daigle K; Fortin D; Mathieu D; Saint-Pierre AB; Pare FM; de la Sablonniere A; Goffaux P

INSTITUCIÓN / INSTITUTION: - Universite de Sherbrooke, Faculty of Medicine, Department of Neurosurgery and Neuro-oncology , Sherbrooke, Quebec , Canada.

RESUMEN / SUMMARY: - Abstract Objective: Although aggressive tumor resection favors survival in neuro-oncology, its effects on quality of life (QOL) are largely unspecified. The objective of the present study, therefore, was to study the relationship between tumor resection and QOL. Methods: We conducted a longitudinal study among 35 patients presenting with a suspected, and later confirmed, glioblastoma multiforme tumor. Following surgery, all patients received radiation therapy with concomitant temozolomide. Tumor volumes were segmented manually, and extent of resection was calculated by comparing pre- and post-operative volumes. QOL was obtained at intake and 3 months later, using the Sherbrooke Neuro-Oncology Assessment Scale. Change in QOL was determined by computing the difference between intake and follow-up data. Confounds were controlled for by detrending change in QOL scores from the effects of age, initial tumor volume, tumor location, and baseline QOL. Results: Results showed that larger tumors at intake provoke increased pain (mostly headaches; $r = 0.41$, $p = 0.015$) and decreased social support/acceptance of disease ($r = 0.43$, $p = 0.009$). Results also showed that compared to biopsies, craniotomies were associated with preserved well-being

across nearly all domains of QOL. When extent of resection was analyzed more specifically, results confirmed that larger resections prevented the decay in functional well-being ($r = 0.616$, $p = 0.005$) and neurocognitive function ($r = 0.51$, $p = 0.026$) typically observed as time progresses. Larger resections were also independently associated with prolonged survival. Conclusions: Although the data were obtained from a relatively small sample of patients, results indicate that aggressive resections avert decay in QOL, and thus prolong optimized survival.

[22]

TÍTULO / TITLE: - One-year progression-free survival of therapy-naive patients with malignant pheochromocytoma and paraganglioma.

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

REVISTA / JOURNAL: - J Clin Endocrinol Metab. 2013 Jul 24.

●● [Enlace al texto completo \(gratis o de pago\) 1210/jc.2013-1907](#)

AUTORES / AUTHORS: - Hescot S; Leboulleux S; Amar L; Vezzosi D; Borget I; Bournaud-Salinas C; de la Fouchardiere C; Libe R; Do Cao C; Niccoli P; Tabarin A; Raingeard I; Chougnat C; Giraud S; Gimenez-Roqueplo AP; Young J; Borson-Chazot F; Bertherat J; Wemeau JL; Bertagna X; Plouin PF; Schlumberger M; Baudin E

INSTITUCIÓN / INSTITUTION: - 1Institut Gustave Roussy, Service de Medecine Nucleaire et de Cancerologie Endocrinienne, and Universite Paris-Sud, Villejuif F-94805, France (S.H., S.L., C.C., M.S., E.B.).

RESUMEN / SUMMARY: - Context: The natural history of malignant pheochromocytoma and paraganglioma (MPP) remains unknown. Objective: The primary aim of this study was to define progression-free survival at one year in therapy-naive patients with MPP. Secondary objectives were to characterize MPP and to look for prognostic parameters for progression at 1 yr. Design and setting: The files of MPP followed up between January 2001 and January 2011 in two French Endocrine Networks were retrospectively reviewed. Therapy-naive patients were enrolled. Main outcome measures: The main outcome was progression-free survival at one year in therapy-naive MPP patients according to RECIST 1.1 criteria. Results: Ninety files (46 males, 44 females, mean age of 47.5 +/- 15 years) were reviewed on site by one investigator. MPP characteristics were: presence of an adrenal primary, a mitotic count exceeding 5 per high-power field, hypertension, inherited disease, and presence of bone metastases in 50%, 22%, 60%, 49% and 56% patients, respectively. Fifty-seven of the 90 patients with MPP (63%) were classified as therapy-naive. The median follow-up of these 57 patients was 2.4 years, (range 0.4-5.7). At 1 year, progression-free survival was 46% (IC 95: 33-59). Twenty-six of 30 (87%) patients with progression at one year had exhibited progressive disease at the first imaging work-up performed after a median of 5.7 months. No prognostic parameter was identified. Conclusions: Half of the therapy-naive patients with

MPP achieved stable disease at 1 year. In symptom-free patients with MPP, a wait-and-see antitumor policy seems appropriate as first line. Modality for a prospective follow-up is proposed.

[23]

TÍTULO / TITLE: - 104 Risk Factors and Long-term Survival in Adult Patients With Primary Malignant Spinal Cord Astrocytomas.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:154. doi: 10.1227/01.neu.0000432696.12694.d8.

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

[1227/01.neu.0000432696.12694.d8](#)

AUTORES / AUTHORS: - Lall RR; Wong A; Dahdaleh NS; Fessler RG; Smith ZA; Lam S

RESUMEN / SUMMARY: - INTRODUCTION: Primary intramedullary spinal cord tumors are rare in adult patients. The majority of these tumors consist of ependymomas and astrocytomas. High-grade or malignant lesions are rare, with a reported incidence of 0.22-0.24 per 100,000 person-years. Survival and prognostic factors in this population remain poorly understood. The current report presents data on intramedullary spinal cord anaplastic astrocytomas (AA) and glioblastomas (GB) in adults using the national Surveillance, Epidemiology, and End Results (SEER) database (1973-2008), and evaluates the impact of demographic and treatment factors on survival. METHODS: Data was obtained from the Surveillance, Epidemiology, and End Results (SEER) program (1973-2008) of the National Cancer Institute. Subjects classified as having histopathologically confirmed AA or GB were included. Categorical age at time of diagnosis, sex, marital status, extent of surgical resection, radiation therapy, and sequence of surgery and radiation treatment were evaluated in this analysis. RESULTS: Eighty nine adults were evaluated (mean age of 43 years); 49% of patients had anaplastic astrocytoma and 51% of patients had glioblastoma. 88% of patients had surgical intervention and 85% of patients had radiotherapy. The median survival was longer for males compared to females (24 months vs 12 months), anaplastic astrocytoma compared to glioblastoma (26 months vs 15 months), and gross-total resection compared to no-surgery (23 months vs 9 months); median survival for radiotherapy was similar to those treated without radiotherapy (17 months vs 19 months). CONCLUSION: Primary malignant spinal cord astrocytomas are rare in adult patients. Patients who were female, had glioblastoma histology, and lacked gross total resection had statistically significant increased risk of mortality compared to their counterparts. Adjuvant radiotherapy and age at diagnosis did not have a significant influence on survival.

[24]

TÍTULO / TITLE: - Can taxanes provide benefit in patients with CNS tumors and in pediatric patients with tumors? An update on the preclinical development of cabazitaxel.

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

REVISTA / JOURNAL: - Cancer Chemother Pharmacol. 2013 Jul 3.

●● Enlace al texto completo (gratis o de pago) 1007/s00280-013-2214-

[X](#)

AUTORES / AUTHORS: - Semiond D; Sidhu SS; Bissery MC; Vrignaud P

INSTITUCIÓN / INSTITUTION: - Sanofi DSAR, 3, digue d'Alfortville, 94140, Alfortville, France.

RESUMEN / SUMMARY: - PURPOSE: While first-generation taxanes are valuable treatment options for many solid tumors, they are limited by an inability to cross the blood-brain barrier (BBB) and by limited efficacy in pediatric patients.

Following promising preclinical data for the next-generation taxane cabazitaxel, including activity in tumor models fully sensitive, poorly sensitive or insensitive to docetaxel, and its ability to cross the BBB, further preclinical studies of cabazitaxel relevant to these two clinical indications were performed.

METHODS: Cabazitaxel brain distribution was assessed in mice, rats and dogs. Cabazitaxel antitumor activity was assessed in mice bearing intracranial human glioblastoma (SF295; U251) xenografts, and subcutaneous cell line-derived human pediatric sarcoma (rhabdomyosarcoma RH-30; Ewing's sarcoma TC-71 and SK-ES-1) or patient-derived pediatric sarcoma (osteosarcoma DM77 and DM113; Ewing's sarcoma DM101) xenografts. The activity of cabazitaxel-cisplatin combination was evaluated in BALB/C mice bearing the syngeneic murine colon adenocarcinoma, C51. RESULTS: Cabazitaxel penetrated rapidly in the brain, with a similar brain-blood radioactivity exposure relationship across different animal species. In intracranial human glioblastoma models, cabazitaxel demonstrated superior activity to docetaxel both at early (before BBB disruption) and at advanced stages, consistent with enhanced brain penetration. Compared with similar dose levels of docetaxel, cabazitaxel induced significantly greater tumor growth inhibition across six pediatric tumor models and more tumor regressions in five of the six models. Therapeutic synergism was observed between cisplatin and cabazitaxel, regardless of administration sequence. CONCLUSIONS: These preclinical data suggest that cabazitaxel could be an effective therapy in CNS and pediatric tumors, supporting ongoing clinical evaluation in these indications.

[25]

TÍTULO / TITLE: - 142 3.0T iMRI Guided Resection in Cerebral Glioma Surgery: Interim Analysis of a Prospective, Randomized, Triple-Blind, Parallel-Controlled Trial.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:167. doi: 10.1227/01.neu.0000432733.71897.77.

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

[1227/01.neu.0000432733.71897.77](https://doi.org/10.1227/01.neu.0000432733.71897.77)

AUTORES / AUTHORS: - Wu JS; Gong X; Song Y; Zhuang D; Yao C; Qiu T; Lu J; Zhang J; Zhu W; Mao Y; Zhou LF

RESUMEN / SUMMARY: - INTRODUCTION: Intraoperative MRI (iMRI)-guided glioma surgery, has been assumed to enable reliable resection control to eliminate the effect of brain shift on extent of resection (EOR). Most previous studies are retrospective, so that at best level 2C evidence can be provided. We hypothesize that the use of high-field iMRI will increase EOR, reduce the morbidity and achieve more improved progress free survival (PFS) and quality of life than conventional neuronavigation. METHODS: A single center prospective randomized triple-blind controlled clinical trial was designed to assess the effect of iMRI on surgical efficacy of malignant gliomas. The estimated sample size was larger than 300 subjects in the intent-to-treat analysis to give 80% complete power (ie, probability of rejecting all false null hypotheses) with an experiment-wise type I error of 0.05. Randomization was conducted when the blinded surgeons deemed that the surgical goal was met, to avoid potential treatment bias. The blinded people included the patients, surgeons, the assessment personnel, and the statisticians. The protocol has been registered at ClinicalTrials.gov (NCT1479686). RESULTS: The primary endpoints were EOR (volumetric analysis) and surgical morbidity. The secondary endpoints were PFS and overall survival (OS). The first 78 patients were analyzed here. 3 patients with glioma of WHO I were excluded. Finally, 38 patients in the iMRI group and 37 ones in the control group were analyzed. Patient characteristics were balanced between both groups. The results between the 1st iMRI and control group are similar as expected. Complete resection rates in iMRI group and control group are 84% and 51% (P = .0907), respectively. Specifically, for high grade glioma, the rates are 88.24% and 66.67% (P = .1596); while for low grade glioma, they are 80.95% and 44% (P = .0090). CONCLUSION: We provided the first level 1 evidence for the application of 3.0T iMRI in glioma surgery, both in low-grade and high-grade glioma. Stryker Neuro-Oncology Award.

[26]

TÍTULO / TITLE: - Comparison of glioma stem cells to neural stem cells from the adult human brain identifies dysregulated Wnt- signaling and a fingerprint associated with clinical outcome.

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

REVISTA / JOURNAL: - Exp Cell Res. 2013 Aug 15;319(14):2230-43. doi: 10.1016/j.yexcr.2013.06.004. Epub 2013 Jun 18.

- Enlace al texto completo (gratis o de pago)

[1016/j.yexcr.2013.06.004](https://doi.org/10.1016/j.yexcr.2013.06.004)

AUTORES / AUTHORS: - Sandberg CJ; Altschuler G; Jeong J; Stromme KK; Stangland B; Murrell W; Grasmow-Wendler UH; Myklebost O; Helseth E; Vik-Mo EO; Hide W; Langmoen IA

INSTITUCIÓN / INSTITUTION: - Vilhelm Magnus Laboratory, Institute for Surgical Research, University of Oslo, Norway; Departments of Neurosurgery, Oslo University Hospital, Oslo, Norway. Electronic address: cesandbe@medisin.uio.no.

RESUMEN / SUMMARY: - Glioblastoma is the most common brain tumor. Median survival in unselected patients is <10 months. The tumor harbors stem-like cells that self-renew and propagate upon serial transplantation in mice, although the clinical relevance of these cells has not been well documented. We have performed the first genome-wide analysis that directly relates the gene expression profile of nine enriched populations of glioblastoma stem cells (GSCs) to five identically isolated and cultivated populations of stem cells from the normal adult human brain. Although the two cell types share common stem- and lineage-related markers, GSCs show a more heterogeneous gene expression. We identified a number of pathways that are dysregulated in GSCs. A subset of these pathways has previously been identified in leukemic stem cells, suggesting that cancer stem cells of different origin may have common features. Genes upregulated in GSCs were also highly expressed in embryonic and induced pluripotent stem cells. We found that canonical Wnt-signaling plays an important role in GSCs, but not in adult human neural stem cells. As well we identified a 30-gene signature highly overexpressed in GSCs. The expression of these signature genes correlates with clinical outcome and demonstrates the clinical relevance of GSCs.

[27]

TÍTULO / TITLE: - Multifaceted oncolytic virus therapy for glioblastoma in an immunocompetent cancer stem cell model.

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

REVISTA / JOURNAL: - Proc Natl Acad Sci U S A. 2013 Jul 16;110(29):12006-11. doi: 10.1073/pnas.1307935110. Epub 2013 Jun 10.

- Enlace al texto completo (gratis o de pago) [1073/pnas.1307935110](https://doi.org/10.1073/pnas.1307935110)

AUTORES / AUTHORS: - Cheema TA; Wakimoto H; Fecci PE; Ning J; Kuroda T; Jeyaretna DS; Martuza RL; Rabkin SD

INSTITUCIÓN / INSTITUTION: - Brain Tumor Research Center and Molecular Neurosurgery Laboratory, Department of Neurosurgery, Massachusetts General Hospital and Harvard Medical School, Boston, MA 02114.

RESUMEN / SUMMARY: - Glioblastoma (World Health Organization grade IV) is an aggressive adult brain tumor that is inevitably fatal despite surgery, radiation, and chemotherapy. Treatment failures are attributed to combinations of cellular

heterogeneity, including a subpopulation of often-resistant cancer stem cells, aberrant vasculature, and noteworthy immune suppression. Current preclinical models and treatment strategies do not incorporate or address all these features satisfactorily. Herein, we describe a murine glioblastoma stem cell (GSC) model that recapitulates tumor heterogeneity, invasiveness, vascularity, and immunosuppressive microenvironment in syngeneic immunocompetent mice and should prove useful for a range of therapeutic studies. Using this model, we tested a genetically engineered oncolytic herpes simplex virus that is armed with an immunomodulatory cytokine, interleukin 12 (G47-mIL12). G47Delta-mIL12 infects and replicates similarly to its unarmed oncolytic herpes simplex virus counterpart in mouse 005 GSCs in vitro, whereas in vivo, it significantly enhances survival in syngeneic mice bearing intracerebral 005 tumors. Mechanistically, G47-mIL12 targets not only GSCs but also increases IFN-gamma release, inhibits angiogenesis, and reduces the number of regulatory T cells in the tumor. The increased efficacy is dependent upon T cells, but not natural killer cells. Taken together, our findings demonstrate that G47Delta-mIL12 provides a multifaceted approach to targeting GSCs, tumor microenvironment, and the immune system, with resultant therapeutic benefit in a stringent glioblastoma model.

[28]

TÍTULO / TITLE: - Highly penetrative, drug-loaded nanocarriers improve treatment of glioblastoma.

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

REVISTA / JOURNAL: - Proc Natl Acad Sci U S A. 2013 Jul 16;110(29):11751-6. doi: 10.1073/pnas.1304504110. Epub 2013 Jul 1.

●● Enlace al texto completo (gratis o de pago) [1073/pnas.1304504110](#)

AUTORES / AUTHORS: - Zhou J; Patel TR; Sirianni RW; Strohbahn G; Zheng MQ; Duong N; Schafbauer T; Huttner AJ; Huang Y; Carson RE; Zhang Y; Sullivan DJ Jr; Piepmeier JM; Saltzman WM

INSTITUCIÓN / INSTITUTION: - Departments of Biomedical Engineering, Neurosurgery, Diagnostic Radiology, and Pathology, Yale University, New Haven, CT 06511.

RESUMEN / SUMMARY: - Current therapy for glioblastoma multiforme is insufficient, with nearly universal recurrence. Available drug therapies are unsuccessful because they fail to penetrate through the region of the brain containing tumor cells and they fail to kill the cells most responsible for tumor development and therapy resistance, brain cancer stem cells (BCSCs). To address these challenges, we combined two major advances in technology: (i) brain-penetrating polymeric nanoparticles that can be loaded with drugs and are optimized for intracranial convection-enhanced delivery and (ii) repurposed compounds, previously used in Food and Drug Administration-approved products, which were identified through library screening to target BCSCs.

Using fluorescence imaging and positron emission tomography, we demonstrate that brain-penetrating nanoparticles can be delivered to large intracranial volumes in both rats and pigs. We identified several agents (from Food and Drug Administration-approved products) that potently inhibit proliferation and self-renewal of BCSCs. When loaded into brain-penetrating nanoparticles and administered by convection-enhanced delivery, one of these agents, dithiazanine iodide, significantly increased survival in rats bearing BCSC-derived xenografts. This unique approach to controlled delivery in the brain should have a significant impact on treatment of glioblastoma multiforme and suggests previously undescribed routes for drug and gene delivery to treat other diseases of the central nervous system.

[29]

TÍTULO / TITLE: - Viral therapy of glioblastoma multiforme.

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

REVISTA / JOURNAL: - Proc Natl Acad Sci U S A. 2013 Jul 16;110(29):11672-3. doi: 10.1073/pnas.1310253110. Epub 2013 Jul 8.

●● Enlace al texto completo (gratis o de pago) [1073/pnas.1310253110](#)

AUTORES / AUTHORS: - Whitley RJ; Markert JM

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics and Neurosurgery, University of Alabama at Birmingham, Birmingham, AL 35233-1711.

[30]

TÍTULO / TITLE: - Endothelial Differentiation of Adipose Tissue-Derived Mesenchymal Stromal Cells in Glioma Tumors: Implications for Cell-Based Therapy.

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

REVISTA / JOURNAL: - Mol Ther. 2013 Jun 13. doi: 10.1038/mt.2013.145.

●● Enlace al texto completo (gratis o de pago) [1038/mt.2013.145](#)

AUTORES / AUTHORS: - Bago JR; Alieva M; Soler C; Rubio N; Blanco J

INSTITUCIÓN / INSTITUTION: - Instituto de Química Avanzada de Cataluña CSIC, CIBER-BBN, Barcelona, España.

RESUMEN / SUMMARY: - Multipotent human adipose tissue mesenchymal stromal cells (hAMSCs) are promising therapy vehicles with tumor-homing capacity that can be easily modified to deliver cytotoxicity activating systems in the proximity of tumors. In a previous work, we observed that hAMSCs are very effective delivering cytotoxicity to glioma tumors. However, these results were difficult to reconcile with the relatively few hAMSCs surviving implantation. We use a bioluminescence imaging (BLI) platform to analyze the behavior of bioluminescent hAMSCs expressing HSV-tTK in a U87 glioma model and gain insight into the therapeutic mechanisms. Tumor-implanted hAMSCs express the endothelial marker PECAM1(CD31), integrate in tumor vessels and associate

with CD133-expressing glioma stem cells (GSC). Inhibition of endothelial lineage differentiation in hAMSCs by Notch1 shRNA had no effect on their tumor homing and growth-promoting capacity but abolished the association of hAMSCs with tumor vessels and CD133+ tumor cells and significantly reduced their tumor-killing capacity. The current strategy allowed the study of tumor/stroma interactions, showed that tumor promotion and tumor-killing capacities of hAMSCs are based on different mechanisms. Our data strongly suggest that the therapeutic effectiveness of hAMSCs results from their association with special tumor vascular structures that also contain GSCs. *Molecular Therapy* (2013); doi:10.1038/mt.2013.145.

[31]

TÍTULO / TITLE: - Pulmonary vein ablation in a patient with a massive left atrial paraganglioma.

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

REVISTA / JOURNAL: - *J Am Coll Cardiol.* 2013 Aug 6;62(6):e11. doi: 10.1016/j.jacc.2013.03.083. Epub 2013 Jun 4.

●● Enlace al texto completo (gratis o de pago) [1016/j.jacc.2013.03.083](#)

AUTORES / AUTHORS: - Cassar A; McLeod CJ; Nishimura RA

INSTITUCIÓN / INSTITUTION: - Division of Cardiovascular Diseases and Department of Internal Medicine, Mayo Clinic and the Mayo Foundation, Rochester, Minnesota.

[32]

TÍTULO / TITLE: - A molecular biology and phase II trial of lapatinib in children with refractory CNS malignancies: a pediatric brain tumor consortium study.

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

REVISTA / JOURNAL: - *J Neurooncol.* 2013 Jul 9.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1166-](#)

[7](#)

AUTORES / AUTHORS: - Fouladi M; Stewart CF; Blaney SM; Onar-Thomas A; Schaiquevich P; Packer RJ; Goldman S; Geyer JR; Gajjar A; Kun LE; Boyett JM; Gilbertson RJ

INSTITUCIÓN / INSTITUTION: - St. Jude Children's Research Hospital, Memphis, TN, USA, maryam.fouladi@cchmc.org.

RESUMEN / SUMMARY: - High expression of ERBB2 has been reported in medulloblastoma and ependymoma; EGFR is amplified and over-expressed in brainstem glioma suggesting these proteins as potential therapeutic targets. We conducted a molecular biology (MB) and phase II study to estimate inhibition of tumor ERBB signaling and sustained responses by lapatinib in children with recurrent CNS malignancies. In the MB study, patients with recurrent medulloblastoma, ependymoma, and high-grade glioma (HGG) undergoing

resection were stratified and randomized to pre-resection treatment with lapatinib 900 mg/m² dose bid for 7-14 days or no treatment. Western blot analysis of ERBB expression and pathway activity in fresh tumor obtained at surgery estimated ERBB receptor signaling inhibition in vivo. Drug concentration was simultaneously assessed in tumor and plasma. In the phase II study, patients, stratified by histology, received lapatinib continuously, to assess sustained response. Eight patients, on the MB trial (four medulloblastomas, four ependymomas), received a median of two courses (range 1-6+). No intratumoral target inhibition by lapatinib was noted in any patient. Tumor-to-plasma ratios of lapatinib were 10-20 %. In the 34 patients (14 MB, 10 HGG, 10 ependymoma) in the phase II study, lapatinib was well-tolerated at 900 mg/m² dose bid. The median number of courses in the phase II trial was two (range 1-12). Seven patients (three medulloblastoma, four ependymoma) remained on therapy for at least four courses range (4-26). Lapatinib was well-tolerated in children with recurrent or CNS malignancies, but did not inhibit target in tumor and had little single agent activity.

[33]

TÍTULO / TITLE: - RTOG 0913: A Phase 1 Study of Daily Everolimus (RAD001) in Combination With Radiation Therapy and Temozolomide in Patients With Newly Diagnosed Glioblastoma.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Aug 1;86(5):880-4. doi: 10.1016/j.ijrobp.2013.04.036. Epub 2013 May 29.

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

[1016/j.ijrobp.2013.04.036](#)

AUTORES / AUTHORS: - Chinnaiyan P; Won M; Wen PY; Rojiani AM; Wendland M; Dipetrillo TA; Corn BW; Mehta MP

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Experimental Therapeutics and Cancer Imaging and Metabolism, H. Lee Moffitt Cancer Center, Tampa, Florida. Electronic address: prakash.chinnaiyan@moffitt.org.

RESUMEN / SUMMARY: - PURPOSE: To determine the safety of the mammalian target of rapamycin inhibitor everolimus (RAD001) administered daily with concurrent radiation and temozolomide in newly diagnosed glioblastoma patients. METHODS AND MATERIALS: Everolimus was administered daily with concurrent radiation (60 Gy in 30 fractions) and temozolomide (75 mg/m² per day). Everolimus was escalated from 2.5 mg/d (dose level 1) to 5 mg/d (dose level 2) to 10 mg/d (dose level 3). Adjuvant temozolomide was delivered at 150 to 200 mg/m² on days 1 to 5, every 28 days, for up to 12 cycles, with concurrent everolimus at the previously established daily dose of 10 mg/d. Dose escalation continued if a dose level produced dose-limiting toxicities (DLTs) in fewer than 3 of the first 6 evaluable patients. RESULTS: Between October 28, 2010, and July 2, 2012, the Radiation Therapy Oncology Group 0913 protocol

initially registered a total of 35 patients, with 25 patients successfully meeting enrollment criteria receiving the drug and evaluable for toxicity. Everolimus was successfully escalated to the predetermined maximum tolerated dose of 10 mg/d. Two of the first 6 eligible patients had a DLT at each dose level. DLTs included gait disturbance, febrile neutropenia, rash, fatigue, thrombocytopenia, hypoxia, ear pain, headache, and mucositis. Other common toxicities were grade 1 or 2 hypercholesterolemia and hypertriglyceridemia. At the time of analysis, there was 1 death reported, which was attributed to tumor progression. CONCLUSIONS: Daily oral everolimus (10 mg) combined with both concurrent radiation and temozolomide followed by adjuvant temozolomide is well tolerated, with an acceptable toxicity profile. A randomized phase 2 clinical trial with mandatory correlative biomarker analysis is currently under way, designed to both determine the efficacy of this regimen and identify molecular determinants of response.

[34]

TÍTULO / TITLE: - The Use of O-(2-18F-Fluoroethyl)-L-Tyrosine PET for Treatment Management of Bevacizumab and Irinotecan in Patients with Recurrent High-Grade Glioma: A Cost-Effectiveness Analysis.

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

REVISTA / JOURNAL: - J Nucl Med. 2013 Aug;54(8):1217-22. doi: 10.2967/jnumed.113.120089. Epub 2013 Jun 19.

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

[2967/jnumed.113.120089](https://doi.org/10.2967/jnumed.113.120089)

AUTORES / AUTHORS: - Heinzl A; Muller D; Langen KJ; Blaum M; Verburg FA; Mottaghy FM; Galldiks N

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine, University of Aachen, Aachen, Germany.

RESUMEN / SUMMARY: - To date, the use of structural MR imaging (including contrast-enhanced and T2-weighted or fluid-attenuated inversion recovery-weighted images) is the standard method to diagnose tumor progression and to assess antiangiogenic treatment effects. However, several studies have suggested that O-(2-(18)F-fluoroethyl)-L-tyrosine ((18)F-FET) PET adds valuable clinical information to the information derived from structural MR imaging alone. We evaluated the effectiveness and cost-effectiveness of the addition of (18)F-FET PET to structural MR imaging for the management of treatment with bevacizumab and irinotecan (BEV/IR) in patients with recurrent high-grade glioma compared with MR imaging alone from the perspective of the German Statutory Health Insurance. METHODS: To evaluate the incremental cost-effectiveness of the additional use of (18)F-FET PET, a decision tree model was used. Effectiveness of (18)F-FET PET was defined as correct identification of both tumor progression before BEV/IR treatment initiation and BEV/IR treatment response and was evaluated for the combination of (18)F-

FET PET and MR imaging compared with MR imaging alone. Costs were estimated for a baseline scenario and for a more expensive scenario. The robustness of the results was tested using deterministic and probabilistic sensitivity analyses. RESULTS: The use of (18)F-FET PET resulted in a number needed to diagnose of 2.4, that is, 3 additional patients have to be diagnosed to avoid 1 wrong diagnosis. The incremental cost-effectiveness ratio of (18)F-FET PET/MR imaging compared with MR imaging alone was euro5,725 (euro1 approximately \$1.30) for the baseline scenario and euro8,145 for the more expensive scenario per additional correct diagnosis. The probabilistic sensitivity analysis confirmed the robustness of the results. CONCLUSION: The model suggests that the additional use of (18)F-FET PET in the management of patients with recurrent high-grade glioma treated with BEV/IR may be cost-effective. Integration of (18)F-FET PET has the potential to avoid overtreatment and corresponding costs, as well as unnecessary side effects to the patient.

[35]

TÍTULO / TITLE: - Proton radiation therapy for pediatric medulloblastoma and supratentorial primitive neuroectodermal tumors: outcomes for very young children treated with upfront chemotherapy.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Sep 1;87(1):120-6. doi: 10.1016/j.ijrobp.2013.05.017. Epub 2013 Jun 21.

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

[1016/j.ijrobp.2013.05.017](#)

AUTORES / AUTHORS: - Jimenez RB; Sethi R; Depauw N; Pulsifer MB; Adams J; McBride SM; Ebb D; Fullerton BC; Tarbell NJ; Yock TI; Macdonald SM

INSTITUCIÓN / INSTITUTION: - Harvard Radiation Oncology Program, Boston, Massachusetts. Electronic address: rbjimenez@partners.org.

RESUMEN / SUMMARY: - PURPOSE: To report the early outcomes for very young children with medulloblastoma or supratentorial primitive neuroectodermal tumor (SPNET) treated with upfront chemotherapy followed by 3-dimensional proton radiation therapy (3D-CPT). METHODS AND MATERIALS: All patients aged <60 months with medulloblastoma or SPNET treated with chemotherapy before 3D-CPT from 2002 to 2010 at our institution were included. All patients underwent maximal surgical resection, chemotherapy, and adjuvant 3D-CPT with either craniospinal irradiation followed by involved-field radiation therapy or involved-field radiation therapy alone. RESULTS: Fifteen patients (median age at diagnosis, 35 months) were treated with high-dose chemotherapy and 3D-CPT. Twelve of 15 patients had medulloblastoma; 3 of 15 patients had SPNET. Median time from surgery to initiation of radiation was 219 days. Median craniospinal irradiation dose was 21.6 Gy (relative biologic effectiveness); median boost dose was 54.0 Gy

(relative biologic effectiveness). At a median of 39 months from completion of radiation, 1 of 15 was deceased after a local failure, 1 of 15 had died from a non-disease-related cause, and the remaining 13 of 15 patients were alive without evidence of disease recurrence. Ototoxicity and endocrinopathies were the most common long-term toxicities, with 2 of 15 children requiring hearing aids and 3 of 15 requiring exogenous hormones. CONCLUSIONS: Proton radiation after chemotherapy resulted in good disease outcomes for a small cohort of very young patients with medulloblastoma and SPNET. Longer follow-up and larger numbers of patients are needed to assess long-term outcomes and late toxicity.

[36]

TÍTULO / TITLE: - Potential Role of Preoperative Conventional MRI Including Diffusion Measurements in Assessing Epidermal Growth Factor Receptor Gene Amplification Status in Patients with Glioblastoma.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Jun 27.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3604](#)

AUTORES / AUTHORS: - Young RJ; Gupta A; Shah AD; Graber JJ; Schweitzer AD; Prager A; Shi W; Zhang Z; Huse J; Omuro AM

INSTITUCIÓN / INSTITUTION: - Departments of Radiology, Neurology, Epidemiology and Biostatistics, and Pathology and Brain Tumor Center, Memorial Sloan-Kettering Cancer Center, New York, New York; and Department of Radiology, Weill Cornell Medical College/New York Presbyterian Hospital, New York, New York.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Epidermal growth factor receptor amplification is a common molecular event in glioblastomas. The purpose of this study was to examine the potential usefulness of morphologic and diffusion MR imaging signs in the prediction of epidermal growth factor receptor gene amplification status in patients with glioblastoma. MATERIALS AND METHODS: We analyzed pretreatment MR imaging scans from 147 consecutive patients with newly diagnosed glioblastoma and correlated MR imaging features with tumor epidermal growth factor receptor amplification status. The following morphologic tumor MR imaging features were qualitatively assessed: 1) border sharpness, 2) cystic/necrotic change, 3) hemorrhage, 4) T2-isointense signal, 5) restricted water diffusion, 6) nodular enhancement, 7) subependymal enhancement, and 8) multifocal discontinuous enhancement. A total of 142 patients had DWI available for quantitative analysis. ADC maps were calculated, and the ADC_{mean}, ADC_{min}, ADC_{max}, ADC_{ROI}, and ADC_{ratio} were measured. RESULTS: Epidermal growth factor receptor amplification was present in 60 patients (40.8%) and absent in 87 patients (59.2%). Restricted water diffusion correlated with epidermal growth factor receptor amplification (P = .04), whereas the other 7 morphologic MR imaging

signs did not ($P > .12$). Quantitative DWI analysis found that all ADC measurements correlated with epidermal growth factor receptor amplification, with the highest correlations found with ADCROI ($P = .0003$) and ADCmean ($P = .0007$). CONCLUSIONS: Our results suggest a role for diffusion MR imaging in the determination of epidermal growth factor receptor amplification status in glioblastoma. Additional work is necessary to confirm these results and isolate new imaging biomarkers capable of noninvasively characterizing the molecular status of these tumors.

[37]

TÍTULO / TITLE: - Transcriptional regulation of serine/threonine protein kinase (AKT) genes by glioma-associated oncogene homolog 1.

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

REVISTA / JOURNAL: - J Biol Chem. 2013 Jul 5;288(27):19647. doi: 10.1074/jbc.A112.425249.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.A112.425249](#)

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

[38]

TÍTULO / TITLE: - New technique may improve brain tumor margin imaging resections.

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

REVISTA / JOURNAL: - J Natl Cancer Inst. 2013 Jul 3;105(13):921-2. doi: 10.1093/jnci/djt176. Epub 2013 Jun 18.

●● Enlace al texto completo (gratis o de pago) [1093/jnci/djt176](#)

AUTORES / AUTHORS: - Fillon M

[39]

TÍTULO / TITLE: - Glioblastoma: Branching out.

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

REVISTA / JOURNAL: - Nat Rev Cancer. 2013 Aug;13(8):520. doi: 10.1038/nrc3578.

●● Enlace al texto completo (gratis o de pago) [1038/nrc3578](#)

AUTORES / AUTHORS: - McCarthy N

[40]

TÍTULO / TITLE: - Intra-individual, randomised comparison of the MRI contrast agents gadobutrol versus gadoteridol in patients with primary and secondary brain tumours, evaluated in a blinded read.

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

REVISTA / JOURNAL: - Eur Radiol. 2013 Jul 4.

●● Enlace al texto completo (gratis o de pago) [1007/s00330-013-2946-](https://doi.org/10.1007/s00330-013-2946-3)

[3](#)

AUTORES / AUTHORS: - Koenig M; Schulte-Altdorneburg G; Piontek M; Hentsch A; Spangenberg P; Schwenke C; Harders A; Heuser L

INSTITUCIÓN / INSTITUTION: - Department of Diagnostic and Interventional Radiology and Neuroradiology, Klinikum Luenen St. Marien-Hospital, Lunen, Germany.

RESUMEN / SUMMARY: - **OBJECTIVE:** To prove that 1.0 M gadobutrol provides superior contrast enhancement and MRI image characteristics of primary and secondary brain tumours compared with 0.5 M gadoteridol, thereby providing superior diagnostic information. **METHODS:** Brain MRI was performed in two separate examinations in patients scheduled for neurosurgery. Independent injections of 1.0 M gadobutrol and 0.5 M gadoteridol at doses of 0.1 mmol Gd/kg body weight were administered per patient in randomised order. Evaluation was performed in an off-site blinded read. **RESULTS:** Fifty-one patients in the full analysis set (FAS) were eligible for efficacy analysis and 44 for the per-protocol analysis. For the primary efficacy variable “preference in contrast enhancement for one contrast agent or the other”, the rate of “gadobutrol preferred” was estimated at 0.73 (95 % confidence interval 0.61; 0.83), showing significant superiority of gadobutrol over gadoteridol. Calculated lesion-to-brain contrast and the results of all qualitative secondary efficacy variables were also in favour of gadobutrol. Keeping a sufficient time delay after contrast application proved to be essential to get optimal image quality. **CONCLUSION:** Compared with 0.5 M gadoteridol, 1.0 M gadobutrol was proven to have significantly superior contrast enhancement characteristics in a routine MRI protocol of primary and secondary brain tumours. **KEY POINTS:** * Contrast-enhanced MRI is the imaging technique of choice in CNS tumours. * Intra-individual comparison proved preference of gadobutrol over gadoteridol. * Quantitative results also showed significant superiority regarding lesion-to-brain contrast. * The time interval between contrast administration and image acquisition must be sufficient.

[41]

TÍTULO / TITLE: - Concurrent Stereotactic Radiosurgery and Bevacizumab in Recurrent Malignant Gliomas: A Prospective Trial.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Aug 1;86(5):873-9. doi: 10.1016/j.ijrobp.2013.04.029. Epub 2013 May 29.

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

[1016/j.ijrobp.2013.04.029](https://doi.org/10.1016/j.ijrobp.2013.04.029)

AUTORES / AUTHORS: - Cabrera AR; Cuneo KC; Desjardins A; Sampson JH; McSherry F; Herndon JE 2nd; Peters KB; Allen K; Hoang JK; Chang Z; Craciunescu O; Vredenburgh JJ; Friedman HS; Kirkpatrick JP

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Duke University, Durham, North Carolina.

RESUMEN / SUMMARY: - **PURPOSE:** Virtually all patients with malignant glioma (MG) eventually recur. This study evaluates the safety of concurrent stereotactic radiosurgery (SRS) and bevacizumab (BVZ), an antiangiogenic agent, in treatment of recurrent MG. **METHODS AND MATERIALS:** Fifteen patients with recurrent MG, treated at initial diagnosis with surgery and adjuvant radiation therapy/temozolomide and then at least 1 salvage chemotherapy regimen, were enrolled in this prospective trial. Lesions <3 cm in diameter were treated in a single fraction, whereas those 3 to 5 cm in diameter received 5 5-Gy fractions. BVZ was administered immediately before SRS and 2 weeks later. Neurocognitive testing (Mini-Mental Status Exam, Trail Making Test A/B), Functional Assessment of Cancer Therapy-Brain (FACT-Br) quality-of-life assessment, physical exam, and dynamic contrast-enhanced magnetic resonance imaging (DCE-MRI) were performed immediately before SRS and 1 week and 2 months following completion of SRS. The primary endpoint was central nervous system (CNS) toxicity. Secondary endpoints included survival, quality of life, microvascular properties as measured by DCE-MRI, steroid usage, and performance status. **RESULTS:** One grade 3 (severe headache) and 2 grade 2 CNS toxicities were observed. No patients experienced grade 4 to 5 toxicity or intracranial hemorrhage. Neurocognition, quality of life, and Karnofsky performance status did not change significantly with treatment. DCE-MRI results suggest a significant decline in tumor perfusion and permeability 1 week after SRS and further decline by 2 months. **CONCLUSIONS:** Treatment of recurrent MG with concurrent SRS and BVZ was not associated with excessive toxicity in this prospective trial. A randomized trial of concurrent SRS/BVZ versus conventional salvage therapy is needed to establish the efficacy of this approach.

[42]

TÍTULO / TITLE: - Germline SDHA Mutation Detected by Next-Generation Sequencing in a Young Index Patient With Large Paraganglioma.

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

REVISTA / JOURNAL: - J Clin Endocrinol Metab. 2013 Aug;98(8):E1379-80. doi: 10.1210/jc.2013-1963. Epub 2013 Jun 7.

●● Enlace al texto completo (gratis o de pago) [1210/jc.2013-1963](#)

AUTORES / AUTHORS: - Welander J; Garvin S; Bohnmark R; Isaksson L; Wiseman RW; Soderkvist P; Gimm O

INSTITUCIÓN / INSTITUTION: - Head, Division of Clinical Sciences, Department of Clinical and Experimental Medicine, Linköping University, SE-58183 Linköping, Sweden. oliver.gimm@liu.se.

[43]

TÍTULO / TITLE: - Stat bite brain tumor mortality by race and ethnicity in u.s. In 2007.

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

REVISTA / JOURNAL: - J Natl Cancer Inst. 2013 Jul 3;105(13):925. doi: 10.1093/jnci/djt178. Epub 2013 Jun 18.

- Enlace al texto completo (gratis o de pago) [1093/jnci/djt178](#)

[44]

TÍTULO / TITLE: - Clinical characteristics and treatment of malignant brainstem gliomas in elderly patients.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 11. pii: S0967-5868(13)00084-2. doi: 10.1016/j.jocn.2012.12.011.

- Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.12.011](#)

AUTORES / AUTHORS: - Babu R; Kranz PG; Karikari IO; Friedman AH; Adamson C

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Department of Surgery, Duke University Medical Center, 201 Trent Drive, Durham, NC 27710, USA.

RESUMEN / SUMMARY: - Adult brainstem gliomas (BSG) are uncommon tumors that constitute only 2% of all brain tumors. Due to its rare occurrence in the elderly (60 years and older), there is no literature discussing the natural history, prognosis, and best treatment strategy for malignant BSG in this population to our knowledge. We report seven elderly patients with malignant BSG and propose treatment strategies to manage these aggressive tumors. The median age at onset in this cohort was 65 years, with the majority of patients being male (71.4%) and Caucasian (85.7%). The median duration of symptoms prior to presentation was 0.5 months, with the most common symptoms being facial weakness, blurry vision, headache, and extremity weakness. Tumors were most commonly located in the pons (85.7%), with one tumor being located in the tectal plate. Five of seven (71.4%) patients underwent biopsies, with two patients undergoing partial resections. Following tissue diagnosis, patients received radiation therapy and concurrent temozolomide, followed by additional chemotherapeutics upon progression. Side effects as a result of treatment were seen in three patients and all involved reversible hematological complications such as neutropenia and thrombopenia. The median time to progression was 6.7 months and the median overall survival was 13.5 months. While malignant BSG in elderly patients are aggressive gliomas with an overall poor prognosis,

these patients are able to safely undergo aggressive chemoradiotherapy, resulting in improved survival. Resection may be considered for select patients in which the tumor is mostly exophytic, near the brainstem surface, and easily accessible.

[45]

TÍTULO / TITLE: - Factors predicting temozolomide induced clinically significant acute hematologic toxicity in patients with high-grade gliomas: A clinical audit.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Jun 10. pii: S0303-8467(13)00171-6. doi: 10.1016/j.clineuro.2013.05.015.

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

[1016/j.clineuro.2013.05.015](#)

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RESUMEN / SUMMARY: - INTRODUCTION: Myelo-suppression, the dose-limiting toxicity of alkylating cytotoxic agents is generally perceived to be uncommon with temozolomide (TMZ), a novel oral second generation imidazotetrazinone prodrug, with a reported incidence of 5-10% of grade 3-4 acute hematologic toxicity. We were observing a higher incidence of clinically significant myelotoxicity with the standard schedule of TMZ, particularly in females, prompting us to do a clinical audit in our patient population. METHODS: One hundred two adults (>18 years of age) treated with TMZ either for newly diagnosed or recurrent/progressive high-grade glioma constituted the study cohort. Clinically significant acute hematologic toxicity was defined as any one or more of the following: any grade 3-4 hematologic toxicity; omission of daily TMZ dose for ≥ 3 consecutive days during concurrent phase; deferral of subsequently due TMZ cycle by ≥ 7 days during adjuvant phase; dose reduction or permanent discontinuation of TMZ; use of growth factors, platelets or packed-cell transfusions during the course of TMZ. Uni-variate and multi-variate analysis was performed to correlate incidence of acute hematologic toxicity with baseline patient, disease, and treatment characteristics. RESULTS: The incidence of clinically significant neutropenia and thrombocytopenia was 7% and 12% respectively. Seven (7%) patients needed packed-cells, growth factors, and/or platelet transfusions. Grade 3-4 lymphopenia though common (32%) was self-limiting and largely asymptomatic. Two (2%) patients, both women succumbed to community acquired pneumonia during adjuvant TMZ. Multi-variate logistic regression analysis identified female gender, grade IV histology, baseline total leukocyte count $< 7700/\text{mm}^3$ and baseline serum creatinine $\geq 1\text{mg/dl}$ as factors associated with significantly increased risk of clinically significant acute

hematologic toxicity. CONCLUSION: The incidence of TMZ induced clinically significant neutropenia and thrombocytopenia was low in our patient population. Severe lymphopenia though high was largely asymptomatic and self-limiting. Gender, grade, leukocyte count, and serum creatinine were significant independent predictors of severe acute myelo-toxicity.

[46]

TÍTULO / TITLE: - A preclinical evaluation of neural stem cell-based cell carrier for targeted anti-glioma oncolytic virotherapy.

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

REVISTA / JOURNAL: - J Natl Cancer Inst. 2013 Jul 3;105(13):968-77. doi: 10.1093/jnci/djt141.

●● Enlace al texto completo (gratis o de pago) [1093/jnci/djt141](#)

AUTORES / AUTHORS: - Ahmed AU; Thaci B; Tobias AL; Auffinger B; Zhang L; Cheng Y; Kim CK; Yunis C; Han Y; Alexiades NG; Fan X; Aboody KS; Lesniak MS

INSTITUCIÓN / INSTITUTION: - Affiliations of authors: The Brain Tumor Center (AUA, BT, ALT, BA, LZ, YC, CKK, CY, YH, NGA, MSL) and Department of Radiology, University of Chicago, Chicago, IL (XF, KSA); Department of Neuroscience, City of Hope National Medical Center and Beckman Research Institute, Duarte, CA (MSL).

RESUMEN / SUMMARY: - BACKGROUND: Oncolytic adenoviral virotherapy (OV) is a highly promising approach for the treatment of glioblastoma multiforme (GBM). In practice, however, the approach is limited by poor viral distribution and spread throughout the tumor mass. METHODS: To enhance viral delivery, replication, and spread, we used a US Food and Drug Administration-approved neural stem cell line (NSC), HB1.F3.CD, which is currently employed in human clinical trials. HB1.F3.CD cells were loaded with an oncolytic adenovirus, CRAAd-Survivin-pk7, and mice bearing various human-derived GBMs were assessed with regard to NSC migration, viral replication, and therapeutic efficacy. Survival curves were evaluated with Kaplan-Meier methods. All statistical tests were two-sided. RESULTS: Anti-glioma activity of OV-loaded HB1.F3.CD cells was effective against clinically relevant human-derived glioma models as well as a glioma stem cell-enriched xenograft model. Median survival was prolonged by 34% to 50% compared with mice treated with OV alone (GBM43FL model median survival = 19.5 days, OV alone vs NSC + OV, hazard ratio of survival = 2.26, 95% confidence interval [CI] = 1.21 to 12.23, P = .02; GBM12 model median survival = 43.5 days, OV alone vs NSC + OV, hazard ratio of survival = 2.53, 95% CI = 1.21 to 10.38, P = .02). OV-loaded HB1.F3.CD cells were shown to effectively migrate to the contralateral hemisphere and hand off the therapeutic payload of OV to targeted glioma cells. In vivo distribution and migratory kinetics of the OV-loaded HB1.F3.CD cells were successfully monitored in real time by magnetic resonance imaging. OV-loaded NSCs

retained their differentiation fate and were nontumorigenic in vivo.
CONCLUSIONS: HB1.F3.CD NSCs loaded with CRAd-Survivin-pk7 overcome major limitations of OV in vivo and warrant translation in a phase I human clinical trial for patients with GBM.

[47]

TÍTULO / TITLE: - Comparative proteomics of glioma stem cells and differentiated tumor cells identifies S100A9 as a potential therapeutic target.

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

REVISTA / JOURNAL: - J Cell Biochem. 2013 Jul 8. doi: 10.1002/jcb.24626.

●● Enlace al texto completo (gratis o de pago) [1002/jcb.24626](#)

AUTORES / AUTHORS: - Chen S; Zhao H; Deng J; Liao P; Xu Z; Cheng Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Second Affiliated Hospital, Chongqing Medical University, Chongqing, China.

RESUMEN / SUMMARY: - Recent studies have suggested the existence of a small subset of cancer cells called cancer stem cells(CSCs), which possess the ability to initiate malignancies, promote tumor formation, drive metastasis, and evade conventional chemotherapies. Elucidation of the specific signaling pathway and mechanism underlying the action of CSCs might improve the efficacy of cancer treatments. In this study, we analyzed differentially expressed proteins between glioma stem cells and differentiated tumor cells isolated from the human glioma cell line, U251, via iTRAQ-tagging combined with two dimensional liquid chromatography tandem MS analysis to identify proteins correlated with specific features of CSCs. Out of a total data set of 559 identified proteins, 29 proteins were up-regulated in the glioma stem cells when compared with the differentiated cells. Interestingly, The expression level of S100A9 was 5-fold higher in glioma stem cells than differentiated cells. Similar results were also observed in glioma stem cells derived from other glioma cells. More importantly, knockdown of S100A9 by RNA interference suppressed the proliferation of glioma stem cell line and decreased the growth of xenograft tumors in vivo. Taken together, these results indicate that the tumorigenesis potential of CSCs arises from highly expressed S100A9. J. Cell. Biochem. © 2013 Wiley Periodicals, Inc.

[48]

TÍTULO / TITLE: - A multi-center retrospective analysis of treatment effects and quality of life in adult patients with cranial ependymomas.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jun 29.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1187-](#)

[2](#)

AUTORES / AUTHORS: - Dutzmann S; Schatlo B; Lobrinus A; Murek M; Wostrack M; Weiss C; Schaller K; Raabe A; Meyer B; Goldbrunner R; Franz K; Seifert V; Senft C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital Frankfurt, Johann Wolfgang Goethe University, Schleusenweg 2-18, 60528, Frankfurt, Germany, stephan.duetzmann@gmail.com.

RESUMEN / SUMMARY: - Long term quality of life data of adult patients harboring intracranial ependymomas have not been reported. The role of adjuvant radiation therapy in Grade II ependymomas is unclear and differs from study to study. We therefore sought to retrospectively analyze outcome and quality of life of adult patients that were operated on intracranial ependymomas at four different surgical centers in two countries. All patients were attempted to be contacted via telephone to assess quality of life (QoL) at the time of the telephone interview. The standard EORTC QoL Questionnaire C30 (EORTC QLQ-C30) and the EORTC QLQ-Brain Cancer Module (QLQ-BN20) were used. 64 adult patients with intracranial ependymomas were included in the study. The only factor that was associated with increased survival was age <55 years ($p < 0.001$). Supratentorial location was correlated with shorter progression free survival than infratentorial location (PFS; $p = 0.048$). In WHO Grade II tumors local irradiation did not lead to increased PFS ($p = 0.888$) or overall survival ($p = 0.801$). Even for incompletely resected Grade II tumors local irradiation did not lead to a benefit in PFS ($p = 0.911$). In a multivariate analysis of QoL, irradiated patients had significantly worse scores in the item "fatigue" ($p = 0.037$) than non-irradiated patients. Here we present QoL data of adult patients with intracranial ependymomas. Our data show that local radiation therapy may have long-term effects on patients' QoL. Since in the incompletely resected Grade II tumors local irradiation did not lead to a benefit in PFS in this retrospective study, prospective randomized studies are necessary. In addition to age, supratentorial tumor location is associated with a worse prognosis in adult ependymoma patients.

[49]

TÍTULO / TITLE: - Prediction of Pseudoprogression in Patients with Glioblastomas Using the Initial and Final Area Under the Curves Ratio Derived from Dynamic Contrast-Enhanced T1-Weighted Perfusion MR Imaging.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Jul 4.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3634](#)

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

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

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Dynamic contrast-enhanced T1-weighted perfusion MR imaging is much less susceptible to artifacts, and its high spatial resolution allows accurate characterization of the vascular microenvironment of the lesion. The purpose of this study was to test the predictive value of the initial and final area under the time signal-intensity curves ratio derived from dynamic contrast-enhanced perfusion MR imaging to differentiate pseudoprogression from early tumor progression in patients with glioblastomas. MATERIALS AND METHODS: Seventy-nine consecutive patients who showed new or enlarged, contrast-enhancing lesions within the radiation field after concurrent chemoradiotherapy were assessed by use of conventional and dynamic contrast-enhanced perfusion MR imaging. The bimodal histogram parameters of the area under the time signal-intensity curves ratio, which included the mean area under the time signal-intensity curves ratio at a higher curve (mAUCRH), 3 cumulative histogram parameters (AUCR50, AUCR75, and AUCR90), and the area under the time signal-intensity curves ratio at mode (AUCRmode), were calculated and correlated with the final pathologic or clinical diagnosis. The best predictor for differentiation of pseudoprogression from early tumor progression was determined by receiver operating characteristic curve analyses. RESULTS: Seventy-nine study patients were subsequently classified as having pseudoprogression (n=37, 46.8%) or early tumor progression (n=42, 53.2%). There were statistically significant differences of mAUCRH, AUCR50, AUCR75, AUCR90, and AUCRmode between the 2 groups (P < .0001, each). Receiver operating characteristic curve analyses showed the mAUCRH to be the best single predictor of pseudoprogression, with a sensitivity of 90.1% and a specificity of 82.9%. AUCR50 was found to be the most specific predictor of pseudoprogression, with a sensitivity of 87.2% and a specificity of 83.1%. CONCLUSIONS: A bimodal histogram analysis of the area under the time signal-intensity curves ratio derived from dynamic contrast-enhanced perfusion MR imaging can be a potential, noninvasive imaging biomarker for monitoring early treatment response in patients with glioblastomas.

[50]

TÍTULO / TITLE: - A Practical Strategy of Monitoring Minimal Residue Disease and Intervention for Central Nervous System Relapse of Childhood Acute Lymphoblastic Leukemia: A Single Chinese Center's Experience.

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

REVISTA / JOURNAL: - J Pediatr Hematol Oncol. 2013 Jul;35(5):388-93. doi: 10.1097/MPH.0b013e31829084eb.

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

[1097/MPH.0b013e31829084eb](#)

AUTORES / AUTHORS: - Liang Y; Ca Q; Zhai ZM; Wang NL

INSTITUCIÓN / INSTITUTION: - *Section of Hematology, Yale Cancer Center, Yale University Medical School, New Haven, CT Departments of section

signPediatrics double daggerHematology, The Second Affiliated Hospital of Anhui Medical College, Hefei daggerDepartment of Hematology, The Second People's Hospital of Chizhou, Chizhou, China.

RESUMEN / SUMMARY: - OBJECTIVE: To investigate monitoring minimal residual disease (MRD) using cerebral spinal fluid for predicting central nervous system leukemia (CNSL) and treatment. OBSERVATIONS: There is no survival difference between enhanced triple intrathecal therapy (ETIT) and cranial radiation for CNSL patients with positive morphology and MRD. Positive MRD correlated with CNSL, whereas negative MRD indicated a lower chance of CNSL recurrence. Altogether 79 cerebral spinal fluid specimens indicating negative morphology but positive MRD were given either ETIT or conventional triple intrathecal therapy. The ETIT group indicated lower relapse. CONCLUSION: Flow cytometry is sensitive to predict CNSL and ETIT is a potent intervention.

[51]

TÍTULO / TITLE: - 198 Of Mice and Men: Matched Observations of Lymphopenia, Splenic Retraction, and the Bone Marrow as Harbor for Lost T-cells in Mice and Patients With Glioblastoma.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:185-6. doi: 10.1227/01.neu.0000432788.37762.98.

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

[1227/01.neu.0000432788.37762.98](https://doi.org/10.1227/01.neu.0000432788.37762.98)

AUTORES / AUTHORS: - Fecci P; Chen C; Koyama S; Dranoff G; Martuza RL; Curry WT

RESUMEN / SUMMARY: - INTRODUCTION: Glioblastoma (GBM) immunotherapy is hampered by poorly characterized patient lymphopenia and T-cell dysfunction. Murine glioma models reveal CD4+ T-lymphocyte disappearance from blood / lymph nodes / spleens, as well as marked splenic and thymic retraction. Meanwhile, the bone marrow of glioma-bearing mice reveals 6-fold expansion of CD4+ T-lymphocytes (1-3). We hypothesized that the blood, spleen, and bone marrow of patients with GBM would demonstrate similar alterations to T-cell homeostasis, and we addressed mechanistic questions in the mouse. METHODS: Samples are analyzed by 8-color flow cytometry, luminex, IHC, ELISA, and functional assays. Retrospective patient studies included complete blood counts and 3D spleen/tumor volumetric assessments in 284 treatment-naive GBM patients and 46 age-matched controls. Ongoing prospective studies examine T-cells in blood, tumor, and bone marrow of 20 newly diagnosed GBM patients and 10 age-matched spinal fusion controls. RESULTS: 23% of treatment-naive GBM patients prove lymphopenic (ct < 1000 cells/ul) at presentation. Mean patient CD4 counts thus far are 308 (control 849, P < .001). 50% of patients present with CD4 counts < 200 (AIDS demarcation in

HIV). Patients demonstrate 32% reductions in spleen volume vs controls ($P < .0001$), with 1/3 exhibiting greater than 50% volume reduction. Decadron exacerbates lymphopenia but does not affect spleen volume. Increased ratios of bone marrow to blood CD4 T-cells have similarly been detected in patients. In mice, this bone marrow CD4 accumulation proves to be brain-tumor specific and abrogated by anti-TGF β s. CONCLUSION: Immunologically recapitulative murine glioma models demonstrate T-cell accumulation in bone marrow in association with disappearance from other immunological compartments. Treatment-naive GBM patients exhibit similar lymphopenia, dramatically low CD4 counts, shrunken spleens, and relative T-cell concentration in the bone marrow. In mice, these phenomena are glioma-specific and TGF β -influenced. This represents the first characterization of an unprecedented alteration to T-cell homeostasis in patients with GBM and has implications for GBM immunotherapy and immunology more broadly.

[52]

TÍTULO / TITLE: - Differentiation of True Progression from Pseudoprogression in Glioblastoma Treated with Radiation Therapy and Concomitant Temozolomide: Comparison Study of Standard and High-b-Value Diffusion-weighted Imaging.

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

REVISTA / JOURNAL: - Radiology. 2013 Jun 14.

●● [Enlace al texto completo \(gratis o de pago\) 1148/radiol.13122024](#)

AUTORES / AUTHORS: - Chu HH; Choi SH; Ryoo I; Kim SC; Yeom JA; Shin H; Jung SC; Lee AL; Yoon TJ; Kim TM; Lee SH; Park CK; Kim JH; Sohn CH; Park SH; Kim IH

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Department of Internal Medicine, Cancer Research Institute, Department of Neurosurgery, Department of Pathology, and Department of Radiation Oncology, Cancer Research Institute, Seoul National University College of Medicine, 28 Yongon-dong, Chongno-gu, Seoul 110-744, Korea.

RESUMEN / SUMMARY: - Purpose: To explore the role of histogram analysis of apparent diffusion coefficient (ADC) maps obtained at standard- and high-b-value (1000 and 3000 sec/mm², respectively) diffusion-weighted (DW) imaging in the differentiation of true progression from pseudoprogression in glioblastoma treated with radiation therapy and concomitant temozolomide. Materials and Methods: This retrospective study was approved by the institutional review board of Seoul National University Hospital, and informed consent requirement was waived. Thirty patients with histopathologically proved glioblastoma who had undergone concurrent chemotherapy and radiation therapy (CCRT) with temozolomide underwent diffusion-weighted MR imaging with b values of 1000 and 3000 sec/mm², and corresponding ADC maps were calculated from entire newly developed or enlarged enhancing lesions after completion of CCRT. Histogram parameters of

each ADC map between true progression (n = 15) and pseudoprogression (n = 15) groups were compared by using the unpaired Student t test. Receiver operating characteristic analysis was used to determine the best cutoff values for predictors in the differentiation of true progression from pseudoprogression. Results were validated in an independent test set of nine patients by using the best cutoff value to predict differentiation of true progression from pseudoprogression. The accuracy of the selected best cutoff value in the independent test set was then calculated. Results: In terms of cumulative histograms, the fifth percentile of both ADC at b value of 1000 sec/mm² (ADC1000) and the ADC at b value of 3000 sec/mm² (ADC3000) were significantly lower in the true progression group than in the pseudoprogression group (P = .049 and P < .001, respectively). In contrast, neither the mean ADC1000 nor the mean ADC3000 was significantly different between the two groups. The diagnostic values of the parameters derived from ADC1000 and ADC3000 were compared, and a significant difference (0.224, P = .016) was found between the area under the receiver operating characteristic curve of the fifth percentile for ADC1000 and that for ADC3000. The accuracies were 66.7% (six of nine patients) and 88.9% (eight of nine patients) based on the fifth percentile of both ADC1000 and ADC3000 in the independent test set, respectively. Conclusion: The fifth percentile of the cumulative ADC histogram obtained at a high b value was the most promising parameter in the differentiation of true progression from pseudoprogression of the newly developed or enlarged enhancing lesions after CCRT with temozolomide for glioblastoma treatment. © RSNA, 2013 Supplemental material: <http://radiology.rsna.org/lookup/suppl/doi:10.1148/radiol.13122024/-/DC1>.

[53]

TÍTULO / TITLE: - Aptamer Identification of Brain Tumor-Initiating Cells.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Aug 1;73(15):4923-4936. Epub 2013 Jun 24.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-12-4556](#)

AUTORES / AUTHORS: - Kim Y; Wu Q; Hamerlik P; Hitomi M; Sloan AE; Barnett GH; Weil RJ; Leahy P; Hjelmeland AB; Rich JN

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Department of Stem Cell Biology and Regenerative Medicine, Lerner Research Institute; Department of Neurosurgery, Rosa Ella Burkhardt Brain Tumor and Neuro-oncology Center, Neurological Institute, Cleveland Clinic; Departments of Neurological Surgery, Pathology, Translational Neuroscience, and General Medical Sciences (Oncology), Case Western Reserve University School of Medicine; Case Comprehensive Cancer Center and University Hospitals, Case Western

Reserve University, Cleveland, Ohio; and Danish Cancer Society Research Center and Centre for Genotoxic Stress Research, Copenhagen, Denmark.

RESUMEN / SUMMARY: - Glioblastomas display cellular hierarchies with self-renewing tumor-initiating cells (TIC), also known as cancer stem cells, at the apex. Although the TIC hypothesis remains controversial and the functional assays to define the TIC phenotype are evolving, we and others have shown that TICs may contribute to therapeutic resistance, tumor spread, and angiogenesis. The identification of TICs has been informed by the use of markers characterized in normal stem cells, but this approach has an inherent limitation to selectively identify TICs. To develop reagents that enrich TICs but not matched non-TICs or tissue-specific stem cells, we adopted Cell-Systematic Evolution of Ligands by Exponential Enrichment (Cell-SELEX) to identify glioblastoma TIC-specific nucleic acid probes-aptamers-that specifically bind TICs. In this study, using Cell-SELEX with positive selection for TICs and negative selection for non-TICs and human neural progenitor cells, we identified TIC aptamers that specifically bind to TICs with excellent dissociation constants (Kd). These aptamers select and internalize into glioblastoma cells that self-renew, proliferate, and initiate tumors. As aptamers can be modified to deliver payloads, aptamers may represent novel agents that could selectively target or facilitate imaging of TICs. Cancer Res; 73(15); 4923-36. ©2013 AACR.

[54]

TÍTULO / TITLE: - Maternal embryonic leucine-zipper kinase (MELK) reduces replication stress in glioblastoma cells.

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

REVISTA / JOURNAL: - J Biol Chem. 2013 Jul 8.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.M113.471433](#)

AUTORES / AUTHORS: - Kig C; Beullens M; Beke L; Van Eynde A; Linders J; Brehmer D; Bollen M

INSTITUCIÓN / INSTITUTION: - University of Leuven, Belgium;

RESUMEN / SUMMARY: - MELK, for maternal embryonic leucine zipper kinase, belongs to the subfamily of AMP-activated Ser/Thr protein kinases. The expression of MELK is very high in glioblastoma-type brain tumors, but it is not clear how this contributes to tumor growth. Here we show that the siRNA-mediated loss of MELK in U87 MG glioblastoma cells causes a G1/S phase cell-cycle arrest accompanied by cell death or a senescence-like phenotype, which can be rescued by the expression of siRNA-resistant MELK. This cell-cycle arrest is mediated by an increased expression of p21WAF1/CIP1, an inhibitor of cyclin-dependent kinases, and is associated with the hypophosphorylation of the retinoblastoma protein and the downregulation of E2F target genes. The increased expression of p21 can be explained by the consecutive activation of ATM, Chk2 and p53. Intriguingly, the activation of p53 in MELK-deficient cells is not due to an increased stability of p53, but stems

from the loss of MDMX, an inhibitor of p53 transactivation. The activation of the ATMChk2 pathway in MELK-deficient cells is associated with the accumulation of DNA double-strand breaks during replication, as demonstrated by the appearance of gammaH2AX foci. Replication stress in these cells is also illustrated by an increased number of stalled replication forks and a reduced fork progression speed. Our data indicate that glioblastoma cells have elevated MELK protein levels to cope better with replication stress during unperturbed S phase. Hence, MELK inhibitors hold great potential for the treatment of glioblastomas, as such or in combination with DNA-damaging therapies.

[55]

TÍTULO / TITLE: - Limited impact of prognostic factors in patients with recurrent glioblastoma multiforme treated with a bevacizumab-based regimen.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jun 12.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1170-](#)

[y](#)

AUTORES / AUTHORS: - Tabouret E; Barrie M; Thiebaut A; Matta M; Boucard C; Autran D; Loundou A; Chinot O

INSTITUCIÓN / INSTITUTION: - Department of Neuro-Oncology, Timone Hospital, APHM, 264, rue Saint Pierre, 13005, Marseille, France, emeline.tabouret@gmail.com.

RESUMEN / SUMMARY: - Bevacizumab has demonstrated activity in patients with recurrent glioblastoma. However, the impact of prognostic factors associated with recurrent glioblastoma treated with cytotoxic agents has not been determined in patients treated with bevacizumab. To analyze the prognostic factors and clinical benefits of bevacizumab and irinotecan treatment in patients with recurrent glioblastoma. This monocentric study retrospectively analyzed all patients with recurrent glioblastoma who were treated with at least one cycle of bevacizumab and irinotecan at our institution from April 2007 to May 2010. Multivariate analysis was used to analyze prognostic factors for overall survival (OS) from the initiation of bevacizumab administration. Among the 100 patients that were identified (M/F: 65/35), the median age was 57.9 years (range: 18-76). Karnofsky Performance Status (KPS) was <70 in 44 patients and >=70 in 56 patients; 83 % of the patients were on steroids. The median tumor area was 2012 mm². The median progression free survival was 3.9 months (CI 95 %: 3.4-4.3). The median OS was 6.5 months (CI 95 %: 5.6-7.4). Multivariate analysis revealed that OS was affected by KPS (p = 0.024), but not by gender, age, steroid treatment, number of previous lines of treatment, tumor size, or time from initial diagnosis. KPS was improved in 30 patients, including 14/44 patients with an initial KPS <70. The median duration of maintained functional independence (KPS >=70) was 3.75 months (CI 95 %: 2.9-4.6). The median OS from initial diagnosis was 18.9 months (CI 95 %: 17.5-20.3). In patients with

recurrent glioblastoma treated with bevacizumab, KPS was revealed as the only factor to impact OS. The clinical benefits associated with this regimen appear valuable. A positive impact of bevacizumab administration on OS of patients with glioblastoma multiforme is suggested.

[56]

TÍTULO / TITLE: - Prolonged administration of adjuvant temozolomide improves survival in adult patients with glioblastoma.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Aug;33(8):3467-74.

AUTORES / AUTHORS: - Darlix A; Baumann C; Lorgis V; Ghiringhelli F; Blonski M; Chauffert B; Zouaoui S; Pinelli C; Rech F; Beauchesne P; Taillandier L

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RESUMEN / SUMMARY: - BACKGROUND: Radiotherapy with concomitant and adjuvant temozolomide (six cycles) is the standard treatment after surgery in glioblastoma patients. Few studies have assessed the impact of additional cycles of temozolomide on survival. PATIENTS AND METHODS: We conducted a bi-centric retrospective study comparing survival and toxicity according to the number of cycles of adjuvant temozolomide. RESULTS: Fifty-eight patients were included. All patients received radiotherapy with concomitant temozolomide. Thirty-eight patients received six cycles, while 20 received nine or more (median=14) cycles. The risk of recurrence was significantly higher in the group receiving six cycles compared to the other group. Prolonged treatment improved progression-free survival ($p=0.03$) and overall survival ($p=0.01$) in multivariate analysis without a significant increase in toxicity. CONCLUSION: Prolonged administration of temozolomide seems to improve progression-free and overall survival, without increased toxicity. Prospective studies in larger populations are needed to better-define the population to whom it can be proposed and its optimal duration.

[57]

TÍTULO / TITLE: - Wide-field pulsed reduced dose rate radiotherapy (PRDR) for recurrent ependymoma in pediatric and young adult patients.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Jun;33(6):2611-8.

AUTORES / AUTHORS: - Mohindra P; Robins HI; Tome WA; Hayes L; Howard SP

INSTITUCIÓN / INSTITUTION: - Department of Human Oncology, University of Wisconsin Hospital and Clinics, Paul P Carbone Cancer Center, Madison, WI, USA. pmohindra@uwhealth.org

RESUMEN / SUMMARY: - AIM: This retrospective analysis evaluates feasibility of wide-field re-irradiation using pulsed reduced dose rate (PRDR) technique in patients with recurrent ependymoma. PRDR employs a dose rate of 6 cGy/min, as opposed to 400-600 cGy/min for conventional radiation, allowing for enhanced normal tissue repair. PATIENTS AND METHODS: Five patients with recurrent ependymoma having eight lesions (two brain, six spinal cord) were treated with PRDR. Progression-free survival (PFS) and overall survival (OS) were estimated by Kaplan Meier method. RESULTS: The median interval between two radiation courses was 58 months (range: 32-212 months). The median PRDR dose was 40 Gy (range: 30.6-54 Gy) with a median cumulative lifetime dose of 105.2 Gy (range: 90-162.4 Gy). At a median post-PRDR follow-up of 64 months, estimated 4-year OS and PFS from PRDR was 60% and 35.7%, respectively. None of the patients developed necrosis on serial magnetic resonance imaging scans, and only one patient had progressive mild radiculopathy. CONCLUSION: In patients with large-volume recurrent ependymoma, re-irradiation with wide-field PRDR is a feasible option.

[58]

TÍTULO / TITLE: - N-acetylcysteine amide (NACA) Augments the Therapeutic Effect of Neural Stem Cell-Based Anti-Glioma Oncolytic Virotherapy.

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

REVISTA / JOURNAL: - Mol Ther. 2013 Jul 25. doi: 10.1038/mt.2013.179.

●● Enlace al texto completo (gratis o de pago) [1038/mt.2013.179](#)

AUTORES / AUTHORS: - Kim CK; Ahmed AU; Auffinger B; Ulasov IV; Tobias AL; Moon KS; Lesniak MS

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

RESUMEN / SUMMARY: - Current research has evaluated the intrinsic tumorigenic properties of stem cell carriers for targeted anti-cancer therapy. Our laboratory has been extensively studying in the pre-clinical setting the role neural stem cells (NSCs) as delivery vehicles of CRAd-S-pk7, a gliomatropic oncolytic adenovirus (OV). However, the mediated toxicity of therapeutic payloads, such as oncolytic adenoviruses, toward cell carriers has significantly limited this targeted delivery approach. Following this rationale, in this study we assess the role of a novel anti-oxidant thiol, N-acetylcysteine amide (NACA), to prevent OV-mediated toxicity towards NSC carriers in an orthotopic glioma xenograft mouse model. Our results show that the combination of NACA and CRAd-S-pk7 not only increases the viability of these cell carriers by preventing ROS-induced apoptosis of NSCs, but also improves the production of viral progeny in HB1.F3.CD NSCs. In an intracranial xenograft mouse model, the combination treatment of NACA and NSCs loaded with CRAd-S-pk7 showed enhanced CRAd-S-pk7 production and distribution in malignant tissues, which improves the therapeutic efficacy of NSC-based targeted anti-glioma oncolytic

virotherapy. These data demonstrate that the combination of NACA and NSCs loaded with CRAd-S-pk7 may be a desirable strategy to improve the therapeutic efficacy of anti-glioma oncolytic virotherapy. *Molecular Therapy* (2013); doi:10.1038/mt.2013.179.

[59]

TÍTULO / TITLE: - 151 Effect of pretreatment lymphopenia on survival in patients with recurrent glioblastoma receiving immunotherapy.

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

REVISTA / JOURNAL: - *Neurosurgery*. 2013 Aug;60 Suppl 1:170. doi: 10.1227/01.neu.0000432742.17570.fd.

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

1227/01.neu.0000432742.17570.fd

AUTORES / AUTHORS: - Bloch O; Fuks YS; Aghi MK; William McDermott M; Berger MS; Sloan AE; Bruce JN; Parsa AT

RESUMEN / SUMMARY: - INTRODUCTION: Glioma-induced lymphopenia and lymphocyte dysfunction are well-recognized factors contributing to immunosuppression in patients with glioblastoma (GBM). Despite a long history of studying this immunosuppression, there have been few reports demonstrating that lymphocyte dysfunction independently predicts patient outcomes. Immunosuppression is a particularly important factor for patients receiving immunotherapy. We, therefore, analyzed the impact of lymphopenia on outcomes of patients receiving an autologous tumor vaccine for recurrent GBM. METHODS: As part of a prospective, multi-centered, phase II study, patients with recurrent GBM received autologous vaccine after gross-total resection of their tumors. The primary clinical endpoint was overall survival. Pre-operative blood samples were taken from all patients to measure the complete blood count (CBC) and differential, including the absolute lymphocyte count (ALC). In this analysis, survival outcomes were evaluated relative to the median ALC by univariate Kaplan-Meier analysis and multivariate Cox proportional hazards modeling. RESULTS: A total of 41 patients with recurrent GBM underwent resection and received a median of 6 doses of autologous vaccine. Median overall survival for the entire cohort was 42.6 weeks (95% CI 34.7-50.5). The median ALC was 0.9×10^3 cells/uL, with 27/41 (66%) patients having lymphopenia according to the clinical laboratory standard (ALC < 1.0). When stratifying patients by ALC relative to the median value, patients with an ALC = 0.9 had significantly improved survival compared to patients with an ALC < 0.9 (49.1 vs 37.1 weeks; log-rank P = .039). In a proportional hazards model including age, KPS, number of vaccine doses, and lymphocyte counts, an ALC = 0.9 was an independent positive predictor with a hazard ratio of 0.85 (95% CI 0.73-0.99, P = .036). CONCLUSION: Pretreatment lymphopenia may affect the outcomes of patients with recurrent GBM receiving immunotherapy. The

implications of lymphopenia should be considered when selecting patients for future vaccine clinical trials.

[60]

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

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

REVISTA / JOURNAL: - J Biol Chem. 2013 Jul 24.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.M113.487553](https://doi.org/10.1074/jbc.M113.487553)

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

INSTITUCIÓN / INSTITUTION: - Univ. of Vermont College of Medicine, United States;

RESUMEN / SUMMARY: - Metabolic reprogramming is a pathological feature of cancer and a driver of tumor cell transformation. N-acetylaspartate (NAA) is one of the most abundant amino acid derivatives in the brain and serves as a source of metabolic acetate for oligodendrocyte myelination and protein/histone acetylation or a precursor for the synthesis of the neurotransmitter N-acetylaspartylglutamate (NAAG). NAA and NAAG as well as aspartoacylase (ASPA), the enzyme responsible for NAA degradation, are significantly reduced in glioma tumors, suggesting a possible role for decreased acetate metabolism in tumorigenesis. This study sought to examine the effects of NAA and NAAG on primary tumor-derived glioma stem-like cells (GSCs), from oligodendroglioma as well as proneural and mesenchymal glioblastoma, relative to oligodendrocyte progenitor cells (Oli-Neu). Although the NAA dicarboxylate transporter NaDC3 is primarily thought to be expressed by astrocytes, all cell lines expressed NaDC3 and, thus, are capable of NAA up-take. Treatment with NAA or NAAG significantly increased GSC growth and suppressed differentiation of Oli-Neu cells and proneural GSCs. Interestingly, ASPA was expressed in both the cytosol and nuclei of GSCs and exhibited greatest nuclear immunoreactivity in differentiation resistant GSCs. Both NAA and NAAG elicited the expression of a novel immunoreactive ASPA species in select GSC nuclei suggesting differential ASPA regulation in response to these metabolites. Therefore, this study highlights a potential role for nuclear ASPA expression in GSC malignancy and suggests that the use of NAA or NAAG is not an appropriate therapeutic approach to increase acetate bioavailability in glioma. Thus, an alternative acetate source is required.

[61]

TÍTULO / TITLE: - Noninvasive tumor hypoxia measurement using magnetic resonance imaging in murine U87 glioma xenografts and in patients with glioblastoma.

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

REVISTA / JOURNAL: - Magn Reson Med. 2013 Jun 24. doi: 10.1002/mrm.24826.

●● Enlace al texto completo (gratis o de pago) [1002/mrm.24826](#)

AUTORES / AUTHORS: - Linnik IV; Scott ML; Holliday KF; Woodhouse N; Waterton JC; B O'Connor JP; Barjat H; Liess C; Ulloa J; Young H; Dive C; Hodgkinson CL; Ward T; Roberts D; Mills SJ; Thompson G; Buonaccorsi GA; Cheung S; Jackson A; Naish JH; Parker GJ

INSTITUCIÓN / INSTITUTION: - Centre for Imaging Sciences, The University of Manchester, Manchester, UK; University of Manchester Biomedical Imaging Institute, Manchester Academic Health Sciences Centre, The University of Manchester, Manchester, UK.

RESUMEN / SUMMARY: - PURPOSE: There is a clinical need for noninvasive, nonionizing imaging biomarkers of tumor hypoxia and oxygenation. We evaluated the relationship of T1 -weighted oxygen-enhanced magnetic resonance imaging (OE-MRI) measurements to histopathology measurements of tumor hypoxia in a murine glioma xenograft and demonstrated technique translation in human glioblastoma multiforme. METHODS: Preclinical evaluation was performed in a subcutaneous murine human glioma xenograft (U87MG). Animals underwent OE-MRI followed by dynamic contrast-enhanced MRI (DCE-MRI) and histological measurement including reduced pimonidazole adducts and CD31 staining. Area under the curve (AUC) was measured for the R1 curve for OE-MRI and the gadolinium concentration curve for DCE-MRI. Clinical evaluation in five patients used analogous imaging protocols and analyses. RESULTS: Changes in AUC of OE-MRI (AUCOE) signal were regionally heterogeneous across all U87MG tumors. Tumor regions with negative AUCOE typically had low DCE-MRI perfusion, had positive correlation with hypoxic area ($P = 0.029$), and had negative correlation with vessel density ($P = 0.004$). DCE-MRI measurements did not relate to either hypoxia or vessel density in U87MG tumors. Clinical data confirmed comparable signal changes in patients with glioblastoma. CONCLUSION: These data support further investigation of T1 -weighted OE-MRI to identify regional tumor hypoxia. The quantification of AUCOE has translational potential as a clinical biomarker of hypoxia.

[62]

TÍTULO / TITLE: - Correlation of optical coherence tomography parameters with clinical and radiological progression in patients with symptomatic optic pathway gliomas.

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

REVISTA / JOURNAL: - Graefes Arch Clin Exp Ophthalmol. 2013 Jun 5.

●● Enlace al texto completo (gratis o de pago) [1007/s00417-013-2394-](#)

[4](#)

AUTORES / AUTHORS: - Fard MA; Fakhree S; Eshraghi B

INSTITUCIÓN / INSTITUTION: - Farabi Eye Research Center, Department of Ophthalmology, Tehran University of Medical Sciences, Tehran, Iran, masood219@gmail.com.

RESUMEN / SUMMARY: - **PURPOSE:** To study the optical coherence tomography (OCT) characteristics in children with optic pathway glioma (OPG) to determine if OCT changes occur alongside clinical/radiological changes at diagnosis and during the second-year follow-up. **METHODS:** Twenty-three patients (38 eyes) diagnosed with symptomatic OPG in a single institution were enrolled in this longitudinal observational cohort study. Complete ophthalmologic evaluation, including determination of visual acuity, visual fields, retinal nerve fiber layer, and posterior pole retinal thickness scanning with spectral-domain optical coherence tomography, and neuroimaging was performed at the time of diagnosis and 6 months and 1 and 2 years after presentation. Patients who experienced visual decline or radiographic tumor enlargement of the OPG were classified as progressors. OCT data were compared between progressors and nonprogressors. **RESULTS:** The average age at diagnosis was 5.8 years. All patients were followed up for 24 months. Five patients (21 %) (eight eyes) had clinical or radiological progression of their OPG during follow-up and were classified as progressors. Mean changes in average nerve fiber layer and posterior pole retinal thickness were significantly higher for progressors compared with nonprogressors ($P < 0.001$). The area under the receiver operator characteristic curves comparing average nerve fiber layer and posterior pole retinal thinning between the progressors and nonprogressors were 0.94 and 0.95 respectively. **CONCLUSIONS:** Optical coherence tomography of average nerve fiber layer and posterior pole retinal thickness may be helpful in monitoring OPG.

[63]

TÍTULO / TITLE: - To operate or not-the impact of a lecture on radical glioblastoma surgery and different treatment options on decision-making for oneself and patients.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1425-9. doi: 10.1007/s00701-013-1796-8. Epub 2013 Jun 23.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1796-](#)

[8](#)

AUTORES / AUTHORS: - Mathiesen T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Karolinska Hospital, 171 76, Stockholm, Sweden, tjit.mathiesen@karolinska.se.

RESUMEN / SUMMARY: - **BACKGROUND:** Clinical decision-making involves a complex interaction between patients and caregivers. The medical knowledge and values of caregivers are essential for treatment recommendations. This study was undertaken to evaluate treatment recommendations by a group of

Scandinavian neurosurgeons before and after an expert lecture on glioblastoma surgery. METHOD: An interactive voting system was used to record responses to four questions regarding glioblastoma management before and after a 25-min lecture on the benefit of radical glioblastoma surgery. RESULTS: The majority of the audience aimed at radical surgery combined with radiotherapy before (76 %) and after (88 %) the lecture. The proportion who recommended immediate postoperative follow-up by MRI increased from 34 % to 75 %. Fourteen percent (before) and 45 % (after) recommended renewed surgery to remove small residuals in patients, while 52 % (before) and 60 % (after) would have wanted to be re-operated if they themselves had been patients. CONCLUSION: The views on optimum management differed widely in a relatively homogeneous group of neurosurgeons. The lecture had a major impact on decision-making. A large proportion of the attendees recommended different management strategies for themselves and for their patients. The findings indicated the need to analyze the evaluation of medical knowledge, discuss the ethics of decision-making and encourage second opinions for serious neurosurgical decisions.

[64]

TÍTULO / TITLE: - Subgroup-Specific Prognostic Implications of TP53 Mutation in Medulloblastoma.

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

REVISTA / JOURNAL: - J Clin Oncol. 2013 Aug 10;31(23):2927-35. doi: 10.1200/JCO.2012.48.5052. Epub 2013 Jul 8.

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

[1200/JCO.2012.48.5052](#)

AUTORES / AUTHORS: - Zhukova N; Ramaswamy V; Remke M; Pfaff E; Shih DJ; Martin DC; Castelo-Branco P; Baskin B; Ray PN; Bouffet E; von Bueren AO; Jones DT; Northcott PA; Kool M; Sturm D; Pugh TJ; Pomeroy SL; Cho YJ; Pietsch T; Gessi M; Rutkowski S; Bogner L; Klekner A; Cho BK; Kim SK; Wang KC; Eberhart CG; Fevre-Montange M; Fouladi M; French PJ; Kros M; Grajkowska WA; Gupta N; Weiss WA; Hauser P; Jabado N; Jouvett A; Jung S; Kumabe T; Lach B; Leonard JR; Rubin JB; Liao LM; Massimi L; Pollack IF; Shin Ra Y; Van Meir EG; Zitterbart K; Schuller U; Hill RM; Lindsey JC; Schwalbe EC; Bailey S; Ellison DW; Hawkins C; Malkin D; Clifford SC; Korshunov A; Pfister S; Taylor MD; Tabori U

INSTITUCIÓN / INSTITUTION: - Division of Haematology/Oncology, Hospital for Sick Children, University of Toronto, 555 University Ave, Toronto, ON M5G 1X8, Canada; uri.tabori@sickkids.ca.

RESUMEN / SUMMARY: - PURPOSE Reports detailing the prognostic impact of TP53 mutations in medulloblastoma offer conflicting conclusions. We resolve this issue through the inclusion of molecular subgroup profiles. PATIENTS AND METHODS We determined subgroup affiliation, TP53 mutation status, and clinical outcome in a discovery cohort of 397 medulloblastomas. We

subsequently validated our results on an independent cohort of 156 medulloblastomas. Results TP53 mutations are enriched in wntless (WNT; 16%) and sonic hedgehog (SHH; 21%) medulloblastomas and are virtually absent in subgroups 3 and 4 tumors ($P < .001$). Patients with SHH/TP53 mutant tumors are almost exclusively between ages 5 and 18 years, dramatically different from the general SHH distribution ($P < .001$). Children with SHH/TP53 mutant tumors harbor 56% germline TP53 mutations, which are not observed in children with WNT/TP53 mutant tumors. Five-year overall survival (OS; +/- SE) was 41% +/- 9% and 81% +/- 5% for patients with SHH medulloblastomas with and without TP53 mutations, respectively ($P < .001$). Furthermore, TP53 mutations accounted for 72% of deaths in children older than 5 years with SHH medulloblastomas. In contrast, 5-year OS rates were 90% +/- 9% and 97% +/- 3% for patients with WNT tumors with and without TP53 mutations ($P = .21$). Multivariate analysis revealed that TP53 status was the most important risk factor for SHH medulloblastoma. Survival rates in the validation cohort mimicked the discovery results, revealing that poor survival of TP53 mutations is restricted to patients with SHH medulloblastomas ($P = .012$) and not WNT tumors. CONCLUSION Subgroup-specific analysis reconciles prior conflicting publications and confirms that TP53 mutations are enriched among SHH medulloblastomas, in which they portend poor outcome and account for a large proportion of treatment failures in these patients.

[65]

TÍTULO / TITLE: - Optimization of long-term outcomes for patients with esthesioneuroblastoma.

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

REVISTA / JOURNAL: - Head Neck. 2013 Jun 18. doi: 10.1002/hed.23327.

●● [Enlace al texto completo \(gratis o de pago\) 1002/hed.23327](#)

AUTORES / AUTHORS: - Ow TJ; Hanna EY; Roberts DB; Levine NB; El-Naggar AK; Rosenthal DI; Demonte F; Kupferman ME

INSTITUCIÓN / INSTITUTION: - Department of Head and Neck Surgery, The University of Texas MD Anderson Cancer Center, Houston, Texas.

RESUMEN / SUMMARY: - BACKGROUND: Esthesioneuroblastoma is a rare cancer of the anterior cranial base that arises in the region of the olfactory rootlets. The purpose of this study was to review the long-term outcomes of patients diagnosed with esthesioneuroblastoma (ENB) treated at a single institution to determine factors associated with improved disease control and survival. METHODS: A retrospective review of 70 patients with ENB treated at the University of Texas MD Anderson Cancer Center between 1992 and 2007 was undertaken. Survival and recurrence was analyzed and compared using the Kaplan-Meier method and log-rank statistics. RESULTS: Seventy patients were reviewed. The majority (77%) had T3 or T4 disease at presentation, 38% identified as modified Kadish stage C or D. Ninety percent of patients received

surgical resection as part of their treatment, and 66% received postoperative radiation or chemoradiation. The median follow-up was 91.4 months (7.6 years). Forty-eight percent of patients developed recurrent disease and the median time to recurrence was 6.9 years. Overall and disease-specific median survival was 10.5 and 11.6 years, respectively. Patients who were treated with surgery alone had a median disease-specific survival of 87.9 months, whereas those who were treated with surgery and postoperative radiation had a median disease-specific survival of 218.5 months ($p = .047$). CONCLUSION: Patients with ENB can achieve favorable long-term survival, even if disease is locally advanced. Survival is improved considerably when surgical resection is followed by postoperative radiation. However, recurrence rates and mortality remain high, and therefore long-term observation in these patients is warranted. © 2013 Wiley Periodicals, Inc. Head Neck, 2013.

[66]

TÍTULO / TITLE: - A long-term follow-up study of eighteen patients with thyrotropin-secreting pituitary adenomas.

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

REVISTA / JOURNAL: - Clin Endocrinol (Oxf). 2013 Jul 15. doi: 10.1111/cen.12290.

●● Enlace al texto completo (gratis o de pago) [1111/cen.12290](#)

AUTORES / AUTHORS: - van Varsseveld NC; Bisschop PH; Biermasz NR; Pereira AM; Fliers E; Drent ML

INSTITUCIÓN / INSTITUTION: - Department of Internal Medicine, section Endocrinology, VU University Medical Center, P.O. Box 7057, 1007 MB, Amsterdam, the Netherlands.

RESUMEN / SUMMARY: - OBJECTIVE: TSH-secreting pituitary adenomas (TSH-omas) are a rare cause of thyrotoxicosis. First-line therapy for these tumors is neurosurgery, although medical therapy with somatostatin analogs (SSAs) is increasingly used for this indication. DESIGN AND PATIENTS: We retrospectively reviewed the data of patients with a TSH-oma ($n=18$, 67% males) followed between 1989 and 2011 (median follow-up 7 years, range 1-21) in three academic medical centers in the Netherlands, focusing on the role of SSA treatment. MEASUREMENTS: Patient records were reviewed for clinical, biochemical, imaging, pathological and treatment characteristics. RESULTS: At initial evaluation, biochemical hyperthyroidism with non-suppressed TSH concentrations was detected in 94% of the patients. The majority of patients (72%) had a macroadenoma with extrasellar extension. Fourteen patients underwent surgery, resulting in postoperative euthyroidism in six patients (43%). Recurrence of hyperthyroidism developed in 3 of them after 5, 24, and 32 months respectively. Adjuvant radiotherapy ($n=2$) did not induce remission. Three patients received SSA therapy exclusively, resulting in apparent cure in one of them. During long-term follow-up, 72% of all patients required medical

therapy (mostly SSA treatment). Euthyroidism was achieved in all but one patient, who refused all treatments. CONCLUSIONS: Our results demonstrate that patients with TSH-omas, who often present with large macroadenomas with extrasellar extension, have an excellent response to SSA therapy. Because the results of surgery and radiotherapy are disappointing, primary medical therapy may be considered in virtually all patients, except in case of optic chiasm compression, especially in those harboring large adenomas with parasellar extension. This article is protected by copyright. All rights reserved.

[67]

TÍTULO / TITLE: - Surgical management and outcomes of petroclival meningiomas: a single-center case series of 259 patients.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1367-83. doi: 10.1007/s00701-013-1795-9. Epub 2013 Jun 26.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1795-](#)

[9](#)

AUTORES / AUTHORS: - Li D; Hao SY; Wang L; Tang J; Xiao XR; Zhou H; Jia GJ; Wu Z; Zhang LW; Zhang JT

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, People's Republic of China.

RESUMEN / SUMMARY: - BACKGROUND: Surgical management of petroclival meningiomas is challenging. Various and inconsistent outcome and prognostic factors of the lesions have been evaluated previously. In the present study, the surgical outcome, philosophy, and experience of petroclival meningiomas are detailed based on a large patient series. METHODS: A series of 259 patients with petroclival meningiomas (70 males and 189 females) were surgically treated. Clinical charts and radiographs were reviewed. Follow-up results were evaluated. RESULTS: The preoperative Karnofsky Performance Scale (KPS) score was 74.2 +/- 10.5. The mean tumor size was 4.3 +/- 1.0 cm. The gross total resection (GTR) rate was 52.5 %. During a mean follow-up period of 55.3 months, recurrence/progression (R/P) occurred in 11 patients. The recent KPS score was 78.4 +/- 22.7, it improved in 139 (57.2 %) patients and stabilized in 53 (21.8 %) patients, and 201 (82.7 %) patients lived independently. The risk factors affecting the KPS score included (but were not limited to) age >= 60, preoperative KPS <= 60, and brainstem edema. The adverse factors contributing to R/P-free survival included (but were not limited to) non-total resection and the absence of the subarachnoid space. The R/P-free survival rate was 94.5 % at 5 years and 91.2 % at 9 years. The overall survival rate was 94.7 % at 5 years and 94.7 % at 9 years. CONCLUSIONS: Favorable outcomes from petroclival meningiomas could be achieved by microsurgery. Neurological function and quality of life were prioritized, and GTR was attempted. Risk

factors should be considered in surgical schemes, and tumor recurrence should be aggressively monitored and treated.

[68]

TÍTULO / TITLE: - Myeloablative chemotherapy and autologous stem cell transplantation in patients with relapsed or progressed central nervous system germ cell tumors: results of Korean Society of Pediatric Neuro-Oncology (KSPNO) S-053 study.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 4.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1188-](http://1007/s11060-013-1188-1)

[1](#)

AUTORES / AUTHORS: - Baek HJ; Park HJ; Sung KW; Lee SH; Han JW; Koh KN; Im HJ; Kang HJ; Park KD

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, Chonnam National University Medical School, Chonnam National University Hwasun Hospital, Gwangju, Republic of Korea.

RESUMEN / SUMMARY: - The present study evaluated the feasibility and effectiveness of myeloablative high-dose chemotherapy and autologous stem cell transplantation in patients with relapsed or progressed central nervous system germ cell tumors (CNS-GCTs). Eleven patients with non-germinomatous germ cell tumors and nine patients with germinomas were enrolled. Patients received between two and eight cycles of conventional chemotherapy prior to HDCT/autoSCT with or without radiotherapy. Overall, 16 patients proceeded to the first HDCT/autoSCT, and nine proceeded to the second HDCT/autoSCT. CTE (carboplatin-thiotepa-etoposide) and cyclophosphamide-melphalan (CM) regimens were used for the first and second HDCT, respectively. Toxicities during HDCT/autoSCT were acceptable, and there were no treatment-related deaths. Twelve patients experienced relapse or progression; however, four patients with germinomas remain alive after subsequent RT. Therefore, a total of 12 patients (four NGGCTs and eight germinomas) remain alive with a median follow-up of 47 months (range 22-90) after relapse or progression. The probability of 3-year overall survival was 59.1 +/- 11.2 % (36.4 +/- 14.5 % for NGGCTs vs. 88.9 +/- 10.5 % for germinomas, P = 0.028). RT, particularly craniospinal RT, was associated with a better tumor response prior to HDCT/autoSCT and a better final outcome. In conclusion, HDCT/autoSCT was feasible, and survival rates were encouraging. Further study with a larger cohort of patients is needed to elucidate the role of HDCT/autoSCT in the treatment of relapsed or progressed CNS-GCTs.

[69]

TÍTULO / TITLE: - The association of pre-treatment neutrophil to lymphocyte ratio with overall survival in patients with glioblastoma multiforme.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug;114(1):149-54. doi: 10.1007/s11060-013-1164-9. Epub 2013 Jun 19.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1164-](#)

[9](#)

AUTORES / AUTHORS: - Bambury RM; Teo MY; Power DG; Yusuf A; Murray S; Battley JE; Drake C; O'Dea P; Bermingham N; Keohane C; Grossman SA; Moylan EJ; O'Reilly S

INSTITUCIÓN / INSTITUTION: - Department of Medical Oncology, Cork University Hospital, Cork, Ireland, richardbambury@me.com.

RESUMEN / SUMMARY: - Neutrophil-lymphocyte ratio (NLR) is a marker of systemic inflammatory response and its elevation has recently been shown to be a poor prognostic factor in many malignancies including colon, prostate and bladder cancer. The primary aim of this study was to assess the prognostic impact of NLR in a clinically annotated cohort of patients with glioblastoma multiforme (GBM). We hypothesised that elevated NLR would be associated with worse prognosis. Between 2004 and 2009, 137 patients had surgery for GBM and were assessed for consideration of adjuvant therapy at our institution. Of these, 84 patients with an evaluable pre-corticosteroid full blood count result were identified and included in the final analysis. Median overall survival was 9.3 months (range 0.7-82.1). On univariate analysis, age >65 years, gender, ECOG performance status ≥ 2 , frontal tumour, extent of surgical resection, completion of adjuvant chemoradiation protocol and NLR > 4 were significantly correlated with overall survival. Patients with NLR > 4, had a worse median overall survival at 7.5 months versus 11.2 months in patients with NLR ≤ 4 (hazard ratio 1.6, 95 % CI 1.00-2.52, p = 0.048). On multivariate analysis NLR > 4 remained an independent prognostic indicator for poor outcome. These data are an important reminder of the potential relevance of host immunity in GBM. In our cohort, NLR > 4 conferred a worse prognosis independent of other well established prognostic factors. If validated in other cohorts NLR may prove to be a useful addition in predicting prognosis in GBM patients. The demonstration that host immunity plays a role in GBM biology suggests that investigation of emerging therapies which modulate host immune response are warranted in this disease.

[70]

TÍTULO / TITLE: - Early postoperative radiotherapy improves progression free survival in patients with grade 2 meningioma.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1385-90. doi: 10.1007/s00701-013-1775-0. Epub 2013 Jun 1.

- Enlace al texto completo (gratis o de pago) [1007/s00701-013-1775-](http://1007/s00701-013-1775-0)

[0](#)

AUTORES / AUTHORS: - Aboukais R; Baroncini M; Zairi F; Reyns N; Lejeune JP

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Lille University Hospital, rue E. Laine, 59037, Lille cedex, France, rabihtdoc@hotmail.com.

RESUMEN / SUMMARY: - BACKGROUND: Grade 2 meningiomas are a real problem in therapeutic management because of their tendency to reoccur. The most effective treatment is surgery. The role of adjuvant radiotherapy in this disease is still disputed due to its uncertain effect on progression-free survival. OBJECTIVE: To show that early adjuvant radiotherapy is an effective treatment in patients with grade 2 meningiomas. MATERIALS AND METHODS: A retrospective study was performed on all patients operated on for grade 2 meningioma in our center between 1994 and 2011. For every patient, we recorded the age at diagnosis, sex, background of neurofibromatosis type 2 (NF2) or meningiomatosis, location of meningioma, quality of tumor resection and whether the patient received early postoperative radiotherapy. These prognosis factors were studied using statistical tests. RESULTS: We included 167 patients (94 women, 73 men, sex ratio = 1.28); the mean age at diagnosis was 53.8 years. Twenty-seven patients received early adjuvant radiotherapy after surgery. Patients who received early postoperative radiotherapy had a significantly longer progression-free survival (8.2 years) than patients without radiotherapy (5.7 years, $p = 0.04$). In multivariate analysis, quality of tumor resection and early postoperative radiotherapy decrease the risk of recurrence of meningioma ($p < 0.05$). CONCLUSION: Adjuvant radiotherapy is an important therapeutic tool in the treatment of patients with grade 2 meningioma. It delays tumor progression and reduces the need for further surgery. Adjuvant radiotherapy must be considered as a treatment option in oncological multidisciplinary meetings, regardless of the quality of surgical resection.

[71]

TÍTULO / TITLE: - Outcome comparison between younger and older patients undergoing intracranial meningioma resections.

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

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

- Enlace al texto completo (gratis o de pago) [1007/s11060-013-1173-](http://1007/s11060-013-1173-8)

[8](#)

AUTORES / AUTHORS: - Poon MT; Fung LH; Pu JK; Leung GK

INSTITUCIÓN / INSTITUTION: - College of Medicine and Veterinary Medicine, The University of Edinburgh Medical School, The Chancellor's Building, 2nd Floor, 49 Little France Crescent, Edinburgh, EH16 4SB, UK.

RESUMEN / SUMMARY: - Studies directly comparing the outcomes of intracranial meningioma resection between elderly and younger patients are currently limited. This study aimed to assess the perioperative complications, mortalities

and functional outcomes in these two groups. Consecutive elderly patients (aged ≥ 65) and tumor-location-matched younger patients who underwent intracranial meningioma resections were retrospectively reviewed. Outcomes were assessed at 30-day, 90-day, 6-month and 1-year. We used a standardized classification of operative complications, and conducted subgroup analyses based on tumor location [convexity, parasagittal and falcine (CPF) as one group; skull base (SB) as another]. There were 92 patients in each group. The mean age was 74.6 \pm 6.4 years in the elderly and 49.3 \pm 10.1 years in the younger groups. The cumulative 30-day, 90-day and 1-year mortality rates were 0, 2.2 and 4.3 % for the elderly, respectively, and 1.1 % for all time points in the young. These differences were not statistically significant. Overall, the elderly suffered from more perioperative complications ($P = 0.010$), and these were mostly minor complications according to the classification of operative complications. However, these differences were observed only in the SB but not in the CPF subgroup. More elderly patients had impaired functional outcome 1-year after surgery. Significantly more elderly patients had new neurological deficits 1-year after surgery (26.1 vs. 6.6 %; $P = 0.001$). Comparable mortality rates were observed in elderly and younger patients. However, the elderly had more minor complications and poorer functional outcomes. Patient selection remains key to good clinical outcome.

[72]

TÍTULO / TITLE: - Recovery from Anesthesia after Craniotomy for Supratentorial Tumors: Comparison of Propofol-Remifentanil and Sevoflurane-Sufentanil (the PROMIFLUNIL Trial).

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

REVISTA / JOURNAL: - J Neurosurg Anesthesiol. 2013 Jun 14.

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

[1097/ANA.0b013e31829cc2d6](https://doi.org/10.1097/ANA.0b013e31829cc2d6)

AUTORES / AUTHORS: - Necib S; Tubach F; Peuch C; Lebihan E; Samain E; Mantz J; Dahmani S

INSTITUCIÓN / INSTITUTION: - *Department of Anesthesiology, Intensive care and Pain Management, Beaujon University Hospital, Clichy double daggerDepartment d'Epidemiologie et Recherche Clinique, Paris parallelDepartment of Anesthesiology and Intensive Care, University Hospitals of Besancon, Besancon #Department of Anesthesiology, Intensive Care and Pain Management, Robert Debre University Hospital daggerFaculte de Medecine Denis DIDEROT (Paris VII), Paris paragraph signFaculte de Medecine de Besancon, Besancon **UMR INSERM U 676, Robert Debre University Hospital section signINSERM, CIE 801, Paris, France.

RESUMEN / SUMMARY: - INTRODUCTION:: Rapid recovery after supratentorial tumors (STT) removal is important. Short-acting anesthetics, such as propofol and remifentanil might favor this objective. The aim of this study was to

compare the recovery of 2 Bispectral index (BIS)-guided anesthesia protocols combining sevoflurane-sufentanil (SS) or propofol-remifentanil (PR) administered during craniotomy for STT. MATERIALS AND METHODS:: After IRB approval and written consent, patients scheduled for surgical removal of STT were randomized to receive PR or SS. Anesthesia was adjusted to maintain BIS values between 45 and 55. The primary outcome was the time from discontinuation of anesthetics to extubation. Secondary endpoints were: time to respond to a simple order, and to achieve spontaneous ventilation, agitation score at emergence, postoperative Mini Mental State, postoperative Aldrete score, pain Visual Analogical Score, simplified sedation score, Glasgow Coma Scale, and surgical complications. Statistical analyses were performed using analysis of variance. RESULTS:: Thirty-five and 31 were included in the SS and PR groups, respectively. Times to extubation was not different between the 2 groups (11.8+/-6.9 vs. 13.0+/-8.1 min in PR and SS groups, respectively, P=0.577). Although times to achieve an Aldrete score to 10, a Glasgow Coma Scale to 15, and a MMS to 30 significantly were lower in SS group, no significant difference was found when analyzing time course of these 3 factors over the first postoperative day. All other secondary endpoints were not different between the 2 groups. CONCLUSION:: During craniotomy for STT, we could not demonstrate a reduction in the time to extubation when comparing a BIS-guided anesthesia associating PR to a BIS-guided anesthesia associating SS (Clinictrials.gov identifier: NCT00389883).

[73]

TÍTULO / TITLE: - The Src Homology 3 Domain-containing Guanine Nucleotide Exchange Factor Is Overexpressed in High-grade Gliomas and Promotes Tumor Necrosis Factor-like Weak Inducer of Apoptosis-Fibroblast Growth Factor-inducible 14-induced Cell Migration and Invasion via Tumor Necrosis Factor Receptor-associated Factor 2.

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

REVISTA / JOURNAL: - J Biol Chem. 2013 Jul 26;288(30):21887-97. doi: 10.1074/jbc.M113.468686. Epub 2013 Jun 17.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.M113.468686](#)

AUTORES / AUTHORS: - Fortin Ensign SP; Mathews IT; Eschbacher JM; Loftus JC; Symons MH; Tran NL

INSTITUCIÓN / INSTITUTION: - From the Cancer and Cell Biology Division, The Translational Genomics Research Institute, Phoenix, Arizona 85004.

RESUMEN / SUMMARY: - Glioblastoma (GB) is the highest grade of primary adult brain tumors, characterized by a poorly defined and highly invasive cell population. Importantly, these invading cells are attributed with having a decreased sensitivity to radiation and chemotherapy. TNF-like weak inducer of apoptosis (TWEAK)-Fn14 ligand-receptor signaling is one mechanism in GB that promotes cell invasiveness and survival and is dependent upon the activity

of multiple Rho GTPases, including Rac1. Here we report that Src homology 3 domain-containing guanine nucleotide exchange factor (SGEF), a RhoG-specific guanine nucleotide exchange factor, is overexpressed in GB tumors and promotes TWEAK-Fn14-mediated glioma invasion. Importantly, levels of SGEF expression in GB tumors inversely correlate with patient survival. SGEF mRNA expression is increased in GB cells at the invasive rim relative to those in the tumor core, and knockdown of SGEF expression by shRNA decreases glioma cell migration in vitro and invasion ex vivo. Furthermore, we showed that, upon TWEAK stimulation, SGEF is recruited to the Fn14 cytoplasmic tail via TRAF2. Mutation of the Fn14-TRAF domain site or depletion of TNF receptor-associated factor 2 (TRAF2) expression by siRNA oligonucleotides blocked SGEF recruitment to Fn14 and inhibited SGEF activity and subsequent GB cell migration. We also showed that knockdown of either SGEF or RhoG diminished TWEAK activation of Rac1 and subsequent lamellipodia formation. Together, these results indicate that SGEF-RhoG is an important downstream regulator of TWEAK-Fn14-driven GB cell migration and invasion.

[74]

TÍTULO / TITLE: - Hypothalamic Involvement Predicts Cognitive Performance and Psychosocial Health in Long-term Survivors of Childhood Craniopharyngioma.

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

REVISTA / JOURNAL: - J Clin Endocrinol Metab. 2013 Aug;98(8):3253-62. doi: 10.1210/jc.2013-2000. Epub 2013 Jun 14.

●● Enlace al texto completo (gratis o de pago) [1210/jc.2013-2000](#)

AUTORES / AUTHORS: - Fjalldal S; Holmer H; Rylander L; Elfving M; Ekman B; Osterberg K; Erfurth EM

INSTITUCIÓN / INSTITUTION: - Department of Endocrinology, Skane University Hospital, SE-221 85 Lund, Sweden. Eva_Marie.Erfurth@med.lu.se.

RESUMEN / SUMMARY: - Context: Hypothalamic damage caused by craniopharyngioma (CP) is associated with poor functional outcome. Objective: To assess cognitive function and quality of life in childhood-onset CP on hormonal replacement, including GH treatment. Design: A cross-sectional study with a median follow-up time of 20 years (1-40). Setting: Patients were recruited from the South Medical Region of Sweden. Participants: The study included 42 patients (20 women) surgically treated for a childhood-onset CP between 1958 and 2000. Patients were aged ≥ 17 years. Equally many controls, matched for age, sex, residence, and smoking habits, were included. Tumor growth into the third ventricle was found in 25 patients. Main Outcome Measures: All subjects were examined with a battery of cognitive tests and the following questionnaires: Symptom Checklist-90, the Interview Schedule for Social Interaction, and the Social Network concept. Results: The CP patients had lower cognitive performance, reaching statistical significance in 12 of 20

test variables, including executive function and memory. Comparison of patients with tumor growth into the third ventricle to controls revealed a significant lower mean total score ($P = .006$). A significant negative correlation was recorded between mean z-score of cognitive performance and years since operation ($r = -0.407$; $P = .014$). No statistically significant group differences were observed across any of the 9 Symptom Checklist-90 subscales. Conclusions: Adults with childhood-onset CP, on hormone replacement, including GH treatment, have memory defects, disturbed attention, and impaired processing speed. Patients with hypothalamic involvement are more affected. Patients rated their quality of life as good as their matched controls.

[75]

TÍTULO / TITLE: - Survivin Inhibitor YM-155 Sensitizes Tumor Necrosis Factor-Related Apoptosis-Inducing Ligand-Resistant Glioma Cells to Apoptosis through Mcl-1 Downregulation and by Engaging the Mitochondrial Death Pathway.

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

REVISTA / JOURNAL: - J Pharmacol Exp Ther. 2013 Aug;346(2):201-10. doi: 10.1124/jpet.113.204743. Epub 2013 Jun 5.

●● Enlace al texto completo (gratis o de pago) 1124/jpet.113.204743

AUTORES / AUTHORS: - Premkumar DR; Jane EP; Foster KA; Pollack IF

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Children's Hospital of Pittsburgh, 4401 Penn Avenue, Pittsburgh, PA 15224. ian.pollack@chp.edu.

RESUMEN / SUMMARY: - Induction of apoptosis by the death ligand tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) is a promising antitumor therapy. However, not all tumor cells are sensitive to TRAIL, highlighting the need for strategies to overcome TRAIL resistance. Inhibitor of apoptosis family member survivin is constitutively activated in various cancers and blocks apoptotic signaling. Recently, we demonstrated that YM-155 [3-(2-methoxyethyl)-2-methyl-4,9-dioxo-1-(pyrazin-2-ylmethyl)-4,9-dihydro-3H-naphtho[2,3-d]imidazol-1-ium bromide], a small molecule inhibitor, downregulates not only survivin in gliomas but also myeloid cell leukemia sequence 1 (Mcl-1), and it upregulates proapoptotic Noxa levels. Because Mcl-1 and survivin are critical mediators of resistance to various anticancer therapies, we questioned whether YM-155 could sensitize resistant glioma cells to TRAIL. To address this hypothesis, we combined YM-155 with TRAIL and examined the effects on cell survival and apoptotic signaling. TRAIL or YM-155 individually induced minimal killing in highly resistant U373 and LN2308 cell lines, but combining TRAIL with YM-155 triggered a synergistic proapoptotic response, mediated through mitochondrial dysfunction via activation of caspases-8, -9, -7, -3, poly-ADP-ribose polymerase, and Bid. Apoptosis induced by combination treatments was blocked by caspase-8 and pan-caspase inhibitors. In addition, knockdown of Mcl-1 by RNA interference overcame apoptotic resistance to TRAIL. Conversely, silencing Noxa by RNA interference reduced the combined effects

of YM-155 and TRAIL on apoptosis. Mechanistically, these findings indicate that YM-155 plays a role in counteracting glioma cell resistance to TRAIL-induced apoptosis by downregulating Mcl-1 and survivin and amplifying mitochondrial signaling through intrinsic and extrinsic apoptotic pathways. The significantly enhanced antitumor activity of the combination of YM-155 and TRAIL may have applications for therapy of malignant glioma.

[76]

TÍTULO / TITLE: - Comparative expression analysis reveals lineage relationships between human and murine gliomas and a dominance of glial signatures during tumour propagation in vitro.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Jul 25.

- Enlace al texto completo (gratis o de pago) 1158/0008-5472.CAN-13-1299

AUTORES / AUTHORS: - Henriquez NV; Forshew T; Tatevossian R; Ellis M; Richard-Loendt A; Rogers HA; Jacques TS; Garcia Reitboeck P; Pearce K; Sheer D; Grundy RG; Brandner S

INSTITUCIÓN / INSTITUTION: - Division of Neuropathology and Department of Neurodegenerative Disease, UCL Institute of Neurology.

RESUMEN / SUMMARY: - Brain tumors are thought to originate from stem/progenitor cell populations that acquire specific genetic mutations. While current preclinical models have relevance to human pathogenesis most do not recapitulate the histogenesis of the human disease. Recently, a large series of human gliomas and medulloblastomas were analysed for genetic signatures of prognosis and therapeutic response. Using a mouse model system that generates three distinct types of intrinsic brain tumors, we correlated RNA and protein expression levels with human brain tumors. A combination of genetic mutations and cellular environment during tumor propagation defined the incidence and phenotype of intrinsic murine tumors. Importantly, in vitro passage of cancer stem cells uniformly promoted a glial expression profile in culture and in brain tumors. Gene expression profiling revealed that experimental gliomas corresponded to distinct subclasses of human glioblastoma, while experimental primitive neuroectodermal tumors (PNET) correspond to atypical teratoid/rhabdoid tumor (AT/RT), a rare childhood tumor.

[77]

TÍTULO / TITLE: - Marginal zone B-cell lymphoma involving a longstanding fibrous meningioma: an initial manifestation of systemic disease.

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

REVISTA / JOURNAL: - Hum Pathol. 2013 Jul 11. pii: S0046-8177(13)00190-1. doi: 10.1016/j.humpath.2013.04.016.

- Enlace al texto completo (gratis o de pago)

[1016/j.humpath.2013.04.016](#)

AUTORES / AUTHORS: - Martin SE; Khalidi HS; Hattab EM

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

RESUMEN / SUMMARY: - The combined presence of meningioma and lymphoma involving the dura is exceptionally rare. A 62-year-old woman, radiologically diagnosed with meningioma 14 years prior but never treated, presented with headaches and visual symptoms. Magnetic resonance imaging demonstrated significant growth of the mass. Surgical resection yielded a composite meningioma and marginal zone B-cell lymphoma. Subsequent systemic workup revealed bone marrow involvement. Low-grade lymphomas rarely metastasize to the central nervous system. When they do, it is usually a result of large cell transformation and typically marks a late event in the course of the disease. This case highlights the necessity of adequate sampling of meningiomas and of including low-grade lymphoma in the differential diagnosis of meningiomas with prominent lymphocytic infiltrates. In addition, this case emphasizes that all patients with lymphoma involving the central nervous system, even when low grade, should receive a full systemic workup.

[78]

TÍTULO / TITLE: - Limited detection of IgH gene rearrangements in plasma of patients with primary central nervous system lymphoma.

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

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

- Enlace al texto completo (gratis o de pago) [1007/s11060-013-1182-](#)

[7](#)

AUTORES / AUTHORS: - He J; Wu J; Jiao Y; Rodriguez FJ; Blakeley JO; Kinzler KW; Papadopoulos N; Vogelstein B; Holdhoff M

INSTITUCIÓN / INSTITUTION: - Ludwig Center for Cancer Genetics and Therapeutics, The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD, USA.

RESUMEN / SUMMARY: - Chemotherapy-based treatment of patients with primary central nervous system lymphoma can lead to durable remissions and potentially cure in a fraction of patients. Accurate assessment of residual disease is necessary to determine the duration and success of treatment that cannot be achieved by contrast-enhanced imaging due to limited sensitivity and specificity. A tumor-derived blood-based biomarker, if detectable and quantifiable, could serve as a more specific and reliable marker for these patients. The goal of this study was to assess whether lymphoma-specific IgH rearrangements can be detected in plasma of patients with PCNSL. PCNSL tissue was analyzed by capturing and sequencing the IgH genomic regions (IgCap) using next generation sequencing with the Illumina platform. Plasma of

patients with detected IgH rearrangement was then analyzed for presence of the respective rearrangement using polymerase chain reaction. Tumor tissue and matched plasma of five treatment-naive patients with biopsy-proven PCNSL (mean age of 65.6 years; range 62-68 years) were analyzed. All patients had measurable contrast-enhancing disease on MRI at time of plasma collection. IgH rearrangements were identified in 4 of 5 analyzed PCNSL tissue samples. The respective rearrangement could be detected in the plasma of 1 patient (25 %) but not in the others. IgH rearrangements can be detected in tumor tissue of patients with PCNSL using IgCap, however, they are absent or only present in minimal quantities in plasma, even in treatment-native patients with bulky disease. Alternative strategies to develop circulating biomarkers for PCNSL patients need to be explored.

[79]

TÍTULO / TITLE: - Intratumoral Modeling of Gefitinib Pharmacokinetics and Pharmacodynamics in an Orthotopic Mouse Model of Glioblastoma.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Aug 2.

- Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-0690](#)

AUTORES / AUTHORS: - Sharma J; Lv H; Gallo JM

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Department of Pharmaceutical Sciences, Temple University, Philadelphia, Pennsylvania; and Department of Pharmacology and Systems Therapeutics, Mount Sinai School of Medicine, New York, New York.

RESUMEN / SUMMARY: - Like many solid tumors, glioblastomas are characterized by intratumoral biologic heterogeneity that may contribute to a variable distribution of drugs and their associated pharmacodynamic responses, such that the standard pharmacokinetic approaches based on analysis of whole-tumor homogenates may be inaccurate. To address this aspect of tumor pharmacology, we analyzed intratumoral pharmacokinetic/pharmacodynamic characteristics of the EGFR inhibitor gefitinib in mice with intracerebral tumors and developed corresponding mathematical models. Following a single oral dose of gefitinib (50 or 150 mg/kg), tumors were processed at selected times according to a novel brain tumor sectioning protocol that generated serial samples to measure gefitinib concentrations, phosphorylated extracellular signal-regulated kinase (pERK), and immunohistochemistry in 4 different regions of tumors. Notably, we observed up to 3-fold variations in intratumoral concentrations of gefitinib, but only up to half this variability in pERK levels. As we observed a similar degree of variation in the immunohistochemical index termed the microvessel pericyte index (MPI), a measure of permeability in the blood-brain barrier, we used MPI in a hybrid physiologically-based pharmacokinetic (PBPK) model to account for regional changes in drug

distribution that were observed. Subsequently, the PBPK models were linked to a pharmacodynamic model that could account for the variability observed in pERK levels. Together, our tumor sectioning protocol enabled integration of the intratumoral pharmacokinetic/pharmacodynamic variability of gefitinib and immunohistochemical indices followed by the construction of a predictive PBPK/pharmacodynamic model. These types of models offer a mechanistic basis to understand tumor heterogeneity as it impacts the activity of anticancer drugs. Cancer Res; 73(16); 1-11. ©2013 AACR.

[80]

TÍTULO / TITLE: - Brain tumor regulates neuromuscular synapse growth and endocytosis in *Drosophila* by suppressing mad expression.

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

REVISTA / JOURNAL: - J Neurosci. 2013 Jul 24;33(30):12352-63. doi: 10.1523/JNEUROSCI.0386-13.2013.

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

[1523/JNEUROSCI.0386-13.2013](#)

AUTORES / AUTHORS: - Shi W; Chen Y; Gan G; Wang D; Ren J; Wang Q; Xu Z; Xie W; Zhang YQ

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Molecular and Developmental Biology, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing 100101, China, and Key Laboratory for Developmental Genes and Human Disease, Ministry of Education, Institute of Life Sciences, Southeast University, Nanjing 210096, China.

RESUMEN / SUMMARY: - The precise regulation of synaptic growth is critical for the proper formation and plasticity of functional neural circuits. Identification and characterization of factors that regulate synaptic growth and function have been under intensive investigation. Here we report that brain tumor (brat), which was identified as a translational repressor in multiple biological processes, plays a crucial role at *Drosophila* neuromuscular junction (NMJ) synapses.

Immunohistochemical analysis demonstrated that brat mutants exhibited synaptic overgrowth characterized by excess satellite boutons at NMJ terminals, whereas electron microscopy revealed increased synaptic vesicle size but reduced density at active zones compared with wild-types.

Spontaneous miniature excitatory junctional potential amplitudes were larger and evoked quantal content was lower at brat mutant NMJs. In agreement with the morphological and physiological phenotypes, loss of Brat resulted in reduced FM1-43 uptake at the NMJ terminals, indicating that brat regulates synaptic endocytosis. Genetic analysis revealed that the actions of Brat at synapses are mediated through mothers against decapentaplegic (Mad), the signal transduction effector of the bone morphogenetic protein (BMP) signaling pathway. Furthermore, biochemical analyses showed upregulated levels of Mad protein but normal mRNA levels in the larval brains of brat mutants,

suggesting that Brat suppresses Mad translation. Consistently, knockdown of brat by RNA interference in Drosophila S2 cells also increased Mad protein level. These results together reveal an important and previously unidentified role for Brat in synaptic development and endocytosis mediated by suppression of BMP signaling.

[81]

TÍTULO / TITLE: - A Novel Mutation (P236S) in the Succinate Dehydrogenase Subunit B Gene in a Japanese Patient with a Posterior Mediastinal Paraganglioma.

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

REVISTA / JOURNAL: - Endocr Pathol. 2013 Jun 19.

- Enlace al texto completo (gratis o de pago) [1007/s12022-013-9252-0](#)

AUTORES / AUTHORS: - Sato H; Shoji S; Kajiwara H; Itoh J; Osamura RY

INSTITUCIÓN / INSTITUTION: - Department of Medicine, Tokai University School of Medicine, Shimokasuya 143, Isehara, Kanagawa, 259-1193, Japan, hrhsato@is.icc.u-tokai.ac.jp.

RESUMEN / SUMMARY: - Succinate dehydrogenase subunit B gene (SDHB) is associated with the development of hereditary paraganglioma (PGL) and pheochromocytoma (PCC). Here we describe a novel germline mutation in SDHB in a 69-year-old Japanese woman with a posterior mediastinal PGL. We summarize the clinical presentation, diagnostic work-up, and pathological features of a patient with a posterior mediastinal PGL and review the pertinent literature. Direct sequencing of SDHB and SDHD was performed. The patient presented with a posterior mediastinal tumor and was normotensive. She underwent abdominal tumor resection at the age of 38 years, but clinical and pathological diagnoses were unknown. She had no family history of hypertension, PGL, or PCC. Imaging studies suggested that the tumor was neurogenic. Endocrinological examinations showed normal plasma catecholamine levels. The tumor was completely removed without metastasis. Pathological findings confirmed PGL. Immunohistochemical staining showed that the tumor cells were positive for chromogranin A, synaptophysin, and CD56, and the Ki67 index was low (<1 %). The patient has not experienced recurrence or metastasis for the last 5 years. DNA sequencing revealed a novel P236S (c.843 C > T) mutation in SDHB. The P236S germline mutation in SDHB was associated with posterior mediastinal PGL. Strict follow-up of the patient is necessary because the SDHB mutation may be related to malignancy.

[82]

TÍTULO / TITLE: - 3D brain tumor segmentation in multimodal MR images based on learning population- and patient-specific feature sets.

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

REVISTA / JOURNAL: - Comput Med Imaging Graph. 2013 Jun 28. pii: S0895-6111(13)00102-X. doi: 10.1016/j.compmedimag.2013.05.007.

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

[1016/j.compmedimag.2013.05.007](#)

AUTORES / AUTHORS: - Jiang J; Wu Y; Huang M; Yang W; Chen W; Feng Q

INSTITUCIÓN / INSTITUTION: - School of Biomedical Engineering, Southern Medical University, Guangzhou 510515, China. Electronic address: smujiang@gmail.com.

RESUMEN / SUMMARY: - Brain tumor segmentation is a clinical requirement for brain tumor diagnosis and radiotherapy planning. Automating this process is a challenging task due to the high diversity in appearance of tumor tissue among different patients and the ambiguous boundaries of lesions. In this paper, we propose a method to construct a graph by learning the population- and patient-specific feature sets of multimodal magnetic resonance (MR) images and by utilizing the graph-cut to achieve a final segmentation. The probabilities of each pixel that belongs to the foreground (tumor) and the background are estimated by global and custom classifiers that are trained through learning population- and patient-specific feature sets, respectively. The proposed method is evaluated using 23 glioma image sequences, and the segmentation results are compared with other approaches. The encouraging evaluation results obtained, i.e., DSC (84.5%), Jaccard (74.1%), sensitivity (87.2%), and specificity (83.1%), show that the proposed method can effectively make use of both population- and patient-specific information.

[83]

TÍTULO / TITLE: - Medulloblastoma in a patient with the PTPN11 p.Thr468Met mutation.

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

REVISTA / JOURNAL: - Am J Med Genet A. 2013 Aug;161(8):2027-9. doi: 10.1002/ajmg.a.36005. Epub 2013 Jun 27.

●● Enlace al texto completo (gratis o de pago) [1002/ajmg.a.36005](#)

AUTORES / AUTHORS: - Rankin J; Short J; Turnpenny P; Castle B; Hanemann CO

INSTITUCIÓN / INSTITUTION: - Department of Clinical Genetics, Royal Devon and Exeter NHS Trust, Exeter, UK.

RESUMEN / SUMMARY: - Medulloblastoma is the commonest brain tumor in childhood and in a minority of patients is associated with an underlying genetic disorder such as Gorlin syndrome or familial adenomatous polyposis. Increased susceptibility to certain tumors, including neuroblastoma and some hematological malignancies, is recognized in disorders caused by mutations in genes encoding components of the RAS signaling pathway which include Noonan syndrome, Noonan syndrome with multiple lentigines (NSML; formerly

called LEOPARD syndrome), Costello syndrome, Cardiofaciocutaneous syndrome, Legius syndrome, and Neurofibromatosis type 1 (NF1), collectively termed RASopathies. Although an association between medulloblastoma and NF1 has been reported, this tumor has not previously been reported in other RASopathies. We present a patient with NSML caused by the recurrent PTPN11 mutation c.1403C > T (p.Thr468Met) in whom medulloblastoma was diagnosed at age 10 years. Medulloblastoma could therefore be part of the tumor spectrum associated with this disorder. © 2013 Wiley Periodicals, Inc.

[84]

TÍTULO / TITLE: - 102 Validation and modification of a predictive model of post-resection hydrocephalus in pediatric patients with posterior fossa tumors.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:153-4. doi: 10.1227/01.neu.0000432694.27941.bb.

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

1227/01.neu.0000432694.27941.bb

AUTORES / AUTHORS: - Foreman P; McCluggage S; Naftel RP; Griessenauer CJ; Ditty BJ; Agee B; Riva-Cambrin J; Wellons JC

RESUMEN / SUMMARY: - INTRODUCTION: Post-resection hydrocephalus is observed in approximately 30% of pediatric patients with posterior fossa tumors. However, which patients will go on to develop post-resection hydrocephalus is not known. The Canadian Preoperative Prediction Rule for Hydrocephalus (CPPRH) was developed in an attempt to identify this subset of patients allowing for the optimization of their care. We seek to validate and critically appraise the CPPRH. METHODS: The authors conducted a retrospective chart review of 99 consecutive pediatric patients presenting between 2002 and 2010 with posterior fossa tumors that subsequently underwent surgical resection. Data was then analyzed utilizing bivariate and multivariate analysis, in addition to the application of the Modified Canadian Preoperative Prediction Rule for Hydrocephalus. RESULTS: Seventy-six patients were evaluated. Four variables were found to be significant in predicting post-resection hydrocephalus: age less than 2, moderate/severe hydrocephalus, preoperative tumor diagnosis, and transependymal edema. The Modified Canadian Preoperative Prediction Rule for Hydrocephalus (mCPPRH) produced observed likelihood ratios of 0.737 (95% CI 0.526-1.032) and 4.688 (95% CI 1.421-15.463) for low- and high-risk groups, respectively. CONCLUSION: The mCPPRH utilizes easily obtainable and reliable preoperative variables that together stratify children with posterior fossa tumors into high- and low-risk categories for the development of post-resection hydrocephalus. This will aid patient counseling, tailor the intensity of postoperative clinical and radiographic monitoring for hydrocephalus, as well as provide evidence-based guidance for the utilization of prophylactic CSF diversion.

[85]

TÍTULO / TITLE: - Neuronal differentiation associated with Gli3 expression predicts favorable outcome for patients with medulloblastoma.

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

REVISTA / JOURNAL: - Neuropathology. 2013 Jul 29. doi: 10.1111/neup.12052.

●● Enlace al texto completo (gratis o de pago) [1111/neup.12052](#)

AUTORES / AUTHORS: - Miyahara H; Natsumeda M; Yoshimura J; Ogura R; Okazaki K; Toyoshima Y; Fujii Y; Takahashi H; Kakita A

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Brain Research Institute, University of Niigata; Department of Pediatrics and Child Neurology, Oita University Faculty of Medicine, Oita, Japan.

RESUMEN / SUMMARY: - Medulloblastoma (MB) is a malignant cerebellar tumor arising in children, and its ontogenesis is regulated by Sonic Hedgehog (Shh) signaling. No data are available regarding the correlation between expression of Gli3, a protein lying downstream of Shh, and neuronal differentiation of MB cells, or the prognostic significance of these features. We re-evaluated the histopathological features of surgical specimens of MB taken from 32 patients, and defined 15 of them as MB with neuronal differentiation (ND), three as MB with both glial and neuronal differentiation (GD), and 14 as differentiation-free (DF) MB. Gli3-immunoreactivity (IR) was evident as a clear circular stain outlining the nuclei of the tumor cells. The difference in the frequency of IR between the ND+GD (94.4%) and DF (0%) groups was significant ($P < 0.001$). The tumor cells with ND showed IR for both Gli3 and neuronal nuclei. Ultrastructurally, Gli3-IR was observed at the nuclear membrane. The overall survival and event-free survival rates of the patients in the ND group were significantly higher than those in the other groups. The expression profile of Gli3 is of considerable significance, and the association of ND with this feature may be prognostically favorable in patients with MB.

TÍTULO / TITLE: - Toxic Effects Induced By Curcumin In Human Astrocytoma Cell Lines.

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

REVISTA / JOURNAL: - Toxicol Mech Methods. 2013 Jul 26.

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

[3109/15376516.2013.826768](#)

AUTORES / AUTHORS: - Romero-Hernandez MA; Eguia-Aguilar P; Perezpena-Diazconti M; Rodriguez-Leviz A; Sadowinski-Pine S; Velasco-Rodriguez LA; Caceres CJ; Arenas-Huertero F

INSTITUCIÓN / INSTITUTION: - Escuela Superior de Medicina, Instituto Politecnico Nacional, Plan de San Luis y Diaz Miron s/n, Colonia Casco de Santo Tomas, Delegacion Miguel Hidalgo, C.P. 11340, Mexico D.F.

RESUMEN / SUMMARY: - Abstract OBJECTS: The objective of this study was to describe the toxicity induced by curcumin in human astrocytoma cell lines. METHODS: The effects induced by curcumin, at 100 microM for 24h, were evaluated in four astrocytoma cell lines using crystal violet assay and through the evaluation of morphological and ultrastructural changes by electron microscopy. Also, the results of vital staining with acridine orange and propidium iodide for acidic vesicles and apoptotic bodies were analyzed and the expression of the Beclin1 gene was assessed by RT-PCR. RESULTS: The cells treated with curcumin at 100 microM induced an inhibitory concentration 50 of viability with morphological changes characterized by a progressive increase in large, non-acidic vesicles devoid of cytoplasmic components and organelles, but that conserved the cell nuclei. No DNA breakage was observed. The astrocytoma cells showed no apoptosis, necrosis or autophagy. Expression of BECLIN1 was not induced ($p < 0.05$) by curcumin in the astrocytoma cells. CONCLUSIONS: Curcumin at 100 microm induced a new type of death cell in astrocytoma cell lines.

[86]

TÍTULO / TITLE: - Enhanced cell growth and tumorigenicity of rat glioma cells by stable expression of human CD133 through multiple molecular actions.

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

REVISTA / JOURNAL: - *Glia*. 2013 Sep;61(9):1402-17. doi: 10.1002/glia.22521. Epub 2013 Jul 6.

●● Enlace al texto completo (gratis o de pago) 1002/glia.22521

AUTORES / AUTHORS: - Fang KM; Lin TC; Chan TC; Ma SZ; Tzou BC; Chang WR; Liu JJ; Chiou SH; Yang CS; Tzeng SF

INSTITUCIÓN / INSTITUTION: - Institute of Life Sciences, College of Bioscience and Biotechnology, National Cheng Kung University, Tainan, Taiwan.

RESUMEN / SUMMARY: - CD133 (Prominin-1/AC133) is generally treated as a cell surface marker found on multipotent stem cells and tumor stem-like cells, and its biological function remains debated. Genetically modified rat glioma cell lines were generated by lentiviral gene delivery of human CD133 into rat C6 glioma cells (hCD133(+)-C6) or by infection of C6 cells with control lentivirus (mock-C6). Stable hCD133 expression promoted the self-renewal ability of C6-formed spheres with an increase in the expression of the stemness markers, Bmi-1 and SOX2. Akt phosphorylation, Notch-1 activation, and Notch-1 target gene expression (Hes-1, Hey1 and Hey2) were increased in hCD133(+)-C6 when compared to mock-C6. The inhibition of Akt phosphorylation, Notch-1 activation, and Hes-1 in hCD133(+)-C6 cells effectively suppressed their clonogenic ability, indicating that these factors are involved in expanding the growth of hCD133(+)-C6. An elevated expression of GTPase-activating protein 27 (Arhgap27) was detected in hCD133(+)-C6. A decline in the invasion of hCD133(+)-C6 by knockdown of Arhgap27 expression indicated the critical role of Arhgap27 in promoting cell migration of hCD133(+)-C6. In vivo study further

showed that hCD133(+) -C6 formed aggressive tumors in vivo compared to mock-C6. Exposure of hCD133(+) -C6 to arsenic trioxide not only reduced Akt phosphorylation, Notch-1 activation and Hes-1 expression in vitro, but also inhibited their tumorigenicity in vivo. The results show that C6 glioma cells with stable hCD133 expression enhanced their stemness properties with increased Notch-1/Hes-1 signaling, Akt activation, and Arhgap27 action, which contribute to increased cell proliferation and migration of hCD133(+) -C6 in vitro, as well as progressive tumor formation in vivo.

[87]

TÍTULO / TITLE: - MAP2K3 is associated with body mass index in American Indians and Caucasians and may mediate hypothalamic inflammation.

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

REVISTA / JOURNAL: - Hum Mol Genet. 2013 Jul 10.

●● Enlace al texto completo (gratis o de pago) 1093/hmg/ddt291

AUTORES / AUTHORS: - Bian L; Traurig M; Hanson RL; Marinelarena A; Kobes S; Muller YL; Malhotra A; Huang K; Perez J; Gale A; Knowler WC; Bogardus C; Baier LJ

INSTITUCIÓN / INSTITUTION: - Diabetes Molecular Genetics Section and Diabetes Epidemiology and Clinical Research Section, Phoenix Epidemiology and Clinical Research Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institute of Health, Phoenix, AZ 85004, USA.

RESUMEN / SUMMARY: - To identify genes that affect body mass index (BMI) in American Indians who are predominately of Pima Indian heritage, we previously completed a genome-wide association study in 1120 American Indians. That study also included follow-up genotyping for 9 SNPs in 2133 additional subjects. A comprehensive follow-up study has subsequently been completed where 292 SNPs were genotyped in 3562 subjects, of which 128 SNPs were assessed for replication in 3238 additional subjects. In the combined subjects (n = 6800), BMI associations for two SNPs, rs12882548 and rs11652094, approached genome-wide significance (P = 6.7 x 10⁻⁷ and 8.1 x 10⁻⁷, respectively). Rs12882548 is located in a gene desert on chromosome 14 and rs11652094 maps near MAP2K3. Several SNPs in the MAP2K3 region including rs11652094 were also associated with BMI in Caucasians from the GIANT consortium (P = 10⁻²-10⁻⁵), and the combined P-values across both American Indians and Caucasian were P = 10⁻⁴-10⁻⁹. Follow-up sequencing across MAP2K3 identified several paralogous sequence variants indicating that the region may have been duplicated. MAP2K3 expression levels in adipose tissue biopsies were positively correlated with BMI, although it is unclear if this correlation is a cause or effect. In vitro studies with cloned MAP2K3 promoters suggest that MAP2K3 expression may be up-regulated during adipogenesis. Microarray analyses of mouse hypothalamus cells expressing constitutively active MAP2K3 identified several up-regulated genes involved in

immune/inflammatory pathways and a gene, Hap1, thought to play a role in appetite regulation. We conclude that MAP2K3 is a reproducible obesity locus that may affect body weight via complex mechanisms involving appetite regulation and hypothalamic inflammation.

[88]

TÍTULO / TITLE: - Radiation-induced mitotic cell death and glioblastoma radioresistance: A new regulating pathway controlled by integrin-linked kinase, hypoxia-inducible factor 1alpha and survivin in U87 cells.

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

REVISTA / JOURNAL: - Eur J Cancer. 2013 Sep;49(13):2884-91. doi: 10.1016/j.ejca.2013.05.003. Epub 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago) [1016/j.ejca.2013.05.003](#)

AUTORES / AUTHORS: - Lanvin O; Monferran S; Delmas C; Couderc B; Toulas C; Cohen-Jonathan-Moyal E

INSTITUCIÓN / INSTITUTION: - Institut National de la Sante et de la Recherche Medicale (INSERM), UMR 1037, Cancer Research Center of Toulouse (CRCT), Toulouse F-31000, France.

RESUMEN / SUMMARY: - We have previously shown that integrin-linked kinase (ILK) regulates U87 glioblastoma cell radioresistance by modulating the main radiation-induced cell death mechanism in solid tumours, the mitotic cell death. To decipher the biological pathways involved in these mechanisms, we constructed a U87 glioblastoma cell model expressing an inducible shRNA directed against ILK (U87shILK). We then demonstrated that silencing ILK enhanced radiation-induced centrosome overduplication, leading to radiation-induced mitotic cell death. In this model, ionising radiations induce hypoxia-inducible factor 1alpha (HIF-1alpha) stabilisation which is inhibited by silencing ILK. Moreover, silencing HIF-1alpha in U87 cells reduced the surviving fraction after 2Gy irradiation by increasing cell sensitivity to radiation-induced mitotic cell death and centrosome amplification. Because it is known that HIF-1alpha controls survivin expression, we then looked at the ILK silencing effect on survivin expression. We show that survivin expression is decreased in U87shILK cells. Furthermore, treating U87 cells with the specific survivin suppressor YM155 significantly increased the percentage of giant multinucleated cells, centrosomal overduplication and thus U87 cell radiosensitivity. In consequence, we decipher here a new pathway of glioma radioresistance via the regulation of radiation-induced centrosome duplication and therefore mitotic cell death by ILK, HIF-1alpha and survivin. This work identifies new targets in glioblastoma with the intention of radiosensitising these highly radioresistant tumours.

[89]

TÍTULO / TITLE: - Cytomegalovirus contributes to glioblastoma in the context of tumor suppressor mutations.

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

REVISTA / JOURNAL: - Cancer Res. 2013 Jun 1;73(11):3441-50. doi: 10.1158/0008-5472.CAN-12-3846.

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-12-3846](#)

AUTORES / AUTHORS: - Price RL; Song J; Bingmer K; Kim TH; Yi JY; Nowicki MO; Mo X; Hollon T; Murnan E; Alvarez-Breckenridge C; Fernandez S; Kaur B; Rivera A; Oglesbee M; Cook C; Chiocca EA; Kwon CH

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, Dardinger Neuro-oncology Center, Solid Tumor Program at the James Comprehensive Cancer Center, Center for Biostatistics, Departments of Pathology, Veterinary Biosciences, and Surgery, The Ohio State University Medical Center, Columbus, Ohio, USA.

RESUMEN / SUMMARY: - To study the controversial role of cytomegalovirus (CMV) in glioblastoma, we assessed the effects of murine CMV (MCMV) perinatal infection in a GFAP-cre; Nf1(loxp/+); Trp53(-/+) genetic mouse model of glioma (Mut3 mice). Early on after infection, MCMV antigen was predominantly localized in CD45+ lymphocytes in the brain with active viral replication and local areas of inflammation, but, by 7 weeks, there was a generalized loss of MCMV in brain, confirmed by bioluminescent imaging. MCMV-infected Mut3 mice exhibited a shorter survival time from their gliomas than control Mut3 mice perinatally infected with mock or with a different neurotropic virus. Animal survival was also significantly shortened when orthotopic gliomas were implanted in mice perinatally infected with MCMV versus controls. MCMV infection increased phosphorylated STAT3 (p-STAT3) levels in neural stem cells (NSC) harvested from Mut3 mice subventricular zone, and, in vivo, there was increased p-STAT3 in NSCs in MCMV-infected compared with control mice. Of relevance, human CMV (HCMV) also increased p-STAT3 and proliferation of patient-derived glioblastoma neurospheres, whereas a STAT3 inhibitor reversed this effect in vitro and in vivo. These findings thus associate CMV infection to a STAT3-dependent modulatory role in glioma formation/progression in the context of tumor suppressor mutations in mice and possibly in humans.

[90]

TÍTULO / TITLE: - Artemin, a Glial Cell Line-Derived Neurotrophic Factor Family Member, Induces TRPM8-Dependent Cold Pain.

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

REVISTA / JOURNAL: - J Neurosci. 2013 Jul 24;33(30):12543-52. doi: 10.1523/JNEUROSCI.5765-12.2013.

- Enlace al texto completo (gratis o de pago)

[1523/JNEUROSCI.5765-12.2013](#)

AUTORES / AUTHORS: - Lippoldt EK; Elmes RR; McCoy DD; Knowlton WM; McKemy DD

INSTITUCIÓN / INSTITUTION: - Neurobiology Section, Department of Biological Sciences, Neurobiology Graduate Program, Molecular and Computational Biology Graduate Program, and Neuroscience Graduate Program, University of Southern California, Los Angeles, California 90089.

RESUMEN / SUMMARY: - Chronic pain associated with injury or disease can result from dysfunction of sensory afferents whereby the threshold for activation of pain-sensing neurons (nociceptors) is lowered. Neurotrophic factors control nociceptor development and survival, but also induce sensitization through activation of their cognate receptors, attributable, in part, to the modulation of ion channel function. Thermal pain is mediated by channels of the transient receptor potential (TRP) family, including the cold and menthol receptor TRPM8. Although it has been shown that TRPM8 is involved in cold hypersensitivity, the molecular mechanisms underlying this pain modality are unknown. Using microarray analyses to identify mouse genes enriched in TRPM8 neurons, we found that the glial cell line-derived neurotrophic factor (GDNF) family receptor GFRalpha3 is expressed in a subpopulation of TRPM8 sensory neurons that have the neurochemical profile of cold nociceptors. Moreover, we found that artemin, the specific GFRalpha3 ligand that evokes heat hyperalgesia, robustly sensitized cold responses in a TRPM8-dependent manner in mice. In contrast, GFRalpha1 and GFRalpha2 are not coexpressed with TRPM8 and their respective ligands GDNF and neurturin did not induce cold pain, whereas they did evoke heat hyperalgesia. Nerve growth factor induced mild cold sensitization, consistent with TrkA expression in TRPM8 neurons. However, bradykinin failed to alter cold sensitivity even though its receptor expresses in a subset of TRPM8 neurons. These results show for the first time that only select neurotrophic factors induce cold sensitization through TRPM8 in vivo, unlike the broad range of proalgesic agents capable of promoting heat hyperalgesia.

[91]

TÍTULO / TITLE: - Histone H1.0-a potential molecular marker with prognostic value for patients with malignant gliomas.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1437-42. doi: 10.1007/s00701-013-1802-1. Epub 2013 Jun 29.

- Enlace al texto completo (gratis o de pago) [1007/s00701-013-1802-](#)

[1](#)

AUTORES / AUTHORS: - Gabrovsky N; Georgieva M; Laleva M; Uzunov K; Miloshev G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital “Pirogov”, 21, Totleben blvd, 1606, Sofia, Bulgaria, gabrovsky@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND: Histones are proteins closely associated with the DNA molecules and serve as a structural scaffold for the organization of chromatin. They play an important role in the regulation of gene expression by changing the level of DNA compaction. The special subtype of the linker histone family-H1 zero (H1.0) is generally expressed in non-dividing, terminally differentiated cells. The aim of our study is to investigate the correlation between the quantities of histone H1.0 in human gliomas, the histopathological grade and the overall survival. MATERIAL AND METHOD: Twenty-nine (N = 29) patients with intraaxial lesions underwent a microsurgical tumor resection. Tumor samples were snap-frozen in liquid nitrogen immediately after resection. Following a specific protocol, linker histones were extracted from the tumor specimens and the quantities of histone H1.0 were assessed. All patients were followed up prospectively. RESULTS: Of the 29 patients in our study (M:F = 17:12), five had a grade II astrocytoma, seven had a grade III, and 17 had a grade IV, according to the World Health Organization (WHO) classification. At the end of the study, three patients were still alive. The mean quantities of H1.0 were: 23.3 for grade II tumors, 13.9 for grade III and 11.3 for grade IV tumors. The statistical analysis demonstrated that the histological grade, age and Karnofsky performance status (KPS) remain among the most reliable predictive factors for the survival of patients with gliomas. Grade III-IV gliomas had significantly less histone H1.0 than grade II gliomas. Conformably, in a multivariate Cox regression analysis, H1.0 made a small but significant contribution ($p < 0.05$) to survival rates. CONCLUSION: Our study confirmed that histone H1.0 is a potential biological marker with prognostic value for the survival of patients with gliomas. The quantities of histone H1.0 are correlated to the histopathological grade of the tumor. The more aggressive and malignant gliomas tend to have lower quantities of histone H1.0.

[92]

TÍTULO / TITLE: - 145 Natural history of central nervous system hemangioblastomas in von hippel-lindau disease.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:168. doi: 10.1227/01.neu.0000432736.56649.9b.

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

[1227/01.neu.0000432736.56649.9b](https://doi.org/10.1227/01.neu.0000432736.56649.9b)

AUTORES / AUTHORS: - Lonser RR; Huntoon K; Butman JA; Asthagiri AR; Bakhtian K; Zhuang Z; Oldfield EH

RESUMEN / SUMMARY: - INTRODUCTION: The most frequent von Hippel-Lindau disease (VHL)-associated tumors are hemangioblastomas. While hemangioblastomas are associated with significant neurological impairment and

mortality, their natural history and optimal management are not fully defined. METHODS: VHL patients were enrolled in a prospective study designed to define the natural history of central nervous system (CNS) hemangioblastomas. Prospective serial imaging, laboratory, genetic and clinical data were analyzed. RESULTS: Two hundred twenty-five (111 males; 114 females) patients harbored 1921 CNS hemangioblastomas in the supratentorial compartment (21 tumors; 1%), cerebellum (865; 45%), brainstem (129; 7%), spinal cord (689; 36%), cauda equina (212; 11%) and nerve roots (5; 0.3%) at study entrance (follow-up, 15,819 hemangioblastoma-years). Increased tumor burden was associated with partial deletions in VHL gene ($P = .005$) and male sex ($P = .002$). Hemangioblastoma development (median, 0.3 new tumors/yr) was associated with younger age ($P < .0001$) and more tumors at study entrance ($P < .0001$). While 1,278 hemangioblastomas (51%) did not grow, 1,226 hemangioblastomas (49%) grew in a saltatory (886 tumors; 72% of growing tumors), linear (76; 6%), or exponential (264; 22%) pattern. Faster tumor growth was associated with male sex ($P = .002$), symptomatic tumors ($P < .0001$) and tumors associated with cysts ($P < .0001$). Location-dependent tumor size was the primary predictor of eventual symptom formation (159 symptomatic tumors [6.4%]; area under the curve greater than 0.9). CONCLUSION: CNS hemangioblastoma burden in VHL is associated with partial germline deletions and male sex. Unpredictable growth of hemangioblastomas compromises assessment of non-surgical therapies. Judicious treatment of symptom-producing hemangioblastomas, while avoiding unnecessary treatment of asymptomatic tumors that may not progress, can provide clinical stability. Integra Foundation Award.

[93]

TÍTULO / TITLE: - Hormone replacement therapy increases the risk of cranial meningioma.

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

REVISTA / JOURNAL: - Eur J Cancer. 2013 Jun 22. pii: S0959-8049(13)00434-6. doi: 10.1016/j.ejca.2013.05.026.

●● Enlace al texto completo (gratis o de pago) [1016/j.ejca.2013.05.026](#)

AUTORES / AUTHORS: - Andersen L; Friis S; Hallas J; Ravn P; Schroder HD; Gaist D

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Odense University Hospital, Institute of Clinical Research, Faculty of Health Sciences, University of Southern Denmark, Sdr. Boulevard 29, 5000 Odense C, Denmark.

RESUMEN / SUMMARY: - AIM: We investigated the influence of hormone replacement therapy (HRT) use on the risk of meningioma in a population-based setting. METHODS: We conducted a nationwide case-control study in Denmark based on population-based administrative and health registries. The study included all female patients aged 55-84 years with a first time diagnosis of

meningioma during 2000-2009. The cases were matched on birth year with female population controls. Ever use of HRT since 1995 was defined as 2 HRT prescriptions and categorised according to HRT type (oestrogen only, combined oestrogen-progestagen, and progestagen only) and cumulated duration of use (<1, 1 to <5, 5 to <10, 10years). We used conditional logistic regression to compute odds ratios (ORs), with 95% confidence intervals (CIs), for meningioma associated with HRT use, and adjusting for potential confounders. RESULTS: We identified 924 cases and 6122 controls. Ever use of HRT was associated with an increased risk of meningioma (OR, 1.3; 95%CI, 1.1-1.5) compared with non-use (0-1 prescriptions). The risk increased with increasing duration of HRT use, reaching an OR of 1.7 (95% CI, 1.2-2.3) after more than 10years of use. The risk of meningioma associated with long-term (10years) HRT use was most pronounced for combined oestrogen-progestagen therapy (OR, 2.2; 95% CI, 1.4-3.3), especially when this regimen constituted the sole HRT therapy (OR, 2.7; 95% CI, 0.9-7.5), although the latter estimate was based on small numbers. CONCLUSIONS: Long-term HRT use, particularly of combined oestrogen-progestagen therapy, may increase the risk of meningioma.

[94]

TÍTULO / TITLE: - Acute catecholamine cardiomyopathy in patients with pheochromocytoma or functional paraganglioma.

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

REVISTA / JOURNAL: - Heart. 2013 Jul 9.

- Enlace al texto completo (gratis o de pago) [1136/heartjnl-2013-304073](#)

AUTORES / AUTHORS: - Giavarini A; Chedid A; Bobrie G; Plouin PF; Hagege A; Amar L

INSTITUCIÓN / INSTITUTION: - Universite Paris-Descartes, Sorbonne Paris Cite, Assistance Publique-Hopitaux de Paris, Hopital Europeen Georges Pompidou, Paris cedex 15, France.

RESUMEN / SUMMARY: - OBJECTIVE: Pheochromocytomas and paragangliomas (PPGL) can cause acute catecholamine cardiomyopathy (ACC). We assessed the prevalence of ACC and compared the presentation of cases with and without ACC in a large series of PPGL. DESIGN: Single centre retrospective study. SETTING: Hypertension Unit, University Hospital, Paris. PATIENTS: 140 consecutive patients with PPGL, referred from January 2003 to September 2012. MAIN OUTCOME MEASURES: Left ventricular ejection fraction (LVEF), perioperative mortality. RESULTS: Fifteen patients (11%) had suffered an ACC, occurring in 14 cases before the diagnosis of PPGL. Precipitating factors were identified in 11 cases. Twelve patients presented with acute pulmonary oedema, including 10 with cardiogenic shock, requiring life support in eight cases. Seven patients (five with pulmonary oedema) presented

with acute chest pain and cardiac dysfunction. Electrocardiographic abnormalities were present in 14 cases: ST segment elevation or pathological Q waves, ST segment depression, and/or diffuse T wave inversion. Six patients displayed classical (apical ballooning) or inverted (basal/mid ventricular stunning) takotsubo-like cardiomyopathy. Coronary arteries were always normal on angiography. In patients with ACC, median LVEF rose from 30% (IQR 23-33%) during ACC to 71% (50-72%) before surgery (n=11, p<0.001). Median LVEF before PPGL surgery was 65% (51-72%) and 65% (60-70%) in patients with and without a history of ACC, respectively (not significant). CONCLUSIONS: PPGL may present as ACC in 11% of cases, excluding patients dying from undiagnosed tumours. Left ventricular dysfunction is usually reversible before surgery. PPGL should be suspected in patients with acute heart failure without evidence of valvular or coronary artery disease.

[95]

TÍTULO / TITLE: - Irradiation-induced angiogenesis is associated with an MMP-9-miR-494-syndecan-1 regulatory loop in medulloblastoma cells.

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

REVISTA / JOURNAL: - Oncogene. 2013 Jun 3. doi: 10.1038/onc.2013.151.

●● Enlace al texto completo (gratis o de pago) [1038/onc.2013.151](#)

AUTORES / AUTHORS: - Asuthkar S; Velpula KK; Nalla AK; Gogineni VR; Gondi CS; Rao JS

INSTITUCIÓN / INSTITUTION: - Department of Cancer Biology and Pharmacology, University of Illinois College of Medicine at Peoria, Peoria, IL, USA.

RESUMEN / SUMMARY: - Matrix metalloproteinase-9 (MMP-9) represents one of the most prominent proteins associated with tumorigenesis and is a modulator of the tumor microenvironment during angiogenesis. Recently, syndecan-1 (SDC1), a transmembrane heparan sulfate-bearing proteoglycan, was also speculated to have a critical role in contributing to angiogenesis when associated with MMP-9. However, the mechanism behind their synergistic regulation is not fully understood. In the current study, we report for the first time that ionizing radiation (IR)-induced MMP-9 enhances SDC1 shedding, corroborating to tube-inducing ability of medulloblastoma (MB) cells. Furthermore, we observed that the tumor angiogenesis is associated with higher MMP-9-SDC1 interactions on both the cell surface and extracellular medium. Our results also revealed the existence of a novel regulatory mechanism where MMP-9 drives the suppression of miR-494, resulting in enhanced SDC1 shedding and angiogenesis. From the in situ hybridization analysis, we found that MMP-9-specific shRNA (shMMP-9) treatment of mouse intracranial tumors resulted in elevated expression of miR-494. This negative correlation between MMP-9 and miR-494 levels was observed to be dependent on the methylation status of a miR-494 promoter-associated CpG island region (-186 to -20), which was confirmed by bisulfite-sequencing and methylation-

specific PCR (MSP) analysis. Further, validation of MMP-9 and SDC1 3'-untranslated region (3'-UTR) targets with luciferase reporter assay provided a more favorable result for miR-494-mediated regulation of SDC1 but not of MMP-9, suggesting that the 3'-UTR of SDC1 mRNA is a direct target of miR-494. Overall, our results indicate that angiogenesis induced by radiotherapy is associated with an MMP-9-miR-494-SDC1 regulatory loop and that MMP-9-SDC1 activity creates a negative feedback loop by regulating the expression of miR-494. Oncogene advance online publication, 3 June 2013; doi:10.1038/onc.2013.151.

[96]

TÍTULO / TITLE: - A panel of four cytokines predicts the prognosis of patients with malignant gliomas.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jun 8.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1171-](#)

[X](#)

AUTORES / AUTHORS: - Lin Y; Zhang G; Zhang J; Gao G; Li M; Chen Y; Wang J; Li G; Song SW; Qiu X; Wang Y; Jiang T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, 1st Affiliated Hospital, China Medical University, Shenyang, 110001, People's Republic of China, lilylinyi@gmail.com.

RESUMEN / SUMMARY: - A comprehensive evaluation of cytokine levels in patients with gliomas could provide important information for the progression and host responses of gliomas. We studied a panel of 120 cytokines and growth factors and investigated their prognostic values for glioma. A protein antibody array was first performed to study the prognostic significance of 120 cytokines in the plasma samples of 45 glioblastoma patients prior to craniotomy or biopsy procedure. An independent set of plasma samples from 260 patients with astrocytomas (80 grade II, 80 grade III, 100 grade IV) with complete clinicopathologic data and follow-ups were used for validation. Ten cytokines were identified by significance analysis of microarray, in which four were associated with poor prognosis (IL-15, MCP-1, GDNF, IL-1R4/ST2), and six were associated with good prognosis (IGFBP-6, MIP-1delta, ICAM-3, IL-7, MIP-3beta, and sgp130) of the glioblastoma patients. Moreover, a 4-cytokine panel composed of IL-7, IL1R4/ST2, sgp130 and MCP-1 showed significant correlation with overall survival of the glioblastoma patients (HR 2.068; 95 % CI 1.357-3.153; p = 0.001). In the validation set, the cytokine panel was significantly correlated with overall survival in the 260 glioma patients (HR 3.480, 95 % CI 1.890-6.422) in multivariate Cox regression analysis. It also showed strong correlation with survival in patients with malignant gliomas (grade III: HR 2.790, 95 % CI 1.597-3.984, p = 0.002; grade IV: HR 1.753; 95 % CI 1.502-2.255, p < 0.001). This panel of four cytokines: IL-7, IL1R4/ST2,

sgp130, and MCP-1 can serve as a prognostic marker for patients with malignant gliomas.

[97]

TÍTULO / TITLE: - Detection of EGFRvIII mutant DNA in the peripheral blood of brain tumor patients.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 23.

- Enlace al texto completo (gratis o de pago) [1007/s11060-013-1209-0](#)

AUTORES / AUTHORS: - Salkeni MA; Zarzour A; Ansay TY; McPherson CM; Warnick RE; Rixe O; Bahassi EM

INSTITUCIÓN / INSTITUTION: - Department of Internal Medicine, Division of Hematology/Oncology, University of Cincinnati, 231, Albert Sabin Way, Cincinnati, OH, 45267-0508, USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most aggressive brain tumor in adults and remains incurable despite multimodal intensive treatment regimens including surgical resection, radiation and chemotherapy. EGFRvIII is a truncated extracellular mutant of the EGF receptor (EGFR) found in about a third of GBMs. It confers enhanced tumorigenic behavior and is associated with chemo- and radio-resistance. GBM patients testing positive for EGFRvIII have a bleaker prognosis than those who do not. Targeting EGFRvIII positive tumors via vaccines or antibody-drug-conjugates represents a new challenging therapeutic avenue with potential great clinical benefits. In this study, we developed a strategy to detect EGFRvIII deletion in the circulating tumor DNA. The overall goal is to identify a simple and robust biomarker in the peripheral blood of patients diagnosed with GBM in order to follow their disease status while on treatment. Thirteen patients were included in this study, three of which were found to carry the EGFRvIII deletion. The circulating DNA status for EGFRvIII correlates with the analysis performed on the respective tumor samples, and its level seems to correlate with the extent of the tumor resection. This semi-quantitative blood biomarker may represent a strategy to (1) screen patients for an anti-EGFRvIII therapy and (2) monitor the patients' response to treatment.

[98]

TÍTULO / TITLE: - Long-term treatment of somatostatin analog-refractory growth hormone-secreting pituitary tumors with pegvisomant alone or combined with long-acting somatostatin analogs: a retrospective analysis of clinical practice and outcomes.

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

REVISTA / JOURNAL: - J Exp Clin Cancer Res. 2013 Jun 21;32:40. doi: 10.1186/1756-9966-32-40.

●● Enlace al texto completo (gratis o de pago) [1186/1756-9966-32-40](https://doi.org/10.1186/1756-9966-32-40)

AUTORES / AUTHORS: - Bianchi A; Valentini F; Iuorio R; Poggi M; Baldelli R; Passeri M; Giampietro A; Tartaglione L; Chiloiro S; Appetecchia M; Gargiulo P; Fabbri A; Toscano V; Pontecorvi A; De Marinis L

INSTITUCIÓN / INSTITUTION: - Department of Endocrinology, Catholic University, School of Medicine, Largo A, Gemelli 8, 00168, Rome, Italy.

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RESUMEN / SUMMARY: - BACKGROUND: Pegvisomant (PEGV) is widely used, alone or with somatostatin analogs (SSA), for GH-secreting pituitary tumors poorly controlled by SSAs alone. No information is available on specific indications for or relative efficacies of PEGV+SSA versus PEGV monotherapy. Aim of our study was to characterize real-life clinical use of PEGV vs. PEGV+SSA for SSA-resistant acromegaly (patient selection, long-term outcomes, adverse event rates, doses required to achieve control). METHODS: A retrospective analysis of data collected in 2005-2010 in five hospital-based endocrinology centers in Rome was performed. Sixty-two adult acromegaly patients treated ≥ 6 months with PEGV (Group 1, n=35) or PEGV+SSA (Group 2, n=27) after unsuccessful maximal-dose SSA monotherapy (≥ 12 months) were enrolled. Groups were compared in terms of clinical/biochemical characteristics at diagnosis and before PEGV or PEGV+SSA was started (baseline) and end-of-follow-up outcomes (IGF-I levels, adverse event rates, final PEGV doses). RESULTS: Group 2 showed higher IGF-I and GH levels and sleep apnea rates, higher rates residual tumor tissue at baseline, more substantial responses to SSA monotherapy and worse outcomes (IGF-I normalization rates, final IGF-I levels). Tumor growth and hepatotoxicity events were rare in both groups. Final daily PEGV doses were similar and significantly increased with treatment duration in both groups. CONCLUSIONS: PEGV and PEGV+SSA are safe, effective solutions for managing SSA-refractory acromegaly. PEGV+SSA tends to be used for more aggressive disease associated with detectable tumor tissue. With both regimens, ongoing monitoring of responses is important since PEGV doses needed to maintain IGF-I control are likely to increase over time.

[99]

TÍTULO / TITLE: - Notch1 induced brain tumor models the sonic hedgehog subgroup of human medulloblastoma.

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

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

●● Enlace al texto completo (gratis o de pago) [1158/0008-5472.CAN-13-0033](https://doi.org/10.1158/0008-5472.CAN-13-0033)

AUTORES / AUTHORS: - Natarajan S; Li Y; Miller EE; Shih DJ; Taylor MD; Stearns TM; Bronson RT; Ackerman SL; Yoon J; Yun K

INSTITUCIÓN / INSTITUTION: - Research, The Jackson Laboratory.

RESUMEN / SUMMARY: - While activation of the Notch pathway is observed in many human cancers, it is unknown whether elevated Notch1 expression is sufficient to initiate tumorigenesis in most tissues. To test the oncogenic potential of Notch1 in solid tumors, we expressed an activated form of NOTCH1 (N1ICD) in the developing mouse brain. N1ICD;hGFAP-cre mice were viable but developed severe ataxia and seizures, and died by weaning age. Analysis of transgenic embryonic brains revealed that N1ICD expression induced p53-dependent apoptosis. When apoptosis was blocked by genetic deletion of p53, 30~40% of N1ICD;GFAP-cre;p53+/- and N1ICD;GFAP-cre;p53-/- mice developed spontaneous medulloblastomas. Interestingly, Notch1-induced medulloblastomas most closely resembled the sonic hedgehog (SHH) subgroup of human medulloblastoma at the molecular level. Surprisingly, N1ICD-induced tumors do not maintain high levels of the Notch pathway gene expression, except for Notch2, demonstrating that initiating oncogenic events may not be decipherable by analyzing growing tumors in some cases. In summary, this study demonstrates that Notch1 has an oncogenic potential in the brain when combined with other oncogenic hits, such as p53 loss, and provides a novel mouse model of medulloblastoma.

[100]

TÍTULO / TITLE: - Altered galectin-1 serum levels in patients diagnosed with high-grade glioma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 4.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1201-](#)

[8](#)

AUTORES / AUTHORS: - Verschuere T; Van Woensel M; Fieuws S; Lefranc F; Mathieu V; Kiss R; Van Gool SW; De Vleeschouwer S

INSTITUCIÓN / INSTITUTION: - Laboratory of Experimental Neurosurgery and Neuroanatomy, Department of Neurosciences, KU Leuven, Herestraat 49, ON1 bus 811, 3000, Leuven, Belgium, tina.verschuere@med.kuleuven.be.

RESUMEN / SUMMARY: - High-grade gliomas (HGG) are the most common and most aggressive intrinsic human brain tumors in adults. Galectin-1, a glycan-binding protein that is overexpressed in HGG, has been shown to contribute significantly to the aggressive nature of HGG. It is unknown whether increased galectin-1 expression levels are exclusively found at the tumor site or whether galectin-1 can also be detected in the serum of HGG patients. Galectin-1 serum levels were analyzed in a prospective dataset of 43 healthy controls and 125 patients with newly diagnosed or recurrent HGG. Samples were taken at the moment of surgical resection and/or 2-3 weeks after surgery. Galectin-1

serum levels were determined using an ELISA for galectin-1. Galectin-1 serum levels depended significantly on age and sex in the control group. Age- and sex-adjusted galectin-1 serum levels were significantly higher in all patient subgroups compared to healthy controls with a high discriminative ability that increased with age. We did not observe a significant decrease in the galectin-1 serum levels upon surgical resection of the tumor. Collectively, the data presented here may represent a first step to establish galectin-1 as a biomarker in HGG disease monitoring. Further longitudinal evaluation is required and ongoing to investigate the value of galectin-1 serum levels in HGG patients as an additional diagnostic marker, but more importantly as a predictor of treatment response and prognosis. Furthermore, galectin-1 serum levels could also provide an important tool for the identification of HGG patients that could benefit from galectin-1 directed therapies that are currently under development.

[101]

TÍTULO / TITLE: - Presurgical planning of feeder resection with realistic three-dimensional virtual operation field in patient with cerebellopontine angle meningioma.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1391-9. doi: 10.1007/s00701-013-1761-6. Epub 2013 May 31.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1761-](#)

[6](#)

AUTORES / AUTHORS: - Yoshino M; Kin T; Nakatomi H; Oyama H; Saito N

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Graduate School of Medicine, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8655, Japan, ymasa-ky@umin.ac.jp.

RESUMEN / SUMMARY: - BACKGROUND: To devascularize meningiomas, the precise location of tumor attachment must be known. However, when a cerebellopontine angle (CPA) meningioma is in contact with many surrounding structures, it can be difficult to distinguish the most vascularized attachment (MVA) from other contact surfaces. OBJECTIVE: To validate the usefulness of a virtual operation field (VOF) of a CPA meningioma by high-spatial-resolution three-dimensional computer graphics (hs-3DCG). METHODS: Presurgical simulation with VOF was performed for eight CPA meningiomas to assess the MVA and the appropriate route to the main feeder. For hs-3DCG, the necessary preoperative radiographic images were fused. A hybrid model of volume and surface rendering was created from the fused images. The simulation results were compared with the operative results, and the MVA estimation rate was compared between VOF and contrast-enhanced fast imaging employing steady-state acquisition. RESULTS: By using VOF, the point at which the main feeder penetrated the tumor was estimated in all cases, and using this information, the MVA was detected. All patients underwent resection of the main feeder in the

same way as simulated preoperatively. Estimation rates of MVA were 37.5 % in CE-FIESTA and 100 % in VOF ($p = 0.02$, Fisher's exact test). CONCLUSION: The hs-3DCG method was of sufficiently high quality to enable VOF of CPA meningioma. This method may facilitate estimation of MVA and the main feeder penetration point, and may aid in the determination of the most appropriate approach to the main feeder.

[102]

TÍTULO / TITLE: - Systemic Delivery of SapC-DOPS Has Antiangiogenic and Antitumor Effects Against Glioblastoma.

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

REVISTA / JOURNAL: - Mol Ther. 2013 Aug;21(8):1517-25. doi: 10.1038/mt.2013.114. Epub 2013 Jun 4.

●● Enlace al texto completo (gratis o de pago) [1038/mt.2013.114](#)

AUTORES / AUTHORS: - Wojton J; Chu Z; Mathsyaraja H; Meisen WH; Denton N; Kwon CH; Chow LM; Palascak M; Franco R; Bourdeau T; Thornton S; Ostrowski MC; Kaur B; Qi X

INSTITUCIÓN / INSTITUTION: - Dardinger Laboratory for Neuro-oncology and Neurosciences, Department of Neurological Surgery, The Ohio State University Medical Center, Columbus, Ohio, USA.

RESUMEN / SUMMARY: - Saposin C-dioleoylphosphatidylserine (SapC-DOPS) nanovesicles are a nanotherapeutic which effectively target and destroy cancer cells. Here, we explore the systemic use of SapC-DOPS in several models of brain cancer, including glioblastoma multiforme (GBM), and the molecular mechanism behind its tumor-selective targeting specificity. Using two validated spontaneous brain tumor models, we demonstrate the ability of SapC-DOPS to selectively and effectively cross the blood-brain tumor barrier (BBTB) to target brain tumors in vivo and reveal the targeting to be contingent on the exposure of the anionic phospholipid phosphatidylserine (PtdSer). Increased cell surface expression of PtdSer levels was found to correlate with SapC-DOPS-induced killing efficacy, and tumor targeting in vivo was inhibited by blocking PtdSer exposed on cells. Apart from cancer cell killing, SapC-DOPS also exerted a strong antiangiogenic activity in vitro and in vivo. Interestingly, unlike traditional chemotherapy, hypoxic cells were sensitized to SapC-DOPS-mediated killing. This study emphasizes the importance of PtdSer exposure for SapC-DOPS targeting and supports the further development of SapC-DOPS as a novel antitumor and antiangiogenic agent for brain tumors.

[103]

TÍTULO / TITLE: - Salvianolic Acid B Induces Apoptosis in Human Glioma U87 Cells Through p38-Mediated ROS Generation.

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

REVISTA / JOURNAL: - Cell Mol Neurobiol. 2013 Jul 11.

●● Enlace al texto completo (gratis o de pago) [1007/s10571-013-9958-](https://doi.org/10.1007/s10571-013-9958-z)

[Z](#)

AUTORES / AUTHORS: - Wang ZS; Luo P; Dai SH; Liu ZB; Zheng XR; Chen T

INSTITUCIÓN / INSTITUTION: - Department of Medical Oncology, First Affiliated Hospital of Bengbu Medical College, Bengbu, 233004, Anhui, China, bengyiwangzishu@163.com.

RESUMEN / SUMMARY: - Salvianolic acid B (SalB), the main water-soluble bioactive compounds isolated from the traditional Chinese medical herb Danshen, has been shown to exert anti-cancer effect in several cancer cell lines. The aim of our study was to investigate the potential anti-cancer effect of SalB in human glioma U87 cells. We found that treatment with SalB significantly decreased cell viability of U87 cells in a dose- and time-dependent manner. SalB also enhanced the intracellular ROS generation and induced apoptotic cell death in U87 cells. Western blot analysis suggested that SalB increased the phosphorylation of p38 MAPK and p53 in a dose-dependent manner. Moreover, blocking p38 activation by specific inhibitor SB203580 or p38 specific siRNA partly reversed the anti-proliferative and pro-apoptotic effects, and ROS production induced by SalB treatment. The anti-tumor activity of SalB in vivo was also demonstrated in U87 xenograft glioma model. All of these findings extended the anti-cancer effect of SalB in human glioma cell lines, and suggested that these inhibitory effects of SalB on U87 glioma cell growth might be associated with p38 activation mediated ROS generation. Thus, SalB might be concerned as an effective and safe natural anticancer agent for glioma prevention and treatment.

[104]

TÍTULO / TITLE: - Superoxide-dependent uptake of vitamin C in human glioma cells.

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

REVISTA / JOURNAL: - J Neurochem. 2013 Jul 13. doi: 10.1111/jnc.12365.

●● Enlace al texto completo (gratis o de pago) [1111/jnc.12365](https://doi.org/10.1111/jnc.12365)

AUTORES / AUTHORS: - Rodriguez FS; Salazar KA; Jara NA; Garcia-Robles MA; Perez F; Ferrada LE; Martinez F; Nualart FJ

INSTITUCIÓN / INSTITUTION: - Laboratory of Neurobiology and Stem Cells, Center for Advanced Microscopy CMA BIOBIO, University of Concepcion, Concepcion, Chile.

RESUMEN / SUMMARY: - Glioblastomas are lethal brain tumors that resist current cytostatic therapies. Vitamin C may antagonize the effects of reactive oxygen species (ROS) generating therapies; however, it is often used to reduce therapy-related side effects despite its effects on therapy or tumor growth. Because the mechanisms of vitamin C uptake in gliomas are currently unknown, we evaluated the expression of the sodium-vitamin C cotransporter

(SVCT) and facilitative hexose transporter (GLUT) families in human glioma cells. Additionally, as microglial cells can greatly infiltrate high-grade gliomas (constituting up to 45% of cells in glioblastomas), the effect of TC620 glioma cell interactions with microglial-like HL60 cells on vitamin C uptake (Bystander effect) was determined. Although glioma cells expressed high levels of the SVCT isoform-2 (SVCT2), low functional activity, intracellular localization and the expression of the dominant-negative isoform (dnSVCT2) were observed. The increased glucose metabolic activity of glioma cells was evident by the high 2-Deoxy-D-glucose (2-DOG) and dehydroascorbic acid (DHA) uptake rates through the GLUT isoform-1 (GLUT1), the main DHA transporter in glioblastoma. Co-culture of glioma cells and activated microglial-like HL60 cells resulted in extracellular ascorbic acid (AA) oxidation and high DHA uptake by glioma cells. This Bystander effect may explain the high antioxidative potential observed in high-grade gliomas. This article is protected by copyright. All rights reserved.

[105]

TÍTULO / TITLE: - Spontaneous subarachnoid haemorrhage from rupture of an anterior communicating artery aneurysm in a patient with pituitary macroadenoma.

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

REVISTA / JOURNAL: - Neurocirugia (Astur). 2013 Jul 8. pii: S1130-1473(13)00054-7. doi: 10.1016/j.neucir.2013.03.005.

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

[1016/j.neucir.2013.03.005](#)

AUTORES / AUTHORS: - Almeida Silva J; Campos R; Souza R; Sette Dos Santos M; Aguiar G

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Santa Marcelina de Itaquaquecetuba Hospital, Sao Paulo, Brazil.

RESUMEN / SUMMARY: - The presence of a cerebral aneurysm in patients with pituitary adenoma is a rare event. Diagnostic suspicion may stem from magnetic resonance imaging, which should lead to complementary investigation. As for treatment, even in conditions in which there has been no previous bleeding, the simultaneous approach should be considered, prioritising the aneurysm most of the time. The present report describes the case of a patient with a history of pituitary macroadenoma, who had undergone a partial transsphenoidal resection ten years earlier. Admission to our service occurred after a sudden headache followed by mental confusion. A cranial computed tomography showed subarachnoid haemorrhage and expansive suprasellar lesion. Cerebral angiography showed a saccular aneurysm of the anterior communicating complex. The patient underwent a surgical procedure for microsurgical clipping of the aneurysm and partial resection of the pituitary tumour. We have also included a brief review of the literature on this subject.

[106]

TÍTULO / TITLE: - Intraindividual comparison of histopathological diagnosis obtained by stereotactic serial biopsy to open surgical resection specimen in patients with intracranial tumours.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Jun 14. pii: S0303-8467(13)00175-3. doi: 10.1016/j.clineuro.2013.05.019.

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

[1016/j.clineuro.2013.05.019](#)

AUTORES / AUTHORS: - Reithmeier T; Lopez WO; Doostkam S; Machein MR; Pinsker MO; Trippel M; Nikkhah G

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RESUMEN / SUMMARY: - BACKGROUND: There are concerns in the literature about the accuracy of histopathological diagnosis obtained by stereotactic biopsy in patients with brain tumours. The aim of this study was to analyse intraindividually the histopathological accuracy of stereotactic biopsies of intracerebral lesions in comparison to open surgical resection. MATERIALS AND METHODS: Between 2007 and 2011 a total of 635 patients underwent stereotactic serial biopsy in our department. Among these patients we identified 51 patients, who underwent magnetic resonance (MR) based stereotactic biopsy and subsequent open resection within 30 days. Mortality and morbidity data as well as final histopathological diagnoses of both procedures were compared with regard to tumour grade and tumour cell type. Patients with discrepancies between the histological diagnosis obtained by biopsy and open resection were classified into three subgroups (same cell type but different grading; same grading but different cell type and different grading as well as different cell type). RESULTS: The mean number of tissue samples taken by stereotactic serial biopsy from each patient was 12 (range 7-21). Minor morbidity was 6% and major morbidity was 14% after open surgery compared to no morbidity after stereotactic biopsy. Mortality was 2% after stereotactic biopsy (one patient died after stereotactic biopsy as a result of a fatal bleeding) compared to 0% in the resection group. Silent bleeding rate without any clinical symptoms was 8% in the biopsy group. A complete correlation of histopathological findings between the biopsy group and the resection group was achieved in 76% and was increased to 90% by analyzing clinical and neuroradiological information. In patients with recurrence the correlation was higher (94%) than for patients with primary brain lesions (67%). The discrepancies between the open resection group and biopsy group were analysed. CONCLUSION: Stereotactic MR guided serial biopsy is a minimal

invasive procedure with low morbidity and high diagnostic accuracy for diagnosis and grading of brain tumours. Diagnostic accuracy of stereotactic biopsy can be enhanced further by careful interpretation of neuroradiological and clinical information.

[107]

TÍTULO / TITLE: - Health-related quality of life of significant others of patients with malignant CNS versus non-CNS tumors: a comparative study.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 4.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11060-013-1198-](#)

[Z](#)

AUTORES / AUTHORS: - Boele FW; Heimans JJ; Aaronson NK; Taphoorn MJ; Postma TJ; Reijneveld JC; Klein M

INSTITUCIÓN / INSTITUTION: - Department of Medical Psychology, VU University Medical Center, PO Box 7057, 1007 MB, Amsterdam, The Netherlands, f.boele@vumc.nl.

RESUMEN / SUMMARY: - It is often assumed that brain tumor patients' significant others (SOs: partners, other family members or close friends) may face greater stress than those of patients with malignancies not involving the central nervous system (CNS), due to progressive changes in neurological and cognitive functioning. We compared health-related quality of life (HRQOL) of SOs of patients with high-grade glioma (HGG) and low-grade glioma (LGG) with that of SOs of patients with non-CNS tumors with similar prognosis and at a similar phase in the disease trajectory (i.e. non-small cell lung cancer (NSCLC) and low-grade hematological malignancies (NHL/CLL), respectively). HRQOL of SOs and patients was assessed using the Short Form-36 (SF-36) Health Survey. Patients' neurological functioning was indexed and they underwent comprehensive neurocognitive testing. SOs of 213 LGG patients, 99 NHL/CLL patients, 55 HGG patients and 29 NSCLC patients participated. The SOs of LGG and NHL/CLL patients reported similar levels of HRQOL. SOs of HGG patients reported significantly lower mental health scores (MCS; $p = 0.041$) and social functioning ($p = 0.028$) than those of NSCLC patients. Mental health scores (MCS) of HGG and NSCLC patients were associated significantly with the mental health of their SOs ($p = 0.013$ and $p < 0.001$, respectively). Surprisingly, HGG patients' cognitive and neurological functioning were not predictive of SOs' mental health at the multivariate level. SOs of patients with highly malignant CNS tumors in the acute phase are at increased risk of compromised HRQOL compared to those of patients with systemic tumors without CNS involvement and a comparable life expectancy.

[108]

TÍTULO / TITLE: - Modulating Roles of Amiloride in Irradiation-Induced Antiproliferative Effects in Glioblastoma Multiforme Cells Involving Akt Phosphorylation and the Alternative Splicing of Apoptotic Genes.

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

REVISTA / JOURNAL: - DNA Cell Biol. 2013 Jul 3.

●● [Enlace al texto completo \(gratis o de pago\) 1089/dna.2013.1998](#)

AUTORES / AUTHORS: - Tang JY; Chang HW; Chang JG

INSTITUCIÓN / INSTITUTION: - 1 Department of Radiation Oncology, Faculty of Medicine, College of Medicine, Kaohsiung Medical University , Kaohsiung, Taiwan .

RESUMEN / SUMMARY: - Apoptosis is a key mechanism for enhanced cellular radiosensitivity in radiation therapy. Studies suggest that Akt signaling may play a role in apoptosis and radioresistance. This study evaluates the possible modulating role of amiloride, an antihypertensive agent with a modulating effect to alternative splicing for regulating apoptosis, in the antiproliferative effects induced by ionizing radiation (IR) in glioblastoma multiforme (GBM) 8401 cells. Analysis of cell viability showed that amiloride treatment significantly inhibited cell proliferation in irradiated GBM8401 cells ($p < 0.05$) in a time-dependent manner, especially in cells treated with amiloride with IR post-treatment. In comparison with GBM8401 cells treated with amiloride alone, with GBM8401 cells treated with IR alone, and with human embryonic lung fibroblast control cells (HEL 299), GBM8401 cells treated with IR combined with amiloride showed increased overexpression of phosphorylated Akt, regardless of whether IR treatment was performed before or after amiloride administration. The alternative splicing pattern of apoptotic protease-activating factor-1 (APAF1) in cells treated with amiloride alone, IR alone, and combined amiloride-IR treatments showed more consistent cell proliferation compared to that in other apoptosis-related genes such as baculoviral IAP repeat containing 5 (BIRC5), Bcl-X, and homeodomain interacting protein kinase-3 (HIPK3). In GBM8401 cells treated with amiloride with IR post-treatment, the ratio of pro-survival (-XL,-LC) to pro-apoptotic (-LN,-S) splice variants of APAF1 was lower than that seen in cells treated with amiloride with IR pretreatment, suggesting that pro-apoptotic splice variants of APAF1 (APAF1-LN,-S) were higher in the glioblastoma cells treated with amiloride with IR post-treatment, as compared to glioblastoma cells and fibroblast control cells that had received other treatments. Together, these results suggest that amiloride modulates cell radiosensitivity involving the Akt phosphorylation and the alternative splicing of APAF1, especially for the cells treated with amiloride with IR post-treatment. Therefore, amiloride may improve the effectiveness of radiation therapy for GBMs.

[109]

TÍTULO / TITLE: - Does midline shift predict postoperative nausea in brain tumor patients undergoing awake craniotomy? A retrospective analysis.

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

REVISTA / JOURNAL: - Curr Med Res Opin. 2013 Jul 16.

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

[1185/03007995.2013.811071](#)

AUTORES / AUTHORS: - Ouyang MW; McDonagh DL; Phillips-Bute B; James ML; Friedman AH; Gan TJ

INSTITUCIÓN / INSTITUTION: - Nanfang Hospital, Southern Medical University , Guangzhou, Guangdong , China.

RESUMEN / SUMMARY: - Abstract Background: The presence of midline shift on neuroradiologic studies in brain tumor patients represents mass effect from the tumor and surrounding edema. We hypothesized that baseline cerebral edema as measured by midline shift would increase postoperative nausea (PON). We studied the incidence of PON in brain tumor patients, with and without midline shift on preoperative magnetic resonance (MRI) or computed tomographic (CT) imaging, undergoing awake craniotomy. Methods: After IRB approval, we retrospectively extracted data from perioperative records between January 2005 and December 2010. Post-craniotomy nausea and pain scores were collected. Intraoperative anti-emetic, anesthetic, and analgesic regimens were assessed. Both the rescue anti-emetic and cumulative postoperative analgesic requirements were collected up to 12 hours postoperatively. The amount of midline shift on preoperative neuroimaging was gathered from radiology reports. Univariate comparisons between groups (no midline shift vs. midline shift) were made with t-tests for continuous variables, and chi-square tests for categorical variables. A multivariable analysis was performed to identify predictors of postoperative nausea. Limitations of this study include the retrospective design and the inability to gather accurate data regarding vomiting from the medical record. Results: Data from 386 patients were available for analysis. Patients were divided into two groups: no midline shift (n = 283) and midline shift (n = 103). The mean midline shift distance was 5.96 mm (95% CI [5.32, 6.59]). There was no difference in the incidence of nausea or pain scores between the two groups. More malignant brain tumor patients were in the midline shift group, as determined by the postoperative histopathological diagnosis (P < 0.05). Patients in the midline shift group also had longer anesthesia and surgical times (P < 0.05). Conclusion: In patients undergoing a standardized anesthetic for awake craniotomy for tumor resection, the presence of preoperative midline shift did not correlate with postoperative nausea.

[110]

TÍTULO / TITLE: - Comparison of postoperative nausea between benign and malignant brain tumor patients undergoing awake craniotomy: a retrospective analysis.

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

REVISTA / JOURNAL: - Curr Med Res Opin. 2013 Jul 16.

- Enlace al texto completo (gratis o de pago)

[1185/03007995.2013.811070](#)

AUTORES / AUTHORS: - Ouyang MW; McDonagh DL; Phillips-Bute B; James ML; Friedman AH; Gan TJ

INSTITUCIÓN / INSTITUTION: - Nanfang Hospital, Southern Medical University, Guangzhou, Guangdong, China.

RESUMEN / SUMMARY: - Abstract Background: Benign and malignant brain tumors have different histopathological characteristics, including different degrees of tissue infiltration and inflammatory response. The aim of this retrospective study was to compare the incidence of postoperative nausea between the two categories of brain tumors in patients undergoing awake craniotomy. Methods: After IRB approval, we retrospectively extracted data from perioperative records between January 2005 and December 2010. Patients were divided based on the postoperative histopathological diagnosis into two groups, benign and malignant. The incidence of nausea, rescue antiemetics, pain scores and postoperative analgesic requirements were compared between the two groups up to 12 hours postoperatively. Intraoperative antiemetic, anesthetic, and analgesic regimens were also assessed. Limitations of this study include the retrospective design, the arbitrary dichotomization of tumors as benign or malignant, and the inability to gather accurate data regarding vomiting from the medical record. Results: Data from 415 patients were available for analysis, with 115 patients in the benign group and 300 patients in the malignant tumor group. A higher postoperative mean pain score was found in the benign brain tumor group compared to the malignant brain tumor group ($P < 0.05$). However, there was no difference in the incidence of nausea between the two groups. Conclusion: The different histopathological characteristics of brain tumors have no association with postoperative nausea in patients undergoing awake craniotomy. Patients with benign brain tumors experience more pain than patients with malignant brain tumors. This difference in postoperative pain may be due to the younger age of the patients in the benign group.

[111]

TÍTULO / TITLE: - Body mass index and the risk of meningioma, glioma and schwannoma in a large prospective cohort study (The HUNT Study).

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

REVISTA / JOURNAL: - Br J Cancer. 2013 Jul 9;109(1):289-94. doi: 10.1038/bjc.2013.304. Epub 2013 Jun 18.

- Enlace al texto completo (gratis o de pago) [1038/bjc.2013.304](#)

AUTORES / AUTHORS: - Wiedmann M; Brunborg C; Lindemann K; Johannesen TB; Vatten L; Helseth E; Zwart JA

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Oslo University Hospital, 0407 Oslo, Norway.

RESUMEN / SUMMARY: - Background: Obesity increases the risk for a number of solid malignant tumours. However, it is not clear whether body mass index (BMI) and height are associated with the risk of primary tumours of the central nervous system (CNS). Methods: In a large population study (The Nord-Trøndelag Health Study (HUNT Study)) of 74 242 participants in Norway, weight and height were measured. During follow-up, incident CNS tumours were identified by individual linkage to the Norwegian Cancer Registry. Sex- and age-adjusted and multivariable Cox regression analyses were used to evaluate BMI and height in relation to the risk of meningioma, glioma and schwannoma. Results: A total of 138 meningiomas, 148 gliomas and 39 schwannomas occurred during 23.5 years (median, range 0-25) of follow-up. In obese women (BMI ≥ 30 kg m⁻²), meningioma risk was 67% higher (hazard ratio (HR)=1.68, 95% confidence interval (CI): 0.97-2.92, P-trend=0.05) than in the reference group (BMI 20-24.9 kg m⁻²), whereas no association with obesity was observed in males. There was no association of BMI with glioma risk, but there was a negative association of overweight/obesity (BMI ≥ 25 kg m⁻²) with the risk of schwannoma (HR=0.48, 95% CI: 0.23-0.99). However, the schwannoma analysis was based on small numbers. Height was not associated with the risk for any tumour subgroup. Conclusion: These results suggest that BMI is positively associated with meningioma risk in women, and possibly, inversely associated with schwannoma risk.

[112]

TÍTULO / TITLE: - Decreased inhibitory neuronal activity in patients with frontal lobe brain tumors with seizure presentation: Preliminary study using magnetoencephalography.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Jun 25.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1781-](http://dx.doi.org/10.1007/s00701-013-1781-2)

[2](#)

AUTORES / AUTHORS: - Chang WS; Kim BS; Jung HH; Kim K; Kwon HC; Lee YH; Chang JW

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Brain Research Institute, Yonsei University College of Medicine, 205 Seongsanno Seodaemun-gu, Seoul, 120-752, Korea.

RESUMEN / SUMMARY: - BACKGROUND: Although 30-50 % of patients with brain tumors experience epileptic seizure as the presenting clinical symptom, and another 10-30 % are at risk for developing epilepsy in the later stages of the disease, the mechanisms of tumor-related epileptogenesis are poorly understood. We used magnetoencephalography (MEG) to investigate sensory evoked fields (SEFs) in patients with frontal lobe brain tumors as a means of

evaluating the neuronal activity of peri-tumoral cortex. METHODS: Twelve patients with frontal lobe brain tumors underwent MEG. We calculated the equivalent current dipole strength of two components of the primary sensory cortical response (N20m and P35m) and compared the P35m/N20m ratio in the tumor hemisphere vs. the normal hemisphere. There were two subsets of patients: group I, in which P35m/N20m was higher in the tumor hemisphere (n = 7), and group II, in which P35m/N20m was higher in the normal hemisphere (n = 5). We looked for associations between clinical factors and P35m/N20m within each group. RESULTS: All patients with seizure presentation were in group I, whereas only two patients without seizure presentation were in group I (Fisher exact test, p = 0.028). No other clinical factors were related to P35m/N20m. The mean ratio of P35m/N20m equivalent current dipole strength in patients with seizure presentation was 4.07 +/- 2.38 in the tumor hemisphere and 2.00 +/- 0.55 in the normal hemisphere. This difference was statistically significant (Mann-Whitney test, p = 0.030). CONCLUSION: The paradoxical increase in P35m/N20m in patients with seizure presentation suggests that decreased inhibitory neuronal activity is a potential cause of tumor-related epilepsy.

[113]

TÍTULO / TITLE: - Silencing of the Smad nuclear interacting protein 1 (SNIP1) by siRNA inhibits proliferation and induces apoptosis in pituitary adenoma cells.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Jul 30.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-0873-](http://1007/s13277-013-0873-1)

[1](#)

AUTORES / AUTHORS: - Chen X; Xue F; Xie T; Luo C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Changzheng Hospital, Second Military Medical University, No. 415 FengYang Road, Shanghai, 200003, China.

RESUMEN / SUMMARY: - Smad nuclear interacting protein 1 (SNIP1) gene encodes a protein that contains a conservative C-terminal forkhead-associated domain and functions as a transcriptional coactivator to regulate cell proliferation and cancer progression. This study aimed to investigate the clinical and biological significance of SNIP1 expression in pituitary adenoma. We analyzed SNIP1 expressions in mouse fibroblast L929 cells and mouse pituitary adenoma AtT-20 cells by Western blotting. SNIP1 gene knockdown by small interfering RNA (siRNA) transfection was performed to evaluate SNIP1 function in pituitary adenoma cell lines. As expected, SNIP1 was found to be upregulated in pituitary adenoma cells. The mRNA and protein levels of SNIP1 were inhibited in AtT-20 cells transfected with siRNAs, which led to decreased proliferation, increased apoptosis, and cycle arrest of pituitary adenoma cells.

Concomitantly, c-Myc and cyclin D1 protein levels were reduced. These findings may provide novel targets for the treatment of pituitary adenoma.

[114]

TÍTULO / TITLE: - Calcineurin regulates Nuclear Factor I dephosphorylation and activity in malignant glioma cell lines.

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

REVISTA / JOURNAL: - J Biol Chem. 2013 Jul 9.

●● Enlace al texto completo (gratis o de pago) [1074/jbc.M113.455832](#)

AUTORES / AUTHORS: - Brun M; Glubrecht DD; Baksh S; Godbout R

INSTITUCIÓN / INSTITUTION: - University of Alberta, Canada.

RESUMEN / SUMMARY: - Malignant gliomas (MG), comprising grades III and IV astrocytomas, are the most common adult brain tumors. These tumors are highly aggressive with a median survival of less than two years. Nuclear Factor I (NFI) is a family of transcription factors that regulates the expression of glial genes in the developing brain. We have previously shown that regulation of the brain fatty acid-binding protein (B-FABP) and glial fibrillary acidic protein (GFAP) genes in MG cells is dependent on the phosphorylation state of NFI, with hypophosphorylation of NFI correlating with GFAP and B-FABP expression. Importantly, NFI phosphorylation is dependent on phosphatase activity that is enriched in GFAP/B-FABP+ve cells. Using chromatin immunoprecipitation, we show that NFI occupies the GFAP and B-FABP promoters in NFI-hypophosphorylated GFAP/B-FABP+ve MG cells. NFI occupancy, NFI-dependent transcription activity and NFI phosphorylation are all modulated by the serine/threonine phosphatase calcineurin. Importantly, a cleaved form of calcineurin, associated with increased phosphatase activity, is specifically expressed in NFI-hypophosphorylated GFAP/B-FABP+ve MG cells. Calcineurin in GFAP/B-FABP+ve MG cells localizes to the nucleus. In contrast, calcineurin is primarily found in the cytoplasm of GFAP/B-FABP-ve cells, suggesting a dual mechanism for calcineurin activation in MG. Finally, our results demonstrate that calcineurin expression is upregulated in areas of high infiltration/migration in grade IV astrocytoma tumor tissue. Our data suggest a critical role for calcineurin in NFI transcriptional regulation and in the determination of MG infiltrative properties.

[115]

TÍTULO / TITLE: - 122 Pediatric radiation-associated meningiomas: distinct clinical, pathological, and cytogenetic characteristics.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:160. doi: 10.1227/01.neu.0000432713.86251.03.

- Enlace al texto completo (gratis o de pago)

[1227/01.neu.0000432713.86251.03](https://doi.org/10.1227/01.neu.0000432713.86251.03)

AUTORES / AUTHORS: - Elbabaa SK; Gokden M; Crawford J; Kesari S; Saad AG

RESUMEN / SUMMARY: - INTRODUCTION: Radiation-associated meningiomas (RAMs) arise after treatment with radiation to the cranium and are recognized as clinically separate from sporadic meningiomas. Limited information exists about the clinical, pathological, and cytogenetic features of RAMs in pediatric patients. We report the findings in 9 children with meningiomas following therapeutic radiation to the cranium. METHODS: Medical files were searched for patients who demonstrated meningiomas after a history of radiation to the brain. Only those patients in whom a meningioma occurred before the age of 18 years were included in this study. Clinical and demographic data along with the MIB-1 labeling index and cytogenetic studies were evaluated. RESULTS: The patients consisted of 5 males and 4 females with a median age of 5 years (range 2-10 years) at radiation therapy. The latency period was a median of 10 years after radiation therapy (range 6-13 years). MIB-1 labeling index was a median of 6.6% (range 4%-10%). There was no statistical difference in the MIB-1 LI between patients in whom the tumor recurred vs those who were disease free ($P = .29$). Five patients (55.6%) displayed multiple meningiomas at the first presentation. Histological types included clear cell meningioma in 1 patient, fibroblastic meningioma in 2, chordoid meningioma in 2, meningothelial meningioma in 7 (atypical in 2 cases), xanthomatous meningioma in 1 and chordoid meningioma in 1. Cytogenetic studies showed that the loss of 22q12.2 was the most common abnormality (3 patients), followed by complex cytogenetic abnormalities (2 patients) and rearrangements between chromosomes 1 and 12 (1 patient) and 1p deletion (1 patient). CONCLUSION: In contrast to RAMs occurring in adults, those in pediatric patients show an increased incidence of multiplicity on first presentation and unusual histological variants, some of which are described here for the first time. There was no difference in the MIB-1 labeling index in children with RAMs as compared with that in children with non-RAMs.

[116]

TÍTULO / TITLE: - Central nervous system involvement in systemic malignant atrophic papulosis (Degos disease): a case report.

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

REVISTA / JOURNAL: - Int J Dermatol. 2013 Jun 20. doi: 10.1111/ijd.12123.

- Enlace al texto completo (gratis o de pago) [1111/ijd.12123](https://doi.org/10.1111/ijd.12123)

AUTORES / AUTHORS: - Su Z; Lu Y; Ge Y; Jiang J; Jia Z; Zhu F; Zhang M; Ji C; Tang Y; Wei J; Gao Q; Wang H

INSTITUCIÓN / INSTITUTION: - Center for Translational Medicine and Jiangsu Key Laboratory of Molecular Medicine, Medical School of Nanjing University,

Nanjing, China; Department of Dermatology, The First Affiliated Hospital of Nanjing Medical University, Nanjing, China.

[117]

TÍTULO / TITLE: - Acquired resistance to anti-VEGF therapy in glioblastoma is associated with a mesenchymal transition.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Jun 26.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-1557](#)

AUTORES / AUTHORS: - Piao Y; Liang J; Holmes LS; Henry V; Sulman EP; de Groot JF

INSTITUCIÓN / INSTITUTION: - Neuro-Oncology, UT - MD Anderson Cancer Center.

RESUMEN / SUMMARY: - PURPOSE: Antiangiogenic therapy reduces vascular permeability and delays progression but may ultimately promote an aggressive treatment-resistant phenotype. The aim of the present study was to identify mechanisms responsible for glioblastoma resistance to antiangiogenic therapy. EXPERIMENTAL DESIGN: Glioma stem cell (GSC) NSC11 and U87 cell lines with acquired resistance to bevacizumab were developed from orthotopic xenografts in nude mice treated with bevacizumab. Genome wide analyses were used to identify changes in tumor subtype and specific factors associated with resistance. RESULTS: Mice with established parental NSC11 and U87 cells responded to bevacizumab, whereas glioma cell lines derived at the time of acquired resistance to anti-VEGF therapy were resistant to bevacizumab and did not have prolongation of survival compared to untreated controls. Gene expression profiling comparing anti-VEGF therapy-resistant cell lines to untreated controls demonstrated an increase in genes associated with a mesenchymal origin, cellular migration/invasion, and inflammation. Gene Set Enrichment Analysis (GSEA) demonstrated that bevacizumab-treated tumors showed a highly significant correlation to published mesenchymal gene signatures. Mice bearing resistant tumors showed significantly greater infiltration of myeloid cells in NSC11 and U87 resistant tumors. Invasion-related genes were also upregulated in both NSC11 and U87 resistant cells which had higher invasion rates in vitro compared with their respective parental cell lines. CONCLUSIONS: Our studies identify multiple pro-inflammatory factors associated with resistance and identify a proneural to mesenchymal transition (PMT) in tumors resistant to antiangiogenic therapy.

[118]

TÍTULO / TITLE: - Construction of an Immunotoxin, D2C7-(scdsFv)-PE38KDEL, Targeting EGFRwt and EGFRvIII for Brain Tumor Therapy.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Aug 7.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-3891](#)

AUTORES / AUTHORS: - Chandramohan V; Bao X; Keir ST; Pegram CN; Szafranski SE; Piao H; Wikstrand CJ; McLendon RE; Kuan CT; Pastan IH; Bigner DD

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Preston Robert Tisch Brain Tumor Center at Duke and Department of Pathology, Duke University Medical Center, Durham, North Carolina; Laboratory of Molecular Biology, Center for Cancer Research, National Cancer Institute, NIH, Bethesda, Maryland; Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai, China; and Saba University School of Medicine, Saba, Dutch Caribbean.

RESUMEN / SUMMARY: - **PURPOSE:** The EGF receptor gene (EGFR) is most frequently amplified and overexpressed, along with its deletion mutant, EGFRvIII, in glioblastoma. We tested the preclinical efficacy of the recombinant immunotoxin, D2C7-(scdsFv)-PE38KDEL, which is reactive with a 55-amino acid (AA) region present in the extracellular domain of both EGFRwt (583-637 AAs) and EGFRvIII (292-346 AAs) proteins. **EXPERIMENTAL DESIGN:** The binding affinity and specificity of D2C7-(scdsFv)-PE38KDEL for EGFRwt and EGFRvIII were measured by surface-plasmon resonance and flow cytometry. In vitro cytotoxicity of D2C7-(scdsFv)-PE38KDEL was measured by inhibition of protein synthesis in human EGFRwt-transfected NR6 (NR6W), human EGFRvIII-transfected NR6 (NR6M), EGFRwt-overexpressing A431-epidermoid-carcinoma, and glioblastoma xenograft cells (43, D08-0493MG, D2159MG, and D270MG). In vivo antitumor efficacy of D2C7-(scdsFv)-PE38KDEL was evaluated using 43, NR6M, and D270MG orthotopic tumor models. **RESULTS:** The KD of D2C7-(scdsFv)-PE38KDEL for EGFRwt and EGFRvIII was 1.6×10^{-9} mol/L and 1.3×10^{-9} mol/L, respectively. Flow cytometry with NR6W and NR6M cells confirmed the specificity of D2C7-(scdsFv)-PE38KDEL for EGFRwt and EGFRvIII. The D2C7-(scdsFv)-PE38KDEL IC₅₀ was 0.18 to 2.5 ng/mL on cells expressing EGFRwt (NR6W, A431, 43, and D08-0493MG). The D2C7-(scdsFv)-PE38KDEL IC₅₀ was approximately 0.25 ng/mL on EGFRvIII-expressing cells (NR6M) and on EGFRwt- and EGFRvIII-expressing glioblastoma xenograft cells (D2159MG and D270MG). Significantly, in intracranial tumor models of 43, NR6M, and D270MG, treatment with D2C7-(scdsFv)-PE38KDEL by convection-enhanced delivery prolonged survival by 310% (P = 0.006), 28% (P = 0.002), and 166% (P = 0.001), respectively. **CONCLUSIONS:** In preclinical studies, the D2C7-(scdsFv)-PE38KDEL immunotoxin exhibited significant potential for treating brain tumors expressing EGFRwt, EGFRvIII, or both. Clin Cancer Res; 1-11. ©2013 AACR.

TÍTULO / TITLE: - Seizure recurrence in patients with solitary cystic granuloma or single parenchymal cerebral calcification: A comparative evaluation.

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

REVISTA / JOURNAL: - Seizure. 2013 Jul 20. pii: S1059-1311(13)00194-5. doi: 10.1016/j.seizure.2013.07.001.

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

[1016/j.seizure.2013.07.001](#)

AUTORES / AUTHORS: - Sharma LN; Garg RK; Verma R; Singh MK; Malhotra HS

INSTITUCIÓN / INSTITUTION: - Department of Neurology, King George Medical University, Lucknow, Uttar Pradesh, India.

RESUMEN / SUMMARY: - BACKGROUND: Solitary cysticercus granuloma and single parenchymal calcified lesion are two common neuroimaging abnormalities in Indian patients with epilepsy. In this study, we evaluated the frequency and predictors of seizure recurrence in patients presenting with new onset epilepsy or single epileptic seizures and these two different imaging findings. MATERIALS AND METHODS: We enrolled 115 patients with newly diagnosed epilepsy. All patients were clinically evaluated and were treated with oxcarbazepine. No anti-helminthic treatment was prescribed. The patients were followed up for 6 months. In the solitary cystic granuloma group, repeat computed tomography was done after 6 months. RESULTS: The study included 80 patients with solitary cysticercus granuloma and 35 patients with a single calcified lesion. Twenty (25%) patients with solitary cysticercus granuloma and 12 (34.3%) patients with parenchymal calcified lesion had a seizure recurrence during the study period ($p=0.307$). After 6 months, 57 (71.3%) patients in the solitary cysticercus granuloma group demonstrated complete resolution of the granuloma and in 21 (26.2%) patients the granuloma transformed into a calcified lesion. In the solitary cysticercus granuloma group, a family history of seizure, serial seizures and calcification on follow-up neuroimaging ($p<0.05$) were significantly associated with recurrence of seizures. In patients with a single parenchymal calcified lesions, electroencephalographic abnormalities and serial seizures ($p<0.05$) were significant predictors of recurrence. Kaplan-Meier statistics revealed that the seizure recurrence rate was insignificantly higher in patients with calcified lesions than in patients with solitary cysticercosis granulomas. CONCLUSION: In conclusion, in patients with solitary cysticercus granuloma, a family history of seizures, serial seizures and calcification of the granuloma, and in patients with a calcified brain lesion, electroencephalographic abnormalities, family history of epilepsy and serial seizures were associated with an increased risk of seizure recurrence.

[120]

TÍTULO / TITLE: - Volumetric trends associated with MRI-guided laser-induced thermal therapy (LITT) for intracranial tumors.

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

REVISTA / JOURNAL: - Lasers Surg Med. 2013 Aug;45(6):362-9. doi: 10.1002/lsm.22151. Epub 2013 Jun 14.

●● Enlace al texto completo (gratis o de pago) 1002/lsm.22151

AUTORES / AUTHORS: - Patel NV; Jethwa PR; Barrese JC; Hargreaves EL; Danish SF

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, UMDNJ-Robert Wood Johnson Medical School, New Brunswick, New Jersey.

RESUMEN / SUMMARY: - BACKGROUND: MR-guided Laser Induced Thermal Therapy (LITT) is a procedure for intracranial tumors. Minimal data exists regarding post-procedure lesion volume changes. OBJECTIVES: We aim to analyze changes in lesion volume during the post-LITT period using polygonal tracing with fusion. Additionally, we investigated the role of lesion histopathology on LITT parameters and volume dynamics. METHODS: Sixteen patients with intracranial neoplasms received LITT. Using OsiriX DICOM Viewer, three raters computed lesion volumes at the following: pre-ablation (PreA), immediate post-ablation (IPA), 24 hours post-ablation (24PA), and first follow-up post-ablation (FPA), which ranged from 4 to 11 weeks post-ablation. Statistical analyses for volume changes between time points and inter-rater reliability were performed. Additionally, comparisons were made between metastatic versus non-metastatic and small versus large lesions in terms of operative parameters and volume changes. RESULTS: There was an acute increase in volume at IPA with a decrease in size by 24PA. ANOVA among inter-rater datasets showed no significant difference at any time point (highest $F(1,15) = 0.225$, $P > 0.80$, for IPA). GLM repeated measures, for Intra-Rater analysis, demonstrated statistically significant differences across time points (lowest $F(1,15) = 13.297$, $P = 0.003$). IPA volumes were larger than those at PreA, 24PA, and FPA (average volume increase [95% CI]: 281% [157-404%], 167% [134-201%], 187% [154-219%], respectively; all $P < 0.004$). Correlation analysis showed lower inter-rater reliability at IPA versus other time points (all $P < 0.03$). Larger lesions ($>2.5 \text{ cm}^3$) versus smaller ($<2.5 \text{ cm}^3$) did not demonstrate a difference in percent volume increase. Operative parameters and volume dynamics were not different between metastatic and non-metastatic groups. CONCLUSIONS: The response of intracranial lesions to LITT demonstrates a peak in volume at the IPA time point with decreased IPA inter-rater reliability. We recommend that conclusions about intracranial lesion size post-LITT be made at least 24 hours post-LITT rather than immediately after LITT. Lasers Surg. Med. 45:362-369, 2013. © 2013 Wiley Periodicals, Inc.

[121]

TÍTULO / TITLE: - Peptide vaccine therapy for childhood gliomas.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:113-9. doi: 10.1227/01.neu.0000430769.33467.68.

- Enlace al texto completo (gratis o de pago)

[1227/01.neu.0000430769.33467.68](https://doi.org/10.1016/j.neu.0000430769.33467.68)

AUTORES / AUTHORS: - Pollack IF; Jakacki RI; Butterfield LH; Okada H

[122]

TÍTULO / TITLE: - Development of a gene/drug dual delivery system for brain tumor therapy: Potent inhibition via RNA interference and synergistic effects.

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

REVISTA / JOURNAL: - Biomaterials. 2013 Oct;34(30):7483-94. doi: 10.1016/j.biomaterials.2013.06.010. Epub 2013 Jun 29.

- Enlace al texto completo (gratis o de pago)

[1016/j.biomaterials.2013.06.010](https://doi.org/10.1016/j.biomaterials.2013.06.010)

AUTORES / AUTHORS: - Lei C; Cui Y; Zheng L; Kah-Hoe Chow P; Wang CH

INSTITUCIÓN / INSTITUTION: - Department of Chemical and Biomolecular Engineering, National University of Singapore, 4 Engineering Drive 4, Singapore 117576, Singapore.

RESUMEN / SUMMARY: - Malignant brain tumors are characterized by three major physiological processes: proliferation, angiogenesis, and invasion. Traditional cytotoxic chemotherapies (e.g. Paclitaxel) control the tumor by blocking growth and proliferation mechanisms, but leave angiogenesis and invasion unchecked. We identified Matrix metalloproteinase-2 (MMP-2), an essential proteinase regulating brain tumor invasion and angiogenesis, as one of the therapeutic target. A designer RNAi plasmid was developed, and complexed with the gene carrier polyethylenimine (PEI), in an effort to specifically suppress MMP-2 expression in tumor cells. The gene and a cytotoxic drug Paclitaxel were then dual-encapsulated in PLGA based submicron implants to achieve a sustained release of both agents. Potent inhibition effects on MMP-2 mRNA and protein expression, in vitro cell angiogenesis and invasion were demonstrated both on the PEI/DNA nanoparticles alone, and on the PEI/DNA nanoparticles embedded in microfibers. Most importantly, through in vivo test on intracranial xenograft tumor model in BALB/c nude mice, it was proved that the gene/drug dual delivery microfibers are able to impose significant tumor regression compared with single drug delivery microfibers and commercial drug treatment, showing evidence for synergistic therapeutic efficacy.

[123]

TÍTULO / TITLE: - 148 Extent of resection of glioblastoma revisited: personalized survival modeling facilitates more accurate individualized survival prediction and supports a “maximum safe resection” approach surgery.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:169. doi: 10.1227/01.neu.0000432739.71828.ce.

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

1227/01.neu.0000432739.71828.ce

AUTORES / AUTHORS: - Frank Marko N; Weil RJ; Schroder JL; Sawaya R

RESUMEN / SUMMARY: - INTRODUCTION: Approximately 12,000 glioblastomas are diagnosed annually in the US. Median survival is 12 months, but individual survival varies with patient-specific factors, including extent of surgical resection (EOR). There is currently no reliable strategy for personalized survival prediction or for predicting the quantitative relationship between survival, EOR, and adjuvant chemoradiation. METHODS: We used accelerated failure time (AFT) modeling with data from 721 glioblastoma patients (1993-2010) to model the factors affecting individualized survival after surgical resection, and we validated this model with data from 109 novel patients from a second institution. The model was then used to construct patient-specific survival curves and to compute personalized estimates of the quantitative relationship between survival, EOR, and adjuvant chemoradiation. RESULTS: Age, KPS, EOR, and adjuvant chemoradiation were identified as statistically-significant predictors of survival and were used to build a nonlinear, multivariate AFT survival model. The model's median predictive error is 4.37 months, representing >20% improvement over current predictive methods. Survival vs EOR curves illustrate a continuous relationship, which can be quantified explicitly for individual patients using the AFT model. Similar quantitative analysis can also be performed to model the individualized survival effects of adjuvant chemoradiation. CONCLUSION: Personalized, nonlinear, multivariate AFT modeling significantly outperforms current methods for estimating personalized median survival after glioblastoma resection. The model can be used to generate individualized survival curves and to quantify the relationship between variables contributing to an individual patient's survival. This approach provides comprehensive, personalized, probabilistic information to patients and clinicians regarding the anticipated course of disease, the overall prognosis, and the patient-specific influence of EOR and adjuvant chemoradiation. Additionally, the continuous, nonlinear relationship between expected median survival and EOR argues against a surgical management strategy based on rigid EOR thresholds and instead supports a "maximum safe resection" paradigm for glioblastoma surgery.

[124]

TÍTULO / TITLE: - Glioblastoma survival in the United States improved after Food and Drug Administration approval of bevacizumab: A population-based analysis.

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

REVISTA / JOURNAL: - Cancer. 2013 Jul 18. doi: 10.1002/cncr.28259.

- Enlace al texto completo (gratis o de pago) [1002/cncr.28259](https://doi.org/10.1002/cncr.28259)

AUTORES / AUTHORS: - Johnson DR; Leeper HE; Uhm JH

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Mayo Clinic, Rochester, Minnesota.

RESUMEN / SUMMARY: - BACKGROUND: Bevacizumab received US Food and Drug Administration approval for use in recurrent glioblastoma based on promising radiographic response data, but without clear evidence that it prolongs survival. A population-based analysis was conducted to determine whether bevacizumab approval was associated with improved glioblastoma survival in the United States. METHODS: Surveillance, Epidemiology, and End Results (SEER) Program data were used to compare survival of glioblastoma patients who died in 2006, 2008 (both prior to approval of bevacizumab), and 2010 (after approval of bevacizumab). RESULTS: The SEER database contained 1715 patients with glioblastoma who died in 2006, 1924 who died in 2008, and 1968 who died in 2010 who met study inclusion criteria. Median survival was 8 months for those who died in 2006, 7 months in 2008, and 9 months in 2010. The difference in survival between 2008 (pre-bevacizumab) and 2010 (post-bevacizumab) was highly significant. This difference is unlikely to be due to improvements in supportive care in this short interval, because there was no significant difference ($P = .4440$) between patients who died in 2006 versus those who died in 2008. Between 2008 and 2010, a statistically significant improvement in survival was seen in all age groups except those patients aged 18 to 39 years. CONCLUSIONS: Patients who died of glioblastoma in 2010 had lived with disease significantly longer than patients who died in 2008. The most likely explanation for this change is the approval and use of bevacizumab for progressive glioblastoma, indicating that at a population level, treatment strategies involving bevacizumab prolong survival.

[125]

TÍTULO / TITLE: - Long-term Changes in Serum IGF-1 Levels After Successful Surgical Treatment of Growth Hormone Secreting Pituitary Adenoma.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 May 30.

- Enlace al texto completo (gratis o de pago)

[1227/01.neu.0000431480.87160.84](https://doi.org/10.1227/01.neu.0000431480.87160.84)

AUTORES / AUTHORS: - Shin MS; Yu JH; Choi JH; Jung CH; Hwang JY; Cho YH; Kim CJ; Kim MS

INSTITUCIÓN / INSTITUTION: - 1Division of Endocrinology and Metabolism, Department of Internal Medicine, 2Department of Neurosurgery, Asan Medical Center University of Ulsan College of Medicine, Seoul 138-736, Korea.

RESUMEN / SUMMARY: - BACKGROUND: Successful treatment of acromegaly is known to normalize serum insulin-like growth factor-1 (IGF-1) levels within days after surgery. However, our clinical observations indicate that many cases

of acromegaly show delayed normalization of serum IGF-1 levels following complete tumor resection. **OBJECTIVE::** To study long-term changes of the serum IGF-1 levels in acromegalic patients for whom surgical treatment was thought to be successful. **METHODS::** A retrospective observational study was performed with 46 acromegalic patients with no residual tumor on sellar magnetic resonance imaging, and a nadir GH of < 0.4 microg/L on postoperative oral glucose tolerance test. **RESULTS::** In all patients, serum IGF-1 levels returned to the normal reference values for age and sex during the observational period (12-132 months). The mean duration from the time of surgery until IGF-1 normalization was 10 months (range, 3 days-57 months). 27 patients (59%) reached normal IGF-1 ranges within three months of surgery, whereas 19 patients (41%) achieved delayed (> 3 months) IGF-1 normalization. 11 patients (24%) recovered normal IGF-1 levels during the 12-57 month period post-operation. The possibility of delayed IGF-1 cure was increased 8.8 fold with an immediate postoperative IGF-1 level increase of 100 microg/L. **CONCLUSION::** Satisfactory remission of acromegaly by IGF-1 criteria was delayed in a large proportion of acromegalic patients, especially those with high postoperative IGF-1 levels. Hence, additional treatment can be delayed in clinically stable acromegalic patients who show no evidence of residual tumors on postoperative MRI and a normal GH suppressive response to a glucose load.

[126]

TÍTULO / TITLE: - FLAIR lesion segmentation: Application in patients with brain tumors and acute ischemic stroke.

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

REVISTA / JOURNAL: - Eur J Radiol. 2013 Sep;82(9):1512-8. doi: 10.1016/j.ejrad.2013.05.029. Epub 2013 Jun 21.

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

[1016/j.ejrad.2013.05.029](#)

AUTORES / AUTHORS: - Artzi M; Aizenstein O; Jonas-Kimchi T; Myers V; Halleivi H; Ben Bashat D

INSTITUCIÓN / INSTITUTION: - The Functional Brain Center, The Wohl Institute for Advanced Imaging, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel; Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel. Electronic address: artzimy@gmail.com.

RESUMEN / SUMMARY: - **BACKGROUND:** Lesion size in fluid attenuation inversion recovery (FLAIR) images is an important clinical parameter for patient assessment and follow-up. Although manual delineation of lesion areas considered as ground truth, it is time-consuming, highly user-dependent and difficult to perform in areas of indistinct borders. In this study, an automatic methodology for FLAIR lesion segmentation is proposed, and its application in patients with brain tumors undergoing therapy; and in patients following stroke

is demonstrated. MATERIALS AND METHODS: FLAIR lesion segmentation was performed in 57 magnetic resonance imaging (MRI) data sets obtained from 44 patients: 28 patients with primary brain tumors; 5 patients with recurrent-progressive glioblastoma (rGB) who were scanned longitudinally during anti-angiogenic therapy (18 MRI scans); and 11 patients following ischemic stroke. RESULTS: FLAIR lesion segmentation was obtained in all patients. When compared to manual delineation, a high visual similarity was observed, with an absolute relative volume difference of 16.80% and 20.96% and a volumetric overlap error of 24.87% and 27.50% obtained for two raters: accepted values for automatic methods. Quantitative measurements of the segmented lesion volumes were in line with qualitative radiological assessment in four patients who received anti-angiogenic drugs. In stroke patients the proposed methodology enabled identification of the ischemic lesion and differentiation from other FLAIR hyperintense areas, such as pre-existing disease. CONCLUSION: This study proposed a replicable methodology for FLAIR lesion detection and quantification and for discrimination between lesion of interest and pre-existing disease. Results from this study show the wide clinical applications of this methodology in research and clinical practice.

[127]

TÍTULO / TITLE: - Irinotecan, vincristine, cisplatin, cyclophosphamide, and etoposide for refractory or relapsed medulloblastoma/PNET in pediatric patients.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jun 9.

- Enlace al texto completo (gratis o de pago) [1007/s00381-013-2163-](#)

[Z](#)

AUTORES / AUTHORS: - Kim H; Kang HJ; Lee JW; Park JD; Park KD; Shin HY; Ahn HS

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, Seoul National University College of Medicine, Seoul, Republic of Korea.

RESUMEN / SUMMARY: - PURPOSE: The treatment outcome of pediatric refractory or relapsed brain tumor is very dismal, and effective salvage chemotherapy is not established. The combination of irinotecan, vincristine, cisplatin, cyclophosphamide, and etoposide was administered to pediatric patients with refractory or relapsed brain tumors as a salvage treatment at our institution. METHODS: The combination regimen was administered since June 2006 and consisted of irinotecan (300 mg/m², d0), vincristine (2 mg/m², d0), cisplatin (60 mg/m², d0), cyclophosphamide (1,000 mg/m², d1), and etoposide (100 mg/m²/day, d0-2). Patients could concurrently receive radiotherapy, surgery, and/or high-dose chemotherapy and stem cell rescue. The medical records of all patients were retrospectively analyzed. RESULTS: Thirteen patients with refractory or relapsed brain tumor were included

(medulloblastoma, n = 12; central nervous system primitive neuroectodermal tumor, n = 1). Median time from diagnosis to this combination chemotherapy was 30 months (range, 3-111 months), and median cycle administered was four cycles (range 1-22 cycles). Objective tumor response at the end of chemotherapy was 38.5 % including three patients with complete response and two with partial response. One patient showed complete response and achieved long-term survival with this combination chemotherapy, and two patients achieved long-term survival with multimodality treatments. There was no grade III or IV toxicity related to this combination chemotherapy except for thrombocytopenia and neutropenia. CONCLUSIONS: The combination of irinotecan, vincristine, cisplatin, cyclophosphamide, and etoposide may produce objective responses in pediatric patients with refractory or relapsed medulloblastoma or primitive neuroectodermal tumor.

[128]

TÍTULO / TITLE: - The changing face of acoustic neuroma management in the USA: Analysis of the 1998 and 2008 patient surveys from the acoustic neuroma association.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Jul 19.

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

[3109/02688697.2013.815323](#)

AUTORES / AUTHORS: - Patel J; Vasan R; van Loveren H; Downes K; Agazzi S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery and Brain Repair, University of South Florida , Tampa, FL , USA.

RESUMEN / SUMMARY: - Objective. A recent review of the national cancer center registry Surveillance Epidemiology and End Results (SEER) database revealed that in the United States, 25% of Acoustic Neuromas (AN) are managed with observation. Several articles have questioned the aggressive treatment of these slow growing tumors. Concern has been raised that data from the SEER database might be biased towards treatment as patients who chose observation are less likely to be seen at a cancer center. To try and adjust for this potential bias, we decided to investigate management trends of AN in the United States using patient surveys conducted by the Acoustic Neuroma Association (ANA). Study design. Database review. Methods. Data from the 1998 and 2008 ANA patient's surveys were analyzed to detect trends between tumor size and treatment modality. Management trends including observation, microsurgical resection and radiation were examined as well based on tumor size criteria. Results. During this study period, tumor size at diagnosis decreased significantly (1966-1998: 23.8% \leq 1.5 cm; 1999-2008: 45.3% \leq 1.5 cm). The use of microsurgery decreased from 92.7% to 53.4%, while the use of radiosurgery/radiotherapy increased from 5% to 24.2% and observation increased to 22.4%. Conclusion. Review of data from the ANA confirmed that

radiosurgery, and watch and wait are gaining popularity as treatment options. Regardless of this shift in tumor management, microsurgery continues to be the primary method of treatment across tumor sizes in the United States of America and observation remains the least common management modality.

[129]

TÍTULO / TITLE: - Anti-hypertensive treatment in pheochromocytoma and paraganglioma: current management and therapeutic features.

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

REVISTA / JOURNAL: - Endocrine. 2013 Jul 2.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s12020-013-0007-](#)

[y](#)

AUTORES / AUTHORS: - Mazza A; Armigliato M; Marzola MC; Schiavon L; Montemurro D; Vescovo G; Zuin M; Chondrogiannis S; Ravenni R; Opocher G; Colletti PM; Rubello D

INSTITUCIÓN / INSTITUTION: - Department of Internal Medicine, Santa Maria della Misericordia Hospital, Viale Tre Martiri 140, 45100, Rovigo, Italy, mazza.alberto@azisanrovigo.it.

RESUMEN / SUMMARY: - Pheochromocytoma (PH) and paraganglioma (PG) are neuroendocrine neoplasms arising from chromaffin cells of the adrenal medulla and the sympathetic ganglia, respectively. Although are unusual cause of hypertension (HT) accounting for at most 0.1-0.2 % of cases, they may lead to severe and potentially lethal hypertensive crisis due to the effects of the released catecholamines. However, both PH and PG may be asymptomatic as ~30 % of subjects are normotensive or have orthostatic hypotension and in these cases the 24 h ambulatory blood pressure (BP) monitoring is an important toll to diagnose and treat HT. HT treatment may be difficult when PH or PG occurs in pregnancy or in the elderly subjects and in these cases a multidisciplinary team is required. When surgical excision is mandatory the perioperative management requires the administration of selective alpha1-adrenergic blocking agents (i.e., doxazosin, prazosin or terazosin) followed by a beta-adrenergic blockade (i.e., propranolol, atenolol). This latter should never be started first because blockade of vasodilatory peripheral beta-adrenergic receptors with unopposed alpha-adrenergic receptor stimulation can lead to a further elevation of BP. Although labetalol is traditionally considered the ideal agent due to its alpha- and beta-adrenergic antagonism, experimental studies do not support its use in this clinical setting. As second regimen, the administration of vasodilators as calcium channel blockers (i.e., nifedipine, nifedipine) may be required to control BP. Oral and sublingual short-acting nifedipine are potentially dangerous in patients with hypertensive emergencies and are not recommend. The latest evidences into the diagnosis and treatment of hypertensive crisis due to PH and PG are reviewed here.

[130]

TÍTULO / TITLE: - Primary central nervous system tumors: pathogenesis and therapy.

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

REVISTA / JOURNAL: - Arch Neurol. 2012 Jul 1;69(7):937. doi: 10.1001/archneurol.2012.818.

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

[1001/archneurol.2012.818](#)

AUTORES / AUTHORS: - Weller M

[131]

- CASTELLANO -

TÍTULO / TITLE: Les tumeurs gliales et glioneuronales de l'adulte et de l'enfant : principales alterations genetiques et classification histomoleculaire.

TÍTULO / TITLE: - Glial and glioneuronal tumors in adults and children: main genetic alterations and towards a histomolecular classification.

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

REVISTA / JOURNAL: - Bull Cancer. 2013 Aug 1;100(7-8):715-726.

●● Enlace al texto completo (gratis o de pago) [1684/bdc.2013.1789](#)

AUTORES / AUTHORS: - Figarella-Branger D; Chappe C; Padovani L; Mercurio S; Colin C; Forest F; Bouvier C

INSTITUCIÓN / INSTITUTION: - Aix-Marseille Universite, Inserm, CRO2 UMR_S 911, 13385 Marseille, France, APHM, Hopital de la Timone, service d'anatomie pathologique et de neuropathologie, 13385 Marseille, France.

RESUMEN / SUMMARY: - Glial and glioneuronal tumors in children and adult demonstrate distinctive clinical, neuroradiological and molecular features depending on the pathological subtype and within a same subgroup according to the age. In children, gliomas are mainly located in the infratentorial part of the brain. They are most often benign and circumscribed but infiltrative tumors with dismal prognosis are recorded within the pons (DIGP) or the thalamus. Glioblastomas are very rare in children. In contrast, gliomas in adult mainly occur in the cerebral hemispheres and the most frequent subtype is glioblastoma. Glioneuronal tumors mainly occurred in children and young adults. In addition, although pilocytic astrocytomas, pleomorphic xanthoastrocytomas and gangliogliomas are classified into different subgroups according to the WHO 2007 classification, these tumors demonstrate similar neuroradiological findings: they are cystic with contrast enhancement of a mural nodule. Major advances have been made these last five years in the discovery of some master genes that are involved in gliomagenesis and point out differences between children and adults. In adults, infiltrative gliomas can be classified into two major subgroups depending on the existence or not of IDH

mutations. IDH-dependent gliomagenesis encompasses diffuse grade II and grade III (they can also show additional molecular alterations such as TP53 mutation or 1p19q codeletion) and secondary glioblastomas. IDH-independent gliomagenesis include triple negative grade II gliomas, gliomatosis cerebri (grade III) and de novo glioblastomas. Pilocytic astrocytomas, pleomorphic xanthoastrocytomas and gangliogliomas share in common BRAF alterations. However, KIAA1549-BRAF fusion characterizes pilocytic astrocytomas whereas V600E BRAF mutation is mainly recorded in pleomorphic xanthoastrocytomas and gangliogliomas.

[132]

TÍTULO / TITLE: - Clinico-radiologic characteristics of long-term survivors of diffuse intrinsic pontine glioma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jun 29.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1189-](#)

[0](#)

AUTORES / AUTHORS: - Jackson S; Patay Z; Howarth R; Pai Panandiker AS; Onar-Thomas A; Gajjar A; Broniscer A

INSTITUCIÓN / INSTITUTION: - Department of Oncology, St. Jude Children's Research Hospital, 262 Danny Thomas Place, Mailstop 260, Memphis, TN, 38105, USA.

RESUMEN / SUMMARY: - Diffuse intrinsic pontine glioma (DIPG) is the deadliest central nervous system tumor in children. The survival of affected children has remained poor despite treatment with radiation therapy (RT) with or without chemotherapy. We reviewed the medical records of all surviving patients with DIPG treated at our institution between October 1, 1992 and May 31, 2011. Blinded central radiologic review of the magnetic resonance imaging at diagnosis of all surviving patients and 15 controls with DIPG was performed. All surviving patients underwent neurocognitive assessment during follow-up. Five (2.6 %) of 191 patients treated during the study period were surviving at a median of 9.3 years from their diagnosis (range 5.3-13.2 years). Two patients were younger than 3 years, one lacked signs of pontine cranial nerve involvement, and three had longer duration of symptoms at diagnosis. One patient had a radiologically atypical tumor and one had a tumor originating in the medulla. All five patients received RT. Chemotherapy was variable among these patients. Neurocognitive assessments were obtained after a median interval of 7.1 years. Three of four patients who underwent a detailed evaluation showed cognitive function in the borderline or mental retardation range. Two patients experienced disease progression at 8.8 and 13 years after diagnosis. A minority of children with DIPG experienced long-term survival with currently available therapies. These patients remained at high risk for tumor progression

even after long follow-ups. Four of our long-term survivors had clinical and radiologic characteristics at diagnosis associated with improved outcome.

[133]

TÍTULO / TITLE: - Pulsed versus conventional radiation therapy in combination with temozolomide in a murine orthotopic model of glioblastoma multiforme.

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

REVISTA / JOURNAL: - Int J Radiat Oncol Biol Phys. 2013 Aug 1;86(5):978-85. doi: 10.1016/j.ijrobp.2013.04.034.

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

[1016/j.ijrobp.2013.04.034](#)

AUTORES / AUTHORS: - Lee DY; Chunta JL; Park SS; Huang J; Martinez AA; Grills IS; Krueger SA; Wilson GD; Marples B

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, William Beaumont Hospital, Royal Oak, Michigan.

RESUMEN / SUMMARY: - **PURPOSE:** To evaluate the efficacy of pulsed low-dose radiation therapy (PLRT) combined with temozolomide (TMZ) as a novel treatment approach for radioresistant glioblastoma multiforme (GBM) in a murine model. **METHODS AND MATERIALS:** Orthotopic U87MG hGBM tumors were established in Nu-Foxn1(nu) mice and imaged weekly using a small-animal micropositron emission tomography (PET)/computed tomography (CT) system. Tumor volume was determined from contrast-enhanced microCT images and tumor metabolic activity (SUVmax) from the F18-FDG microPET scan. Tumors were irradiated 7 to 10 days after implantation with a total dose of 14 Gy in 7 consecutive days. The daily treatment was given as a single continuous 2-Gy dose (RT) or 10 pulses of 0.2 Gy using an interpulse interval of 3 minutes (PLRT). TMZ (10 mg/kg) was given daily by oral gavage 1 hour before RT. Tumor vascularity and normal brain damage were assessed by immunohistochemistry. **RESULTS:** Radiation therapy with TMZ resulted in a significant 3- to 4-week tumor growth delay compared with controls, with PLRT+TMZ the most effective. PLRT+TMZ resulted in a larger decline in SUVmax than RT+TMZ. Significant differences in survival were evident. Treatment after PLRT+TMZ was associated with increased vascularization compared with RT+TMZ. Significantly fewer degenerating neurons were seen in normal brain after PLRT+TMZ compared with RT+TMZ. **CONCLUSIONS:** PLRT+TMZ produced superior tumor growth delay and less normal brain damage when compared with RT+TMZ. The differential effect of PLRT on vascularization may confirm new treatment avenues for GBM.

[134]

TÍTULO / TITLE: - De novo arteriovenous malformation after brain radiotherapy for medulloblastoma in a child.

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

REVISTA / JOURNAL: - Neurology. 2013 Jul 23;81(4):398-9. doi: 10.1212/WNL.0b013e31829c5cd5.

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

[1212/WNL.0b013e31829c5cd5](#)

AUTORES / AUTHORS: - Mathon B; Blauwblomme T; Bolle S; Dufour C; Nagarra O; Brunelle F; Puget S

INSTITUCIÓN / INSTITUTION: - From Necker Hospital (B.M., T.B., F.B., S.P.), Universite Rene Descartes, Paris Cite Sorbonne; Gustave Roussy Cancer Institute (S.B., C.D.), University Paris XI, Villejuif; and Sainte-Anne Hospital (O.N.), Paris, France.

RESUMEN / SUMMARY: - A 5-year-old boy was operated on for a non-metastatic medulloblastoma of the fourth ventricle (figure 1). Chemotherapy and bifractionated craniospinal radiotherapy were administered. Four years later, T1-weighted MRI with contrast revealed abnormal vessels in the right sylvian fissure that gradually increased during follow-up; angiography confirmed an arteriovenous malformation (AVM) (figure 2). Even though it was asymptomatic, its location and growth prompted us to treat (embolization then excision of the residual nidus). This very rare case of supposed radiation-induced AVM suggests that when abnormal vasculature imaging occurs in follow-up(1,2) further investigation with angiography is warranted, with consideration of further treatment.

[135]

TÍTULO / TITLE: - Socio-demographic factors and their impact on the number of resections for patients with recurrent glioblastoma.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jun 13. pii: S0967-5868(13)00134-3. doi: 10.1016/j.jocn.2013.02.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.02.010](#)

AUTORES / AUTHORS: - Sia Y; Field K; Rosenthal M; Drummond K

INSTITUCIÓN / INSTITUTION: - Royal Melbourne Hospital, Grattan Street, Parkville, Melbourne, VIC 3050, Australia. Electronic address:

Yi.Sia@mh.org.au.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most aggressive malignant brain tumour. Having a second or subsequent operation at recurrence may be a positive prognostic factor for survival. Recent studies suggest that socio-demographic variables may influence survival, raising the question whether surgical care differs based on these variables. We examined the relationship between selected socio-demographic variables and the number of repeat operations undergone by patients with recurrent GBM. Data from all patients diagnosed with GBM between 2001 and 2011 was obtained from a clinical database maintained across two institutions (one public, one private).

The clinical and socio-demographic factors for patients who received one operation were compared to those who had two or more operations, using chi-squared analyses to determine statistical differences between groups. Socioeconomic status was measured using the Index of Relative Socioeconomic Advantage and Disadvantage scores. Of 553 patients, 449 (81%) had one operation and 104 (19%) had 2 operations. Patients who had 2 operations were significantly younger (median 55years versus 64years, $p < 0.001$), less likely to have multifocal ($p = 0.043$) or bilateral ($p = 0.037$) disease and more likely to have initial macroscopic resection ($p = 0.006$), than those who had only one operation. Socioeconomic status did not significantly differ between the groups ($p = 0.31$). Similarly, there was no significant difference between the number of operations in patients from regional versus city residence and public versus private hospital. This is reassuring as it suggests similar surgical management options are available for patients regardless of socio-demographic background.

[136]

TÍTULO / TITLE: - Zn induces apoptosis in human highly metastatic SHG-44 glioma cells, through inhibiting activity of the voltage-gated proton channel Hv1.

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

REVISTA / JOURNAL: - Biochem Biophys Res Commun. 2013 Jul 24. pii: S0006-291X(13)01227-8. doi: 10.1016/j.bbrc.2013.07.067.

●● Enlace al texto completo (gratis o de pago) 1016/j.bbrc.2013.07.067

AUTORES / AUTHORS: - Wang Y; Zhang S; Li SJ

INSTITUCIÓN / INSTITUTION: - Department of Biophysics, School of Physics Science, Nankai University, Tianjin 300071, China.

RESUMEN / SUMMARY: - In contrast to the voltage-gated K⁺ channels, the voltage-gated proton channel Hv1 contains a voltage-sensor domain but lacks a pore domain. Here, we showed that Hv1 is expressed in the highly metastatic glioma cell SHG-44, but lowly in the poorly metastatic glioma cell U-251. Inhibition of Hv1 activity by 140μM zinc chloride induces apoptosis in the human highly metastatic glioma cells. Zn²⁺ ions markedly inhibit proton secretion, and reduce the gelatinase activity in the highly metastatic glioma cells. In vivo, the glioma tumor sizes of the implantation of the SHG-44 xenografts in nude mice that were injected zinc chloride solution, were dramatically smaller than that in the controlled groups. The results demonstrated that the inhibition of Hv1 activity via Zn²⁺ ions can effectively retard the cancer growth and suppress the cancer metastasis by the decrease of proton extrusion and the down-regulation of gelatinase activity. Our results suggest that Zn²⁺ ions may be used as a potential anti-glioma drug for glioma therapy.

[137]

TÍTULO / TITLE: - Unrelated cord blood transplantation for central nervous system relapse in high-risk childhood acute lymphoblastic leukemia.

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

REVISTA / JOURNAL: - Ann Hematol. 2013 Jun 22.

●● Enlace al texto completo (gratis o de pago) [1007/s00277-013-1820-](http://1007/s00277-013-1820-3)

[3](#)

AUTORES / AUTHORS: - Zheng C; Tang B; Tong J; Liu H; Geng L; Wang X; Ding K; Sun Z

INSTITUCIÓN / INSTITUTION: - Shandong University School of Medicine, Jinan, 2500012, China.

RESUMEN / SUMMARY: - Few clinical studies have investigated the role of unrelated cord blood transplantation (CBT) for central nervous system (CNS) relapse of childhood acute lymphoblastic leukemia (ALL) patients with high-risk factors. The aim of this report is to identify the potential benefits of unrelated CBT in high-risk childhood ALL with CNS relapse who has been treated on CNS-directed treatment strategies. Eleven childhood ALL patients with CNS relapse who underwent unrelated CBT enrolled in our study between 2001 and 2011, and all of the patients had features associated with poor outcomes, such as high white blood cells at diagnosis, ph + chromosome, or a history of bone marrow relapse. All transplants were performed with myeloablative-conditioning therapy (BU/cyclophosphamide (CY2) or total body irradiation/CY) plus highly CNS-active agents (carmustine or high-dose cytarabine). All patients achieved neutrophil engraftment and platelet engraftment. A total of nine patients (81.8 %) developed pre-engraftment syndrome at a median of 7 days, and three patients developed acute graft-vs-host disease at a median of 21 days. The median follow-up after CBT was 28.5 months. The probability of overall survival at 9 years was 63.6 %, and no patient experienced a CNS relapse. Our experience suggests that unrelated CBT appears to be an effective treatment option for CNS relapse of childhood ALL patients associated with poor outcome features.

[138]

TÍTULO / TITLE: - CYP19 expression is induced by 2,3,7,8-tetrachloro-dibenzo-para-dioxin in human glioma cells.

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

REVISTA / JOURNAL: - Mol Cell Endocrinol. 2013 Aug 15;375(1-2):106-12. doi: 10.1016/j.mce.2013.05.018. Epub 2013 May 29.

●● Enlace al texto completo (gratis o de pago) 1016/j.mce.2013.05.018

AUTORES / AUTHORS: - Tan W; Wong TY; Wang Y; Huang J; Leung LK

INSTITUCIÓN / INSTITUTION: - Biochemistry Programme, School of Life Sciences, Faculty of Science, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong.

RESUMEN / SUMMARY: - Dioxins are the most concerned environmental pollutants. Recent studies have shown that these compounds could disrupt the proper functioning of our endocrine system. Estrogen is synthesized in glial cells of the brain. The hormone has been linked to the maintenance of normal brain operation, ranging from neurotransmission to synapse formation. Aromatase or CYP19 is the enzyme responsible for estrogen synthesis. In the present study, we demonstrated that 2,3,7,8-tetrachloro-dibenzo-para-dioxin (TCDD) stimulated the enzyme activity in human brain cells as low as 1pM. Increased brain-specific CYP19 mRNA species was also observed in these cells. Since the brain-specific promoter 1.f of CYP19 contains two binding motifs for CCAAT/enhancer binding protein, electrophoretic mobility shift assay was performed to validate the activation. We further traced the triggering signal and found that the mitogen-activated protein kinases ERK-1/2 were activated. In summary, TCDD could induce CYP19 transcription in brain cells. Exposure to the pollutant might perturb the hormonal balance in the brain.

[139]

TÍTULO / TITLE: - Boron neutron capture therapy for recurrent high-grade meningiomas.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Jun 28.

- Enlace al texto completo (gratis o de pago)

[3171/2013.5.JNS122204](#)

AUTORES / AUTHORS: - Kawabata S; Hiramatsu R; Kuroiwa T; Ono K; Miyatake S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Osaka Medical College, Takatsuki;

RESUMEN / SUMMARY: - Object Similar to glioblastomas, high-grade meningiomas are difficult pathologies to control. In this study, the authors used boron neutron capture therapy (BNCT), a tumor-selective intensive particle radiation modality, to treat high-grade meningioma. Methods From June 2005 to September 2011, BNCT was applied 28 times in 20 cases of recurrent high-grade meningioma. All patients had previously undergone intensive treatments such as repetitive surgeries and multiple sessions of radiation therapy. Fluorine-18-labeled boronophenylalanine (18F-BPA) PET was performed before BNCT in 19 of the 20 cases; BPA is itself a therapeutic compound. Compound uptake, tumor shrinkage, long-term control rate including survival time, and failure pattern of the treated patients were all evaluated. Results Eighteen of 19 cases studied using 18F-BPA PET showed good BPA uptake, with ratios of tumor to normal brain greater than 2.7. These ratios indicated the likely effects of BNCT prior to neutron irradiation. The original tumor sizes were between 4.3 cm³ and 109 cm³. A mean tumor volume reduction of 64.5% was obtained after BNCT within just 2 months. The median follow-up duration was 13 months. Six

patients are still alive; at present, the median survival times after BNCT and diagnosis are 14.1 months (95% CI 8.6-40.4 months) and 45.7 months (95% CI 32.4-70.7 months), respectively. Clinical symptoms before BNCT, such as hemiparesis and facial pain, were improved after BNCT in symptomatic cases. Systemic metastasis, intracranial distant recurrence outside the radiation field, CSF dissemination, and local tumor progression were observed in 6, 7, 3, and 3 cases, respectively, during the clinical course. Apparent pseudoprogression was observed in at least 3 cases. Symptomatic radiation injuries occurred in 6 cases, and were controllable in all but 1 case. Conclusions Boron neutron capture therapy may be especially effective in cases of high-grade meningioma.

[140]

TÍTULO / TITLE: - 5-Aminolevulinic-Acid-Induced Protoporphyrin IX Fluorescence in Meningioma: Qualitative and Quantitative Measurements In Vivo.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Jul 24.

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

[1227/NEU.0000000000000117](#)

AUTORES / AUTHORS: - Valdes PA; Bekelis K; Harris BT; Wilson BC; Leblond F; Kim A; Simmons NE; Erkmén K; Paulsen KD; Roberts DW

INSTITUCIÓN / INSTITUTION: - 1Section of Neurosurgery, Dartmouth-Hitchcock Medical Center, One Medical Center Drive, Lebanon, NH 2Thayer School of Engineering, 14 Engineering Drive, Hanover, NH 3Geisel School of Medicine at Dartmouth, 1 Rope Ferry Road, Hanover, NH 4Departments of Pathology and Neurology, Georgetown University Medical Center, Washington, DC 5Ontario Cancer Institute, University of Toronto, Toronto, ON, Canada 6Norris Cotton Cancer Center, Dartmouth-Hitchcock Medical Center, One Medical Center Drive, Lebanon, NH 7Engineering Physics Department, Ecole Polytechnique de Montreal, Montreal, Quebec, Canada.

RESUMEN / SUMMARY: - BACKGROUND:: The use of 5-aminolevulinic acid (ALA)-induced protoporphyrin IX (PpIX) fluorescence has shown promise as a surgical adjunct for maximizing the extent of surgical resection in gliomas. To date, the clinical utility of 5-ALA in meningiomas is not fully understood, with most descriptive studies using qualitative approaches to 5-ALA-PpIX. OBJECTIVE:: To assess the diagnostic performance of 5-ALA-PpIX fluorescence during surgical resection of meningioma. METHODS:: ALA was administered to 15 patients with meningioma undergoing PpIX fluorescence-guided surgery at our institution. At various points during the procedure, the surgeon performed qualitative, visual assessments of fluorescence using the surgical microscope, followed by a quantitative fluorescence measurement using an intraoperative probe. Specimens were collected at each point for subsequent neuropathological analysis. Clustered data analysis of variance was used to ascertain a difference between groups and receiver operating

characteristic (ROC) analyses performed to assess diagnostic capabilities. RESULTS: Red-pink fluorescence was observed in 80% (12/15) of patients, with visible fluorescence generally demonstrating a strong, homogeneous character. Quantitative fluorescence measured diagnostically significant PpIX concentrations (cPpIX) in both visibly and non-visibly fluorescent tissues, with significantly higher cPpIX in both visibly fluorescent ($p < 0.001$) and tumor tissue ($p = 0.0023$). ROC analyses also showed diagnostic accuracies up to 90% for differentiating tumor from normal dura. CONCLUSION: ALA-induced PpIX fluorescence guidance is a potential and promising adjunct in accurately detecting neoplastic tissue during meningioma resective surgery. These results suggest a broader reach for PpIX as a biomarker for meningiomas than was previously noted in the literature.

[141]

TÍTULO / TITLE: - Recurrent Glioblastoma: Optimum Area under the Curve Method Derived from Dynamic Contrast-enhanced T1-weighted Perfusion MR Imaging.

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

REVISTA / JOURNAL: - Radiology. 2013 Jul 22.

●● Enlace al texto completo (gratis o de pago) [1148/radiol.13130016](#)

AUTORES / AUTHORS: - Chung WJ; Kim HS; Kim N; Choi CG; Kim SJ

INSTITUCIÓN / INSTITUTION: - Department of Radiology and Research Institute of Radiology, University of Ulsan College of Medicine, Asan Medical Center, 6 Asanbyeongwon-Gil, Songpa-Gu, Seoul 138-736, Korea.

RESUMEN / SUMMARY: - Purpose: To determine whether the ratio of the initial area under the time-signal intensity curve (AUC) (IAUC) to the final AUC or AUCR-derived from dynamic contrast material-enhanced magnetic resonance (MR) imaging can be an imaging biomarker for distinguishing recurrent glioblastoma multiforme (GBM) from radiation necrosis and to compare the diagnostic accuracy of the AUCR with commonly used model-free dynamic contrast-enhanced MR imaging parameters. Materials and Methods: The institutional review board approved this retrospective study and waived the informed consent requirement. Fifty-seven consecutive patients with pathologically confirmed recurrent GBM ($n = 32$) or radiation necrosis ($n = 25$) underwent dynamic contrast-enhanced MR imaging. Histogram parameters of the IAUC at 30, 60, and 120 seconds and the AUCR, which included the mean value at the higher curve of the bimodal histogram (mAUCRH), as well as 90th percentile cumulative histogram cutoffs, were calculated and were correlated with final pathologic findings. The best predictor for differentiating recurrent GBM from radiation necrosis was determined by means of receiver operating characteristic (ROC) curve analysis. Results: The demographic data were not significantly different between the two patient groups. There were statistically significant differences in all of the IAUC and AUCR parameters between the

recurrent GBM and the radiation necrosis patient groups ($P < .05$ for each). ROC curve analyses showed mAUCRH to be the best single predictor of recurrent GBM (mAUCRH for recurrent GBM = 0.35 ± 0.11 [standard deviation], vs 0.19 ± 0.17 for radiation necrosis; $P < .0001$; optimum cutoff, 0.23), with a sensitivity of 93.8% and a specificity of 88.0%. Conclusion: A bimodal histogram analysis of AUCR derived from dynamic contrast-enhanced MR imaging can be a potential noninvasive imaging biomarker for differentiating recurrent GBM from radiation necrosis. © RSNA, 2013 Supplemental material: <http://radiology.rsna.org/lookup/suppl/doi:10.1148/radiol.13130016/-/DC1>.

[142]

TÍTULO / TITLE: - Identification of novel therapeutic targets through genomic analysis of meningiomas.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;73(2):N22-4. doi: 10.1227/01.neu.0000432626.41718.68.

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

1227/01.neu.0000432626.41718.68

AUTORES / AUTHORS: - Komotar RJ; Starke RM; Connolly ES

[143]

TÍTULO / TITLE: - Evaluation of mast cells and hypoxia inducible factor-1 expression in meningiomas of various grades in correlation with peritumoral brain edema.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 23.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1208-](http://1007/s11060-013-1208-1)

[1](#)

AUTORES / AUTHORS: - Reszec J; Hermanowicz A; Rutkowski R; Bernaczyk P; Mariak Z; Chyczewski L

INSTITUCIÓN / INSTITUTION: - Department of Medical Pathomorphology, Medical University of Bialystok, Waszyngtona 13, 15-269, Bialystok, Poland, joannareszec@gmail.com.

RESUMEN / SUMMARY: - Meningiomas are common primary brain tumors. However, they are often complicated by significant peritumoral brain edema, which leads to surgery difficulties and prolonged hospitalization. The aim of this study was to evaluate the presence of mast cells and expression of hypoxia inducible factor-1 (HIF-1) in correlation with the grade of meningioma and presence of peritumoral brain edema. Immunohistochemistry was performed with specific antibodies against tryptase (mast cells) and HIF-1 in low grade meningiomas (estimated as G1) and high grade meningiomas (estimated as G2 or G3). Peritumoral brain edema observed in MRI was graded using

Steinhoff classification. Tryptase expression was observed in 40.4 % low grade meningiomas and in 90 % high grade cases; HIF-1 in 55.7 % low grade and in 84 % high grade meningiomas. There was a statistically significant correlation between HIF-1 and tryptase expression in both groups ($p = 0.003$). Presence of peritumoral brain edema statistically correlated with tryptase ($p = 0.001$) and HIF-1 expression ($p = 0.004$). Mast cells as well as hypoxia are involved in meningioma progression, and may be associated with the formation of peritumoral brain edema leading to surgery complication and recovery. Therefore, they may be useful markers in predicting the clinical course of meningioma cases.

[144]

TÍTULO / TITLE: - Active immunotherapy using dendritic cells in the treatment of glioblastoma multiforme.

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

REVISTA / JOURNAL: - Cancer Treat Rev. 2013 Jun 20. pii: S0305-7372(13)00120-5. doi: 10.1016/j.ctrv.2013.05.007.

●● Enlace al texto completo (gratis o de pago) [1016/j.ctrv.2013.05.007](#)

AUTORES / AUTHORS: - Bregy A; Wong TM; Shah AH; Goldberg JM; Komotar RJ

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

RESUMEN / SUMMARY: - **OBJECTIVE:** Glioblastoma multiforme, the most common malignant brain tumor still has a dismal prognosis with conventional treatment. Therefore, it is necessary to explore new and/or adjuvant treatment options to improve patient outcomes. Active immunotherapy is a new area of research that may be a successful treatment option. The focus is on vaccines that consist of antigen presenting cells (APCs) loaded with tumor antigen. We have conducted a systematic review of prospective studies, case reports and clinical trials. The goal of this study was to examine the efficacy and safety in terms of complications, median overall survival (OS), progression free survival (PFS) and quality of life. **METHODS:** A PubMed search was performed to include all relevant studies that reported the characteristics, outcomes and complications of patients with GBM treated with active immunotherapy using dendritic cells. Reported parameters were immune response, radiological findings, median PFS and median OS. Complications were categorized based on association with the craniotomy or with the vaccine itself. **RESULTS:** A total of 21 studies with 403 patients were included in our review. Vaccination with dendritic cells (DCs) loaded with autologous tumor cells resulted in increased median OS in patients with recurrent GBM (71.6-138.0wks) as well as those newly diagnosed (65.0-230.4 wks) compared to average survival of 58.4wks. **CONCLUSIONS:** Active immunotherapy, specifically with autologous DCs loaded with autologous tumor cells, seems to have the potential of increasing

median OS and prolonged tumor PFS with minimal complications. Larger clinical trials are needed to show the potential benefits of active immunotherapy.

[145]

TÍTULO / TITLE: - Lentivirus-mediated CD/TK fusion gene transfection neural stem cell therapy for C6 glioblastoma.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Jul 5.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-0957-](#)

[y](#)

AUTORES / AUTHORS: - Niu J; Xing C; Yan C; Liu H; Cui Y; Peng H; Chen Y; Li D; Jiang C; Li N; Yang H

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Second Affiliated Hospital of Harbin Medical University, No. 148 Health Road, Nangang District, Harbin, Heilongjiang, 150000, China.

RESUMEN / SUMMARY: - A suicide gene can convert nontoxic prodrugs into toxic products to kill tumor cells. In this study, our aim was to transfect lentivirus-mediated CD/TK fusion gene into Wistar rat's neural stem cells (NSC) and then implant the NSC into a C6 glioma model to observe a C6 glioma growth inhibition effect. Primary NSC and stable transfection CD/TK fusion gene cell lines were established. To observe the tumor size and rat survival period in different groups, C6 glioma cell apoptosis and cell viability rate were applied to analyze the tumor inhibition effect of the neural stem cells' transfected CD/TK fusion gene. C6 cell viability showed that CDglyTK-NSC + GCV/5-Fc (group 1) was lower than CDglyTK-NSC (group 2), NSC + GCV/5-Fc (group 3), and control (group 4) from day 2 ($p < 0.05$), and the apoptosis rate was higher in group 1 compared with that of other groups (50.6 %, $p < 0.05$) either in vitro or in vivo (35.47 %, $p < 0.05$); both cell viability and apoptosis had no significance in the other three groups. In vivo, tumor size in group 1 was $7.76 \pm 1.37 \text{ mm}^3$, which is smaller than the others (group2 $27.28 \pm 4.11 \text{ mm}^3$, group3 27.94 ± 2.08 and $28.61 \pm 2.97 \text{ mm}^3$; $p < 0.05$). The other groups' tumor size was not significant ($p > 0.05$). Survival time of rats treated with CDglyTK-NSC + GCV/5-Fc (group 1) was significantly longer than that of the other groups ($p < 0.05$; group 1 48.86 ± 1.97 , group 2 28.67 ± 3.75 , group 3 31.5 ± 1.27 , group 4 29.3 ± 1.33). We also showed that the transfected C6 cells had a migratory capacity toward gliomas in vivo. Transfected CD/TK fusion gene neural stem cells combined with propyl-guanosine and 5-flucytosine double prodrug significantly inhibit the development of glioma.

[146]

TÍTULO / TITLE: - Cerebral Atherosclerosis Is Associated With Cystic Infarcts and Microinfarcts but Not Alzheimer Pathologic Changes.

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

REVISTA / JOURNAL: - Stroke. 2013 Jul 25.

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

[1161/STROKEAHA.113.001945](#)

AUTORES / AUTHORS: - Zheng L; Vinters HV; Mack WJ; Zarow C; Ellis WG; Chui HC

INSTITUCIÓN / INSTITUTION: - From the Department of Neurology (L.Z., C.Z., H.C.C.), and Department of Preventive Medicine (W.J.M.), Keck School of Medicine, University of Southern California, Los Angeles, CA; Department of Neurology, University of California Los Angeles, Los Angeles, CA (H.V.V.); and Department of Neurology, University of California Davis, Sacramento, CA (W.G.E.).

RESUMEN / SUMMARY: - **BACKGROUND AND PURPOSE:** Some studies have reported associations between intracranial atherosclerosis and Alzheimer disease pathology. We aimed to correlate severity of cerebral atherosclerosis, arteriolosclerosis, and cerebral amyloid angiopathy with neurofibrillary tangles, neuritic plaques, and cerebral infarcts. **METHODS:** This autopsy study (n=163) was drawn from a longitudinal study of subcortical ischemic vascular disease, Alzheimer disease, and normal aging. Multivariable logistic regression models were used to test associations among the 3 forms of cerebrovascular disease and the presence of ischemic and neurodegenerative brain lesions. Apolipoprotein E genotype was included as a covariate in these multivariable models. **RESULTS:** Cerebral atherosclerosis was positively associated with microinfarcts (odds ratio [OR], 2.3; 95% confidence interval [CI], 1.2-4.4) and cystic infarcts (OR, 2.0; 95% CI, 1.0-4.2) but not Alzheimer disease pathology. Arteriolosclerosis showed a positive correlation with lacunar infarcts (OR, 2.0; 95% CI, 1.0-4.2) but not Alzheimer disease pathology. Cerebral amyloid angiopathy was inversely associated with lacunar infarcts (OR, 0.6; 95% CI, 0.41-1.1), but positively associated with Braak and Braak stage (OR, 1.5; 95% CI, 1.1-2.1) and Consortium to Establish a Registry for Alzheimer Disease plaque score (OR, 1.5; 95% CI, 1.1-2.2). **CONCLUSIONS:** Microinfarcts, which have been correlated with severity of cognitive impairment, were most strongly associated with atherosclerosis. Possible pathogenetic mechanisms include artery-to-artery emboli, especially microemboli that may include atheroemboli or platelet-fibrin emboli. Arteriolosclerosis was positively, whereas cerebral amyloid angiopathy was negatively correlated with lacunar infarcts, which might prove helpful in clinical differentiation of arteriolosclerotic from cerebral amyloid angiopathy-related vascular brain injury.

[147]

TÍTULO / TITLE: - siRNA-mediated knockdown of SMC1A expression suppresses the proliferation of glioblastoma cells.

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

REVISTA / JOURNAL: - Mol Cell Biochem. 2013 Sep;381(1-2):209-15. doi: 10.1007/s11010-013-1704-9. Epub 2013 Jun 11.

●● Enlace al texto completo (gratis o de pago) [1007/s11010-013-1704-](https://doi.org/10.1007/s11010-013-1704-9)

[9](#)

AUTORES / AUTHORS: - Yang Y; Zhang Z; Wang R; Ma W; Wei J; Li G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Peking Union Medical College Hospital, Peking Union Medical College and Chinese Academy of Medical Sciences, No.1 Shuaifuyuan, Wangfujing, Dongcheng District, Beijing, 100730, People's Republic of China.

RESUMEN / SUMMARY: - SMC1A is a member of cohesin complex which has essential functions in cell cycle progression and DNA repair. Therefore, we choose SMC1A as a target gene therapy of glioblastoma. It is well known that glioblastoma has very low survival rate because of ineffectiveness of conventional treatments. This study was designed to explore the possibilities of small interfering RNA (siRNA)-mediated SMC1A silencing as alternative method of treatment. We found that the lentivirus-mediated RNAi system efficiently decreased the expression level of SMC1A. Inhibiting SMC1A expression efficiently ($P < 0.001$) resulted in inhibiting the proliferation and colony formation of U251 and U87MG cells. Moreover, we found that SMC1A silencing led to S cell-cycle arresting. Collectively, these results demonstrated the possibility of siRNA-mediated silencing of SMC1A as a therapeutic tool for the treatment of glioblastoma.

[148]

TÍTULO / TITLE: - Temporal lobe epilepsy with hippocampal sclerosis in acute lymphoblastic leukemia.

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

REVISTA / JOURNAL: - Pediatrics. 2013 Jul;132(1):e252-6. doi: 10.1542/peds.2012-1420. Epub 2013 Jun 17.

●● Enlace al texto completo (gratis o de pago) [1542/peds.2012-1420](https://doi.org/10.1542/peds.2012-1420)

AUTORES / AUTHORS: - Kasai-Yoshida E; Ogihara M; Ozawa M; Nozaki T; Morino M; Manabe A; Hosoya R

INSTITUCIÓN / INSTITUTION: - Department of Neuropediatrics, Tokyo Metropolitan Neurological Hospital, 2-6-1, Musashidai, Fuchu, Tokyo 183-0042, Japan. kasai-sin@umin.ac.jp.

RESUMEN / SUMMARY: - Of 71 acute lymphoblastic leukemia survivors at our hospital over the past 10 years, 2 children developed mesial temporal lobe epilepsy with hippocampal sclerosis (MTLE-HS). This is the first report to describe the clinical course of MTLE-HS observed longitudinally by EEG and MRI. Patient 1 experienced a seizure during chemotherapy involving intrathecal methotrexate. Postseizure MRI suggested methotrexate encephalopathy or leukemic invasion. Anticonvulsant therapy was initiated; subsequent EEGs and MRIs revealed normal results. Three years after chemotherapy, a diffuse,

irregular spike-and-wave pattern was observed on interictal EEG. Five years after chemotherapy, the patient developed MTLE-HS comprising complex partial seizures, typical temporal spikes on EEG, and hippocampal sclerosis (HS). Patient 2 did not experience seizures during chemotherapy. Four years later, the patient started experiencing complex partial seizures, and a diffuse, irregular spike-and-wave pattern was observed on interictal EEG. A clinical picture of MTLE-HS developed 2 years later. In both patients, nonspecific EEG abnormalities (ie, diffuse, irregular spike-and-wave activity) preceded the appearance of HS on MRI by 2 years, suggesting an insidious advance of HS during the latent period. Such atypical EEG findings may indicate MTLE-HS during follow-up of leukemia patients. MTLE-HS develops several years after an initial precipitating incident such as prolonged seizures, central nervous system infection, and brain trauma. In our cases, the initial precipitating incident may have been chemotherapy and/or prolonged seizures. Thus, MTLE-HS associated with leukemia may not be as rare as generally believed. A large cohort study of late neurologic complications is warranted.

[149]

TÍTULO / TITLE: - A long non-coding RNA signature in glioblastoma multiforme predicts survival.

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

REVISTA / JOURNAL: - Neurobiol Dis. 2013 May 29;58C:123-131. doi: 10.1016/j.nbd.2013.05.011.

●● Enlace al texto completo (gratis o de pago) [1016/j.nbd.2013.05.011](#)

AUTORES / AUTHORS: - Zhang XQ; Sun S; Lam KF; Kiang KM; Pu JK; Ho AS; Lui WM; Fung CF; Wong TS; Leung GK

INSTITUCIÓN / INSTITUTION: - Department of Surgery, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong.

RESUMEN / SUMMARY: - Long non-coding RNAs (lncRNAs) represent the leading edge of cancer research, and have been implicated in cancer biogenesis and prognosis. We aimed to identify lncRNA signatures that have prognostic values in glioblastoma multiforme (GBM). Using a lncRNA-mining approach, we performed lncRNA expression profiling in 213 GBM tumors from The Cancer Genome Atlas (TCGA), randomly divided into a training (n=107) and a testing set (n=106). We analyzed the associations between lncRNA signatures and clinical outcome in the training set, and validated the findings in the testing set. We also validated the identified lncRNA signature in another two independent GBM data sets from Gene Expression Omnibus (GEO), which contained specimens from 68 and 101 patients, respectively. We identified a set of six lncRNAs that were significantly associated with the overall survival in the training set ($P \leq 0.01$). Based on this six-lncRNA signature, the training-set patients could be classified into high-risk and low-risk subgroups with significantly different survival (HR=2.13, 95% CI=1.38-3.29; $P=0.001$). The

prognostic value of this six-lncRNA signature was confirmed in the testing set and the two independent data sets. Further analysis revealed that the prognostic value of this signature was independent of age and O-6-methylguanine-DNA methyltransferase (MGMT) promoter methylation status. The identification of the prognostic lncRNAs indicates the potential roles of lncRNAs in GBM pathogenesis. This six-lncRNA signature may have clinical implications in the subclassification of GBM.

[150]

TÍTULO / TITLE: - Medulloblastoma expresses CD1d and can be targeted for immunotherapy with NKT cells.

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

REVISTA / JOURNAL: - Clin Immunol. 2013 Jun 18;149(1):55-64. doi: 10.1016/j.clim.2013.06.005.

●● Enlace al texto completo (gratis o de pago) 1016/j.clim.2013.06.005

AUTORES / AUTHORS: - Liu D; Song L; Brawley VS; Robison N; Wei J; Gao X; Tian G; Margol A; Ahmed N; Asgharzadeh S; Metelitsa LS

INSTITUCIÓN / INSTITUTION: - Texas Children's Cancer Center, Department of Pediatrics, Baylor College of Medicine, Houston, TX 77030, USA; Center for Cell and Gene Therapy, Baylor College of Medicine, Houston, TX 77030, USA.

RESUMEN / SUMMARY: - Medulloblastoma (MB) is the most common malignant brain tumor of childhood. Current therapies are toxic and not always curative that necessitates development of targeted immunotherapy. However, little is known about immunobiology of this tumor. In this study, we show that MB cells in 9 of 20 primary tumors express CD1d, an antigen-presenting molecule for Natural Killer T cells (NKTs). Quantitative RT-PCR analysis of 61 primary tumors revealed an elevated level of CD1d mRNA expression in a molecular subgroup characterized by an overactivation of Sonic Hedgehog (SHH) oncogene compared with Group 4. CD1d-positive MB cells cross-presented glycolipid antigens to activate NKT-cell cytotoxicity. Intracranial injection of NKTs resulted in regression of orthotopic MB xenografts in NOD/SCID mice. Importantly, the numbers and function of peripheral blood type-I NKTs were preserved in MB patients. Therefore, CD1d is expressed on tumor cells in a subset of MB patients and represents a novel target for immunotherapy.

[151]

TÍTULO / TITLE: - Intracranial Hemangiopericytoma: Patterns of Failure and the Role of Radiation Therapy.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Jul 8.

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

1227/NEU.0000000000000064

AUTORES / AUTHORS: - Ghia AJ; Chang EL; Allen PK; Mahajan A; Penas-Prado M; McCutcheon IE; Brown PD

INSTITUCIÓN / INSTITUTION: - 1Department of Radiation Oncology, 2Department of Neuro-Oncology, 3Department of Neurosurgery, The University of Texas M.D. Anderson Cancer Center, Houston, TX 4Department of Radiation Oncology, The University of Southern California, Los Angeles, CA.

RESUMEN / SUMMARY: - **BACKGROUND:** Meningeal hemangiopericytoma (M-HPC) is a rare entity. **OBJECTIVE:** To characterize our institutional experience in treating M-HPC. **METHODS:** We reviewed the medical records of patients with M-HPC evaluated at The University of Texas M.D. Anderson Cancer Center between 1979 and 2009. **RESULTS:** We identified 63 patients diagnosed between 1979 and 2009 with M-HPC treated with surgery alone or with post-operative radiotherapy (PORT). The majority were male (59%) and with a median age of 40.9 years (range 0-71). Gross total resection (GTR) predominated (n=31, 49%) followed by subtotal resection (n=23, 37%) and unknown status (n=9, 14.3%). PORT was delivered to 39 of the 63 patients (62%). The 5, 10, and 15-year overall survival (OS) were 90%, 68%, and 28%, respectively. The 5, 10, and 15-year local control (LC) were 70%, 37%, and 20%, respectively. The 5, 10, and 15-year metastasis free survival (MFS) were 85%, 39%, and 7%. PORT resulted in improved LC (HR 0.38, p=0.008). RT dose \geq 60 Gy correlated with improved LC relative to $<$ 60 Gy (HR 0.12, p=0.045). GTR correlated with improved LC (HR 0.40, p=0.03). On multivariate analysis, PORT (HR 0.33, p=0.003), GTR (HR=0.33, p=0.008) and RT dose \geq 60 Gy (HR 0.33, p=0.003) correlated with improved LC. Amongst those with GTR, PORT resulted in improved LC (HR 0.18, p=0.027). Extent of resection and PORT did not correlate with improved OS. **CONCLUSION:** In M-HPC, both PORT and GTR independently correlate with improved LC. PORT improves LC following GTR. We recommend RT dose \geq 60 Gy to optimize LC.

[152]

TÍTULO / TITLE: - The expression of fatty acid metabolism-associated proteins is correlated with the prognosis of meningiomas.

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

REVISTA / JOURNAL: - APMIS. 2013 Jul 24. doi: 10.1111/apm.12135.

●● Enlace al texto completo (gratis o de pago) [1111/apm.12135](#)

AUTORES / AUTHORS: - Jiang J; Lin C; Liu N; Zhang Z; Sun Y; Fang X; Qi J

INSTITUCIÓN / INSTITUTION: - Department of Pathology, First Affiliated Hospital of Harbin Medical University, Harbin, China.

RESUMEN / SUMMARY: - The expression of fatty acid metabolism-associated proteins is correlated with the prognosis of meningiomas. Meningioma is a common tumor of the nervous system; however, reliable prognostic markers for meningioma are currently insufficient. High fatty acid synthase (FAS)

expression occurs in many tumors, and is associated with tumor progression and grade. Few studies have previously investigated fatty acid metabolism in meningioma; thus, in this study, we investigated the expression of FAS and brain fatty acid-binding protein (BFABP) proteins in all grades of meningioma and determined the association to meningioma grade, invasiveness, recurrence, and progression. We determined expression levels of FAS and BFABP in all grade meningiomas by immunohistochemical analysis in 314 patients diagnosed with meningioma. The expression levels of FAS and BFABP increased significantly in correlation with meningioma grade ($p < 0.01$). Compared with benign meningioma, the expression levels of FAS and BFABP were significantly higher in brain invasive meningioma ($p < 0.01$). Compared with nonrecurrent meningioma (benign meningioma), the expression of FAS was also increased in recurrent meningioma ($p < 0.01$). The expression of fatty acid metabolism-associated proteins potentially correlates with meningioma grade, invasiveness, aggressiveness, and recurrent status and provides evidence for a novel therapeutic target for meningioma.

[153]

TÍTULO / TITLE: - Subependymal mass lesions and peripheral polyneuropathy in adult-onset glutaric aciduria type I.

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

REVISTA / JOURNAL: - Neurology. 2013 Jul 24.

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

[1212/WNL.0b013e3182a2cbf2](https://doi.org/10.1212/WNL.0b013e3182a2cbf2)

AUTORES / AUTHORS: - Herskovitz M; Goldsher D; Sela BA; Mandel H

INSTITUCIÓN / INSTITUTION: - From the Rambam Health Care Campus (M.H., D.G.), Haifa; Meyer Children's Hospital (H.M.), Haifa; Sackler School of Medicine (B.-A.S.), Tel-Aviv University; Institute of Chemical Pathology (B.-A.S.), Sheba Medical Center, Tel-Hashomer; and Technion Faculty of Medicine (D.G., H.M.), Haifa, Israel.

RESUMEN / SUMMARY: - Glutaric aciduria type I (GA-I) is an autosomal recessive disease caused by a deficiency of the mitochondrial enzyme glutaryl CoA dehydrogenase (GCDH). This metabolic block causes increased urinary concentrations of glutaric and 3-hydroxyglutaric acids. The accumulation and excretion of glutarylcarnitine esters leads to secondary carnitine deficiency. GA-I has an incidence of 1:30,000. The clinical hallmark of GA-I is an acute encephalopathic crisis, with bilateral striatal necrosis presented by severe dystonic dyskinetic disorder. Most patients have their first symptoms during infancy, but some have a less severe form of the disease and some may even remain asymptomatic.¹

[154]

TÍTULO / TITLE: - Meningioangiomas: A rare presentation with progressive cortical blindness.

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

REVISTA / JOURNAL: - Neurology. 2013 Jul 30;81(5):511-2. doi: 10.1212/WNL.0b013e31829d8714.

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

[1212/WNL.0b013e31829d8714](#)

AUTORES / AUTHORS: - Shah A; Korya D; Larsen BT; Torres M; Drake K; La Wall J

INSTITUCIÓN / INSTITUTION: - From University Medical Center, University of Arizona, Tucson.

[155]

TÍTULO / TITLE: - LRIG1 dictates the chemo-sensitivity of temozolomide (TMZ) in U251 glioblastoma cells via down-regulation of EGFR/topoisomerase-2/Bcl-2.

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

REVISTA / JOURNAL: - Biochem Biophys Res Commun. 2013 Jul 9. pii: S0006-291X(13)01126-1. doi: 10.1016/j.bbrc.2013.06.116.

●● Enlace al texto completo (gratis o de pago) [1016/j.bbrc.2013.06.116](#)

AUTORES / AUTHORS: - Qi XC; Xie DJ; Yan QF; Wang YR; Zhu YX; Qian C; Yang SX

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Sir Run Run Shaw Hospital, College of Medical Sciences, Zhejiang University, Hangzhou 310016, China.

RESUMEN / SUMMARY: - In the current study, we aimed to understand the potential role of leucine-rich repeats and immunoglobulin-like domains 1 (LRIG1) in TMZ-resistance of U251 glioma cells. We established TMZ-resistant U251 clones (U251/TMZ cells), which expressed low level of LRIG1, but high levels of epidermal growth factor receptor (EGFR), topoisomerase-2 (Topo-2) and Bcl-2. Depletion of LRIG1 by the targeted RNA interference (RNAi) upregulated EGFR/Topo-2/Bcl-2 in U251 cells, and the cells were resistant to TMZ. Reversely, over-expression of LRIG1 in U251 cells downregulated EGFR/Topo-2/Bcl-2 expressions, and cells were hyper-sensitive to TMZ. Our data suggested EGFR-dependent mammalian target of rapamycin (mTOR) activation was important for Topo-2 and Bcl-2 expressions in U251/TMZ cells. The EGFR inhibitor and the mTOR inhibitor downregulated Topo-2/Bcl-2 expressions, both inhibitors also restored TMZ sensitivity in U251/TMZ cells. Finally, inhibition of Topo-2 or Bcl-2 by targeted RNAi(s) knockdown or by the corresponding inhibitor re-sensitized U251/TMZ cells to TMZ, indicating that both Topo-2 and Bcl-2 were important for TMZ resistance in the resistant U251 cells. Based on these results, we concluded that LRIG1 inhibits EGFR expression and the downstream signaling activation, interferes with Bcl-2/Topo-2 expressions and eventually sensitizes glioma cells to TMZ.

[156]

TÍTULO / TITLE: - Piperlongumine selectively kills glioblastoma multiforme cells via reactive oxygen species accumulation dependent JNK and p38 activation.

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

REVISTA / JOURNAL: - Biochem Biophys Res Commun. 2013 Jul 19;437(1):87-93. doi: 10.1016/j.bbrc.2013.06.042. Epub 2013 Jun 22.

●● Enlace al texto completo (gratis o de pago) 1016/j.bbrc.2013.06.042

AUTORES / AUTHORS: - Liu JM; Pan F; Li L; Liu QR; Chen Y; Xiong XX; Cheng K; Yu SB; Shi Z; Yu AC; Chen XQ

INSTITUCIÓN / INSTITUTION: - Department of Pathophysiology, School of Basic Medicine, Key Laboratory of Neurological Diseases, Ministry of Education, Hubei Provincial Key Laboratory of Neurological Diseases, Huazhong University of Science and Technology, Wuhan 430030, China.

RESUMEN / SUMMARY: - Piperlongumine (PL), a natural alkaloid isolated from the long pepper, may have anti-cancer properties. It selectively targets and kills cancer cells but leaves normal cells intact. Here, we reported that PL selectively killed glioblastoma multiforme (GBM) cells via accumulating reactive oxygen species (ROS) to activate JNK and p38. PL at 20µM could induce severe cell death in three GBM cell lines (LN229, U87 and 8MG) but not astrocytes in cultures. PL elevated ROS prominently and reduced glutathione levels in LN229 and U87 cells. Antioxidant N-acetyl-L-cysteine (NAC) completely reversed PL-induced ROS accumulation and prevented cell death in LN229 and U87 cells. In LN229 and U87 cells, PL-treatment activated JNK and p38 but not Erk and Akt, in a dosage-dependent manner. These activations could be blocked by NAC pre-treatment. JNK and p38 specific inhibitors, SB203580 and SP600125 respectively, significantly blocked the cytotoxic effects of PL in LN229 and U87 cells. Our data first suggests that PL may have therapeutic potential for one of the most malignant and refractory tumors GBM.

[157]

TÍTULO / TITLE: - Treatment outcome of relapsed/refractory primary central nervous system diffuse large B-cell lymphoma: a single-center experience of autologous stem cell transplantation.

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

REVISTA / JOURNAL: - Int J Hematol. 2013 Jul 19.

●● Enlace al texto completo (gratis o de pago) [1007/s12185-013-1403-](http://1007/s12185-013-1403-z)

[z](#)

AUTORES / AUTHORS: - Choi MK; Kang ES; Kim DW; Ko YH; Seok H; Park JH; Pyo DH; Hoon Lim D; Kim SJ; Kim WS

INSTITUCIÓN / INSTITUTION: - Division of Hematology-Oncology, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, 50 Irwon-dong, Gangnam-gu, Seoul, 135-710, Korea.

RESUMEN / SUMMARY: - No salvage treatment strategy has been established for relapsed or refractory primary central nervous system lymphoma (PCNSL). We compared treatment outcomes of patients who underwent salvage chemotherapy with or without autologous stem cell transplantation (ASCT). We retrospectively analyzed PCNSL patients who were histologically diagnosed with diffuse large B-cell lymphoma. All patients relapsed after high-dose methotrexate (MTX)-based chemotherapy, or were refractory to high-dose MTX. Patients were treated with salvage chemotherapy, such as ICE/D (ifosfamide, carboplatin, etoposide, and dexamethasone) or high-dose MTX. High-dose chemotherapy containing thiotepa and busulfan followed by ASCT was performed if patients were eligible for ASCT after salvage treatment. Forty-five patients (35 relapsed and 10 refractory) received ICE/D or high-dose MTX. Despite the important difference that ICE/D was used predominantly for early relapsed or refractory patients, the two salvage treatments produced similar overall response rates [84.4 % (38/45) for ICE/D and 81.3 % (13/16) for high-dose MTX re-treatment]. Eighteen patients underwent ASCT, whereas 27 patients received salvage chemotherapy alone. The median progression-free survival of patients who underwent ASCT (19.5 months) was significantly better than that of patients who did not receive ASCT (6.7 months, P = 0.023). Multivariate analysis showed that refractoriness to initial treatment and no ASCT were significantly associated with poor survival outcome. Our study suggested that the combination of ifosfamide, carboplatin, etoposide, and dexamethasone may represent a feasible salvage treatment option for relapsed or refractory PCNSL, and that high-dose chemotherapy containing thiotepa and busulfan followed by ASCT may be effective for patients with a favorable toxicity profile.

[158]

TÍTULO / TITLE: - Monocytes and macrophages as biomarkers for the diagnosis of megalencephalic leukoencephalopathy with subcortical cysts.

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

REVISTA / JOURNAL: - Mol Cell Neurosci. 2013 Jul 10;56C:307-321. doi: 10.1016/j.mcn.2013.07.001.

●● Enlace al texto completo (gratis o de pago) 1016/j.mcn.2013.07.001

AUTORES / AUTHORS: - Petrini S; Minnone G; Coccetti M; Frank C; Aiello C; Cutarelli A; Ambrosini E; Lanciotti A; Brignone MS; D'Oria V; Strippoli R; De Benedetti F; Bertini E; Bracci-Laudiero L

INSTITUCIÓN / INSTITUTION: - Confocal Microscopy Core Facility, Research Center, Bambino Gesù Children's Hospital, IRCCS, P.zza S. Onofrio 4, 00165 Rome, Italy. Electronic address: stefania.petrini@opbg.net.

RESUMEN / SUMMARY: - Megalencephalic leukoencephalopathy with subcortical cysts (MLC) is a rare congenital leukodystrophy characterized by macrocephaly, subcortical cysts and demyelination. The majority of patients harbor mutations in the MLC1 gene encoding for a membrane protein with largely unknown function. Mutations in MLC1 hamper its normal trafficking and distribution in cell membranes, leading to enhanced degradation. MLC1 protein is highly expressed in brain astrocytes and in circulating blood cells, particularly monocytes. We used these easily available cells and monocyte-derived macrophages from healthy donors and MLC1-mutated patients to study MLC1 expression and localization, and to investigate how defective MLC1 mutations may affect macrophage functions. RT-PCR, western blot and immunofluorescence analyses show that MLC1 is expressed in both monocytes and macrophages, and its biosynthesis follows protein trafficking between endoplasmic reticulum and trans-Golgi network and the secretory pathway to the cell surface. MLC1 is transported along the endosomal recycling pathway passing through Rab5+ and Rab11A+vesicles before lysosomal degradation. Alterations in MLC1 trafficking and distribution were observed in macrophages from MLC1-mutated patients, which also showed changes in the expression and localization of several proteins involved in plasma membrane permeability, ion and water homeostasis and ion-regulated exocytosis. As a consequence of these alterations, patient-derived macrophages show abnormal cell morphology and intracellular calcium influx and altered response to hypo-osmotic stress. Our results suggest that blood-derived macrophages may give relevant information on MLC1 function and may be considered as valid biomarkers for MLC diagnosis and for investigating therapeutic strategies aimed to restore MLC1 trafficking in patient cells.

[159]

TÍTULO / TITLE: - Determining if low dose hyper-radiosensitivity (HRS) can be exploited to provide a therapeutic advantage: A cell line study in four glioblastoma multiforme (GBM) cell lines.

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

REVISTA / JOURNAL: - Int J Radiat Biol. 2013 Jul 16.

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

[3109/09553002.2013.825061](#)

AUTORES / AUTHORS: - Schoenherr D; Krueger SA; Martin L; Marignol L; Wilson GD; Marples B

RESUMEN / SUMMARY: - Abstract Purpose The rationale of the study was to determine if ultra-fractionation using repeated pulses of radiation (10x0.2 Gray (Gy)) would be more cytotoxic than continuously-delivered radiation to the same total dose (2 Gy) in four glioma cell lines. Materials and methods Human T98G, U373, U87MG and U138MG cells were conventionally X-irradiated with 0.1-8 Gy and clonogenic survival assessed. Next, cells were treated with either a

single dose of 2 Gy or 10 pulses of 0.2 Gy using a 3 minute inter-pulse interval and DNA (Deoxyribonucleic acid) repair (pHistone H2A.X), G2-phase cell cycle checkpoint arrest (pHistone H3) and apoptosis (caspase-3) compared between the two regimens. A dose of 0.2 Gy was selected as this reflects the hyper-radiosensitivity (HRS)/increased radioresistance (IRR) transition point of the low-dose cell survival curve. Results T98G, U87MG and U138MG exhibited distinct HRS responses and survival curves were well-described by the Induced Repair model. Despite the prolonged delivery time, ultra-fractionation (10x0.2 Gy) was equally effective as a single continuously-delivered 2 Gy dose. However, ultra-fractionation was more effective when given for 5 consecutive days to a total dose of 10 Gy. The increased effectiveness of ultra-fractionation could not be attributed directly to differences in DNA damage, repair processes or radiation-induced apoptosis. Conclusions Ultra-fractionation (10 x 0.2 Gy) is an effective modality for killing glioma cell lines compared with standard 2 Gy dosing when multiple days of treatment are given.

[160]

TÍTULO / TITLE: - Surgical treatment of Morton's neuroma: clinical results after open excision.

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

REVISTA / JOURNAL: - Int Orthop. 2013 Jul 13.

●● Enlace al texto completo (gratis o de pago) [1007/s00264-013-2002-](#)

[6](#)

AUTORES / AUTHORS: - Kasperek M; Schneider W

INSTITUCIÓN / INSTITUTION: - Department Orthopaedics, Herz Jesu Krankenhaus, Vienna, Austria, max.kasperek@hotmail.com.

RESUMEN / SUMMARY: - PURPOSE: Long-term results following surgical treatment of Morton neuroma are rare. The purpose of the present study was to evaluate patients after excision of Morton's neuroma at least ten years following surgery. METHODS: We performed a retrospective review of the patients' records who underwent excision of an interdigital neuroma with the clinical diagnosis of Morton's neuroma. Eighty-one patients who had undergone surgery on 98 feet were analysed at an average of 15.3 years postoperatively. In total 111 neuromas were excised, because in 13 feet more than one neuroma was identified clinically. Follow-up evaluation included physical examination and a radiographic evaluation. The interdigital neuroma clinical evaluation score and the AOFAS score were assessed. RESULTS: An excellent result was reported for 44 feet (44.9 %), a good result for 31 feet (31.6 %) and a fair one for 15 feet (15,3 %). Eight feet had a poor result (8.2 %), in all of them an amputation neuroma was diagnosed. The average neuroma score was 62 points (range 20-80) and the AOFAS score 75 points (range 29-100). Sixty-one feet (62.2 %) had concomitant foot and ankle disorders not related to the primary diagnosis of Morton's neuroma. Numbness was assessed in 72 % (72

feet), a normal sensibility in 26 % (26 feet) and dyaesthesia in 1 % (one foot). The clinical outcome was not influenced by existence of sensory deficits ($p = 0.646$); analysis of location of neuroma showed best results for those in the third webspace. A significantly worse outcome was found in patients operated on multiple neuromas compared to single neuroma ($p = 0.038$). CONCLUSION: Surgical excision of a Morton's neuroma results in good clinical results and high overall patient's satisfaction in the long term. Multiple neuromas have worse outcome than single neuromas. Sensory deficits and concomitant foot and ankles disorders are common, but do not have an influence on patient's satisfaction.

[161]

TÍTULO / TITLE: - Analysis of Risk Factors and Survival in Pediatric High-Grade Spinal Cord Astrocytoma: A Population-Based Study.

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

REVISTA / JOURNAL: - *Pediatr Neurosurg.* 2013 Jul 20.

●● Enlace al texto completo (gratis o de pago) [1159/000353135](#)

AUTORES / AUTHORS: - Lam S; Lin Y; Melkonian S

INSTITUCIÓN / INSTITUTION: - Section of Neurosurgery, University of Chicago, Chicago, Ill., USA.

RESUMEN / SUMMARY: - Background/Aims: Primary pediatric high-grade spinal cord astrocytomas are rare neoplasms with poor prognoses. Using the Surveillance, Epidemiology, and End Results (SEER) database, we analyzed prognostic factors and survival. Methods: Pediatric patients with histologically confirmed diagnoses of primary high-grade spinal cord astrocytoma (WHO grade III-IV) from 1973 to 2008 in the SEER database were studied. Univariate and multivariate Cox proportional hazards models were used to analyze the relationship between demographic, tumor grade, and treatment factors on survival. Results: Median survival in the 48 patient cohort was 10 months. Increasing age and higher tumor grade were found to be significantly associated with higher mortality. For children aged <7, 7-12, and 13-18 years, median survival was 22, 11, and 8 months, respectively. For children with anaplastic astrocytoma (WHO grade III), median survival was 12 months, compared with 7 months for those with glioblastoma multiforme (WHO grade IV). This study did not find a statistically significant relationship between sex, race, presence of radiation therapy or extent of surgical resection and mortality. Conclusion: Survival in primary pediatric high-grade spinal cord astrocytomas was positively associated with younger age and lower tumor grade. Survival was not associated with other demographic or treatment modality factors.

[162]

TÍTULO / TITLE: - An ASK1-p38 signalling pathway mediates hydrogen peroxide-induced toxicity in NG108-15 neuronal cells.

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

REVISTA / JOURNAL: - Neurosci Lett. 2013 Aug 9;549:163-7. doi: 10.1016/j.neulet.2013.05.045. Epub 2013 Jun 4.

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

[1016/j.neulet.2013.05.045](#)

AUTORES / AUTHORS: - Nomura K; Lee M; Banks C; Lee G; Morris BJ

INSTITUCIÓN / INSTITUTION: - Institute of Neuroscience and Psychology, College of Medical, Veterinary and Life Sciences, University of Glasgow, Glasgow G12 8QQ, UK.

RESUMEN / SUMMARY: - Reactive oxygen species (ROS) are believed to be involved in many forms of neurodegeneration, including ischaemic infarct damage and Alzheimer's disease. Despite the known involvement of p38 and JNK MAP kinases in mediating apoptosis and cell death in a variety of cell types, the details of the signalling pathways activated in neuronal cells by ROS are poorly characterised. Recently TAK1 (MAP3K7), a kinase upstream of JNK and p38, has attracted attention as a possible mediator of ischaemic cell death. This study tested the hypothesis that hydrogen peroxide (H₂O₂), which produces ROS, induces apoptosis in the NG108-15 neuronal cell line via activation of either TAK1 or the related kinase ASK1 (MAP3K5). H₂O₂ caused a concentration-dependent reduction in cell viability associated with caspase 3 activation. Loss of cell viability was inhibited by a selective caspase 3 inhibitor, and by the p38 inhibitor SB203580, but was not affected by the JNK inhibitor SP600125. The selective TAK1 inhibitor 5Z-7-oxozeaenol (5Z-7) exacerbated the loss of cell viability, whereas the ASK1 inhibitor NQDI-1 completely prevented caspase activation and cell death. These results show that pharmacological inhibition of ASK1 is neuroprotective, implicating an ASK1-p38 signalling pathway in ROS-induced apoptosis in neurones. The results also imply that the role of TAK1 may be neuroprotective rather than pro-degenerative.

[163]

TÍTULO / TITLE: - Exploratory Evaluation of MR Permeability with 18F-FDG PET Mapping in Pediatric Brain Tumors: A Report from the Pediatric Brain Tumor Consortium.

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

REVISTA / JOURNAL: - J Nucl Med. 2013 Aug;54(8):1237-43. doi: 10.2967/jnumed.112.115782. Epub 2013 Jun 25.

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

[2967/jnumed.112.115782](#)

AUTORES / AUTHORS: - Zukotynski KA; Fahey FH; Vajapeyam S; Ng SS; Kocak M; Gururangan S; Kun LE; Poussaint TY

INSTITUCIÓN / INSTITUTION: - Department of Medical Imaging, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, Ontario, Canada.

RESUMEN / SUMMARY: - The purpose of this study was to develop a method of registering (18)F-FDG PET with MR permeability images for investigating the correlation of (18)F-FDG uptake, permeability, and cerebral blood volume (CBV) in children with pediatric brain tumors and their relationship with outcome. **METHODS:** Twenty-four children with brain tumors in a phase II study of bevacizumab and irinotecan underwent brain MR and (18)F-FDG PET within 2 wk. Tumor types included supratentorial high-grade astrocytoma (n = 7), low-grade glioma (n = 9), brain stem glioma (n = 4), medulloblastoma (n = 2), and ependymoma (n = 2). There were 33 cases (pretreatment only [n = 12], posttreatment only [n = 3], and both pretreatment [n = 9] and posttreatment [n = 9]). (18)F-FDG PET images were registered to MR images from the last time point of the T1 perfusion time series using mutual information. Three-dimensional regions of interest (ROIs) drawn on permeability images were automatically transferred to registered PET images. The quality of ROI registration was graded (1, excellent; 2, very good; 3, good; 4, fair; and 5, poor) by 3 independent experts. Spearman rank correlations were used to assess correlation of maximum tumor permeability (Kpsmax), maximum CBV (CBVmax), and maximum (18)F-FDG uptake normalized to white matter (T/Wmax). Cox proportional hazards models were used to investigate associations of these parameters with progression-free survival (PFS). **RESULTS:** The quality of ROI registration between PET and MR was good to excellent in 31 of 33 cases. There was no correlation of baseline Kpsmax with CBVmax (Spearman rank correlation = 0.018 [P = 0.94]) or T/Wmax (Spearman rank correlation = 0.07 [P = 0.76]). Baseline CBVmax was correlated with T/Wmax (Spearman rank correlation = 0.47 [P = 0.036]). Baseline Kpsmax, CBVmax, and T/Wmax were not significantly associated with PFS (P = 0.42, hazard ratio [HR] = 0.97, 95% confidence interval [CI] = 0.90-1.045, and number of events [nevents] = 15 for Kpsmax; P = 0.41, HR = 0.989, 95% CI = 0.963-1.015, and nevents = 14 for CBVmax; and P = 0.17, HR = 1.49, 95% CI = 0.856-2.378, and nevents = 15 for T/Wmax). **CONCLUSION:** (18)F-FDG PET and MR permeability images were successfully registered and compared across a spectrum of pediatric brain tumors. The lack of correlation between metabolism and permeability may be expected because these parameters characterize different molecular processes. The correlation of CBV and tumor metabolism may be related to an association with tumor grade. More patients are needed for a covariate analysis of these parameters and PFS by tumor histology.

[164]

TÍTULO / TITLE: - Delayed Diagnosis in Children with Intracranial Germ Cell Tumors.

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

REVISTA / JOURNAL: - J Pediatr. 2013 Jul 26. pii: S0022-3476(13)00737-3. doi: 10.1016/j.jpeds.2013.06.024.

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

[1016/j.jpeds.2013.06.024](#)

AUTORES / AUTHORS: - Sethi RV; Marino R; Niemierko A; Tarbell NJ; Yock TI; Macdonald SM

INSTITUCIÓN / INSTITUTION: - Harvard Medical School, Massachusetts General Hospital, Boston, MA.

RESUMEN / SUMMARY: - **OBJECTIVE:** To review symptoms and provider history in a large cohort of patients with germ cell tumors (GCTs) to highlight the variety of manifestations and assess the effect of delayed diagnosis on outcomes. **STUDY DESIGN:** Patients treated for intracranial pure germinoma and nongerminomatous GCTs at Massachusetts General Hospital between 1998 and 2012 were included (n = 70). The primary outcome was time from onset of symptoms to diagnostic imaging. Delay was defined as an interval of ≥ 6 months. **RESULTS:** The median duration of symptoms before diagnostic magnetic resonance imaging was 6 months (range, 2 days to 72 months). Thirty-eight of the 70 patients (54%) had a delayed diagnosis. Patients with suprasellar tumors presented with symptoms related to endocrinopathies, and patients with pineal region tumors presented with symptoms related to hydrocephalus. Most of the patients were evaluated by a general pediatrician (49%) and/or pediatric subspecialists (66%) before diagnosis. Patients with delayed diagnosis saw a greater number of physicians before diagnosis (P = .006). The majority of patients (63%) with delayed diagnosis were seen by 2 or more physicians, and many (40%) were seen by 2 or more subspecialists. Progression-free survival was similar in the patients with delayed diagnosis and those without delayed diagnosis (P = .90), but the former were more likely to present with disseminated disease at diagnosis (34% vs 6%; P = .007). **CONCLUSION:** A significant proportion of patients with GCT experience a delay in time to diagnosis, in some cases despite evaluation by general pediatricians and specialists. This delay increases the risk of disseminated disease.

[165]

TÍTULO / TITLE: - Astrocytoma grade IV (glioblastoma multiforme) displays 3 subtypes with unique expression profiles of intermediate filament proteins.

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

REVISTA / JOURNAL: - Hum Pathol. 2013 Jun 18. pii: S0046-8177(13)00141-X. doi: 10.1016/j.humpath.2013.03.013.

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

[1016/j.humpath.2013.03.013](#)

AUTORES / AUTHORS: - Skalli O; Wilhelmsson U; Orndahl C; Fekete B; Malmgren K; Rydenhag B; Pekny M

INSTITUCIÓN / INSTITUTION: - Department of Biological Sciences, The University of Memphis, Memphis, TN 38152, USA. Electronic address: oskalli@memphis.edu.

RESUMEN / SUMMARY: - Astrocytoma grade IV (glioblastoma multiforme) is the most common and most malignant tumor of the central nervous system and is currently noncurable. Here, we have examined a population-based cohort of 47 patients with grade IV astrocytoma, who underwent tumor surgery at Sahlgrenska University Hospital in Sweden and who survived after surgery for less than 200 days (short survivors, 28 patients) and more than 500 days (long survivors, 19 patients). For each tumor, we ascertained information on patient age, sex, tumor location, oncological treatment, and survival after surgery. The analysis of the tumor volume and the extent of tumor resection (incomplete versus complete resection of the macroscopic tumor) was made retrospectively from the preoperative radiological investigations and, when available, also from postoperative radiology. We performed semiquantitative immunohistochemical evaluation of the presence of intermediate filament (nanofilament) proteins glial fibrillary acidic protein, vimentin, nestin, and synemin in tumor cells. The intermediate filament system helps cells and tissues to cope with various types of stress, and thus, it might affect the malignant potential of grade IV astrocytoma. We propose a subclassification of astrocytomas grade IV with respect to the expression of the intermediate filament proteins glial fibrillary acidic protein, vimentin, nestin, and synemin, namely, type A, B, and C. Our results suggest that the expression of the intermediate filament proteins glial fibrillary acidic protein, vimentin, nestin, and synemin is coregulated in grade IV astrocytomas. The expression patterns of the intermediate filament proteins in astrocytoma type A, B, and C might have biological and clinical significance.

[166]

TÍTULO / TITLE: - Targeting cancer stem cells in glioblastoma multiforme using mTOR inhibitors and the differentiating agent all-trans retinoic acid.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Jul 18. doi: 10.3892/or.2013.2625.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2625](#)

AUTORES / AUTHORS: - Friedman MD; Jeevan DS; Tobias M; Murali R; Jhanwar-Uniyal M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, New York Medical College, Valhalla, NY 10595, USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM), the most aggressive primary brain tumor, portends a poor prognosis despite current treatment modalities. Recurrence of tumor growth is attributed to the presence of treatment-resistant cancer stem cells (CSCs). The targeting of these CSCs is therefore essential in the treatment of this disease. Mechanistic target of rapamycin (mTOR) forms two multiprotein complexes, mTORC1 and mTORC2,

which regulate proliferation and migration, respectively. Aberrant function of mTOR has been shown to be present in GBM CSCs. All-trans retinoic acid (ATRA), a derivative of retinol, causes differentiation of CSCs as well as normal neural progenitor cells. The purpose of this investigation was to delineate the role of mTOR in CSC maintenance, and to establish the mechanism of targeting GBM CSCs using differentiating agents along with inhibitors of the mTOR pathways. The results demonstrated that ATRA caused differentiation of CSCs, as demonstrated by the loss of the stem cell marker Nestin. These observations were confirmed by western blotting, which demonstrated a time-dependent decrease in Nestin expression following ATRA treatment. This effect occurred despite combination with mTOR (rapamycin), PI3K (LY294002) and MEK1/2 (U0126) inhibitors. Expression of activated extracellular signal-regulated kinase 1/2 (pERK1/2) was enhanced following treatment with ATRA, independent of mTOR pathway inhibitors. Proliferation of CSCs, determined by neurosphere diameter, was decreased following treatment with ATRA alone and in combination with rapamycin. The motility of GBM cells was mitigated by treatment with ATRA, rapamycin and LY29002 alone. However, combination treatment augmented the inhibitory effect on migration suggesting synergism. These findings indicate that ATRA-induced differentiation is mediated via the ERK1/2 pathway, and underscores the significance of including differentiating agents along with inhibitors of mTOR pathways in the treatment of GBM.

[167]

TÍTULO / TITLE: - The expression of hepatoma-derived growth factor in primary central nervous system lymphoma and its correlation with angiogenesis, proliferation and clinical outcome.

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

REVISTA / JOURNAL: - Med Oncol. 2013 Sep;30(3):622. doi: 10.1007/s12032-013-0622-8. Epub 2013 Jun 15.

●● Enlace al texto completo (gratis o de pago) [1007/s12032-013-0622-8](#)

AUTORES / AUTHORS: - Li SZ; Zhao YB; Cao WD; Qu Y; Luo P; Zhen HN; Chen XY; Yan ZF; Fei Z

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Xijing Hospital, Fourth Military Medical University, Changle West Road 169#, Xi'an, 710032, China.

RESUMEN / SUMMARY: - Hepatoma-derived growth factor (HDGF), a potential predictive and prognostic marker in several human cancers, is the firstly reported member of the HDGF family of proteins containing a well-conserved N-terminal amino acid sequence. HDGF is implicated in tumorigenesis by direct angiogenic activity, and its expression is correlated with aggressive biological ability of cancer cells including proliferation and angiogenesis. So, we propose that HDGF may be a valuable factor in progression and prognosis for primary

central nervous system lymphoma (PCNSL) through its angiogenic and proliferative activity. So, HDGF, CD31 and Ki67 expression in the specimens of 60 patients suffering from PCNSL was investigated by immunohistochemistry in this study. Their correlations with clinicopathologic features and prognosis were evaluated to determine whether HDGF, CD31 and Ki67 expression levels correlate with the prognosis of the 60 patients suffering from PCNSL. We found that all PCNSL specimens showed HDGF, CD31 and Ki67 expression with different expression levels. Statistical analysis showed that HDGF had a positive correlation with CD31, but not with Ki67. Patients with higher HDGF and CD31 expression level had poorer overall survival rates than those with lower expression levels of HDGF and CD31, while Ki67 expression level did not correlate with overall survival. Multivariate analysis revealed that postoperative adjuvant chemotherapy and high expression of HDGF was independent prognostic indicator of patient survival.

[168]

TÍTULO / TITLE: - 150 Gene Expression Analysis Revealed Distinct Physiology in G-CIMP+ and G-CIMP- Gliomas.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:169-70. doi: 10.1227/01.neu.0000432741.17570.26.

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

[1227/01.neu.0000432741.17570.26](https://doi.org/10.1227/01.neu.0000432741.17570.26)

AUTORES / AUTHORS: - Taich ZJ; Goyal A; Gonda DD; Marcusson E; Kaimal V; Jiang T; Carter BS; Chen CC

RESUMEN / SUMMARY: - INTRODUCTION: The discovery that gliomas can be categorized by their CpG Island Methylator Phenotype (G-CIMP) status has fundamentally altered our understanding of glioblastoma pathogenesis. However, the inherent physiologies associated with the G-CIMP phenotype remains unclear. Here, we utilized gene signature expression analysis to better understand these physiologies. METHODS: Published expression signatures associated with pathway activation of receptor tyrosine kinases (EGFR, PTEN), Ras (Ras, MAPK, MEK, RAF), cell-cycle progression (TGF- β , E2F3), tumor initiation (CD133, glioblastoma tumorigenicity signature), cell migration (Epithelial Mesenchymal Transformation (EMT) and glioblastoma invasion signature), inflammation (NF κ B), and angiogenesis (VEGF) were applied to glioma transcriptomes published by the Chinese Glioma Cooperative Group (CGCG; n = 155) and the Rembrandt group (n = 288). Gliomas in these database were categorized into G-CIMP+ or G-CIMP- status using a published gene expression signatures. RESULTS: There was a graded increase in gene expression associated with RTK and Ras pathway activation, cell cycle progression, tumor initiation, cell migration, inflammation, as well as angiogenesis during glioma progression from stage II to stage IV. Genes

associated with activation of RTK, Ras, NFkb, EMT and angiogenesis were expressed at higher levels in G-CIMP- glioblastomas relative to G-CIMP+ glioblastomas. On the other hand, genes associated with tumor invasiveness were expressed at higher levels in G-CIMP+ glioblastomas. Despite these differences, gene signatures reflecting tumor initiating capacity and cell cycle progression were comparable between G-CIMP+ and G-CIMP- glioblastomas. Similar expression patterns were observed in Grade II G-CIMP+ and G-CIMP- gliomas. CONCLUSION: G-CIMP+ and G-CIMP- gliomas exhibited patterns of gene expression that suggest inherently distinct molecular physiology.

[169]

TÍTULO / TITLE: - Quantitative proteomic analysis of the inhibitory effects of CIL-102 on viability and invasiveness in human glioma cells.

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

REVISTA / JOURNAL: - Toxicol Appl Pharmacol. 2013 Jul 26. pii: S0041-008X(13)00312-8. doi: 10.1016/j.taap.2013.07.009.

●● Enlace al texto completo (gratis o de pago) [1016/j.taap.2013.07.009](#)

AUTORES / AUTHORS: - Teng CC; Kuo HC; Sze CI

INSTITUCIÓN / INSTITUTION: - Institute of Nursing and Department of Nursing, Chang Gung University of Science and Technology, Taiwan; Chronic Diseases and Health Promotion Research Center, CGUST, Taiwan; Institute of Basic Medicine Science, National Cheng Kung University, Tainan, Taiwan.

RESUMEN / SUMMARY: - CIL-102 (1-[4-(furo[2,3-b]quinolin-4-ylamino)phenyl]ethanone), the major active agent of the alkaloid derivative, has been demonstrated to exert anticancer effects. Herein, we present an investigation focused on the identification of the target(s) of CIL-102's action and the mechanism of its action in apoptotic and anti-invasive pathways. Proteomic approaches were used to purify and identify the protein substrates using 2D difference gel electrophoresis (2D SDS-PAGE) to assess changes in the expression of relevant protein treatment with CIL-102 that resulted in the inhibition of viability and invasion. Our results demonstrate that CIL-102 treatment of U87 cells decreased cell proliferation and invasiveness. CIL-102 dose-dependent induction of apoptosis and inhibitory invasiveness were accompanied by sustained phosphorylation of JNK1/2 and p70S6K as well as generation of the reactive oxygen species. In addition, differential proteins displayed between CIL-102-treated and untreated U87 were determined and validated. There were 11 differentially expressed proteins between the CIL-102-treated and untreated groups. Furthermore, we demonstrated that CIL-102 inhibited cancer cell proliferation and reduced anti-invasion properties by up-regulating the levels of FUMH (Fumarate hydratase). The investigation demonstrated that there was an increase in the cellular levels of FUMH in the CIL-102 reduction in viability and invasion via the activation of JNK1/2 and mTOR signaling modules. NAC administration and shRNA FUMH conferred

resistance to CIL-102-inhibited HIF1alpha and MMP-2 levels via inhibition of JNK1/2 and mTOR activation. We concluded that CIL-102-induced an apoptosis cascade and decreased aggressiveness in astrocytoma cells by modulation of mitochondria function, providing a new mechanism for CIL-102 treatment.

[170]

TÍTULO / TITLE: - RTEL1 and TERT polymorphisms are associated with astrocytoma risk in the Chinese Han population.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Jun 29.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-0947-](#)

[0](#)

AUTORES / AUTHORS: - Jin TB; Zhang JY; Li G; Du SL; Geng TT; Gao J; Liu QP; Gao GD; Kang LL; Chen C; Li SQ

INSTITUCIÓN / INSTITUTION: - School of Life Sciences, Northwest University, Xi'an, 710069, China.

RESUMEN / SUMMARY: - Common variants of multiple genes play a role in glioma onset. However, research related to astrocytoma, the most common primary brain neoplasm, is rare. In this study, we chose 21 tagging SNPs (tSNPs), previously reported to be associated with glioma risk in a Chinese case-control study from Xi'an, China, and identified their contributions to astrocytoma susceptibility. We found an association with astrocytoma susceptibility for two tSNPs (rs6010620 and rs2853676) in two different genes: regulator of telomere elongation helicase 1 (RTEL1) and telomerase reverse transcriptase (TERT), respectively. We confirmed our results using recessive, dominant, and additive models. In the recessive model, we found two tSNPs (rs2297440 and rs6010620) associated with increased astrocytoma risk. In the dominant model, we found that rs2853676 was associated with increased astrocytoma risk. In the additive model, all three tSNPs (rs2297440, rs2853676, and rs6010620) were associated with increased astrocytoma risk. Our results demonstrate, for the first time, the potential roles of RTEL1 and TERT in astrocytoma development.

[171]

TÍTULO / TITLE: - Inhibition of tumor formation and redirected differentiation of glioblastoma cells in a xenotypic embryonic environment.

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

REVISTA / JOURNAL: - Dev Dyn. 2013 Jun 18. doi: 10.1002/dvdy.24001.

●● Enlace al texto completo (gratis o de pago) [1002/dvdy.24001](#)

AUTORES / AUTHORS: - Joel M; Sandberg CJ; Boulland JL; Vik-Mo EO; Langmoen IA; Glover JC

INSTITUCIÓN / INSTITUTION: - Laboratory of Neural Development and Optical Recording (NDEVOR), Department of Physiology, Institute of Basic Medical Sciences, University of Oslo, Oslo, Norway; Vilhelm Magnus Laboratory for Neurosurgical Research, Institute of Surgical Research, Oslo University Hospital-Rikshospitalet, Norway; Norwegian Center for Stem Cell Research, Department of Immunology and Transfusion Medicine, Oslo University Hospital-Rikshospitalet, Oslo, Norway.

RESUMEN / SUMMARY: - Background: Tissue microenvironment plays key roles in regulating the progression of aggressive tumors. Tumors are uncommon in the early embryo, suggesting that embryonic tissue microenvironments are nonpermissive for tumors. Yet, the effects of embryonic tissue microenvironments on tumor cells have not been extensively studied. We have, therefore, tested the behavior of human glioblastoma multiforme (GBM) cells transplanted into a central neural tissue microenvironment in the chicken embryo. Results: GBM cells were cultured as spheres to enrich for GBM stem cells (GSCs) and transduced with GFP for identification. Within the proliferative embryonic neural tissue, GSC-enriched GBM cells exhibited reduced proliferation and survival, altered gene expression, and formed no tumors, in marked contrast to their aggressive behavior in vitro and tumor formation in other tissue microenvironments including the chorioallantoic membrane of the chicken embryo and the brain of adult severe combined immunodeficiency (SCID) mice. Surviving cells in the spinal neural tube exhibited tumor-atypical expression profiles of neuron-, glia-, stem cell-, and tumor-related genes. Conclusions: Embryonic neural tissue provides a poor environment for GBM cell survival and tumor formation, and redirects differentiation toward a more benign phenotype. Understanding the anti-tumorigenic effects of this embryonic tissue microenvironment could provide opportunities to develop novel therapies for GBM treatment. Developmental Dynamics, 2013. © 2013 Wiley Periodicals, Inc.

[172]

TÍTULO / TITLE: - The alternative lengthening of telomere phenotype is significantly associated with loss of ATRX expression in high-grade pediatric and adult astrocytomas: a multi-institutional study of 214 astrocytomas.

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

REVISTA / JOURNAL: - Mod Pathol. 2013 Jun 14. doi: 10.1038/modpathol.2013.90.

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

[1038/modpathol.2013.90](#)

AUTORES / AUTHORS: - Abedalthagafi M; Phillips JJ; Kim GE; Mueller S; Haas-Kogen DA; Marshall RE; Croul SE; Santi MR; Cheng J; Zhou S; Sullivan LM; Martinez-Lage M; Judkins AR; Perry A

INSTITUCIÓN / INSTITUTION: - 1] Division of Neuropathology, Department of Pathology, University of California, San Francisco, San Francisco, CA, USA [2]

Division of Surgical Pathology, Department of Pathology, University of California, San Francisco, San Francisco, CA, USA.

RESUMEN / SUMMARY: - Loss-of-function of alpha thalassemia/mental retardation syndrome X-linked (ATRX) protein leads to a phenotype called alternative lengthening of telomeres (ALT) in some tumors. High-grade astrocytomas comprise a heterogeneous group of central nervous system tumors. We examined a large cohort of adult (91) and pediatric (n=88) high-grade astrocytomas as well as lower grade forms (n=35) for immunohistochemical loss of ATRX protein expression and the presence of ALT using telomere-specific fluorescence in situ hybridization, with further correlation to other known genetic alterations. We found that in pediatric high-grade astrocytomas, 29.6% of tumors were positive for ALT and 24.5% were immunonegative for the ATRX protein, these two alterations being highly associated with one another (P<0.0001). In adult high-grade astrocytomas, 26.4% of tumors were similarly positive for ALT, including 80% of ATRX protein immunonegative cases (P<0.0001). Similar frequencies were found in 11 adult low-grade astrocytomas, whereas all 24 pilocytic astrocytomas were negative for ALT. We did not find any significant correlations between isocitrate dehydrogenase status and either ALT positivity or ATRX protein expression in our adult high-grade astrocytomas. In both cohorts, however, the ALT positive high-grade astrocytomas showed more frequent amplification of the platelet-derived growth factor receptor alpha gene (PDGFRA; 45% and 50%, respectively) than the ALT negative counterparts (18% and 26%; P=0.03 for each). In summary, our data show that the ALT and ATRX protein alterations are common in both pediatric and adult high-grade astrocytomas, often with associated PDGFRA gene amplification. Modern Pathology advance online publication, 14 June 2013; doi:10.1038/modpathol.2013.90.

[173]

TÍTULO / TITLE: - Small-Animal PET with a sigma-Ligand, 11C-SA4503, Detects Spontaneous Pituitary Tumors in Aged Rats.

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

REVISTA / JOURNAL: - J Nucl Med. 2013 Aug;54(8):1377-83. doi: 10.2967/jnumed.112.115931. Epub 2013 Jun 19.

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

[2967/jnumed.112.115931](#)

AUTORES / AUTHORS: - Ramakrishnan NK; Rybczynska AA; Visser AK; Marosi K; Nyakas CJ; Kwizera C; Sijbesma JW; Elsinga PH; Ishiwata K; Pruijm J; Dierckx RA; van Waarde A

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine and Molecular Imaging, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands.

RESUMEN / SUMMARY: - Pituitary tumors are often detected only after death or at late stages of the disease when they are macroadenomas with a low surgical cure rate. Spontaneous pituitary tumors occur in rats over 1 y of age. In an ongoing study of changes in sigma-1 agonist binding related to aging, several of our rats developed such tumors. The aim of the current study was to assess the kinetics of (11)C-SA4503 ((11)C-labeled 1-[2-(3,4-dimethoxyphenethyl)]-4-(3-phenylpropyl)-piperazine dihydrochloride) in tumor and brain and to evaluate the utility of this tracer in the detection of pituitary tumors. **METHODS:** Small-animal PET scans of the brain region of male Wistar Hannover rats (age, 18-32 mo) were acquired using the sigma-1 agonist tracer (11)C-SA4503. The time-dependent uptake of (11)C in the entire brain, tumor or normal pituitary, and thyroid was measured. A 2-tissue-compartment model was fitted to the PET data, using metabolite-corrected plasma radioactivity as the input function. **RESULTS:** Pituitary tumors showed up as bright hot spots in the scans. The total distribution volume (VT) of the tracer was significantly higher in the tumor than in the normal pituitary. Surprisingly, a higher VT was also seen in the brain and thyroid tissue of animals with pituitary tumors than in healthy rats. The increase in VT in the brain and thyroid was not related to a change in nondisplaceable binding potential (BPND) but rather to an increase in the partition coefficient (K1/k2) of (11)C-SA4503. The increase in VT in the tumor on the other hand was accompanied by a significant increase in BPND. Western blotting analysis indicated that pituitary tumors overexpressed sigma-1 receptors. **CONCLUSION:** The overexpression of sigma-1 receptors in spontaneous pituitary tumors is detected as an increase in uptake and BPND of (11)C-SA4503. Therefore, this tracer may have promise for the detection of pituitary adenomas, using PET.

[174]

TÍTULO / TITLE: - A survey of MRI-based medical image analysis for brain tumor studies.

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

REVISTA / JOURNAL: - Phys Med Biol. 2013 Jul 7;58(13):R97-129. doi: 10.1088/0031-9155/58/13/R97. Epub 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago) [1088/0031-](#)

[9155/58/13/R97](#)

AUTORES / AUTHORS: - Bauer S; Wiest R; Nolte LP; Reyes M

INSTITUCIÓN / INSTITUTION: - Institute for Surgical Technology and Biomechanics, University of Bern, Switzerland. stefan.bauer@istb.unibe.ch

RESUMEN / SUMMARY: - MRI-based medical image analysis for brain tumor studies is gaining attention in recent times due to an increased need for efficient and objective evaluation of large amounts of data. While the pioneering approaches applying automated methods for the analysis of brain tumor images date back almost two decades, the current methods are becoming more

mature and coming closer to routine clinical application. This review aims to provide a comprehensive overview by giving a brief introduction to brain tumors and imaging of brain tumors first. Then, we review the state of the art in segmentation, registration and modeling related to tumor-bearing brain images with a focus on gliomas. The objective in the segmentation is outlining the tumor including its sub-compartments and surrounding tissues, while the main challenge in registration and modeling is the handling of morphological changes caused by the tumor. The qualities of different approaches are discussed with a focus on methods that can be applied on standard clinical imaging protocols. Finally, a critical assessment of the current state is performed and future developments and trends are addressed, giving special attention to recent developments in radiological tumor assessment guidelines.

[175]

- CASTELLANO -

TÍTULO / TITLE: Glutamate et gliomes malins, de l'épilepsie a l'agressivite biologique : implications therapeutiques.

TÍTULO / TITLE: - Glutamate and malignant gliomas, from epilepsia to biological aggressiveness: therapeutic implications.

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

REVISTA / JOURNAL: - Bull Cancer. 2013 Jul 24.

●● Enlace al texto completo (gratis o de pago) 1684/bdc.2013.1781

AUTORES / AUTHORS: - Bleicic S; Rynkowski M; De Witte O; Lefranc F

INSTITUCIÓN / INSTITUTION: - Service de neurologie, Epicura, 7800 Ath, Belgique.

RESUMEN / SUMMARY: - In this review article, we describe the unrecognized roles of glutamate and glutamate receptors in malignant glioma biology. The neurotransmitter glutamate released from malignant glioma cells in the extracellular matrix is responsible for seizure induction and at higher concentration neuronal cell death. This neuronal cell death will create vacated place for tumor growth. Glutamate also stimulates the growth and the migration of glial tumor cells by means of the activation of glutamate receptors on glioma cells in a paracrine and autocrine manner. The multitude of effects of glutamate in glioma biology supports the rationale for pharmacological targeting of glutamate receptors and transporters in the adjuvant treatment of malignant gliomas in neurology and neuro-oncology. Using the website www.clinicaltrials.gov/ as a reference - a service developed by the National Library of Medicine for the National Health Institute in USA - we have evoked the few clinical trials completed and currently ongoing with therapies targeting the glutamate receptors.

[176]

TÍTULO / TITLE: - Effect of All-Trans Retinoic Acid on the Differentiation of U87 Glioma Stem/Progenitor Cells.

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

REVISTA / JOURNAL: - Cell Mol Neurobiol. 2013 Jul 13.

●● Enlace al texto completo (gratis o de pago) [1007/s10571-013-9960-](#)

[5](#)

AUTORES / AUTHORS: - Shi Z; Lou M; Zhao Y; Zhang Q; Cui D; Wang K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Shanghai Tenth People's Hospital, Tongji University, No. 301 Middle Yanchang Road, Zabei District, Shanghai, 200072, China.

RESUMEN / SUMMARY: - GSPCs (glioma stem/progenitor cells) were isolated from U87 glioma cell lines by serum-free neural stem cell medium. Four concentrations (1, 2, 4, and 8 $\mu\text{mol/L}$) of ATRA (all-trans retinoic acid) were used to induce the differentiation of GSPCs in the medium with or without growth factors. The effect of ATRA on the differentiation of GSPCs was analyzed by flow cytometry, real-time-PCR, and immunofluorescence. The differentiation of GSPCs could be induced by 1 or 2 $\mu\text{mol/L}$ ATRA when GSPCs were cultured in growth factor-free medium. The detection of real-time-PCR showed that the level of GFAP (glial fibrillary acidic protein) mRNA of differentiated GSPCs in the growth factor-free medium containing 1 $\mu\text{mol/L}$ ATRA group was significantly higher than that in the control group, and there was no significant difference in the level of TUBB-3 mRNA between the two groups. The GSPCs suffered apoptosis in the growth factor-free medium containing 4 or 8 $\mu\text{mol/L}$ ATRA. The differentiation of GSPCs could not be induced by ATRA when GSPCs were cultured in the medium containing growth factors. The percentage of cells in G0/G1 phase was 84.26 \pm 2.24 %, and the percentage of apoptosis was 18.95 \pm 2.53 % in experimental groups which was similar to those in the control group. In conclusion, ATRA has certain capacity to induce differentiation of GSPCs, while its effective concentration should be controlled strictly. The differentiation of GSPCs induced by ATRA cannot antagonize the formidable differential inhibition of epidermal growth factor and basic fibroblast growth factor.

[177]

TÍTULO / TITLE: - Intertumoral and intratumoral heterogeneity as a barrier for effective treatment of medulloblastoma.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:57-63. doi: 10.1227/01.neu.0000430318.01821.6f.

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

[1227/01.neu.0000430318.01821.6f](#)

AUTORES / AUTHORS: - Wang X; Ramaswamy V; Remke M; Mack SC; Dubuc AM; Northcott PA; Taylor MD

[178]

TÍTULO / TITLE: - Late causes of death in children treated for CNS malignancies.

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

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

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1197-](#)

[0](#)

AUTORES / AUTHORS: - Perkins SM; Fei W; Mitra N; Shinohara ET

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Washington University School of Medicine, St. Louis, MO, USA.

RESUMEN / SUMMARY: - As the outcome for pediatric central nervous system (CNS) malignancies improves, data regarding long term effects and risk of early mortality are needed. Using the Surveillance, Epidemiology, and End Results database, we evaluated the causes of mortality in 5-year survivors of a CNS tumor diagnosed prior to the age of 20 years. Using United States population data, standardized mortality ratios (SMRs) were calculated to compare number of deaths observed to the expected number for the cohort. Cumulative incidence of subsequent malignant neoplasms (SMNs) and standardized incidence ratios of observed to expected SMNs were calculated. 3,627 patients were included in the study. 20-year overall survival (OS) was 85.7 % compared to an expected rate of 98.5 % ($p < 0.001$). Death from the primary brain tumor accounted for 51 % of deaths, while death from a SMN accounted for 10 % of deaths. Patients were at an increased risk of death due to cardiovascular and cerebrovascular disease (SMRs = 2.5, 95 % confidence interval (CI) 1.2-4.8 and 7.9, 2.6-19.0, respectively). Cumulative incidence of SMN at 30 years was 6.4 % (95 % CI 4.8-7.7). Patients treated after 1986 enjoyed a small improvement in mortality (20-year OS 86.5 vs 83.8 %, $p = 0.005$). Five-year survivors of a childhood CNS tumor experienced a nearly 13-fold increased risk of death compared to their peers. Patients were at an increased risk of death due to recurrent disease, SMNs, cerebrovascular and cardiovascular events.

[179]

TÍTULO / TITLE: - Clinical, radiological, and pathological features of 26 intracranial and intraspinal malignant peripheral nerve sheath tumors.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Jul 5.

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

[3171/2013.5.JNS122119](#)

AUTORES / AUTHORS: - Ren X; Wang J; Hu M; Jiang H; Yang J; Jiang Z

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University; and.

RESUMEN / SUMMARY: - Object Intracranial and intraspinal malignant peripheral nerve sheath tumors (MPNSTs) are rarely reported because of their extremely low incidence. Knowledge about these tumors is poor. In this study the authors aimed to analyze the incidence and clinical, radiological, and pathological features of intracranial and intraspinal MPNSTs. Methods Among 4000 cases of intracranial and intraspinal PNSTs surgically treated between 2004 and 2011 at Beijing Tiantan Hospital, cases of MPNST were chosen for analysis and were retrospectively reviewed. To determine which parameters were associated with longer progression-free survival (PFS) and overall survival (OS), statistical analysis was performed. Results Malignant PNSTs accounted for 0.65% of the entire series of intracranial and intraspinal PNSTs. Twenty-four (92.3%) of these 26 MPNSTs were primary. Radiologically, 26.9% (7 of 26) of the MPNSTs were misdiagnosed as nonschwannoma diseases. Twenty-one patients were followed up for 1.5 to 102 months after surgery. Twelve patients experienced tumor recurrence, and median PFS was 15.0 months. The 2- and 3-year PFS rates were 47.7% and 32.7%, respectively. Five patients died of tumor recurrence, and median OS was not available. The 2- and 3-year OS rates were 74.7% and 64.0%, respectively. Univariate analysis revealed that female sex, total tumor removal, and primary MPNSTs were significantly associated with a better prognosis. Multivariate analysis revealed that only total removal was an independent prognostic factor for both PFS and OS. Conclusions Malignant PNST within the skull or spinal canal is a rare neoplasm and is seldom caused by benign schwannomas. Radiologically, intracranial or intraspinal MPNST should be differentiated from meningioma, chordoma, fibrous dysplasia of bone, and ear cancer. Total resection whenever possible is necessary for the prolonged survival of patients, especially males.

[180]

TÍTULO / TITLE: - Teaching NeuroImages: Diagnostic utility of FDG-PET in neurolymphomatosis.

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

REVISTA / JOURNAL: - Neurology. 2013 Jul 2;81(1):e3. doi: 10.1212/WNL.0b013e318297eef5.

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

[1212/WNL.0b013e318297eef5](#)

AUTORES / AUTHORS: - Toledano M; Siddiqui MA; Thompson CA; Garza I; Pittock SJ

INSTITUCIÓN / INSTITUTION: - From the Department of Neurology (M.T., I.G., S.J.P.), Division of Hospital Internal Medicine, Internal Medicine (M.A.S.), and Department of Hematology (C.A.T.), Mayo Clinic, Rochester, MN.

RESUMEN / SUMMARY: - A 70-year-old woman with a history of non-Hodgkin lymphoma presented with left-sided facial pain. MRI of the face, orbit, and neck was negative (figure). A week later, she developed hypesthesia in a V3 distribution. Repeat MRI was again nondiagnostic but FDG-PET showed increased uptake along the left V3 branch of the trigeminal nerve, as well as in the parotid gland. Biopsy of the left parotid confirmed recurrent lymphoma.

[181]

TÍTULO / TITLE: - Neural stem cell-mediated enzyme/prodrug therapy for glioma.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;73(2):N16-8. doi: 10.1227/01.neu.0000432623.52020.48.

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

[1227/01.neu.0000432623.52020.48](https://doi.org/10.1227/01.neu.0000432623.52020.48)

AUTORES / AUTHORS: - Parry PV; Engh JA

[182]

TÍTULO / TITLE: - The Role of BRAF-Targeted Therapy in Astrocytomas: A Review.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:110-2. doi: 10.1227/01.neu.0000430768.25844.4d.

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

[1227/01.neu.0000430768.25844.4d](https://doi.org/10.1227/01.neu.0000430768.25844.4d)

AUTORES / AUTHORS: - Lang SS

[183]

TÍTULO / TITLE: - EGFRvIII stimulates glioma growth and invasion through PKA-dependent serine phosphorylation of Dock180.

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

REVISTA / JOURNAL: - Oncogene. 2013 Jun 3. doi: 10.1038/onc.2013.198.

●● Enlace al texto completo (gratis o de pago) [1038/onc.2013.198](https://doi.org/10.1038/onc.2013.198)

AUTORES / AUTHORS: - Feng H; Hu B; Vuori K; Sarkaria JN; Furnari FB; Cavenee WK; Cheng SY

INSTITUCIÓN / INSTITUTION: - 1] Department of Neurology, Northwestern Brain Tumor Institute, Northwestern University Feinberg School of Medicine, Chicago, IL, USA [2] Center for Genetic Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, USA [3] The Robert H Lurie Comprehensive Cancer Center, Northwestern University Feinberg School of Medicine, Chicago, IL, USA [4] Stem Cell Research Center, Renji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China.

RESUMEN / SUMMARY: - Glioblastomas (GBMs), the most common and malignant brain tumors, are highly resistant to current therapies. The failure of targeted therapies against aberrantly activated oncogenic signaling, such as that of the EGFR-PI3K/Akt pathway, underscores the urgent need to understand alternative downstream pathways and to identify new molecular targets for the development of more effective treatments for gliomas. Here, we report that EGFRvIII (DeltaEGFR/de2-7EGFR), a constitutively active EGFR mutant that is frequently co-overexpressed with EGFR in clinical GBM tumors, promotes glioma growth and invasion through protein kinase A (PKA)-dependent phosphorylation of Dock180, a bipartite guanine nucleotide exchange factor (GEF) for Rac1. We demonstrate that EGFRvIII induces serine phosphorylation of Dock180, stimulates Rac1 activation and glioma cell migration. Treatments of glioma cells using the PKA inhibitors H-89 and KT5720, overexpression of a PKA inhibitor (PKI), and in vitro PKA kinase assays show that EGFRvIII induction of serine phosphorylation of Dock180 is PKA-dependent. Significantly, PKA induces phosphorylation of Dock180 at amino acid residue S1250 that resides within its Rac1-activating DHR-2 domain. Expression of the Dock180S1250L mutant, but not wild type Dock180WT, protein in EGFRvIII-expressing glioma cells inhibited receptor-stimulated cell proliferation, survival, migration in vitro and glioma tumor growth and invasion in vivo. Together, our findings describe a novel mechanism by which EGFRvIII drives glioma tumorigenesis and invasion through PKA-dependent phosphorylation of Dock180, thereby suggesting that targeting EGFRvIII-PKA-Dock180-Rac1 signaling axis could provide a novel pathway to develop potential therapeutic strategies for malignant gliomas. Oncogene advance online publication, 3 June 2013; doi:10.1038/onc.2013.198.

[184]

TÍTULO / TITLE: - Synchrotron microbeam radiation therapy induces hypoxia in intracerebral gliosarcoma but not in the normal brain.

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

REVISTA / JOURNAL: - Radiother Oncol. 2013 May 31. pii: S0167-8140(13)00226-0. doi: 10.1016/j.radonc.2013.05.013.

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

[1016/j.radonc.2013.05.013](#)

AUTORES / AUTHORS: - Bouchet A; Lemasson B; Christen T; Potez M; Rome C; Coquery N; Le Clec'h C; Moisan A; Brauer-Krisch E; Leduc G; Remy C; Laissue JA; Barbier EL; Brun E; Serduc R

INSTITUCIÓN / INSTITUTION: - INSERM U836, Grenoble, France; Université Joseph Fourier, Grenoble Institut des Neurosciences, UMR-S836, France; ESRF, Grenoble, France.

RESUMEN / SUMMARY: - PURPOSE: Synchrotron microbeam radiation therapy (MRT) is an innovative irradiation modality based on spatial fractionation of a

high-dose X-ray beam into lattices of microbeams. The increase in lifespan of brain tumor-bearing rats is associated with vascular damage but the physiological consequences of MRT on blood vessels have not been described. In this manuscript, we evaluate the oxygenation changes induced by MRT in an intracerebral 9L gliosarcoma model. METHODS: Tissue responses to MRT (two orthogonal arrays (2x400Gy)) were studied using magnetic resonance-based measurements of local blood oxygen saturation (MR_SO2) and quantitative immunohistology of RECA-1, Type-IV collagen and GLUT-1, marker of hypoxia. RESULTS: In tumors, MR_SO2 decreased by a factor of 2 in tumor between day 8 and day 45 after MRT. This correlated with tumor vascular remodeling, i.e. decrease in vessel density, increases in half-vessel distances (x5) and GLUT-1 immunoreactivity. Conversely, MRT did not change normal brain MR_SO2, although vessel inter-distances increased slightly. CONCLUSION: We provide new evidence for the differential effect of MRT on tumor vasculature, an effect that leads to tumor hypoxia. As hypothesized formerly, the vasculature of the normal brain exposed to MRT remains sufficiently perfused to prevent any hypoxia.

[185]

TÍTULO / TITLE: - New Strategies in Pediatric Gliomas: Molecular Advances in Pediatric Low-Grade Gliomas as a Model.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Jul 23.

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

[13-0662](#)

AUTORES / AUTHORS: - Raabe EH; Kieran MW; Cohen KJ

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Oncology, Johns Hopkins Hospital.

RESUMEN / SUMMARY: - Pediatric low-grade gliomas (pLGG) account for more brain tumors in children than any other histologic subtype. While surgery, chemotherapy and radiation remain the mainstay of upfront treatment, recent advances in molecular interrogation of pLGG have demonstrated a small number of recurring genetic mutations in these tumors that might be exploited therapeutically. Notable findings include abnormalities in the RAS/MAP kinase pathway such as NF-1 loss or BRAF activation, and mTOR activation. Recent identification of activating re-arrangements in c-MYB and MYBL1 in pediatric diffuse astrocytoma also provide candidates for therapeutic intervention. Targeting these molecularly identified pathways may allow for improved outcomes for patients as pediatric oncology moves into the era of biology-driven medicine.

[186]

TÍTULO / TITLE: - LGR5 is a Proneural Factor and is Regulated by OLIG2 in Glioma Stem-Like Cells.

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

REVISTA / JOURNAL: - Cell Mol Neurobiol. 2013 Aug;33(6):851-65. doi: 10.1007/s10571-013-9951-6. Epub 2013 Jun 21.

●● Enlace al texto completo (gratis o de pago) [1007/s10571-013-9951-6](#)

AUTORES / AUTHORS: - Mao XG; Song SJ; Xue XY; Yan M; Wang L; Lin W; Guo G; Zhang X

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

RESUMEN / SUMMARY: - The biological functional roles of LGR5 (leucine-rich repeat containing G protein-coupled receptor 5, also known as GPR49), a novel potential marker for stem-like cells in glioblastoma (GSCs), is poorly acknowledged. Here, we demonstrated that LGR5 was detected in glioblastoma tissues and GSCs. Bioinformatics analysis revealed that LGR5 is closely related to neurogenesis and neuronal functions, and preferentially expressed in Proneural subtype of GBMs. Furthermore, LGR5 is regulated by Proneural factor OLIG2, which is important for both neurogenesis and GSC maintenance. Biological experiments in GSC cells validated the bioinformatics analysis results and revealed that LGR5 regulated the tumor sphere formation capacity, an important stem cell property for GSCs. Therefore, LGR5 expression may be functionally correlated with the neurogenic competence, and be regulated by OLIG2 in GSCs.

[187]

TÍTULO / TITLE: - Adenovirus-Mediated Coexpression of DCX and SPARC Radiosensitizes Human Malignant Glioma Cells.

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

REVISTA / JOURNAL: - Cell Mol Neurobiol. 2013 Jul 12.

●● Enlace al texto completo (gratis o de pago) [1007/s10571-013-9963-2](#)

AUTORES / AUTHORS: - Xu Y; Yang L; Jiang X; Yu J; Yang J; Zhang H; Tai G; Yuan X; Liu F

INSTITUCIÓN / INSTITUTION: - Department of Radiobiology, School of Radiation Medicine and Protection, Medical College of Soochow University, School for Radiological and Interdisciplinary Sciences, Soochow University, No. 199 Ren'ai Street, Suzhou, 215123, China.

RESUMEN / SUMMARY: - This study is designed to examine the radiosensitizing effects of coexpression of doublecortin (DCX) and secreted protein and rich in cysteine (SPARC). Previously, we showed that downregulation of SPARC by small interfering RNA increased radioresistance of U-87MG glioma cells. Therefore, overexpression of SPARC might increase radiosensitivity of glioma

cells. But SPARC has been shown to promote glioma cell invasion both in vitro and vivo. In order to radiosensitize glioma cells without stimulating invasion, we chose DCX, which is a well-characterized anti-tumor gene, to coexpress with SPARC. An adenovirus-mediated double gene expression system was constructed and applied to U251 and A172 glioma cell lines. Our data showed that coexpression of DCX and SPARC collaboratively diminished radioresistance of glioma cells, interfered with cell cycle turnover and increased irradiation-induced apoptosis. In addition, transwell assay revealed that coexpression was able to counteract the invasion-promoting effects of SPARC, and even inhibited intrinsic invasion, evidenced by less invading cells in double gene overexpressed group than that of control adenovirus-treated group. In conclusion, genetic engineering combining two or more genes might be a more effective method to overcome radioresistance of glioma cells.

[188]

TÍTULO / TITLE: - Alphaxalone inhibits growth, migration and invasion of rat C6 malignant glioma cells.

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

REVISTA / JOURNAL: - Steroids. 2013 Jul 4;78(10):1041-1045. doi: 10.1016/j.steroids.2013.06.008.

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

[1016/j.steroids.2013.06.008](#)

AUTORES / AUTHORS: - Sun H; Zheng X; Zhou Y; Zhu W; Ou Y; Shu M; Gao X; Leng T; Qiu P; Yan G

INSTITUCIÓN / INSTITUTION: - Department of Cardiology, First Affiliated Hospital, Sun Yat-Sen University, Guangzhou, Guangdong 510080, China.

RESUMEN / SUMMARY: - Malignant gliomas are the most devastating and aggressive brain tumors affecting the central nervous system. The insidious growth and infiltration are the most prominent characteristics of malignant gliomas, which render the current therapies for malignant gliomas including surgery, radiation and chemotherapy unsuccessful. Inhibition of infiltration as well as proliferation in combination with surgery might be more effective in the treatment of malignant gliomas. In the current study, we demonstrate the alphaxalone (3-hydroxypregnane-11,20-dione) could effectively inhibit the proliferation of C6 glioma cells in a concentration dependent manner. Moreover, this compound could also suppress the migration and invasion of C6 glioma cells at a concentration without causing significant cytotoxicity. Except the in vitro anti-glioma activity, alphaxalone effectively delayed the growth of rat C6 malignant glioma xenografts in vivo. Together, these findings suggest alphaxalone might be a promising candidate for the treatment of malignant gliomas and may also provide helpful clues for anti-glioma drugs development in future.

[189]

TÍTULO / TITLE: - Dioscin, a natural steroid saponin, induces apoptosis and DNA damage through reactive oxygen species: A potential new drug for treatment of glioblastoma multiforme.

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

REVISTA / JOURNAL: - Food Chem Toxicol. 2013 Jul 16;59C:657-669. doi: 10.1016/j.fct.2013.07.012.

●● Enlace al texto completo (gratis o de pago) [1016/j.fct.2013.07.012](#)

AUTORES / AUTHORS: - Lv L; Zheng L; Dong D; Xu L; Yin L; Xu Y; Qi Y; Han X; Peng J

INSTITUCIÓN / INSTITUTION: - College of Pharmacy, Dalian Medical University, 9 Western Lvshun South Road, Dalian 116044, China.

RESUMEN / SUMMARY: - Dioscin, a natural product obtained from medicinal plants shows lipid-lowering, anti-cancer and hepatoprotective effects. However, the effect of it on glioblastoma is unclear. In this study, dioscin significantly inhibited proliferation of C6 glioma cells and caused reactive oxygen species (ROS) generation and Ca²⁺ release. ROS accumulation affected levels of malondialdehyde, nitric oxide, glutathione disulfide and glutathione, and caused cell apoptosis. In addition, ROS generation caused mitochondrial damage including structural changes, increased mitochondrial permeability transition and decreased mitochondria membrane potential, which led to the release of cytochrome C, nuclear translocation of programmed cell death-5 and increased activities of caspase-3,9. Simultaneously, dioscin down-regulated protein expression of Bcl-2, Bcl-xl, up-regulated expression of Bak, Bax, Bid and cleaved poly (ADP-ribose) polymerase. Also, oxygen stress induced S-phase arrest of cancer cells by way of regulating expression of DNA Topo I, p53, CDK2 and Cyclin A and caused DNA damage. In a rat allograft model, dioscin significantly inhibited tumor size and extended the life cycle of the rats. In conclusion, dioscin shows noteworthy anti-cancer activity on glioblastoma cells by promoting ROS accumulation, inducing DNA damage and activating mitochondrial signal pathways. Ultimately, we believe dioscin has promise as a new therapy for the treatment of glioblastoma.

[190]

TÍTULO / TITLE: - Dynamic contrast enhanced MRI parameters and tumor cellularity in a rat model of cerebral glioma at 7 T.

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

REVISTA / JOURNAL: - Magn Reson Med. 2013 Jul 22. doi: 10.1002/mrm.24873.

●● Enlace al texto completo (gratis o de pago) [1002/mrm.24873](#)

AUTORES / AUTHORS: - Aryal MP; Nagaraja TN; Keenan KA; Bagher-Ebadian H; Panda S; Brown SL; Cabral G; Fenstermacher JD; Ewing JR

INSTITUCIÓN / INSTITUTION: - Department of Physics, Oakland University, Rochester, Michigan, USA; Department of Neurology, Henry Ford Hospital, Detroit, Michigan, USA.

RESUMEN / SUMMARY: - **PURPOSE:** To test the hypothesis that a noninvasive dynamic contrast enhanced MRI (DCE-MRI) derived interstitial volume fraction (v_e) and/or distribution volume (VD) were correlated with tumor cellularity in cerebral tumor. **METHODS:** T1-weighted DCE-MRI studies were performed in 18 athymic rats implanted with U251 xenografts. After DCE-MRI, sectioned brain tissues were stained with Hematoxylin and Eosin for cell counting. Using a Standard Model analysis and Logan graphical plot, DCE-MRI image sets during and after the injection of a gadolinium contrast agent were used to estimate the parameters plasma volume (v_p), forward transfer constant (K_{trans}), v_e , and VD . **RESULTS:** Parameter values in regions where the standard model was selected as the best model were: (mean \pm S.D.): $v_p = (0.81 \pm 0.40)\%$, $K_{trans} = (2.09 \pm 0.65) \times 10^{-2} \text{ min}^{-1}$, $v_e = (6.65 \pm 1.86)\%$, and $VD = (7.21 \pm 1.98)\%$. The Logan-estimated VD was strongly correlated with the standard model's $v_p + v_e$ ($r = 0.91$, $P < 0.001$). The parameters, v_e and/or VD , were significantly correlated with tumor cellularity ($r \geq -0.75$, $P < 0.001$ for both). **CONCLUSION:** These data suggest that tumor cellularity can be estimated noninvasively by DCE-MRI, thus supporting its utility in assessing tumor pathophysiology. Magn Reson Med, 2013. © 2013 Wiley Periodicals, Inc.

[191]

TÍTULO / TITLE: - Late effects of adjuvant chemotherapy for adult onset non-CNS cancer; cognitive impairment, brain structure and risk of dementia.

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

REVISTA / JOURNAL: - Crit Rev Oncol Hematol. 2013 Jun 12. pii: S1040-8428(13)00082-6. doi: 10.1016/j.critrevonc.2013.04.002.

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

1016/j.critrevonc.2013.04.002

AUTORES / AUTHORS: - Koppelmans V; Breteler MM; Boogerd W; Seynaeve C; Schagen SB

INSTITUCIÓN / INSTITUTION: - Erasmus University Medical Center, Department of Epidemiology, Rotterdam, The Netherlands; Netherlands Cancer Institute/Antoni van Leeuwenhoek Hospital, Division of Psychosocial Research & Epidemiology, Amsterdam, The Netherlands.

RESUMEN / SUMMARY: - Few studies have investigated the late (i.e. ≥ 5 years post-treatment) effects of chemotherapy for non-central nervous system (non-CNS) cancer on the brain. Here we discuss the studies that have investigated the late effects of adjuvant chemotherapy for non-CNS cancer on cognitive function ($n=6$); brain structure and function ($n=5$); and incidence of dementia ($n=4$). The neuropsychological studies showed long-term adverse cognitive problems in chemotherapy-exposed breast cancer survivors. This is in line with

results from neuroimaging studies that report long-term brain structural alterations after chemotherapy. The studies exploring the association between chemotherapy and the incidence of dementia were contradictory and showed no clear relationship between the two phenomena. Although several methodological issues limit the validity and interpretation of some of the results of these studies, they suggest that chemotherapy is associated with subtle, yet long-lasting cognitive deficits, possibly related to brain structural and functional differences, but as yet not with an increased risk of dementia.

[192]

TÍTULO / TITLE: - Tumor-infiltrating lymphocytes in glioblastoma are associated with specific genomic alterations and related to transcriptional class.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Jul 17.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-13-0551](#)

AUTORES / AUTHORS: - Rutledge WC; Kong J; Gao J; Gutman DA; Cooper L; Appin C; Park Y; Scarpace L; Mikkelsen T; Cohen ML; Aldape KD; McLendon RE; Lehman NL; Miller CR; Schniederjan MJ; Brennan CW; Moreno CS; Saltz JH; Brat DJ

INSTITUCIÓN / INSTITUTION: - School of Medicine, Emory University.

RESUMEN / SUMMARY: - **PURPOSE:** Tumor-infiltrating lymphocytes (TILs) have prognostic significance in many cancers, yet their roles in glioblastoma (GBM) have not been fully defined. We hypothesized TILs in GBM are associated with molecular alterations, histologies and survival. **EXPERIMENTAL DESIGN:** We used data from The Cancer Genome Atlas (TCGA) to investigate molecular, histologic and clinical correlates of TILs in GBMs. Lymphocytes were categorized as absent, present or abundant in histopathologic images from 171 TCGA GBMs. Associations were examined between lymphocytes and histologic features, mutations, copy number alterations, CpG island methylator phenotype, transcriptional class and survival. We validated histologic findings using CD3G gene expression. **RESULTS:** We found a positive correlation between TILs and GBMs with gemistocytes, sarcomatous cells, epithelioid cells and giant cells. Lymphocytes were enriched in the mesenchymal transcriptional class and strongly associated with mutations in NF1 and RB1. These mutations are frequent in the mesenchymal class and characteristic of gemistocytic, sarcomatous, epithelioid and giant cell histologies. Conversely, TILs were rare in GBMs with small cells and oligodendroglioma components. Lymphocytes were depleted in the classical transcriptional class and in EGFR-amplified and homozygous PTEN-deleted GBMs. These alterations are characteristic of GBMs with small cells and GBMs of the classical transcriptional class. No association with survival was demonstrated. **CONCLUSIONS:** TILs were enriched in GBMs of the mesenchymal class, strongly associated with

mutations in NF1 and RB1 and typical of histologies characterized by these mutations. Conversely, TILs were depleted in the classical class, EGFR-amplified and homozygous PTEN-deleted tumors and rare in histologies characterized by these alterations.

[193]

TÍTULO / TITLE: - Comparative study on methyl- and ethylmercury-induced toxicity in C6 glioma cells and the potential role of LAT-1 in mediating mercurial-thiol complexes uptake.

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

REVISTA / JOURNAL: - Neurotoxicology. 2013 May 30;38C:1-8. doi: 10.1016/j.neuro.2013.05.015.

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

[1016/j.neuro.2013.05.015](#)

AUTORES / AUTHORS: - Zimmermann LT; Santos DB; Naime AA; Leal RB; Dorea JG; Barbosa F Jr; Aschner M; Rocha JB; Farina M

INSTITUCIÓN / INSTITUTION: - Departamento de Bioquímica, Centro de Ciências Biológicas, Universidade Federal de Santa Catarina, Florianópolis, Santa Catarina, Brazil. Electronic address: luciana.zimmermann@yahoo.com.br.

RESUMEN / SUMMARY: - Various forms of mercury possess different rates of absorption, metabolism and excretion, and consequently, toxicity. Methylmercury (MeHg) is a highly neurotoxic organic mercurial. Human exposure is mostly due to ingestion of contaminated fish. Ethylmercury (EtHg), another organic mercury compound, has received significant toxicological attention due to its presence in thimerosal-containing vaccines. This study was designed to compare the toxicities induced by MeHg and EtHg, as well as by their complexes with cysteine (MeHg-S-Cys and EtHg-S-Cys) in the C6 rat glioma cell line. MeHg and EtHg caused significant ($p < 0.0001$) decreases in cellular viability when cells were treated during 30min with each mercurial following by a washing period of 24h (EC50 values of 4.83 and 5.05 μ M, respectively). Significant cytotoxicity ($p < 0.0001$) was also observed when cells were treated under the same conditions with MeHg-S-Cys and EtHg-S-Cys, but the respective EC50 values were significantly increased (11.2 and 9.37 μ M). L-Methionine, a substrate for the L-type neutral amino acid carrier transport (LAT) system, significantly protected against the toxicities induced by both complexes (MeHg-S-Cys and EtHg-S-Cys). However, no protective effects of L-methionine were observed against MeHg and EtHg toxicities. Corroborating these findings, L-methionine significantly decreased mercurial uptake when cells were exposed to MeHg-S-Cys ($p = 0.028$) and EtHg-S-Cys ($p = 0.023$), but not to MeHg and EtHg. These results indicate that the uptake of MeHg-S-Cys and EtHg-S-Cys into C6 cells is mediated, at least in part, through the LAT system, but MeHg and EtHg enter C6 cells by mechanisms other than LAT system.

[194]

TÍTULO / TITLE: - Snapshot quiz.

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

REVISTA / JOURNAL: - Br J Surg. 2013 Jul;100(8):1118. doi: 10.1002/bjs.9157.

- Enlace al texto completo (gratis o de pago) [1002/bjs.9157](#)

AUTORES / AUTHORS: - Huang KC; Liang JT

INSTITUCIÓN / INSTITUTION: - Division of Colorectal Surgery, Department of Surgery, National Taiwan University Hospital and College of Medicine, 7 Chung-Shan South Road, Taipei, Taiwan.

[195]

TÍTULO / TITLE: - Final height and insulin-like growth factor-1 in children with medulloblastoma treated with growth hormone.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jun 18.

- Enlace al texto completo (gratis o de pago) [1007/s00381-013-2124-](#)

[6](#)

AUTORES / AUTHORS: - Chae HW; Park YS; Kim DS; Kwon AR; Kim HS; Kim DH

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, Yonsei University College of Medicine, 50 Yonsei-ro, Seodaemun-gu, Seoul, 120-752, Republic of Korea.

RESUMEN / SUMMARY: - PURPOSE: Medulloblastoma is a highly malignant childhood brain tumor. Survival from medulloblastoma is increasing. This study was performed to examine growth outcomes, insulin-like growth factor-1 (IGF-1), and response to growth hormone (GH) treatment in children with medulloblastoma. METHODS: Retrospective analysis of 34 children treated with GH for medulloblastoma was performed. We evaluated serum IGF-1 and insulin-like growth factor binding protein-3 concentrations. Further, we examined growth status and changes with GH treatment according to treatment modality. RESULTS: GH deficiency was observed in 28 patients (82 %). The initial height at the start of GH treatment was -2.35 ± 1.53 standard deviation score (SDS) and increased to -1.85 ± 1.28 SDS by 1 year, -1.64 ± 1.46 SDS by 2 years, and -1.42 ± 1.49 SDS by 3 years after GH treatment. The final height was -1.54 ± 1.06 SDS. Gender, surgical method, tumor location, tumor size, and type of radiation did not correlate with height gain. A younger age at the initiation of GH treatment correlated with height gain. The initial serum IGF-1 concentration was -1.73 ± 0.42 and increased significantly to -0.74 ± 0.21 SDS by 1 year after GH treatment. The serum IGF-1 SDS increment correlated significantly with height gain. CONCLUSIONS: Beginning GH treatment at a younger age was an important prognostic factor for growth outcome. Serum IGF-1 increment correlated with height gain during GH

treatment. Thus, early GH treatment and analysis of serum IGF-1 might be helpful for improving final height or growth outcome.

[196]

TÍTULO / TITLE: - Evodiamine, a plant alkaloid, induces calcium/JNK-mediated autophagy and calcium/mitochondria-mediated apoptosis in human glioblastoma cells.

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

REVISTA / JOURNAL: - Chem Biol Interact. 2013 Jun 15;205(1):20-28. doi: 10.1016/j.cbi.2013.06.004.

●● Enlace al texto completo (gratis o de pago) [1016/j.cbi.2013.06.004](#)

AUTORES / AUTHORS: - Liu AJ; Wang SH; Chen KC; Kuei HP; Shih YL; Hou SY; Chiu WT; Hsiao SH; Shih CM

INSTITUCIÓN / INSTITUTION: - Graduate Institute of Clinical Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan, ROC; Department of Neurosurgery, Taipei City Hospital Ren-Ai Branch, Taipei, Taiwan, ROC.

RESUMEN / SUMMARY: - Glioblastomas, the most common primary gliomas, are characterized by increased invasion and difficult therapy. Major clinical medicines for treating gliomas merely extend the survival time for a number of months. Therefore, development of new agents against gliomas is important. Autophagy, a process for degrading damaged organelles and proteins, is an adaptive response to environmental stress. However, the role of autophagy in glioblastoma development still needs to be further investigated. Evodiamine, a major alkaloid isolated from *Evodia rutaecarpa* Benth, has various pharmacological activities, such as inhibiting tumor growth and metastatic properties. However, the effects of evodiamine on glioblastomas and their detailed molecular mechanisms and autophagy formation are not well understood. In this study, we observed that evodiamine induced dose- and time-dependent apoptosis in glioma cells. Blockade of calcium channels in endoplasmic reticulum (ER) significantly reduced evodiamine-induced cytosolic calcium elevation, apoptosis, and mitochondrial depolarization, which suggests that evodiamine induces a calcium-mediated intrinsic apoptosis pathway. Interestingly, autophagy was also enhanced by evodiamine, and had reached a plateau by 24h. Pharmacological inhibition of autophagy resulted in increased apoptosis and reduced cell viability. Inhibition of ER calcium channel activation also significantly reduced evodiamine-induced autophagy. Inactivation of c-Jun N-terminal kinases (JNK) suppressed evodiamine-mediated autophagy accompanied by increased apoptosis. Furthermore, evodiamine-mediated JNK activation was abolished by BAPTA-AM, an intracellular calcium scavenger, suggesting that evodiamine mediates autophagy via a calcium-JNK signaling pathway. Collectively, these results suggest that evodiamine induces intracellular calcium/JNK signaling-mediated autophagy and calcium/mitochondria-mediated apoptosis in glioma cells.

[197]

TÍTULO / TITLE: - Circadian gene Clock contributes to cell proliferation and migration of glioma and is directly regulated by tumor-suppressive miR-124.

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

REVISTA / JOURNAL: - FEBS Lett. 2013 Aug 2;587(15):2455-60. doi: 10.1016/j.febslet.2013.06.018. Epub 2013 Jun 19.

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

1016/j.febslet.2013.06.018

AUTORES / AUTHORS: - Li A; Lin X; Tan X; Yin B; Han W; Zhao J; Yuan J; Qiang B; Peng X

INSTITUCIÓN / INSTITUTION: - State Key Laboratory of Medical Molecular Biology, Department of Molecular Biology and Biochemistry, Institute of Basic Medical Sciences, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100005, China.

RESUMEN / SUMMARY: - Although the roles of circadian Clock genes and microRNAs in tumorigenesis have been profoundly studied, mechanisms of cross-talk between them in regulation of gliomagenesis are poorly understood. Here we show that the expression level of CLOCK is significantly increased in high-grade human glioma tissues and glioblastoma cell lines. In contrast miR-124 is attenuated in similar samples. Further studies show that Clock is a direct target of miR-124, and either restoration of miR-124 or silencing of CLOCK can reduce the activation of NF-kappaB. In conclusion, we suggest that as a target of glioma suppressor miR-124, CLOCK positively regulates glioma proliferation and migration by reinforcing NF-kappaB activity.

[198]

TÍTULO / TITLE: - GSK3beta/beta-catenin signaling is correlated with the differentiation of glioma cells induced by wogonin.

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

REVISTA / JOURNAL: - Toxicol Lett. 2013 Jul 19. pii: S0378-4274(13)01137-5. doi: 10.1016/j.toxlet.2013.07.013.

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

1016/j.toxlet.2013.07.013

AUTORES / AUTHORS: - Wang Y; Zhang Y; Qian C; Cai M; Li Y; Li Z; You Q; Hu R; Guo Q

INSTITUCIÓN / INSTITUTION: - State Key Laboratory of Natural Medicines, Jiangsu Key Laboratory of Carcinogenesis and Intervention, Department of Physiology, China Pharmaceutical University, 24 Tongji Xiang, Nanjing 210009, PR China.

RESUMEN / SUMMARY: - Malignant gliomas are the most common and most aggressive primary brain tumor, and for which differentiation therapy has

emerged as a promising candidate strategy. In this study, we used in vitro and in vivo assays to examine the differentiation effects of wogonin, a major active constituent of *Scutellaria baicalensis*, on glioma C6 and U251 cells. We found that wogonin can suppress cell proliferation and induce G0/G1 arrest under a concentration-dependent manner. Wogonin also triggered significant reduction in the G1 cell-cycle regulatory proteins cyclin D1, cyclin-dependent kinase 2 and 4 along with overexpression of cell-cycle inhibitory proteins p27. Immunofluorescence and western blot analysis indicated that wogonin increased the expression of lineage-specific differentiation markers glial fibrillary acidic protein (GFAP). In mechanisms, we verified that wogonin significantly diminished the phosphorylated level of protein kinase B (AKT), and maintenance of low beta-catenin expression level was dependent on glycogen synthase kinase 3beta (GSK3beta) activation at Ser9. Blocking GSK3beta/beta-catenin pathway was required for wogonin-induced proliferation inhibition and terminal differentiation by using canonical activator lithium chloride (LiCl) and inhibitor dickkopf-1 (Dkk1). Moreover, intravenous administration of wogonin delayed the growth of C6 glioma in the intracranial tumor model. These findings provide the evidence and mechanistic support for wogonin-based differentiation therapies for malignant glioblastoma. Furthermore, inhibition of GSK3beta/beta-catenin pathway may be a key and requisite factor in glioma differentiation.

[199]

TÍTULO / TITLE: - Increased mitochondrial functions in human glioblastoma cells persistently infected with measles virus.

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

REVISTA / JOURNAL: - Antiviral Res. 2013 Jul 2;99(3):238-244. doi: 10.1016/j.antiviral.2013.06.016.

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

[1016/j.antiviral.2013.06.016](#)

AUTORES / AUTHORS: - Takahashi M; Wolf AM; Watari E; Norose Y; Ohta S; Takahashi H

INSTITUCIÓN / INSTITUTION: - Department of Microbiology and Immunology, Nippon Medical School, 1-1-5 Sendagi, Bunkyo-ku, Tokyo 113-8602, Japan. Electronic address: megumi@nms.ac.jp.

RESUMEN / SUMMARY: - Measles virus (MV) is known for its ability to cause an acute infection with a potential of development of persistent infection. However, knowledge of how viral genes and cellular factors interact to cause or maintain the persistent infection has remained unclear. We have previously reported the possible involvement of mitochondrial short chain enoyl-CoA hydratase (ECHS), which is localized at mitochondria, in the regulation of MV replication. In this study we found increased functions of mitochondria in MV-persistently infected cells compared with uninfected or acutely infected cells. Furthermore, impairment of mitochondrial functions by treatment with mitochondrial inhibitors

such as ethidium bromide (EtBr) or carbonyl cyanide-p-trifluoromethoxyphenylhydrazone (FCCP) induced the cytopathic effects of extensive syncytial formation in persistently infected cells. These findings suggest that mitochondria are one of the subcellular organelles contributing to regulate persistent infection of MV. Recent studies showed mitochondria provide an integral platform for retinoic acid-inducible protein (RIG-I)-like cytosolic receptors (RLRs) signaling and participate in cellular innate antiviral immunity. Our findings not only reveal a role of mitochondria in RLR mediated antiviral signaling but also suggest that mitochondria contribute to the regulation of persistent viral infection.

[200]

TÍTULO / TITLE: - Multi-targeted DATS prevents tumor progression and promotes apoptosis in ectopic glioblastoma xenografts in SCID mice via HDAC inhibition.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug;114(1):43-50. doi: 10.1007/s11060-013-1165-8. Epub 2013 Jun 11.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1165-](#)

[8](#)

AUTORES / AUTHORS: - Wallace GC 4th; Haar CP; Vandergrift WA 3rd; Giglio P; Dixon-Mah YN; Varma AK; Ray SK; Patel SJ; Banik NL; Das A

INSTITUCIÓN / INSTITUTION: - Department of Neurosciences (Neurology and Neuro-oncology) and MUSC Brain & Spine Tumor Program, Medical University of South Carolina, Charleston, SC, 29425, USA.

RESUMEN / SUMMARY: - Glioblastoma, the most lethal brain tumor, remains incurable despite aggressive chemotherapy and surgical interventions. New chemotherapeutics for glioblastoma have been explored in preclinical models and some agents have reached the clinical setting. However, success rates are not significant. Previous investigations involving diallyl trisulfide (DATS), a garlic compound, indicated significant anti-cancer effects in glioblastoma in vitro. DATS has also been shown to inhibit histone deacetylase activity and impede glioblastoma tumor progression. We hypothesized that DATS would block ectopic U87MG tumor by multiple pro-apoptotic pathways via inhibiting histone deacetylase (HDAC). To prove this, we developed ectopic U87MG tumors in SCID mice and treated them daily with intraperitoneal injections of DATS for 7 days. Results indicated that DATS (10 µg/kg-10 mg/kg) dose-dependently reduced tumor mass and number of mitotic cells within tumors. Histological and biochemical assays demonstrated that DATS reduced mitosis in tumors, decreased HDAC activity, increased acetylation of H3 and H4, inhibited cell cycle progression, decreased pro-tumor markers (e.g., survivin, Bcl-2, c-Myc, mTOR, EGFR, VEGF), promoted apoptotic factors (e.g., bax, mcalpian, active caspase-3), and induced DNA fragmentation. Our data also demonstrated an increase in p21Waf1 expression, which correlated with increased p53

expression and MDM2 degradation following DATS treatment. Finally, histological assessment and enzyme assays showed that even the highest dose of DATS did not negatively impact hepatic function. Collectively, our results clearly demonstrated that DATS could be an effective therapeutic agent in preventing tumor progression and inducing apoptosis in human glioblastoma in vivo, without impairing hepatic function.

[201]

TÍTULO / TITLE: - Salvage therapy with BRAF inhibitors for recurrent pleomorphic xanthoastrocytoma: a retrospective case series.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jun 12.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1176-](http://1007/s11060-013-1176-5)

[5](#)

AUTORES / AUTHORS: - Chamberlain MC

INSTITUCIÓN / INSTITUTION: - Department of Neurology and Neurological Surgery, University of Washington, Seattle, WA, USA, chambemc@u.washington.edu.

RESUMEN / SUMMARY: - Pleomorphic xanthoastrocytoma (PXA) is a World Health Organization Grade 2 glioma that is uncommon (<1 % all adult gliomas) and seen primarily in children and young adults. PXA has been demonstrated to manifest the V600E BRAF mutation in nearly 70 % of all tumors, a mutation that constitutively activates the BRAF/MEK signaling pathway. Assess response and toxicity of a BRAF inhibitor, vemurafenib, in recurrent PXA manifesting the V600E mutation. Four adults [2 males; 2 female: median age 45 years (range 34-53)] with surgery, radiation and alkylator refractory recurrent PXA demonstrating the BRAF mutation (V600E) were treated with vemurafenib. A cycle of vemurafenib was defined as 4 weeks of continuous therapy. All toxicities seen were grade 2 and included arthralgia, photosensitivity, fatigue and nausea (1 patient each). The median number of cycles of therapy was 5 (range 2-10). Radiographic response was progressive disease in 1, stable disease in 2 and partial response in 1. Median progression free survival was 5 months (range 2-10 months). Median overall survival was 8 months (range 4-14 months). In this small retrospective series of select patients with recurrent PXA manifesting the BRAF V600E activating mutation, vemurafenib appears to have single agent activity with manageable toxicity. Confirmation in a larger series of similar patients is required.

[202]

TÍTULO / TITLE: - Antioxidants Delay Clinical Signs and Systemic Effects of ENU Induced Brain Tumors in Rats.

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

REVISTA / JOURNAL: - Nutr Cancer. 2013 Jul;65(5):686-94. doi: 10.1080/01635581.2013.789541.

- Enlace al texto completo (gratis o de pago)

[1080/01635581.2013.789541](https://doi.org/10.1080/01635581.2013.789541)

AUTORES / AUTHORS: - Hervouet E; Staehlin O; Pouliquen D; Debien E; Cartron PF; Menanteau J; Vallette FM; Olivier C

INSTITUCIÓN / INSTITUTION: - a UMR INSERM 892-CNRS 6299, Centre de Recherche en Cancerologie Nantes-Angers, Nantes, France.

RESUMEN / SUMMARY: - According to our previous study suggesting that antioxidant properties of phytochemicals in the diet decrease glioma aggressiveness, we used a SUVIMAX-like diet ("Supplementation en Vitamines et Minéraux Antioxydants") (enriched with alpha-tocopherol, beta carotene, vitamin C, zinc, and sodium selenite), adapted to rats. The present results showed that each of the antioxidants inhibited growth of glioma cells in vitro. When used in combination for in vivo studies, we showed a highly significant delay in the clinical signs of the disease, but not a statistical significant difference in the incidence of glioma in an Ethyl-nitrosourea (ENU)-model. The SUVIMAX-like diet decreased candidate markers of tumoral aggressiveness and gliomagenesis progression. The mRNA expressions of 2 common markers in human glioma: Mn-SOD (Manganese Superoxide Dismutase) and IGFBP5 (insulin growth factor binding protein) were reduced in the tumors of rats fed the antioxidant diet. In addition, the transcripts of two markers linked to brain tumor proliferation, PDGFRb (platelet-derived growth factor receptor beta) and Ki-67, were also significantly decreased. On the whole, our results suggest a protective role for antioxidants to limit aggressiveness and to some extent, progression of gliomas, in a rat model.

[203]

TÍTULO / TITLE: - Leptin concentration and nutritional status in the course of treatment in children with brain tumours-preliminary report.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jun 19.

- Enlace al texto completo (gratis o de pago) [1007/s00381-013-2183-](https://doi.org/10.1007/s00381-013-2183-8)

[8](#)

AUTORES / AUTHORS: - Musiol K; Sobol G; Mizia-Malarz A; Wos H

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RESUMEN / SUMMARY: - PURPOSE: To assess the nutritional status in children with central nervous system (CNS) tumours, including concentration of leptin, the neuropeptide responsible for regulation of energetic homeostasis in an organism. METHOD: The studied group comprised 44 children with brain

tumours, aged (4.02-18.7). In all children during the whole therapy (from the start to the period of 1 year and more after the end of therapy), a number of standard deviations (SDs) for the body mass index (SDS BMI) was derived from anthropometric measurements. Concentrations of leptin were assayed simultaneously. RESULT: The lowest values of the anthropometric indices were found in children during the maintenance therapy. Concentrations of leptin in patients with malignant CNS tumours and significant undernutrition were slightly greater as compared to patients presenting normal nutritional status; however, without statistical significance. CONCLUSION: In children with tumours of the central nervous system, there are quantitative disorders of the nutritional status which correlate with the period of the treatment. The most significant disorders in the nutritional status are observed during maintenance chemotherapy. There was no statistically significant correlation between the concentration of leptin and nutritional status in children with malignant brain tumours during the course of treatment and after its completion.

[204]

TÍTULO / TITLE: - Interleukin-6 is overexpressed and augments invasiveness of human glioma stem cells in vitro.

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

REVISTA / JOURNAL: - Clin Exp Metastasis. 2013 Jul 6.

●● Enlace al texto completo (gratis o de pago) [1007/s10585-013-9599-](http://1007/s10585-013-9599-0)

[0](#)

AUTORES / AUTHORS: - Qiu B; Zhang D; Wang Y; Ou S; Wang J; Tao J; Wang Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, First Hospital of China Medical University, No. 155, North Nanjing Street, Heping District, Shenyang, 110001, Liaoning, China.

RESUMEN / SUMMARY: - In the present study, we carried out a series of assays to investigate the expression of interleukin-6 in glioma stem cells and its role in glioma stem cells invasion. Glioma stem cells from eight surgical glioma specimens were cultured and identified. Real-time reverse transcription polymerase chain reaction and immunoassay were used to measure and compare the expression levels of interleukin-6 in glioma stem cells and matched primary glioma cells. Subsequently, neutralizing antibody against interleukin-6 or exogenous interleukin-6 was used in a Matrigel-invasion assay and effects of interleukin-6 on glioma stem cells invasiveness was then determined. The results revealed that interleukin-6 mRNA and protein expression levels were significantly higher in glioma stem cells than in primary glioma cells from the same tumor. However, its expression levels were not apparently higher in glioma stem cells from grade IV gliomas than from grade III gliomas. In Matrigel-invasion assay, glioma stem cells invasiveness markedly decreased after interleukin-6 was blocked with neutralizing antibody, but significantly increased when exogenous interleukin-6 was added. Additionally, the similar

effects of interleukin-6 were also found on primary glioma cells invasiveness. Our results suggest that glioma stem cells are likely to be the major tumor source of immunosuppressive cytokines interleukin-6 and thereby play a crucial role in determining glioma malignancy, immunosuppression and immune evasion. Furthermore, interleukin-6 can significantly augment glioma stem cells invasiveness in vitro, suggesting a potential target in future therapy for glioma stem cells rather than for their derivatives.

[205]

TÍTULO / TITLE: - Assessment of Angiographic Vascularity of Meningiomas with Dynamic Susceptibility Contrast-Enhanced Perfusion-Weighted Imaging and Diffusion-Tensor Imaging.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Jul 25.

●● [Enlace al texto completo \(gratis o de pago\) 3174/ajnr.A3651](#)

AUTORES / AUTHORS: - Toh CH; Wei KC; Chang CN; Peng YW; Ng SH; Wong HF; Lin CP

INSTITUCIÓN / INSTITUTION: - Departments of Medical Imaging and Intervention and Neurosurgery, Chang Gung Memorial Hospital, Linkou and Chang Gung University College of Medicine, Tao-Yuan, Taiwan; and Department of Biomedical Imaging and Radiological Sciences and Brain Connectivity Laboratory, Institute of Neuroscience, National Yang-Ming University, Taipei, Taiwan.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: The roles of DTI and dynamic susceptibility contrast-enhanced-PWI in predicting the angiographic vascularity of meningiomas have not been studied. We aimed to investigate if these 2 techniques could reflect the angiographic vascularity of meningiomas. MATERIALS AND METHODS: Thirty-two consecutive patients with meningiomas who had preoperative dynamic susceptibility contrast-enhanced-PWI, DTI, and conventional angiography were retrospectively included. The correlations between angiographic vascularity of meningiomas, classified with a 4-point grading scale, and the clinical or imaging variables-age and sex of patient, as well as size, CBV, fractional anisotropy, and ADC of meningiomas-were analyzed. The meningiomas were dichotomized into high-vascularity and low-vascularity groups. The differences in clinical and imaging variables between the 2 groups were compared. Receiver operating characteristic curve analysis was used to determine the diagnostic performance of these variables. RESULTS: In meningiomas, angiographic vascularity correlated positively with CBV but negatively with fractional anisotropy. High-vascularity meningiomas demonstrated significantly higher CBV but lower fractional anisotropy as compared with low-vascularity meningiomas. In differentiating between the 2 groups, the area under the curve values were 0.991 for CBV and 0.934 for fractional anisotropy on receiver operating

characteristic curve analysis. CONCLUSIONS: CBV and fractional anisotropy correlate well with angiographic vascularity of meningiomas. They may differentiate between low-vascularity and high-vascularity meningiomas.

[206]

TÍTULO / TITLE: - Intellectual functioning and multi-dimensional attentional processes in long-term survivors of a central nervous system related pediatric malignancy.

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

REVISTA / JOURNAL: - Life Sci. 2013 May 31. pii: S0024-3205(13)00294-4. doi: 10.1016/j.lfs.2013.05.017.

●● Enlace al texto completo (gratis o de pago) [1016/j.lfs.2013.05.017](#)

AUTORES / AUTHORS: - Butler RW; Fairclough DL; Katz ER; Kazak AE; Noll RB; Thompson RD; Sahler OJ

INSTITUCIÓN / INSTITUTION: - Austin Hatcher Foundation for Pediatric Cancer, Chattanooga, TN, USA. Electronic address: butlerr@hatcherfoundation.org.

RESUMEN / SUMMARY: - AIMS: Central nervous system (CNS) malignancies and/or their treatment in pediatric cancer survivors are known to be associated with deficits in neuropsychological functions. We report findings from a nationwide study of childhood cancer survivors to investigate intelligence and attention/concentration from a multi-dimensional perspective in a diverse sample from this population. MAIN METHODS: Four hundred forty-four pediatric cancer survivors between 6 and 17 years of age, who had suffered CNS involvement associated with their malignancy, were evaluated. All patients completed a measure of general intelligence. Attention was measured by a continuous performance test (CPT) and by parental report using a standardized psychological inventory. KEY FINDINGS: Social economic status (SES) was a significant predictor of intellectual functioning and scores on independent measures of attention. After controlling for SES, cranial radiation therapy (CRT) was strongly predictive of impairments in intellectual functioning. Patients who had completed a transplant procedure did not have significant impairments in intellectual functioning when compared to other participants. CPT performance was most clearly influenced by a younger age at diagnosis and the presence of a supratentorial brain tumor. Reaction time was lower in patients who had received CRT. Gender did not correlate with CPT performance, but caregiver reports of deficits in attentional functioning were more prevalent in girls compared to boys. SIGNIFICANCE: These findings are important given the large, representative sample and multi-dimensional assessment of attentional functioning. The presence of a very strong SES effect on all dependent variables must be addressed in studies of this nature.

[207]

TÍTULO / TITLE: - Expression of the mTOR Pathway Regulators in Human Pituitary Adenomas Indicates the Clinical Course.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Aug;33(8):3123-31.

AUTORES / AUTHORS: - Jia W; Sanders AJ; Jia G; Liu X; Lu R; Jiang WG

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, P.R China. E-mail:

jwttvy@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 with different biological behaviour, especially with regard to tumour size, invasion, endocrine function, intratumour cystic lesion and apoplexy. There is little understanding of the growth and the control of progression of pituitary tumours. In the present study, we investigated the expression of mammalian target of rapamycin (mTOR) pathway regulators, in clinical pituitary adenomas. Pituitary adenomas from 95 patients were included in the study. Fresh pituitary tumours were obtained immediately after surgery and processed for histological, immunohistological and molecular based analyses. Histopathological and clinical information including tumour stage, invasion characteristic and endocrine status were analysed against the gene transcript expression of mTOR, RAPTOR and RICTOR. There was a stepwise and significantly increased relation-ship between RICTOR expression and tumour size, namely $p=0.0012$ and $p=0.0055$ for tumours 1-2 cm and tumours >3 cm compared with tumours <1 cm respectively. Significantly higher levels of mTOR were seen in tumours with cystic lesions ($p=0.044$). There was no significant correlation between mTOR, RAPTOR and RICTOR and tumour apoplexy, nor a correlation between mTOR, RAPTOR and RICTOR with suprasellar spread and sella floor destruction. However, pituitary tumours with cavernous sinus invasion, namely Knosp stage 3-4 had significantly lower levels of RAPTOR than those of Knosp stage 1-2 ($p=0.01$). A similar but statistically insignificant trend was seen with RICTOR. Using modified Hardy's staging, it was found that there was a significant correlation between tumour stage and RAPTOR and RICTOR expression. mTOR and RAPTOR levels differed in tumours with different endocrine functions, although no statistical difference was observed. However, Growth Hormone (GH) -, Follicle-Stimulating Hormone (FSH)-, Thyroid Stimulating Hormone (TSH)-secreting tumours had significantly lower levels of RICTOR compared with nonfunctional tumours. Finally, levels of mTOR were found to be significantly correlated with levels of both RAPTOR and RICTOR. It is noteworthy that RAPTOR and RICTOR levels were also significantly correlated. In conclusion, mTOR pathway regulators, mTOR, RAPTOR and RICTOR are significantly correlated with the invasion, staging, and tumour growth of pituitary adenomas and thus have an important predictive and prognostic value in patients with pituitary adenoma.

[208]

TÍTULO / TITLE: - Silencing of miR-21 by locked nucleic acid-lipid nanocapsule complexes sensitize human glioblastoma cells to radiation-induced cell death.

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

REVISTA / JOURNAL: - Int J Pharm. 2013 May 31. pii: S0378-5173(13)00476-6. doi: 10.1016/j.ijpharm.2013.05.049.

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

[1016/j.ijpharm.2013.05.049](#)

AUTORES / AUTHORS: - Griveau A; Bejaud J; Anthiya S; Avril S; Autret D; Garcion E

INSTITUCIÓN / INSTITUTION: - Inserm U1066, Micro et nanomedecines biomimetiques, F-49933 Angers, France; LUNAM Universite, F-49933 Angers, France.

RESUMEN / SUMMARY: - The recent discovery of microRNA (miRNA) as major post-transcriptional repressors prompts the interest of developing novel approaches to target miRNA pathways to improve therapy. In this context, although the most significant barrier to their widespread clinical use remains delivery, nuclease-resistant locked nucleic acid (LNA) that binds specifically and irreversibly to miRNA represent interesting weapons. Thus, by focusing on oncogenic miR-21 miRNA, which participates in cancer cell resistance to apoptotic signals, the aim of the present study was to investigate the possibility of silencing miRNA by LNA conjugated to lipid nanocapsules (LNCs) as miRNA-targeted nanomedicines in U87MG glioblastoma (GBM) cells. After synthesis of an amphiphilic lipopeptide affine for nucleic acids, a post-insertion procedure during the LNC phase inversion formulation process allowed to construct peptide-conjugated LNCs. Peptide-conjugated LNCs were then incubated with LNAs to allow the formation of complexes characterized in gel retardation assays and by their physicochemical properties. U87MG cell treatment by LNA-LNC complexes resulted in a marked reduction of miR-21 expression as assessed by RTqPCR. In addition, exposure of U87MG cells to LNA-LNC complexes followed by external beam radiation demonstrated a significant improvement of cell sensitivity to treatment and emphasizes the interest to investigate further this miRNA-targeted strategy.

[209]

TÍTULO / TITLE: - Polo-like kinase 1 inhibition causes decreased proliferation by cell cycle arrest, leading to cell death in glioblastoma.

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

REVISTA / JOURNAL: - Cancer Gene Ther. 2013 Jul 26. doi: 10.1038/cgt.2013.46.

●● Enlace al texto completo (gratis o de pago) [1038/cgt.2013.46](#)

AUTORES / AUTHORS: - Pezuk JA; Brassesco MS; Morales AG; de Oliveira JC; de Paula Queiroz RG; Machado HR; Carlotti CG Jr; Neder L; Scrideli CA; Tone LG

INSTITUCIÓN / INSTITUTION: - Department of Genetics, Faculty of Medicine of Ribeirao Preto, University of Sao Paulo.

RESUMEN / SUMMARY: - Glioblastoma (GBM) is one of the most aggressive central nervous system tumors with a patient's median survival of <1 year. Polo-like kinases (PLKs) are a family of serine/threonine kinases that have key roles in cell cycle control and DNA-damage response. We evaluated PLK1, 2, 3 and 4 gene expression in 8 GBM cell lines and 17 tumor samples, and analyzed the effect of the PLK1 inhibition on SF188 and T98G GBM cell lines and 13 primary cultures. Our data showed PLK1 overexpression and a variable altered expression of PLK2, 3 and 4 genes in GBM tumor samples and cell lines. Treatments with nanomolar concentrations of BI 2536, BI 6727, GW843682X or GSK461364 caused a significant decrease in GBM cells proliferation. Colony formation was also found to be inhibited ($P<0.05$), whereas apoptosis rate and mitotic index were significantly increased ($P<0.05$) after PLK1 inhibition in both GBM cell lines. Cell cycle analysis showed an arrest at G2 ($P<0.05$) and cell invasion was also decreased after PLK1 inhibition. Furthermore, simultaneous combinations of BI 2536 and temozolomide produced synergistic effects for both the cell lines after 48 h of treatment. Our findings suggest that PLK1 might be a promising target for the treatment of GBMs. Cancer Gene Therapy advance online publication, 26 July 2013; doi:10.1038/cgt.2013.46.

[210]

TÍTULO / TITLE: - Association of the MTHFR C677T polymorphism with primary brain tumor risk.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Jul 12.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-0922-](#)

[9](#)

AUTORES / AUTHORS: - Xu C; Yuan L; Tian H; Cao H; Chen S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Sixth Affiliated Hospital, Shanghai Jiaotong University, Shanghai, 200233, China, xc.zzc@163.com.

RESUMEN / SUMMARY: - Methylene tetrahydrofolate reductase (MTHFR) gene plays key roles not only in folate metabolism but also in carcinogenesis. The single nucleotide polymorphism MTHFR C677T has been indicated in the development of various tumors. The effect of the MTHFR C677T polymorphism on brain tumors remains poorly understood. We performed the present meta-analysis and aimed to provide a better understanding of the pathogenesis of brain tumors. A literature search of the PubMed, Embase, Web of Science, and Wanfang databases was carried out for potential relevant publications. We

calculated the pooled odds ratio (OR) with corresponding 95 % confidence interval (95 % CI) to assess the association of MTHFR C677T with the susceptibility to brain tumors. We also performed stratified analysis and sensitivity analysis to further estimate the genetic association. All statistical analyses were conducted by the use of STATA 11.0 (STATA Corporation, College Station, TX, USA). Eight case-control studies involving a total of 3,059 cases and 3,324 controls were retrieved according to the inclusion criteria. The overall ORs suggested that the MTHFR C677T variant can exert a risk effect on brain tumor development under the following contrast models (ORTC vs. CC = 1.14, 95 % CI 1.02-1.27, P OR = 0.018; ORTT + TC vs. CC = 1.23, 95 % CI 1.01-1.51, P OR = 0.043). No significant correlation was identified among the Caucasians, but not among the Asians. In addition, the TC genotype carriers were more susceptible to meningioma when compared with the CC genotype carriers (ORTC vs. CC = 1.38, 95 % CI 1.15-1.65, P OR < 0.001). The MTHFR C677T polymorphism seemed to exert no effect on glioma risk. The current meta-analysis firstly provides evidence that the MTHFR C677T polymorphism may modify the risk for brain tumors, particularly meningioma. The role of the MTHFR C677T variant in brain tumor pathogenesis across diverse ethnicities needs further elucidation by more future studies with large sample size.

[211]

TÍTULO / TITLE: - Cranial irradiation in adults diagnosed with acute myelogenous leukemia presenting with hyperleukocytosis and neurologic dysfunction.

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

REVISTA / JOURNAL: - Leuk Lymphoma. 2013 Jun 4.

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

[3109/10428194.2013.797088](https://doi.org/10.1007/s12026-013-9708-8)

AUTORES / AUTHORS: - Ferro A; Jabbour SK; Taunk NK; Aisner J; Cohler A; Somalya S; Goyal S

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology.

RESUMEN / SUMMARY: - This study describes our institution's experience using whole brain radiation therapy (WBRT) to treat patients with acute myelogenous leukemia (AML) presenting with hyperleukocytosis. After approval by the institutional review board, we identified patients with AML and hyperleukocytosis using hospital records. The primary endpoints in the study included alleviation of neurological symptoms (or prevention if prophylactic RT was used), overall survival, development of intracranial hemorrhage (ICH) and \geq grade 3 toxicities using the Common Terminology Criteria for Adverse Events version 4.0 (CTCAE v4.0). Eighteen patients received WBRT for the treatment of AML hyperleukocytosis. Thirteen patients received treatment in order to control neurological symptoms. Clinical assessment showed that 12 of 13 patients (92%) achieved resolution of neurological symptoms either concurrent with RT or immediately after RT. The mean overall survival for all of

the patients who received WBRT was 14.2 months (95% confidence interval, 5.4-23.0). No patient who received RT experienced \geq grade 3 toxicity. Two (6%) patients developed ICH following therapy. Our institution's experience demonstrates that WBRT may be utilized as part of multimodality therapy in order to alleviate or prevent neurological symptoms in patients with AML presenting with leukostasis.

[212]

TÍTULO / TITLE: - pH/temperature sensitive magnetic nanogels conjugated with Cy5.5-labeled lactoferrin for MR and fluorescence imaging of glioma in rats.

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

REVISTA / JOURNAL: - Biomaterials. 2013 Oct;34(30):7418-28. doi: 10.1016/j.biomaterials.2013.05.078. Epub 2013 Jun 28.

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

1016/j.biomaterials.2013.05.078

AUTORES / AUTHORS: - Jiang L; Zhou Q; Mu K; Xie H; Zhu Y; Zhu W; Zhao Y; Xu H; Yang X

INSTITUCIÓN / INSTITUTION: - National Engineering Research Center for Nanomedicine, College of Life Science and Technology, Huazhong University of Science and Technology, Wuhan 430074, PR China.

RESUMEN / SUMMARY: - Glioma is the most common primary brain tumor and causes a disproportionate level of morbidity and mortality across a wide range of individuals. From previous clinical practices, definition of glioma margin is the key point for surgical resection. In order to outline the exact margin of glioma and provide a guide effect for the physicians both at pre-surgical planning stage and surgical resection stage, pH/temperature sensitive magnetic nanogels conjugated with Cy5.5-labeled lactoferrin (Cy5.5-Lf-MPNA nanogels) were developed as a promising contrast agent. Due to its pH/temperature sensitivity, Cy5.5-Lf-MPNA nanogels could change in its hydrophilic/hydrophobic properties and size at different pH and temperatures. Under physiological conditions (pH 7.4, 37 degrees C), Cy5.5-Lf-MPNA nanogels were hydrophilic and swollen, which could prolong the blood circulation time. In the acidic environment of tumor tissues (pH 6.8, 37 degrees C), Cy5.5-Lf-MPNA nanogels became hydrophobic and shrunken, which could be more easily accumulated in tumor tissue and internalized by tumor cells. In addition, lactoferrin, an effective targeting ligand for glioma, provides active tumor targeting ability. In vivo studies on rats bearing in situ glioma indicated that the MR/fluorescence imaging with high sensitivity and specificity could be acquired using Cy5.5-Lf-MPNA nanogels due to active targeting function of the Lf and enhancement of cellular uptake by tailoring the hydrophilic/hydrophobic properties of the nanogels. With good biocompatibility shown by cytotoxicity assay and histopathological analysis, Cy5.5-Lf-MPNA nanogels are hopeful to be

developed as a specific and high-sensitive contrast agent for preoperative MRI and intraoperative fluorescence imaging of glioma.

[213]

TÍTULO / TITLE: - Genotype-Specific Abnormalities in Mitochondrial Function Associate with Distinct Profiles of Energy Metabolism and Catecholamine Content in Pheochromocytoma and Paraganglioma.

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

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Jul 15;19(14):3787-3795. Epub 2013 May 30.

- Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-3922](https://doi.org/10.1158/1078-0432.CCR-12-3922)

AUTORES / AUTHORS: - Rao JU; Engelke UF; Rodenburg RJ; Wevers RA; Pacak K; Eisenhofer G; Qin N; Kusters B; Goudswaard AG; Lenders JW; Hermus AR; Mensenkamp AR; Kunst HP; Sweep FC; Timmers HJ

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Department of Laboratory Medicine, Laboratory of Genetic Endocrine and Metabolic Diseases; Department of Medicine, Division of Endocrinology; Departments of Pediatrics, Pathology, and Medicine, Division of Vascular Medicine; Departments of Genetics and Otolaryngology, Radboud University Nijmegen Medical Centre, Nijmegen; Department of Pathology, Maastricht University Medical Centre, Maastricht, the Netherlands; Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Institute of Health, Bethesda, Maryland; and Department of Medicine and Institute of Clinical Chemistry & Laboratory Medicine, University Hospital Carl Gustav Carus, Dresden, Germany.

RESUMEN / SUMMARY: - PURPOSE: Pheochromocytomas and paragangliomas (PGL) are neuroendocrine tumors of sympathetic and parasympathetic paraganglia. This study investigated the relationships between genotype-specific differences in mitochondrial function and catecholamine content in PGL tumors. EXPERIMENTAL DESIGN: Respiratory chain enzyme assays and ¹H-nuclear magnetic resonance (NMR) spectroscopy at 500 MHz were conducted on homogenates of 35 sporadic PGLs and 59 PGLs from patients with hereditary mutations in succinate dehydrogenase subunits B and D (SDHB, SDHD), succinate dehydrogenase assembly factor 2, von Hippel-Lindau (VHL), rearranged during transfection (RET), neurofibromatosis type 1 (NF1), and myc-associated factor X. RESULTS: In SDHx-related PGLs, a significant decrease in complex II activity (P < 0.0001) and a significant increase in complex I, III, and IV enzyme activities were observed when compared to sporadic, RET, and NF1 tumors. Also, a significant increase in citrate synthase (P < 0.0001) enzyme activity was observed in SDHx-related PGLs when compared to sporadic-, VHL-, RET-, and NF1-related tumors. An increase in succinate accumulation (P < 0.001) and decrease in ATP/ADP/AMP accumulation (P < 0.001) was observed

when compared to sporadic PGLs and PGLs of other genotypes. Positive correlations ($P < 0.01$) were observed between respiratory chain complex II activity and total catecholamine content and ATP/ADP/AMP and total catecholamine contents in tumor tissues. CONCLUSIONS: This study for the first time establishes a relationship between determinants of energy metabolism, like activity of respiratory chain enzyme complex II, ATP/ADP/AMP content, and catecholamine content in PGL tumors. Also, this study for the first time successfully uses NMR spectroscopy to detect catecholamines in PGL tumors and provides ex vivo evidence for the accumulation of succinate in PGL tumors with an SDHx mutation. Clin Cancer Res; 19(14); 3787-95. ©2013 AACR.

[214]

TÍTULO / TITLE: - BUB1 and BUBR1 inhibition decreases proliferation and colony formation, and enhances radiation sensitivity in pediatric glioblastoma cells.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jun 2.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2175-](#)

[8](#)

AUTORES / AUTHORS: - Morales AG; Pezuk JA; Brassesco MS; de Oliveira JC; de Paula Queiroz RG; Machado HR; Carlotti CG Jr; Neder L; de Oliveira HF; Scrideli CA; Tone LG

INSTITUCIÓN / INSTITUTION: - Department of Genetics, University of Sao Paulo, Av. Bandeirantes, 3900, Bairro Monte Alegre, 14048-900, Ribeirao Preto, Sao Paulo, Brazil.

RESUMEN / SUMMARY: - PURPOSE: Glioblastoma (GBM) is a very aggressive and lethal brain tumor with poor prognosis. Despite new treatment strategies, patients' median survival is still lower than 1 year in most cases. The expression of the BUB gene family has demonstrated to be altered in a variety of solid tumors, pointing to a role as putative therapeutic target. The purpose of this study was to determine BUB1, BUB3, and BUBR1 gene expression profiles in glioblastoma and to analyze the effects of BUB1 and BUBR1 inhibition combined or not with Temozolomide and radiation in the pediatric SF188 GBM cell line. METHODS: For gene expression analysis, 8 cell lines and 18 tumor samples were used. The effect of BUB1 and BUBR1 inhibition was evaluated using siRNA. Apoptosis, cell proliferation, cell cycle kinetics, micronuclei formation, and clonogenic capacity were analyzed after BUB1 and BUBR1 inhibition. Additionally, combinatorial effects of gene inhibition and radiation or Temozolomide (TMZ) treatment were evaluated through proliferation and clonogenic capacity assays. RESULTS: We report the upregulation of BUB1 and BUBR1 expression and the downregulation of BUB3 in GBM samples and cell lines when compared to white matter samples ($p < 0.05$). Decreased cell proliferation and colony formation after BUB1 and BUBR1 inhibition were

observed, along with increased micronuclei formation. Combinations with TMZ also caused cell cycle arrest and increased apoptosis. Moreover, our results demonstrate that BUB1 and BUBR1 inhibition sensitized SF188 cells to gamma-irradiation as shown by decreased growth and abrogation of colony formation capacity. CONCLUSION: BUB1 and BUBR1 inhibition decreases proliferation and shows radiosensitizing effects on pediatric GBM cells, which could improve treatment strategies for this devastating tumor. Collectively, these findings highlight the potentials of BUB1 and BUBR1 as putative therapeutic targets for glioblastoma treatment.

[215]

TÍTULO / TITLE: - Activation of the phosphorylation of ATM contributes to radioresistance of glioma stem cells.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Jul 11. doi: 10.3892/or.2013.2614.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2614](#)

AUTORES / AUTHORS: - Zhou W; Sun M; Li GH; Wu YZ; Wang Y; Jin F; Zhang YY; Yang L; Wang DL

INSTITUCIÓN / INSTITUTION: - Chongqing Cancer Institute, Chongqing 400030, P.R. China.

RESUMEN / SUMMARY: - Ionizing radiation (IR) is currently the most efficient therapy available for malignant glioma. Unfortunately, this strategy is palliative due to the characteristics of radioresistance of malignant glioma. The aim of our study was to compare glioma stem cells (GSCs) with glioma cells (GCs) to determine whether GSCs are responsible for the radioresistance phenotype and to elucidate whether cell cycle checkpoint proteins are responsible for the radioresistance of GSCs. In this study, CD133 (a marker of brain cancer stem cells) and nestin were co-expressed in GSCs isolated from GCs. The percent of CD133+ cells in GSCs and GCs were >80 and <2%, respectively. Significantly more GSCs survived following 2, 4, 6 and 8 Gy IR than GCs. IR kills cancer cells primarily through DNA double-strand breaks (DSBs). The neutral comet assay is often used to intuitively show the level of DSBs. Significantly fewer GSCs showed DNA damage than GCs following 2 Gy IR. This demonstrated that GSCs are more resistant to in vitro radiation than GCs. Furthermore, activated ataxia telangiectasia mutated (ATM) is essential for the activation of downstream effector kinases, such as checkpoint kinase 2 (Chk2) and p53 which mainly contribute to the proper regulation of IR-induced arrest in the G1 phase. DNA damage induced by IR potentially initiated activation of phosphorylation of the ATM, p53 and Chk2 checkpoint proteins. Activation of the phosphorylation of these checkpoint proteins was significantly higher in the GSCs compared to GCs. We found that inhibition of ATM activation induced cell cycle checkpoint defects and increased the rate of apoptosis of GSCs following IR. Our results suggest that GSCs were more resistant to radiation compared to

GCs due to high expression of phosphorylated cell cycle checkpoint proteins, and inhibition of ATM could significantly reduce the radioresistance of GSCs and GCs. ATM may represent a source of radioresistance in GSCs and a target of improved radiosensitivity of GSCs.

[216]

TÍTULO / TITLE: - Diffusion MRI Improves the Accuracy of Preoperative Diagnosis of Common Pediatric Cerebellar Tumors among Reviewers with Different Experience Levels.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Jun 20.

●● [Enlace al texto completo \(gratis o de pago\) 3174/ajnr.A3596](#)

AUTORES / AUTHORS: - Koral K; Zhang S; Gargan L; Moore W; Garvey B; Fiesta M; Seymour M; Yang L; Scott D; Choudhury N

INSTITUCIÓN / INSTITUTION: - Departments of Radiology, University of Texas Southwestern Medical Center and Children's Medical Center, Dallas, Texas; Departments of Clinical Sciences and Internal Medicine, University of Texas Southwestern Medical Center Dallas, Texas; and Department of Neuro-Oncology, Children's Medical Center, Dallas, Texas.

RESUMEN / SUMMARY: - **BACKGROUND AND PURPOSE:** Although utility of diffusion MR imaging in the preoperative diagnosis of common pediatric cerebellar tumors is generally recognized, its added value has not been systematically studied previously. The purpose of this study was to evaluate the impact of diffusion MR imaging on the accuracy of preoperative diagnosis of common pediatric cerebellar tumors among reviewers with different experience levels. **MATERIALS AND METHODS:** Review of the neuro-oncology data base yielded 96 patients whose preoperative brain MR imaging included both diffusion MR imaging ($b = 1000 \text{ s/mm}^2$) and ADC maps. There were 38 pilocytic astrocytomas, 33 medulloblastomas, 17 ependymomas, and 8 atypical teratoid/rhabdoid tumors. Six reviewers (4 residents, 2 neuroradiologists) evaluated the examinations. Two sessions were conducted with each reviewer, without and with diffusion MR imaging data on 2 separate days. The impact of diffusion MR imaging on accuracy of diagnoses was assessed. **RESULTS:** In choosing the correct diagnosis of the 4 alternatives, performances of 5 of the 6 reviewers improved significantly with inclusion of the diffusion MR imaging data, from 63%-77% ($P = .0003-.0233$). The performance of 1 reviewer also improved, but the difference did not attain statistical significance ($P = .1944$). Inclusion of diffusion MR imaging data improved the likelihood of rendering a correct diagnosis (odds ratio = 3.16, 95% confidence interval = 2.07-4.00) over all tumor types. When embryonal tumors were regarded as a single group, the rate of correct diagnosis increased from 66%-83% with diffusion MR imaging data, and performances of all of the reviewers improved significantly ($P = .0001-.05$). The improvement in performances resulted from increased correct

diagnoses of pilocytic astrocytomas, medulloblastomas, and atypical teratoid/rhabdoid tumors. There was no improvement in the correct diagnoses of ependymomas with inclusion of the diffusion MR imaging data. CONCLUSIONS: Diffusion MR imaging improves accuracy of preoperative diagnosis of common pediatric cerebellar tumors significantly among reviewers with differing experience levels.

[217]

TÍTULO / TITLE: - Cilengitide targets pediatric glioma and neuroblastoma cells through cell detachment and anoikis induction.

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

REVISTA / JOURNAL: - Anticancer Drugs. 2013 Sep;24(8):818-25. doi: 10.1097/CAD.0b013e328362edc5.

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

[1097/CAD.0b013e328362edc5](#)

AUTORES / AUTHORS: - Leblond P; Dewitte A; Le Tinier F; Bal-Mahieu C; Baroncini M; Sarrazin T; Lartigau E; Lansiaux A; Meignan S

INSTITUCIÓN / INSTITUTION: - aPediatric Oncology Unit bAntitumoral Pharmacology Laboratory cMedical Physics Unit dRadiotherapy Department, Centre Oscar Lambret eINSERM U837, Institute for Cancer Research of Lille (IRCL), University of Lille North of France fPediatric Neurosurgery Department, Lille University Hospital, Lille, France.

RESUMEN / SUMMARY: - The prognosis of children with high-grade glioma or high-risk neuroblastoma remains poor. Cilengitide is a selective antagonist of $\alpha v \beta 3$ and $\alpha v \beta 5$ integrins, which are involved in tumor growth and development of metastasis. We have evaluated the effects of Cilengitide on pediatric glioma and neuroblastoma cell lines for the first time. Expression levels of $\alpha v \beta 3$ and $\alpha v \beta 5$ were determined by flow cytometry in three neuroblastoma and five pediatric glioma cell lines compared with adult U87-MG before and after irradiation. Cell detachment, cytotoxicity, and cell growth under nonadhesive conditions were measured using the MTS assay. Cell death and apoptosis were assessed by annexin-V/propidium iodide staining. The varying $\alpha v \beta 3$ and $\alpha v \beta 5$ expression levels were unrelated to tumor grade. Irrespective of the $\alpha v \beta 5$ expression level, the pediatric cells expressing $\alpha v \beta 3$ were dose dependently sensitive to Cilengitide. UW479 cells expressed only $\alpha v \beta 5$ integrin and were not sensitive to Cilengitide, suggesting that Cilengitide's action largely depends on $\alpha v \beta 3$ inhibition. Cell detachment resulted in a higher cytotoxicity in pediatric glioma compared with U87-MG cells, which seem able to grow despite the significant Cilengitide-induced cell detachment. Growth kinetics on polyHEMA showed that only pediatric glioma cells were sensitive to anoikis and so died after Cilengitide-induced detachment. Furthermore, irradiation of glioma cells increased $\alpha v \beta 3$ expression slightly but not Cilengitide sensitivity.

Cilengitide's action on glioma and neuroblastoma cells appears to be dependent on alphavbeta3 expression and sensitivity to anoikis. Cilengitide is able to target pediatric glioma and neuroblastoma cells in vitro directly and efficiently. Tumor context could validate these promising observations.

[218]

TÍTULO / TITLE: - N(4)-Tolyl-2-acetylpyridine thiosemicarbazones and their platinum(II,IV) and gold(III) complexes: cytotoxicity against human glioma cells and studies on the mode of action.

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

REVISTA / JOURNAL: - Biometals. 2013 Jun 9.

●● Enlace al texto completo (gratis o de pago) [1007/s10534-013-9639-](#)

[X](#)

AUTORES / AUTHORS: - Ferraz KS; Da Silva JG; Costa FM; Mendes BM; Rodrigues BL; Dos Santos RG; Beraldo H

INSTITUCIÓN / INSTITUTION: - Departamento de Química, Universidade Federal de Minas Gerais, Belo Horizonte, MG, 31270-901, Brazil.

RESUMEN / SUMMARY: - Complexes [Au(2Ac4oT)Cl][AuCl₂] (1), [Au(Hpy2Ac4mT)Cl₂]Cl.H₂O (2), [Au(Hpy2Ac4pT)Cl₂]Cl (3), [Pt(H2Ac4oT)Cl]Cl (4), [Pt(2Ac4mT)Cl].H₂O (5), [Pt(2Ac4pT)Cl] (6) and [Pt(L)Cl₂OH], L = 2Ac4mT (7), 2Ac4oT (8), 2Ac4pT (9) were prepared with N(4)-ortho- (H2Ac4oT), N(4)-meta- (H2Ac4mT) and N(4)-para- (H2Ac4pT) tolyl-2-acetylpyridine thiosemicarbazone. The cytotoxic activities of all compounds were assayed against U-87 and T-98 human malignant glioma cell lines. Upon coordination cytotoxicity improved in 2, 5 and 8. In general, the gold(III) complexes were more cytotoxic than those with platinum(II,IV). Several of these compounds proved to be more active than cisplatin and auranofin used as controls. The gold(III) complexes probably act by inhibiting the activity of thioredoxin reductase enzyme whereas the mode of action of the platinum(II,IV) complexes involves binding to DNA. Cells treated with the studied compounds presented morphological changes such as cell shrinkage and blebs formation, which indicate cell death by apoptosis induction.

[219]

TÍTULO / TITLE: - Ionizing radiation-induced gene expression changes in TP53 proficient and deficient glioblastoma cell lines.

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

REVISTA / JOURNAL: - Mutat Res. 2013 Jun 29. pii: S1383-5718(13)00160-5. doi: 10.1016/j.mrgentox.2013.06.010.

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

[1016/j.mrgentox.2013.06.010](#)

AUTORES / AUTHORS: - Godoy PR; Mello SS; Magalhaes DA; Donaires FS; Nicolucci P; Donadi EA; Passos GA; Sakamoto-Hojo ET

INSTITUCIÓN / INSTITUTION: - Department of Genetics, Faculty of Medicine of Ribeirao Preto-FMRP-USP, University of Sao Paulo, Ribeirao Preto, SP, Brazil.

RESUMEN / SUMMARY: - The genetic heterogeneity presented by different cell lines derived from glioblastoma (GBM) seems to influence their responses to antitumoral agents. Although GBM tumors present several genomic alterations, it has been assumed that TP53, frequently mutated in GBM, may to some extent be responsible for differences in cellular responses to antitumor agents, but this is not clear yet. To directly determine the impact of TP53 on GBM response to ionizing radiation, we compared the transcription profiles of four GBM cell lines (two with wild-type (WT) TP53 and two with mutant (MT) TP53) after 8Gy of gamma-rays. Transcript profiles of cells analyzed 30min and 6h after irradiation showed that WT TP53 cells presented a higher number of modulated genes than MT TP53 cells. Our findings also indicate that there are several pathways (apoptosis, DNA repair/stress response, cytoskeleton organization and macromolecule metabolic process) in radiation responses of GBM cell lines that were modulated only in WT TP53 cells (30min and 6h). Interestingly, the majority of differentially expressed genes did not present the TP53 binding site, suggesting secondary effects of TP53 on transcription. We conclude that radiation-induced changes in transcription profiles of irradiated GBM cell lines mainly depend on the functional status of TP53.

[220]

TÍTULO / TITLE: - Glioma Spheroids Obtained Via Ultrasonic Aspiration are Viable and Express Stem Cell Markers: A New Tissue Resource for Glioma Research.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Jul 24.

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

[1227/NEU.0000000000000118](#)

AUTORES / AUTHORS: - Jensen SS; Aaberg-Jessen C; Andersen C; Schroder HD; Kristensen BW

INSTITUCIÓN / INSTITUTION: - 1Department of Pathology, 2Department of Neurosurgery, Odense University Hospital, Denmark, Institute of Clinical Research, University of Southern Denmark.

RESUMEN / SUMMARY: - BACKGROUND:: Ultrasonic aspirators allow safe, rapid and accurate removal of brain tumors. However, the tissue fragments removed are used surprisingly little in research. OBJECTIVE:: To investigate whether such tissue fragments could be cultured as organotypic multicellular spheroids since access to biopsy tissue is often limited. METHODS:: Tissue fragments obtained by ultrasonic aspiration from 10 glioblastomas and tumor biopsy tissue from seven of these tumors were cultured in serum-containing and

serum-free medium. Upon culturing, the fragments formed spheroids, which were prepared for histology. Two glioblastoma cell lines from ultrasonic fragments and biopsy tissue were established as well. RESULTS:: Hematoxylin eosin staining showed viable glioma spheroids obtained from both ultrasonic and biopsy tissue in both types of medium. EGFR and PTEN/chromosome 10 status were found to be preserved in most spheroids (7-8 out of 10 tumors) together with the level of GFAP, VWF and Ki-67. The level of stem cell markers CD133, Bmi-1, nestin and Sox2 was preserved as well. The ultrasonic spheroids had higher levels of GFAP and VWF and a lower level of Bmi-1, nestin, Sox2 and Olig2 compared to that found in conventional biopsy spheroids. For both types of spheroids, the stem cell medium seemed to favor expression of stem cell markers. The established cell lines were both capable of spheroid formation at clonal density and tumor formation in vivo. CONCLUSION:: Viable organotypic and proliferating spheroids were easily obtained from ultrasonic tissue fragments. The preservation of markers and establishment of cell lines with tumor initiating cell properties suggest ultrasonic spheroids as a new tissue resource for glioma research.

[221]

TÍTULO / TITLE: - MicroRNA-128 promotes cell-cell adhesion in U87 glioma cells via regulation of EphB2.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Jul 5. doi: 10.3892/or.2013.2596.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2596](#)

AUTORES / AUTHORS: - Lin L; Chen X; Peng X; Zhou J; Kung HF; Lin MC; Jiang S

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Gene Engineering of the Ministry of Education, State Key Laboratory of Biocontrol, School of Life Sciences, Sun Yat-sen University, Guangzhou, P.R. China.

RESUMEN / SUMMARY: - MicroRNAs (miRNAs) are small, non-coding RNAs which regulate gene expression at the post-transcriptional level. Abnormal expression of miRNAs occurs frequently in human tumors. Despite the fact that reduced expression of miR-128 has been observed in glioma tissues and cells, the role of miR-128 in tumors has not been fully characterized. In the present study, cell adhesion assays indicated that overexpression of miR-128 can promote cell-cell adhesion. Target site prediction algorithms indicated that miR-128 binds the 3'-untranslated regions of erythropoietin-producing hepatocellular receptor (Eph)B1 and EphB2 mRNAs. Luciferase reporter assays confirmed that miR-128 binds and regulates EphB1 and EphB2 mRNAs. Overexpression of EphB2 reduced the ability of miR-128 to promote cell-cell adhesion. The wound-healing assay indicated that miR-128 significantly inhibited cell migration via EphB2. This study revealed the novel functions of miR-128 in cell-

cell adhesion and cell migration in glioma cells through the regulation of EphB2, and identified EphB1 and EphB2 as novel miR-128 targets.

[222]

TÍTULO / TITLE: - miR-708 acts as a tumor suppressor in human glioblastoma cells.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Aug;30(2):870-6. doi: 10.3892/or.2013.2526. Epub 2013 Jun 7.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2526](#)

AUTORES / AUTHORS: - Guo P; Lan J; Ge J; Nie Q; Mao Q; Qiu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Ren Ji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai 200127, P.R. China.

RESUMEN / SUMMARY: - Glioblastoma (GBM) is one of the most lethal forms of human cancer, and new clinical biomarkers and therapeutic targets are urgently required. microRNAs (miRNAs) are small, non-coding RNAs that negatively regulate gene expression at the post-transcriptional and/or translational level by binding the 3' untranslated regions (3' UTRs) of target mRNAs. The dysregulated expression of several miRNAs has been reported to modulate glioma progression. In the present study, we defined the expression and function of miR-708, which, based on real-time PCR analysis, were downregulated in GBM cells. The overexpression of miR-708 inhibited cell proliferation and invasion and induced apoptosis in the human GBM cell lines A172 and T98G. Furthermore, the overexpression of miR-708 reduced the expression of Akt1, CCND1, MMP2, EZH2, Parp-1 and Bcl2 in A172 and T98G cells. Taken together, our study suggests that miR-708 affects GBM cell proliferation and invasion, and induces apoptosis. It is suggested that miR-708 may play an important role as a tumor suppressor in GBM and it may be an attractive target for therapeutic intervention in GBM.

[223]

TÍTULO / TITLE: - Amyloid-beta induces a permanent phosphorylation of HSF-1, but a transitory and inflammation-independent overexpression of Hsp-70 in C6 astrocytoma cells.

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

REVISTA / JOURNAL: - Neuropeptides. 2013 Jul 11. pii: S0143-4179(13)00043-7. doi: 10.1016/j.npep.2013.06.002.

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

[1016/j.npep.2013.06.002](#)

AUTORES / AUTHORS: - Calvillo M; Diaz A; Limon DI; Mayoral MA; Chanez-Cardenas ME; Zenteno E; Montano LF; Guevara J; Espinosa B

INSTITUCIÓN / INSTITUTION: - Laboratorio Experimental de Enfermedades Neurodegenerativas, Instituto Nacional de Neurología y Neurocirugía "MVS", Mexico D.F. 14059, Mexico.

RESUMEN / SUMMARY: - Two hallmarks of Alzheimer diseases are the continuous inflammatory process, and the brain deposit of Amyloid b (Abeta), a cytotoxic protein. The intracellular accumulation of Abeta25-35 fractions, in the absence of Heat Shock proteins (Hsps), could be responsible for its cytotoxic activity. As, pro-inflammatory mediators and nitric oxide control the expression of Hsps, our aim was to investigate the effect of Abeta25-35 on the concentration of IL-1beta, TNF-alpha and nitrite levels, and their relation to pHSF-1, Hsp-60, -70 and -90 expressions, in the rat C6 astrocyte cells. Interleukin-specific ELISA kits, immunohistochemistry with monoclonal anti-Hsp and anti pHSF-1 antibodies, and histochemistry techniques, were used. Our results showed that Abeta25-35 treatment of C6 cells increased, significantly and consistently the concentration of IL-1beta, TNF-alpha and nitrite 3days after initiating treatment. The immunoreactivity of C6 cells to Hsp-70 reached its peak after 3days of treatment followed by an abrupt decrease, as opposed to Hsp-60 and -90 expressions that showed an initial and progressive increase after 3days of Abeta25-35 treatment. pHSF-1 was identified throughout the experimental period. Nevertheless, progressive and sustained cell death was observed during all the treatment times and it was not caspase-3 dependent. Our results suggest that Hsp-70 temporary expression serves as a trigger to inhibit casapase-3 pathway and allow the expression of Hsp-60 and -90 in C6 astrocytoma cells stimulated with Abeta25-35.

[224]

TÍTULO / TITLE: - Quantitative MR perfusion parameters related to survival time in high-grade gliomas.

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

REVISTA / JOURNAL: - Eur Radiol. 2013 Jul 10.

●● Enlace al texto completo (gratis o de pago) [1007/s00330-013-2967-](http://1007/s00330-013-2967-y)

[y](#)

AUTORES / AUTHORS: - Sanz-Requena R; Revert-Ventura A; Marti-Bonmati L; Alberich-Bayarri A; Garcia-Marti G

INSTITUCIÓN / INSTITUTION: - Radiology Department, Hospital Quiron Valencia, Av Blasco Ibanez 14, 46010, Valencia, España, rsanz.val@quiron.es.

RESUMEN / SUMMARY: - **OBJECTIVES:** To evaluate the quantitative parameters obtained from dynamic MR T2*-weighted images as predictors of survival taking into consideration the biasing effects of other survival-related covariates. **METHODS:** Thirty-nine patients (60 +/- 14 years; survival 267 +/- 191 days) with high-grade gliomas (8 grade III, 31 grade IV) were retrospectively included in the study. Additional data incorporated Karnofsky performance scale, tumour resection extension after surgery and type of treatment. Dynamic T2*-weighted

MRI was acquired before treatment. Tumour curves were extracted for each voxel, and several quantitative parameters were obtained from the whole tumour volume and the 10 % maximum values. Additional image covariates included the presence of necrosis, single or multiple lesions, and tumour and oedema volumes. The relationship between quantitative parameters and survival was assessed using clusterisation techniques and the log-rank method. Cox regression analysis was used to evaluate each parameter's predictive value. RESULTS: Only the mean of the 10 % maximum values of the transfer coefficient showed an independent relationship with patient survival (log-rank chi-squared test <0.001, Cox regression P = 0.015), with higher values corresponding to lower survival rates. CONCLUSIONS: High maximum transfer coefficient values show an independent statistical relationship with low survival in high-grade glioma patients. This imaging biomarker can be used as a predictor of prognosis. KEY POINTS: * Histological examination is the standard procedure for predicting glioma biological behaviour. * Tumour biopsies may be biased by sample size and location. * Dynamic T2*-weighted MRI quantitative analysis characterises tumour vasculature at the voxel level. * High-transfer constant maximum values are independent predictors of low overall survival.

[225]

TÍTULO / TITLE: - Transferrin-Modified Doxorubicin-Loaded Biodegradable Nanoparticles Exhibit Enhanced Efficacy in Treating Brain Glioma-Bearing Rats.

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

REVISTA / JOURNAL: - Cancer Biother Radiopharm. 2013 Jun 20.

●● Enlace al texto completo (gratis o de pago) [1089/cbr.2013.1480](#)

AUTORES / AUTHORS: - Liu G; Mao J; Jiang Z; Sun T; Hu Y; Jiang Z; Zhang C; Dong J; Huang Q; Lan Q

INSTITUCIÓN / INSTITUTION: - 1 Neurosurgery Department, The Second Affiliated Hospital of Soochow University, Suzhou, China.

RESUMEN / SUMMARY: - Abstract Doxorubicin (Dox) is widely used for the treatment of solid tumors but its clinical utility on glioma is limited. In this study, we developed a novel nano-scale drug delivery system employing biodegradable nanoparticle (NP) as carriers to load Dox. Transferrin (Tf) was conjugated to the surface of NP to specifically target the NP to glioma. Tf-NP-Dox was prepared via emulsification-solvent evaporation method, and characterized for the size, Drug loading capacity (DLC), entrapment efficiency, and Tf number on the surface. The antitumor efficiency in vitro was evaluated via CCK-8 assay. The transmembrane transportation was evaluated via HPLC assay. The antitumor efficiency in vivo was assessed in C6 glioma intracranial implant rat model. The average diameter of Tf-NP-Dox was 100 nm with approximately 32 Tf molecules on the surface. DLC was 4.4%. CCK-8 assay demonstrated much stronger cytotoxicity of Tf-NP-Dox to C6 glioma cells compared to NP-Dox or Dox. HPLC assay showed that Tf-NP-Dox transported

Dox into C6 cells with high efficiency. In vivo, Tf-NP-Dox could transport Dox into tumors compare to contralateral part, with tumor inhibitory ratio and survival higher than NP-Dox or Dox. Taken together, our results suggest that Tf-NP-Dox exhibits better therapeutic effects against glioma both in vitro and in vivo, and is a potential nano-scale drug delivery system for glioma chemotherapy.

[226]

TÍTULO / TITLE: - Surgery for low-grade glioma infiltrating the central cerebral region: location as a predictive factor for neurological deficit, epileptological outcome, and quality of life.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug;119(2):318-23. doi: 10.3171/2013.5.JNS122235. Epub 2013 Jun 14.

- Enlace al texto completo (gratis o de pago)

[3171/2013.5.JNS122235](#)

AUTORES / AUTHORS: - Schucht P; Ghareeb F; Duffau H

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital Bern, Switzerland;

RESUMEN / SUMMARY: - Object A main concern with regard to surgery for low-grade glioma (LGG, WHO Grade II) is maintenance of the patient's functional integrity. This concern is particularly relevant for gliomas in the central region, where damage can have grave repercussions. The authors evaluated postsurgical outcomes with regard to neurological deficits, seizures, and quality of life. Methods Outcomes were compared for 33 patients with central LGG (central cohort) and a control cohort of 31 patients with frontal LGG (frontal cohort), all of whom had had medically intractable seizures before undergoing surgery with mapping while awake. All surgeries were performed in the period from February 2007 through April 2010 at the same institution. Results For the central cohort, the median extent of resection was 92% (range 80%-97%), and for the frontal cohort, the median extent of resection was 93% (range 83%-98%; $p = 1.0$). Although the rate of mild neurological deficits was similar for both groups, seizure freedom (Engel Class I) was achieved for only 4 (12.1%) of 33 patients in the central cohort compared with 26 (83.9%) of 31 patients in the frontal cohort ($p < 0.0001$). The rate of return to work was lower for patients in the central cohort (4 [12.1%] of 33) than for the patients in the frontal cohort (28 [90.3%] of 31; $p < 0.0001$). Conclusions Resection of central LGG is feasible and safe when appropriate intraoperative mapping is used. However, seizure control for these patients remains poor, a finding that contrasts markedly with seizure control for patients in the frontal cohort and with that reported in the literature. For patients with central LGG, poor seizure control ultimately determines quality of life because most will not be able to return to work.

[227]

TÍTULO / TITLE: - miR-124 radiosensitizes human glioma cells by targeting CDK4.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jun 13.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1179-](#)

[2](#)

AUTORES / AUTHORS: - Deng X; Ma L; Wu M; Zhang G; Jin C; Guo Y; Liu R

INSTITUCIÓN / INSTITUTION: - Cancer Institute of Southern Medical University, Guangzhou, People's Republic of China.

RESUMEN / SUMMARY: - The aberrant expression of cyclin-dependent kinase-4 (CDK4) has previously been observed in human brain glioma. Furthermore, it is observed that up-regulation of CDK4 is associated with therapy resistance and relapse. However, the mechanisms behind these phenomena remain unclear. Here, we demonstrated that elevated CDK4 expression is correlated with poor prognosis in glioma after radiotherapy and that CDK4 knockdown conferred radiosensitivity in glioma cell lines. CDK4 was identified as potential downstream target of miR-124 through bioinformatics analysis and dual-firefly luciferase reporter assay. Furthermore, restoration of miR-124 could confer radiosensitivity. Cell differentiation agent-2 (CDA-2) mimicked the effect of miR-124 restoration and CDK4 knockdown, and sensitized xenografts to radiation in an animal model. Our findings demonstrated for the first time that CDK4 was a downstream target of miR-124 and that CDA-2 could radiosensitize Glioblastoma multiforme cells through the MiR-124-CDK4 axis.

[228]

TÍTULO / TITLE: - Molecular imaging in the development of a novel treatment paradigm for glioblastoma multiforme: an integrated multidisciplinary commentary.

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

REVISTA / JOURNAL: - Drug Discov Today. 2013 Jun 20. pii: S1359-6446(13)00167-0. doi: 10.1016/j.drudis.2013.06.004.

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

[1016/j.drudis.2013.06.004](#)

AUTORES / AUTHORS: - Jarzabek MA; Sweeney KJ; Evans RL; Jacobs AH; Stupp R; O'Brien D; Berger MS; Prehn JH; Byrne AT

INSTITUCIÓN / INSTITUTION: - Department of Physiology and Medical Physics & Centre for Systems Medicine, Royal College of Surgeons in Ireland, Dublin, Ireland.

RESUMEN / SUMMARY: - Current therapeutic strategies against glioblastoma multiforme (GBM) have failed to prevent disease progression and recurrence effectively. The part played by molecular imaging (MI) in the development of novel therapies has gained increasing traction in recent years. For the first time,

using expertise from an integrated multidisciplinary group of authors, herein we present a comprehensive evaluation of state-of-the-art GBM imaging and explore how advances facilitate the emergence of new treatment options. We propose a novel next-generation treatment paradigm based on the targeting of multiple hallmarks of cancer evolution that will heavily rely on MI.

[229]

TÍTULO / TITLE: - 107 Dose-finding and safety study of an oncolytic polio/rhinovirus recombinant against recurrent glioblastoma.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:155. doi: 10.1227/01.neu.0000432699.02392.a4.

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

[1227/01.neu.0000432699.02392.a4](#)

AUTORES / AUTHORS: - Sampson JH; Desjardins A; Peters KB; Ranjan T; Vlahovic G; Lally-Goss D; Threatt S; Herndon J; Friedman AH; Friedman H; Bigner D; Gromeier M

RESUMEN / SUMMARY: - INTRODUCTION: Current therapies for glioblastoma are limited by ineffective delivery beyond the blood-brain barrier, limited diffusion of regionally-delivered macromolecules, and lack of tumor specificity. Sustained direct intracerebral infusion at slow flow rates [convection-enhanced delivery (CED)] can overcome delivery barriers. PVSRIPO is the live attenuated, oral (SABIN) serotype 1 poliovirus vaccine containing a heterologous internal ribosomal entry site stemming from human rhinovirus type 2. PVSRIPO recognizes nectin-like molecule-5, an oncofetal cell adhesion molecule and tumor antigen widely expressed ectopically in malignancy. We are reporting results of an ongoing phase I study evaluating PVSRIPO via CED delivery. METHODS: Adult patient eligibility: 1-5 cm of measurable supratentorial recurrent glioblastoma \geq 1 cm away from the ventricles; \geq 4 weeks after chemotherapy, bevacizumab or study drug; adequate organ function; KPS \geq 70%; and positive anti-poliovirus titer. PVSRIPO is delivered intratumorally by CED over 6.5 hours. PVSRIPO dose escalation is accomplished by increasing agent concentration, allowing flow-rate and infusion volume to remain constant. A 2-step continual reassessment method is used for dose escalation, with 1 patient each treated on dose levels 1-4, and a possibility of \leq 13 patients on dose level 5. RESULTS: Total of 6 patients have been treated. Two grade 3 adverse events were observed. Median PFS is 4.0 months (95% CI: 0.9, "infinity"); median OS not estimable. Six-month PFS is 41.7% (95% CI: 5.6%, 76.7%); 6-month OS is 66.7% (95% CI: 5.4%, 94.5%). Patient #1 failed bevacizumab prior to enrollment and remains disease-free more than 9 months post PVSRIPO. Two patients are disease-free 8+ and 2+ months post treatment, respectively. One had pathology confirmed disease recurrence 2 months post treatment and 1 came off study due to clinical decline

4 months post treatment. CONCLUSION: PVSRIPO infusion via CED is safe thus far with encouraging efficacy results. Updated results will be presented at the meeting.

[230]

TÍTULO / TITLE: - Immunological characterization of glioblastoma cells for immunotherapy.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Jun;33(6):2525-33.

AUTORES / AUTHORS: - Jung TY; Choi YD; Kim YH; Lee JJ; Kim HS; Kim JS; Kim SK; Jung S; Cho D

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Chonnam National University Hwasun Hospital, Jeollanam-do, Republic of Korea.

RESUMEN / SUMMARY: - The aim of this study was the immunological characterization of glioblastoma cells. Glioblastoma cell lines were cultured in serum and serum-free neurobasal (NBE) medium conditions. These cell lines were characterized by flow cytometry, reverse transcription-polymerase chain reaction (RT-PCR), western blot and natural killer (NK) cell-cytotoxicity assays. A previously described NK cell expansion method that uses K562 cells expressing interleukin (IL)-15 and 4-1 BB Ligand (BBL) (K562-mb15-41BBL) was used. RT-PCR and western blots for the expression of tumor-associated antigens (TAAs), were carried out in 32 glioblastoma and seven normal brain tissues. U87 and U343 tumor cell lines showed increased expression for major histocompatibility complex (MHC)-I and -II molecules. No significant differences in the levels of CD133, MHC class I/II, MHC class I-related chain A (MICA), MICB, UL16 binding protein 1-3 (ULBP 1-3) expression in these cell lines and in NK cell cytotoxicity were observed between serum and NBE conditions. Regardless of culture conditions, U87 and U343 cell lines were sensitive to expanded NK cells, with median cytotoxicities at 4:1 effector/target ratio of 43.2% and 46.5%, respectively. In RT-PCR, U343 and U87 showed the expression of most TAAs at a high ratio compared with U251. Western blots demonstrated positive expression for BIRC5, CD99 and ERBB2 in U251, U87 and U343 cell lines and tissues. These highly-expressed TAAs such as BIRC5, CD99 and ERBB2 in glioblastoma tissue could be the targets for immunotherapy. U87 and U343 cell lines could be useful for studying the efficacy of immunotherapy related to various TAAs and NK cell immunotherapy.

[231]

TÍTULO / TITLE: - Oncolytic effects of parvovirus H-1 in medulloblastoma are associated with repression of master regulators of early neurogenesis.

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

REVISTA / JOURNAL: - Int J Cancer. 2013 Jul 13. doi: 10.1002/ijc.28386.

●● Enlace al texto completo (gratis o de pago) [1002/ijc.28386](https://doi.org/10.1002/ijc.28386)

AUTORES / AUTHORS: - Lacroix J; Schlund F; Leuchs B; Adolph K; Sturm D; Bender S; Hielscher T; Pfister SM; Witt O; Rommelaere J; Schlehofer JR; Witt H

INSTITUCIÓN / INSTITUTION: - Division of Tumor Virology, Program Infection and Cancer, German Cancer Research Center (DKFZ), Im Neuenheimer Feld 242, 69120, Heidelberg; Department of Pediatric Hematology, Oncology and Immunology, Heidelberg University Hospital, Im Neuenheimer Feld 430, 69120, Heidelberg.

RESUMEN / SUMMARY: - Based on extensive pre-clinical studies, the oncolytic parvovirus H-1 (H-1PV) is currently applied to patients with recurrent glioblastoma in a phase I/IIa clinical trial (ParvOryx01, NCT01301430). Cure rates of about 40% in pediatric high-risk medulloblastoma (MB) patients also indicate the need of new therapeutic approaches. In order to prepare a future application of oncolytic parvovirotherapy to MB, the present study pre-clinically evaluates the cytotoxic efficacy of H-1PV on MB cells in vitro and characterizes cellular target genes involved in this effect. Six MB cell lines were analyzed by whole genome oligonucleotide microarrays after treatment and the results were matched to known molecular and cytogenetic risk factors. In contrast to non-transformed infant astrocytes and neurons, in five out of six MB cell lines lytic H-1PV infection and efficient viral replication could be demonstrated. The cytotoxic effects induced by H-1PV were observed at LD50s below 0.05 p. f. u. per cell indicating high susceptibility. Gene expression patterns in the responsive MB cell lines allowed the identification of candidate target genes mediating the cytotoxic effects of H-1PV. H-1PV induced down-regulation of key regulators of early neurogenesis shown to confer poor prognosis in MB such as ZIC1, FOXG1B, MYC, and NFIA. In MB cell lines with genomic amplification of MYC, expression of MYC was the single gene most significantly repressed after H-1PV infection. H-1PV virotherapy may be a promising treatment approach for MB since it targets genes of functional relevance and induces cell death at very low titers of input virus. © 2013 Wiley Periodicals, Inc.

[232]

TÍTULO / TITLE: - Clinical outcome of pediatric choroid plexus tumors: retrospective analysis from a single institute.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jul 14.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2223-](https://doi.org/10.1007/s00381-013-2223-4)

[4](#)

AUTORES / AUTHORS: - Koh EJ; Wang KC; Phi JH; Lee JY; Choi JW; Park SH; Park KD; Kim IH; Cho BK; Kim SK

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

RESUMEN / SUMMARY: - BACKGROUND: Choroid plexus tumor is a rare brain tumor with variable clinical features according to the histological grade. We reviewed the treatment outcome of 23 children, focusing on the biological behavior of the atypical choroid plexus papilloma (ACPP) and the current therapeutic strategy in choroid plexus carcinoma (CPC). METHODS: The demographics, clinical features, surgical treatments, adjuvant therapies, and survival were reviewed. RESULTS: The median age at diagnosis was 18 months-55 months for choroid plexus papilloma (CPP), 8 months for ACPP, and 15 months for CPC. Gross total resections were achieved in seven of eight patients with CPP, seven of seven with ACPP, and three of eight with CPC. Seven patients with CPC received chemotherapy. Four patients received high-dose chemotherapy (HDCT) and autologous peripheral blood stem cell transplantation (aPBSCT), and three among them have survived. Four patients with CPC received radiotherapy. One CPP patient and one CPC patient underwent radiosurgery. All CPP and ACPP patients have survived. The overall survival rate of the CPC patients was 62.5 % in the first year and 42.9 % in the second year. The progression-free survival rate of the CPC patients was 50 % in the first year and 0 % in the second year. Seven patients underwent permanent cerebrospinal fluid diversion surgery because of hydrocephalus or subdural effusion. CONCLUSION: CPP and ACPP were surgically curable. Multi-modal treatments are necessary in the management of CPC with poor prognosis. HDCT and aPBSCT may be important to treat infants for whom radiotherapy is limited. Hydrocephalus and subdural effusion should be resolved with appropriate management.

[233]

TÍTULO / TITLE: - Measurements of tumor vascular leakiness using DCE in brain tumors: clinical applications.

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

REVISTA / JOURNAL: - NMR Biomed. 2013 Aug;26(8):1042-9. doi: 10.1002/nbm.2994. Epub 2013 Jul 7.

●● Enlace al texto completo (gratis o de pago) [1002/nbm.2994](#)

AUTORES / AUTHORS: - Jain R

INSTITUCIÓN / INSTITUTION: - Departments of Radiology and Neurosurgery, Division of Neuroradiology, Henry Ford Health System, Detroit, MI, 48202, USA.

RESUMEN / SUMMARY: - Various imaging techniques have been employed to evaluate blood-brain-barrier leakiness in brain tumors, as higher tumor vascular leakiness is known to be associated with higher grade and malignant potential of the tumor, and hence can help provide additional diagnostic and prognostic information. These imaging techniques range from routine post-contrast T1 -

weighted images that highlight degree of contrast enhancement to absolute measurement of quantitative metrics of vascular leakiness employing complex pharmacokinetic modeling. The purpose of this article is to discuss the clinical applications of available imaging techniques, and in particular dynamic contrast-enhanced T1 -weighted MR imaging (DCE-MRI), to evaluate tumor vascular leakiness. Copyright © 2013 John Wiley & Sons, Ltd.

[234]

TÍTULO / TITLE: - Postoperative ischemic changes after glioma resection identified by diffusion-weighted magnetic resonance imaging and their association with intraoperative motor evoked potentials.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Jul 5.

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

[3171/2013.5.JNS121981](#)

AUTORES / AUTHORS: - Gempt J; Krieg SM; Huttinger S; Buchmann N; Ryang YM; Shiban E; Meyer B; Zimmer C; Forschler A; Ringel F

INSTITUCIÓN / INSTITUTION: - Neurochirurgische Klinik und Poliklinik; and.

RESUMEN / SUMMARY: - Object The aim of surgical glioma treatment is the complete resection of tumor tissue while preserving neurological function. Surgery-related neurological deficits arise from direct damage to the cortical or subcortical structures or from ischemia. The authors aimed to assess the incidence of resection-related ischemia of newly diagnosed or recurrent supratentorial gliomas and the sensitivity of intraoperative neuromonitoring (IOM) of motor evoked potentials (MEPs) for detecting such ischemic events and their influence on neurological motor function. Methods Between January 2009 and December 2010, 70 patients with tumors in motor-eloquent brain areas underwent intraoperative MEP monitoring during glioma resection and were examined by early postoperative MRI including diffusion-weighted imaging (DWI) and apparent diffusion coefficient (ADC) mapping. Postoperative areas of restricted diffusion were assessed by investigators blinded to the course of intraoperative MEPs and the neurological course. Results Among the 70 enrolled patients, a MEP amplitude decline below 50% of the baseline level was observed in 21 patients (30%). Sixteen of these patients (76%) had ischemic lesions identified on postoperative MRI scans. Forty-nine patients (70%) showed no decline in MEP amplitude, and only 16 (33%) of these patients harbored ischemic lesions. Moreover, 9 (69%) of 13 patients with a permanent loss of MEP amplitude showed postoperative ischemic lesions. Factors that promoted the occurrence of postoperative infarction were previous radiotherapy and location of the tumor close to the central arteries. Conclusions Alterations in the MEP amplitude during tumor resection and postoperative ischemic lesions are associated with postoperative impairment of motor function. Rather than cortical or subcortical structural damage of eloquent brain tissue alone, peri- or

postoperative ischemic lesions play a crucial role in the development of surgery-related motor deficits.

[235]

TÍTULO / TITLE: - 111 Surgical outcomes in a modern series of low-grade gliomas undergoing surgical resection.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:156-7. doi: 10.1227/01.neu.0000432703.25262.61.

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

1227/01.neu.0000432703.25262.61

AUTORES / AUTHORS: - Orina JN; Fang S; Meyer FB; Parney IF

RESUMEN / SUMMARY: - INTRODUCTION: Low-grade gliomas represent 10%-15% of all brain tumors in adults. Increasing data suggest that initial maximal surgical resection at the time of diagnosis may lead to improved survival provided the morbidity of surgery does not significantly impair patient quality of life. To further investigate the benefits and risks of surgery in this population, we conducted a retrospective review examining outcomes in patients with intracranial low-grade gliomas undergoing initial resection at our institution. METHODS: Adult patients with newly diagnosed low-grade gliomas undergoing craniotomy and resection at Mayo Clinic, Rochester between 1998 and 2011 were retrospectively reviewed. Statistical analysis using logistical regression to compare gross total resections (GTR) to subtotal resections (STR) was performed with JMP software. The Kaplan-Meier method was used to construct overall survival curves that were compared using the log-rank test. RESULTS: One hundred ninety-nine patients were included. Median follow-up was 98 months. 128 patients (64%) underwent gross total resection (GTR) and 71 patients (36%) underwent subtotal resection (STR). The majority of tumors were mixed oligoastrocytomas. Peri-operative neurological complication rate was 11% overall (12% in GTR, 10% in STR). Regional complications occurred in 9% overall (10% GTR, 7% STR). Systemic complications occurred in 4% overall (3% GTR, 7% STR). There were 34 deaths during the follow-up period (17%). 5- and 10-year overall survival was greater in those with GTR (95.9%, 89.1%) than those with STR (81.5%, 71.8%). This difference was statistically significant (P = .0009). CONCLUSION: GTR in low-grade glioma surgery is associated with improved overall survival when compared to STR. Neurological complication rates are similar between the 2 groups. This study further supports the emerging opinion that early maximal surgery may be beneficial in this patient population, and may also help counsel patients considering operation.

[236]

TÍTULO / TITLE: - Perfusion and diffusion MRI combined with C-methionine PET in the preoperative evaluation of suspected adult low-grade gliomas.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jun 16.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1178-](#)

[3](#)

AUTORES / AUTHORS: - Berntsson SG; Falk A; Savitcheva I; Godau A; Zetterling M; Hesselager G; Alafuzoff I; Larsson EM; Smits A

INSTITUCIÓN / INSTITUTION: - Department of Neuroscience, Neurology, Uppsala University, University Hospital, 751 85, Uppsala, Sweden.

RESUMEN / SUMMARY: - Perfusion and diffusion magnetic resonance imaging (pMRI, dMRI) are valuable diagnostic tools for assessing brain tumors in the clinical setting. The aim of this study was to determine the correlation of pMRI and dMRI with ¹¹C-methionine positron emission tomography (MET PET) in suspected low-grade gliomas (LGG) prior to surgery. Twenty-four adults with suspected LGG were enrolled in an observational study and examined by MET PET, pMRI and dMRI. Histological tumor diagnosis was confirmed in 23/24 patients (18 gliomas grade II, 5 gliomas grade III). The maximum relative cerebral blood volume (rCBVmax) and the minimum mean diffusivity (MDmin) were measured in tumor areas with highest MET uptake (hotspot) on PET by using automated co-registration of MRI and PET scans. A clearly defined hotspot on PET was present in all 23 tumors. Regions with rCBVmax corresponded with hotspot regions in all tumors, regions with MDmin corresponded with hotspot regions in 20/23 tumors. The correlation between rCBVmax ($r = 0.19$, $P = 0.38$) and MDmin ($r = -0.41$, $P = 0.053$) with MET uptake in the hotspot was not statistically significant. Taken into account the difficulties of measuring perfusion abnormalities in non-enhancing gliomas, this study demonstrates that co-registered MET PET and pMRI facilitates the identification of regions with rCBVmax. Furthermore, the lack of a clear positive correlation between tumor metabolism in terms of MET uptake and tumor vascularity measured as rCBVmax suggests that combined pMRI/PET provides complementary baseline imaging data in these tumors.

[237]

TÍTULO / TITLE: - Spindle Cell Oncocytomas and Granular Cell Tumors of the Pituitary Are Variants of Pituitaryoma.

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

REVISTA / JOURNAL: - Am J Surg Pathol. 2013 Jul 24.

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

[1097/PAS.0b013e31829723e7](#)

AUTORES / AUTHORS: - Mete O; Lopes MB; Asa SL

INSTITUCIÓN / INSTITUTION: - *Department of Pathology, University Health Network, Toronto, ON, Canada daggerDepartment of Pathology, University of Virginia Health System, Charlottesville, VA.

RESUMEN / SUMMARY: - Pituicytomas are neoplasms that arise from pituicytes, which are specialized glia of the posterior pituitary. Pituicytes have 5 ultrastructural variants: light, dark, granular, ependymal, and oncocyctic. Granular cell tumors of the pituitary gland are thought to arise from granular pituicytes. Spindle cell oncocytomas are considered to arise from folliculostellate cells, which are sustentacular cells of the adenohypophysis. Recent data suggest that, whereas pituicytes and all 3 tumor types are positive for TTF-1, folliculostellate cells are negative for TTF-1. We investigated 7 spindle cell oncocytomas, 4 pituicytomas, and 3 granular cell tumors for their genetic (BRAF mutation and BRAF-KIAA fusion), immunohistochemical (GFAP, vimentin, S100 protein, olig2, IDH1-R132H, NF, galectin-3, chromogranin-A, CD56, EMA, CAM5.2, CD68, TTF-1, and bcl-2), and ultrastructural features to refine their classification. All tumors had nuclear positivity for TTF-1 and were negative for CAM5.2, chromogranin-A, and NF. GFAP, vimentin, S100, galectin-3, EMA, and CD68 were variably positive in the majority of the 3 tumor groups. Olig2 was only positive in 1 pituicytoma. Whereas granular cell tumors were negative for bcl-2 and CD56, pituicytomas and spindle cell oncocytomas showed variable positivity. All tumors were negative with the IDH1-R132H mutation-specific antibody, and none had evidence of BRAF alterations (BRAF mutation and BRAF-KIAA fusion). Diffuse TTF-1 expression in nontumorous pituicytes, pituicytomas, spindle cell oncocytomas, and granular cell tumors indicates a common pituicyte lineage. The ultrastructural variants of pituicytes are reflected in these 3 morphologic variants of tumors arising from these cells. We propose the terminology “oncocyctic pituicytomas” and “granular cell pituicytomas” to refine the classification of these lesions.

[238]

TÍTULO / TITLE: - Surgical management of adult intrinsic brainstem tumors.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:131-8. doi: 10.1227/01.neu.0000430770.33467.be.

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

10.1227/01.neu.0000430770.33467.be

AUTORES / AUTHORS: - Elharmady MS; Teo C

[239]

TÍTULO / TITLE: - Cerebellar location may predict an unfavourable prognosis in paediatric high-grade glioma.

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

REVISTA / JOURNAL: - Br J Cancer. 2013 Jul 18. doi: 10.1038/bjc.2013.404.

●● Enlace al texto completo (gratis o de pago) [1038/bjc.2013.404](http://dx.doi.org/10.1038/bjc.2013.404)

AUTORES / AUTHORS: - Karremann M; Rausche U; Roth D; Kuhn A; Pietsch T; Gielen GH; Warmuth-Metz M; Kortmann RD; Straeter R; Gnekow A; Wolff JE; Kramm CM

INSTITUCIÓN / INSTITUTION: - Department of Paediatric and Adolescent Medicine, Universitätsmedizin Mannheim, Medical Faculty Mannheim, Heidelberg University, Theodor-Kutzer-Ufer 1-3, 68167 Mannheim, Germany.

RESUMEN / SUMMARY: - Background:High-grade glioma (HGG) of the cerebellum accounts for only 5% of paediatric HGG. Since little is known about these tumours, the present study aimed at their further characterisation.Methods:Twenty-nine paediatric patients with centrally reviewed cerebellar HGG were identified from the HIT-GBM/HIT-HGG database. Clinical and epidemiological data were compared with those of 180 paediatric patients with cortical HGG.Results:Patients with cerebellar tumours were younger (median age of 7.6 vs 11.7 years, $P=0.028$), but both groups did not differ significantly with regard to gender, tumour predisposing syndromes, secondary HGG, primary metastasis, tumour grading, extent of tumour resection, chemotherapy regimen, or radiotherapy. Except for an increased incidence of anaplastic pilocytic astrocytoma (APA) in the cerebellar subset (20.7% vs 3.3%; $P<0.001$), histological entities were similarly distributed in both groups. As expected, tumour grading had a prognostic relevance on survival. Compared with cortical HGG, overall survival in the cerebellar location was significantly worse (median overall survival: 0.92+/-0.02 vs 2.03+/-0.32 years; $P=0.0064$), and tumour location in the cerebellum had an independent poor prognostic significance as shown by Cox-regression analysis ($P=0.019$).Conclusion:High-grade glioma represents a group of tumours with an obviously site-specific heterogeneity associated with a worse survival in cerebellar location.British Journal of Cancer advance online publication, 18 July 2013; doi:10.1038/bjc.2013.404 www.bjcancer.com.

[240]

TÍTULO / TITLE: - Osteopontin and splice variant expression level in human malignant glioma: Radiobiologic effects and prognosis after radiotherapy.

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

REVISTA / JOURNAL: - Radiother Oncol. 2013 Jul 25. pii: S0167-8140(13)00315-0. doi: 10.1016/j.radonc.2013.06.036.

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

[1016/j.radonc.2013.06.036](http://dx.doi.org/10.1016/j.radonc.2013.06.036)

AUTORES / AUTHORS: - Guttler A; Giebler M; Cuno P; Wichmann H; Kessler J; Ostheimer C; Soling A; Strauss C; Illert J; Kappler M; Vordermark D; Bache M

INSTITUCIÓN / INSTITUTION: - Department of Radiotherapy, Martin Luther University Halle-Wittenberg, Germany. Electronic address: antje.hahnel@uk-halle.de.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: We investigated the role of the hypoxia-associated secreted glycoprotein osteopontin (OPN) in the response of malignant glioma to radiotherapy by characterizing OPN and its splice variants in vitro and in patient material. MATERIAL AND METHODS: The effect of siRNA knockdown of OPN splice variants on cellular and radiobiologic behavior was analyzed in U251MG cells using OpnS siRNA (inhibition of all OPN splice variants) and OpnAC siRNA (knockdown only of OPNa and OPNc). OPN and splice variant mRNA levels were quantified in archival material of 41 glioblastoma tumor samples. Plasma OPN was prospectively measured in 33 malignant glioma patients. RESULTS: Inhibition of OPNa and OPNc (OpnAC) reduced clonogenic survival in U251MG cells but did not affect proliferation, migration or apoptosis. Knockdown of all OPN splice variants (OpnS) resulted in an even stronger inhibition of clonogenic survival, while cell proliferation and migration were reduced and rate of apoptosis was increased. Additional irradiation had additive effects with both siRNAs. Plasma OPN increased continuously in malignant glioma patients and was associated with poor survival. CONCLUSIONS: OPNb is partially able to compensate the effects of OPNa and OPNc knockdown in U251MG cells. High OPN plasma levels at the end of radiotherapy are associated with poor survival.

[241]

TÍTULO / TITLE: - Circulating microparticles of glial origin and tissue factor bearing in high-grade glioma: a potential prothrombotic role.

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

REVISTA / JOURNAL: - Thromb Haemost. 2013 Jul 29;110(2):378-85. doi: 10.1160/TH12-12-0957. Epub 2013 Jun 27.

●● Enlace al texto completo (gratis o de pago) [1160/TH12-12-0957](#)

AUTORES / AUTHORS: - Sartori MT; Della Puppa A; Ballin A; Campello E; Radu CM; Saggiorato G; d'Avella D; Scienza R; Cella G; Simioni P

INSTITUCIÓN / INSTITUTION: - Maria Teresa Sartori, MD, 2nd Chair of Internal Medicine, Department of Cardiac, Thoracic and Vascular Sciences, via Giustiniani 2, 35128 Padova, Italy, Tel.: +39 049 8212653; Fax: +39 049 8218731, E-mail: mtsart@unipd.it.

RESUMEN / SUMMARY: - Venous thromboembolism (VTE) may complicate the clinical course of glioblastoma multiforme (GBM). Circulating microparticles (MPs) have been associated with cancer-related VTE. Sixty-one consecutive patients with GBM undergoing gross-total (41) or subtotal (20) surgical resection followed by radio-chemotherapy were prospectively evaluated. MPs numbers according to cellular origin and the procoagulant activity of annexin V positive (AV+) MPs (MP-activity) were measured before surgery and then 1

week and 1, 4, and 7 months after surgery. Glial (GFAP+) and endothelial (CD62E+) derived MPs, AV+ and tissue factor-bearing (TF+) MPs were measured using flow cytometry. Baseline levels of GFAP+/TF-, TF+/GFAP-, and GFAP+/TF+ MPs were significantly higher in GBM patients than in healthy controls, and significantly increased at each time point after surgery; at 7 months, a further significant increase over the level found a week after surgery was only seen in the subtotaly resected patients. The number AV+/CD62E- MPs increased in GBM patients and correlated with MP activity. TF+/GFAP- MPs numbers were significantly higher in 11 GBM patients who developed VTE than in those who did not (p 0.04). TF+/GFAP- MPs levels above the 90th percentile (calculated in GBM patients without VTE) were associated with a higher risk of VTE (RR 4.17, 95% CI 1.57-11.03). In conclusion, the numbers of glial-derived and/or TF-bearing MPs were high in GBM patients both before and even more after the neoplasm was treated, especially in patients with subtotal resection likely according to disease progression. A contribution of TF+/GFAP- MPs to the risk of VTE is suggested.

[242]

TÍTULO / TITLE: - Nuclear Expression of Glioma-Associated Oncogene Homolog 1 and Nuclear Factor-kappaB Is Associated with a Poor Prognosis of Pancreatic Cancer.

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

REVISTA / JOURNAL: - Oncology. 2013 Jul 16;85(2):86-94.

●● Enlace al texto completo (gratis o de pago) [1159/000353452](#)

AUTORES / AUTHORS: - Yang SH; Hsu CH; Lee JC; Tien YW; Kuo SH; Cheng AL

INSTITUCIÓN / INSTITUTION: - Department of Oncology, National Taiwan University Hospital and National Taiwan University College of Medicine, Taipei, Taiwan.

RESUMEN / SUMMARY: - Objective: We investigated the association of the hedgehog pathway with nuclear factor (NF)-kappaB and clinical outcomes in pancreatic cancer patients. Methods: We analyzed tissue samples for the expression of NF-kappaB (RelA/p65), sonic hedgehog (Shh) and glioma-associated oncogene homolog 1 (Gli1) by immunohistochemistry and investigated their expression in association with clinical outcomes. Results: Eighty-one patients with pancreatic cancer were investigated. Expression of Shh and nuclear expression of Gli1 and NF-kappaB were found in 63 of 66 (96%), 28 of 68 (41%) and 22 of 68 cases (32%), respectively. Nuclear Gli1 expression was closely associated with nuclear expression of NF-kappaB (p < 0.001). Patients with nuclear Gli1 had significantly worse prognoses than those without (median survival 7.9 vs. 13.9 months; p = 0.009). Similarly, patients with nuclear expression of NF-kappaB had shorter overall survival than those with negative or cytoplasmic expression of NF-kappaB (median survival 5.5 vs. 13.9

months; $p < 0.001$). Shh expression had no prognostic significance. In the multivariate analysis, NF-kappaB nuclear expression was closely associated with unfavorable overall survival ($p = 0.02$). Conclusion: Our results indicate that nuclear expression of Gli1 or NF-kappaB is a strong predictor of poor prognosis in pancreatic cancer. Additional investigation of the biologic significance of this association is warranted. © 2013 S. Karger AG, Basel.

[243]

TÍTULO / TITLE: - Cerebral ischemic injury is enhanced in a model of oculodentodigital dysplasia.

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

REVISTA / JOURNAL: - Neuropharmacology. 2013 May 31. pii: S0028-3908(13)00212-8. doi: 10.1016/j.neuropharm.2013.05.003.

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

1016/j.neuropharm.2013.05.003

AUTORES / AUTHORS: - Kozoriz MG; Lai S; Vega JL; Saez JC; Sin WC; Bechberger JF; Naus CC

INSTITUCIÓN / INSTITUTION: - Department of Cellular and Physiological Sciences, Life Sciences Institute, University of British Columbia, Vancouver, BC, Canada.

RESUMEN / SUMMARY: - Oculodentodigital dysplasia (ODDD) is a rare autosomal dominant disease that results in visible developmental anomalies of the limbs, face, eyes and teeth. Recently analysis of human connexin43 (Cx43) DNA sequences has revealed a number of different missense, duplication and frame shift mutations resulting in this phenotype. A mouse model of this disorder has been created with a missense point mutation of the glycine amino acid at position 60 to serine (G60S). Heterozygote +/G60S mice exhibit a similar ODDD phenotype as observed in humans. In addition to the malformations listed above, ODDD patients often have neurological findings. In the brain, Cx43 is highly expressed in astrocytes and has been shown to play a role in neuroprotection. We were interested in determining the effect of the +/G60S mutation following stroke. Four days after middle cerebral artery occlusion the volume of infarct was larger in mice with the +/G60S mutation. In astrocyte-neuron co-cultures, exposure to glutamate also resulted in greater cellular death in the +/G60S mutants. Protein levels of Cx43 in the mutant mouse were found to be reduced when compared to the normal tissue. Cx43 protein was observed as a continual line of small punctate aggregates in the plasma membrane with increased intracellular localization, which is distinct from the larger plaques seen in the normal mouse astrocytes. Functionally, primary +/G60S astrocytes exhibited reduced gap junctional coupling and increased hemichannel activity, which may underlie the mechanism of increased damage during stroke. This article is part of a Special Issue entitled 'Connexin based channels'.

[244]

TÍTULO / TITLE: - SELDI-TOF analysis of glioblastoma cyst fluid is an approach for assessing cellular protein expression.

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

REVISTA / JOURNAL: - Neurol Res. 2013 Jul 25.

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

[1179/1743132813Y.0000000243](#)

AUTORES / AUTHORS: - Hoelscher M; Richter N; Melle C; Eggeling FV; Schaenzer A; Nestler U

RESUMEN / SUMMARY: - OBJECTIVES: In about 10% of glioblastoma patients, preoperative MRI discloses the presence of tumor cysts. Whereas the impact of cystic appearance on prognosis has been discussed extensively, only little is known about the tumor cyst fluid. In this study, we tested the feasibility of the surface enhanced laser desorption ionization time of flight (SELDI-TOF) technique to detect cyst fluid proteins. METHODS: Cyst fluid was collected from 21 glioblastoma patients for SELDI-TOF analysis and compared to control cerebrospinal fluids from 15 patients with spinal stenosis. Resulting protein peaks with significant differences between groups were further described, using the molecular weight in an internet search of protein databases and publications. Two potential cyst fluid proteins, basigin and ferritin light chain, were selected for immunohistological detection in the histologic slides of the patients, metallothionein (MT) served as negative control. RESULTS: As supposed from the results of the SELDI-TOF analysis, basigin and ferritin were detected immunohistochemically in the cyst wall, whereas MT was more equally distributed between the cyst wall and the surrounding tumor tissue. Median survival time of the patients was 20 months (range 2 to 102 months) and correlated with age, but not with expression of the three proteins. DISCUSSION: The SELDI-TOF approach reveals a number of proteins, potentially present in glioblastoma cyst fluid. Identification of these proteins in tumor cells may help understand the pathogenetic pathways and the prognostic value of cystic changes.

[245]

TÍTULO / TITLE: - Intrathecal injection of P/Q type voltage-gated calcium channel antibodies from paraneoplastic cerebellar degeneration cause ataxia in mice.

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

REVISTA / JOURNAL: - J Neuroimmunol. 2013 Aug 15;261(1-2):53-9. doi: 10.1016/j.jneuroim.2013.05.003. Epub 2013 May 31.

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

[1016/j.jneuroim.2013.05.003](#)

AUTORES / AUTHORS: - Martin-Garcia E; Mannara F; Gutierrez-Cuesta J; Sabater L; Dalmau J; Maldonado R; Graus F

INSTITUCIÓN / INSTITUTION: - Laboratori de Neurofarmacologia, Facultat de Ciències de la Salut i de la Vida, Universitat Pompeu Fabra, Barcelona, Espanya.

RESUMEN / SUMMARY: - The role of antibodies against the P/Q type voltage-gated calcium channels (VGCC-ab) in the pathogenesis of paraneoplastic cerebellar degeneration (PCD) and lung cancer is unclear. We evaluated in mice the effect of intrathecal injection of IgG purified from serum of a patient with both PCD and Lambert-Eaton myasthenic syndrome (LEMS), and from another patient with isolated LEMS. Mice injected with PCD/LEMS IgG developed marked, reversible ataxia compared with those injected with LEMS or control IgG. These findings suggest that P/Q-type VGCC-ab may play a role in the pathogenesis of ataxia in patients with PCD and SCLC.

[246]

TÍTULO / TITLE: - Primary central nervous system lymphoma in the elderly: the Cleveland Clinic experience.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Aug;33(8):3251-8.

AUTORES / AUTHORS: - Xie H; Dahiya S; Murphy ES; Chao ST; Suh JH; Stevens GH; Peereboom DM; Ahluwalia MS

INSTITUCIÓN / INSTITUTION: - Assistant Professor of Medicine, Cleveland Clinic Lerner College of Medicine, Section Head Neuro-Oncology Outcomes, Burkhardt Brain Tumor and Neuro-Oncology Center, Neurological Institute, Cleveland Clinic, 9500 Euclid Avenue, S70, Cleveland, OH 44195, U.S.A.

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RESUMEN / SUMMARY: - BACKGROUND: Primary central nervous system lymphoma (PCNSL) is a type of extranodal non-Hodgkin lymphoma that involves only the central nervous system. Untreated PCNSL in the elderly has a rapidly fatal course. PATIENTS AND METHODS: In this retrospective study, we evaluated the demographics, management, and outcomes of patients over 60 years of age with PCNSL at our institution. RESULTS: A total of 54 patients with a median age of 67 years were included in the analysis. The initial treatment regimens included whole-brain radiation therapy (WBRT), chemotherapy with or without consolidation WBRT. The median progression-free survival (PFS) was 8.0 months (95% confidence interval CI=2.7-22 months) and the median overall survival (OS) was 38 months (95% CI=18-65 months). On multivariable analysis, age younger than 70 years and Karnofsky Performance Status (KPS) no less than 70 were favorable prognostic factors for both OS and PFS. CONCLUSION: Aggressive treatment strategies for elderly patients with PCNSL with good performance status can lead to improved outcomes in this patient population.

[247]

TÍTULO / TITLE: - Retrospective study of pemetrexed as salvage therapy for central nervous system lymphoma.

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

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

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1196-](#)

[1](#)

AUTORES / AUTHORS: - Zhang JP; Lee EQ; Nayak L; Doherty L; Kesari S; Muzikansky A; Norden AD; Chen H; Wen PY; Drappatz J

INSTITUCIÓN / INSTITUTION: - Department of Neuro-Oncology, Beijing Sanbo Brain Hospital, Capital Medical University, Beijing, China.

RESUMEN / SUMMARY: - There is currently no standard therapy for recurrent or chemotherapy-refractory central nervous system lymphoma (CNSL). Pemetrexed has been reported to have activity in patients with primary CNSL (PCNSL). The use of pemetrexed in secondary CNS lymphoma (SCNSL) has not previously been reported. Here we retrospectively review the outcomes and toxicities of standard and modified doses of pemetrexed as salvage therapy in 18 PCNSL and 12 SCNSL patients. The overall response rate for PCNSL patients was 64.7 %, all of whom achieved a complete response (CR). The median progression-free survival (PFS) was 5.8 months. For the SCNSL patients, RR was 58.3 % with 2 CR (16.7 %); the median PFS was 2.5 months. Grade \geq 3 adverse events included leukopenia in 5 patients (16.7 %), neutropenia in 1 patient (3.3 %), and fatigue in 3 patients (10.0 %). 3 patients died while on treatment, 2 due to infections and 1 due to pulmonary embolism. Our results indicate that pemetrexed has activity as salvage therapy in recurrent PCNSL, even with modified dosing, but outcomes trend towards less favorable in SCNSL.

[248]

TÍTULO / TITLE: - Ciliary Body Medulloepithelioma: Analysis of 41 Cases.

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

REVISTA / JOURNAL: - Ophthalmology. 2013 Jun 21. pii: S0161-6420(13)00441-7. doi: 10.1016/j.ophtha.2013.05.015.

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

[1016/j.ophtha.2013.05.015](#)

AUTORES / AUTHORS: - Kaliki S; Shields CL; Eagle RC Jr; Vemuganti GK; Almeida A; Manjandavida FP; Mulay K; Honavar SG; Shields JA

INSTITUCIÓN / INSTITUTION: - Ocular Oncology Service, Wills Eye Hospital, Thomas Jefferson University, Philadelphia, Pennsylvania; The Department of Pathology, Wills Eye Hospital, Thomas Jefferson University, Philadelphia, Pennsylvania; Ocular Oncology Service, Hyderabad, India.

RESUMEN / SUMMARY: - PURPOSE: To describe the clinical features, histopathology, treatment, and outcomes of ciliary body medulloepithelioma.

DESIGN: Retrospective study. PARTICIPANTS: Forty-one patients with medulloepithelioma. INTERVENTION: Cryotherapy, plaque radiotherapy, external beam radiotherapy, tumor removal by partial lamellar sclerouvectomy (PLSU), or enucleation. MAIN OUTCOME MEASURES: Metastasis and death. RESULTS: Of 41 patients with ciliary body medulloepithelioma, the median age at diagnosis was 5 years. The mean tumor basal diameter was 11 mm, and the mean tumor thickness was 7 mm. Related features included secondary glaucoma (n = 18, 44%), iris neovascularization (n = 21, 51%), cataract (n = 19, 46%), lens subluxation (n = 11, 27%), lens coloboma (n = 8, 20%), retrolental neoplastic cyclitic membrane (n = 21, 51%), intratumoral cysts (n = 25, 61%), and extraocular extension (n = 4, 10%). There was systemic association with pleuropulmonary blastoma in 2 cases (5%). Primary tumor treatment included enucleation (n = 21, 60%), tumor removal by PLSU (n = 8, 23%), plaque radiotherapy (n = 3, 9%), external beam radiotherapy (n = 1, 3%), cryotherapy (n = 1, 3%), or palliative chemotherapy (n = 1, 3%). In 1 case, medulloepithelioma was diagnosed histopathologically after inadvertent evisceration for blind painful eye. Subsequent treatment for residual or recurrent tumor in cases treated conservatively/inappropriately (n = 15) was necessary in 7 cases (47%). Histopathology disclosed benign features in 6 cases (20%), malignant features in 24 cases (80%), teratoid features in 11 cases (37%), and nonteratoid features in 19 cases (63%). In the 26 enucleated eyes, other features included retrolental neoplastic cyclitic membrane (n = 18, 69%), neoplastic epiretinal membrane (n = 6, 23%), and persistent hyaloid artery (n = 6, 23%). Systemic metastasis occurred in 3 cases (8%) over a mean follow-up of 49 months, all of whom presented with extrascleral extension of tumor due to mean delay in diagnosis by 39 months. CONCLUSIONS: Medulloepithelioma most commonly occurs in children. Systemic association with pleuropulmonary blastoma rarely is found. Patients with extrascleral medulloepithelioma are at risk for metastasis. FINANCIAL DISCLOSURE(S): The author(s) have no proprietary or commercial interest in any materials discussed in this article.

[249]

TÍTULO / TITLE: - The impact of high-field-strength intraoperative magnetic resonance imaging on brain tumor management.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:92-7. doi: 10.1227/01.neu.0000430321.39870.be.

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

1227/01.neu.0000430321.39870.be

AUTORES / AUTHORS: - Haydon DH; Chicoine MR; Dacey RG Jr

[250]

TÍTULO / TITLE: - Lysyl oxidase genetic variants and the prognosis of glioma.

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

REVISTA / JOURNAL: - APMIS. 2013 Jun 12. doi: 10.1111/apm.12133.

●● [Enlace al texto completo \(gratis o de pago\) 1111/apm.12133](#)

AUTORES / AUTHORS: - Han S; Feng S; Yuan G; Dong T; Gao D; Liang G; Wei X

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, General Hospital of Shenyang Military Area Command of Chinese PLA, Shenyang, Liaoning, China.

RESUMEN / SUMMARY: - Lysyl oxidase (LOX) is a copper-dependent amine oxidase that plays important roles in the development and homeostasis of primary brain tumors such as glioma. The aim of this study was to investigate whether polymorphisms in the LOX gene were associated with susceptibility to glioma. We tested two functional polymorphisms of LOX, -22G/C and 473G/A, and compared them between 466 glioma cases and 502 healthy controls in the Chinese population. Results showed that the prevalence of 473AA genotype was significantly increased in cases than in controls ($p = 0.001$). Individuals who carried 473^a allele had a 1.44-fold of increased risk for glioma than those with 473G allele ($p = 0.002$). In addition, when analyzing the survival time of glioma patients with LOX 473G/A polymorphism, cases with AA genotype had significantly shorter survival time compared to the patients carrying G allele (25.0 months vs 43.0 months, $p = 0.0009$). These results suggested that polymorphism in LOX gene was associated with increased susceptibility to glioma and could be used as prognostic factor for this malignancy.

[251]

TÍTULO / TITLE: - Intrathecal liposomal cytarabine and leptomeningeal medulloblastoma relapse: a valuable therapeutic option.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Aug;33(8):3515-8.

AUTORES / AUTHORS: - Mastronuzzi A; Del Bufalo F; Iacono A; Secco DE; Serra A; Colafati GS; DE Ioris MA; Corsetti T

INSTITUCIÓN / INSTITUTION: - Division of Hematology/Oncology and Stem Cell Transplantation, Bambino Gesù Children's Hospital, IRCCS, Piazza Sant'Onofrio, 4-00165, Rome, Italy. angela.mastronuzzi@opbg.net.

RESUMEN / SUMMARY: - **BACKGROUND:** Relapsed medulloblastoma (MB) is a highly lethal disease, requiring for new effective treatment strategies. Intrathecal (IT) therapy both for de novo or relapsed brain tumors with meningeal metastasis is rarely used in first line and relapse protocols. **PATIENTS AND METHODS:** We report on three cases of children with relapsed MB treated with IT liposomal cytarabine administered after mild sedation every 15 days. **RESULTS:** The treatment was well-tolerated in all patients, achieving a prolonged progression-free survival (4-11 months) with a good quality of life. **CONCLUSION:** This experience suggests the need for a phase II trial in brain

embryonal tumors with leptomeningeal metastasis to better evaluate the efficacy of IT liposomal cytarabine.

[252]

TÍTULO / TITLE: - Isocitrate dehydrogenase 1 mutant R132H sensitizes glioma cells to BCNU-induced oxidative stress and cell death.

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

REVISTA / JOURNAL: - Apoptosis. 2013 Jun 26.

- Enlace al texto completo (gratis o de pago) [1007/s10495-013-0877-](#)

[8](#)

AUTORES / AUTHORS: - Mohrenz IV; Antonietti P; Pusch S; Capper D; Balss J; Voigt S; Weissert S; Mukrowsky A; Frank J; Senft C; Seifert V; von Deimling A; Kogel D

INSTITUCIÓN / INSTITUTION: - Experimental Neurosurgery, Neuroscience Center, Goethe University Hospital, Theodor-Stern-Kai 7, 60590, Frankfurt, Germany.

RESUMEN / SUMMARY: - Isocitrate dehydrogenase 1 (IDH1) decarboxylates isocitrate to alpha-ketoglutarate (alpha-KG) leading to generation of NADPH, which is required to regenerate reduced glutathione (GSH), the major cellular ROS scavenger. Mutation of R132 of IDH1 abrogates generation of alpha-KG and leads to conversion of alpha-KG to 2-hydroxyglutarate. We hypothesized that glioma cells expressing mutant IDH1 have a diminished antioxidative capacity and therefore may encounter an ensuing loss of cytoprotection under conditions of oxidative stress. Our study was performed with LN229 cells stably overexpressing IDH1 R132H and wild type IDH1 or with a lentiviral IDH1 knockdown. Quantification of GSH under basal conditions and following treatment with the glutathione reductase inhibitor BCNU revealed significantly lower GSH levels in IDH1 R132H expressing cells and IDH1 KD cells compared to their respective controls. FACS analysis of cell death and ROS production also demonstrated an increased sensitivity of IDH1-R132H-expressing cells and IDH1 KD cells to BCNU, but not to temozolomide. The sensitivity of IDH1-R132H-expressing cells and IDH1 KD cells to ROS induction and cell death was further enhanced with the transaminase inhibitor aminooxyacetic acid and under glutamine free conditions, indicating that these cells were more addicted to glutaminolysis. Increased sensitivity to BCNU-induced ROS production and cell death was confirmed in HEK293 cells inducibly expressing the IDH1 mutants R132H, R132C and R132L. Based on these findings we propose that in addition to its established pro-tumorigenic effects, mutant IDH1 may also limit the resistance of gliomas to specific death stimuli, therefore opening new perspectives for therapy.

[253]

TÍTULO / TITLE: - The glioma-associated oncogene homolog 1 promotes epithelial-mesenchymal transition in human esophageal squamous cell cancer by inhibiting E-cadherin via Snail.

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

REVISTA / JOURNAL: - Cancer Gene Ther. 2013 Jul;20(7):379-85. doi: 10.1038/cgt.2013.36. Epub 2013 Jun 21.

●● Enlace al texto completo (gratis o de pago) [1038/cgt.2013.36](#)

AUTORES / AUTHORS: - Min S; Xiaoyan X; Fanghui P; Yamei W; Xiaoli Y; Feng W

INSTITUCIÓN / INSTITUTION: - Department of Oncology, the First Affiliated Hospital of Zhengzhou University, Zhengzhou, China.

RESUMEN / SUMMARY: - The glioma-associated oncogene homolog 1 (GLI1) family of zinc finger transcription factors is the nuclear mediator of the Hedgehog pathway that regulates genes essential for various stages of tumor development and progression. However, the role and mechanism by which high expression of GLI1 contributes to the invasion and metastasis of human esophageal squamous cell cancer (ESCC) has not been fully elucidated. In the present study, we demonstrated that GLI1 was over-expressed in human ESCC tissues, especially in ESCC tissues with deep invasion and lymph-node metastasis. Moreover, GLI1 was also over-expressed in ESCC cell lines and correlated with the aggressiveness of ESCC cell lines. In addition, GLI signaling pathway agonist purmorphamine could increase the invasion and metastasis ability of ESCC cells in vitro. There is increasing evidence for the contribution of epithelial-mesenchymal transition (EMT) to ESCC invasion and metastasis, therefore we investigated GLI1's role in EMT. Our results showed that high expression of GLI1 dampened expression of E-cadherin and enhanced the expression of Vimentin, and it also improved the expression of Snail, indicative of its role in EMT occurrence. Mechanistic studies showed that down-expression of Snail reversed GLI1 activation-regulated expression of EMT markers, suggesting the role of Snail in GLI1-mediated EMT. Taken together, our results had revealed that GLI1 could participate in the invasion and metastasis of ESCC through EMT. These studies indicated that in ESCC, GLI1 could be a useful target for cancer prevention and therapy.

[254]

TÍTULO / TITLE: - Incidence of Pineal Gland Cyst and Pineoblastoma in Children With Retinoblastoma During the Chemoreduction Era.

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

REVISTA / JOURNAL: - Am J Ophthalmol. 2013 Jul 20. pii: S0002-9394(13)00360-7. doi: 10.1016/j.ajo.2013.05.023.

●● Enlace al texto completo (gratis o de pago) [1016/j.ajo.2013.05.023](#)

AUTORES / AUTHORS: - Ramasubramanian A; Kytasty C; Meadows AT; Shields JA; Leahey A; Shields CL

INSTITUCIÓN / INSTITUTION: - Ocular Oncology Service, Wills Eye Institute, Thomas Jefferson University, Philadelphia, Pennsylvania.

RESUMEN / SUMMARY: - **PURPOSE:** To report on the frequency of cysts and tumors of the pineal gland in patients with retinoblastoma. **DESIGN:** Observational retrospective case control study. **METHODS:** setting: Institutional. study population: Four hundred eight patients treated for retinoblastoma from January 2000 to January 2012 at Wills Eye Institute, Philadelphia, Pennsylvania, USA. observation procedure: Magnetic resonance imaging (MRI) features of the pineal gland were evaluated in all patients with retinoblastoma. Characteristics of patients with pineal cysts and pineoblastoma were reviewed. main outcome measures: Comparison of frequency of pineal gland cyst and pineoblastoma in children managed with systemic chemoreduction vs other methods. **RESULTS:** Of 408 patients, treatment included systemic chemoreduction in 252 (62%) and nonchemoreduction methods in 156 (38%). Overall, 34 patients (8%) manifested pineal gland cyst and 4 (1%) showed pineoblastoma. Of all 408 patients, comparison (chemoreduction vs nonchemoreduction) revealed pineal cyst (20/252 vs 14/156, $P = .7$) and pineoblastoma (1/252 vs 3/156, $P = .1$). The pineal cyst ($n = 34$) (mean diameter 4 mm) was asymptomatic ($n = 34$), followed conservatively ($n = 34$), and with minimal enlargement ($n = 2$, 9%) but without progression to pineoblastoma. The cyst was found in 22 germline and 12 nongermline patients ($P = .15$). Among the 4 patients with pineoblastoma, all had germline mutation and 2 had family history of retinoblastoma. Among all patients with family history of retinoblastoma ($n = 45$), 2 (4%) developed pineoblastoma. The pineoblastoma was asymptomatic in 2 patients and symptomatic with vomiting and headache in 2 patients. The mean interval from date of retinoblastoma detection to pineal cyst was 2 months (median 2, range 0-8 months) and to pineoblastoma was 27 months (median 28, range 7-46 months). Management included aggressive chemotherapy and radiotherapy, with 2 survivors. **CONCLUSIONS:** Pineal gland cyst was incidentally detected in 8% of retinoblastoma patients, causing no symptoms, and without progression to pineoblastoma. Pineoblastoma was detected in 1% of patients and fewer patients who received systemic chemotherapy developed pineoblastoma, possibly indicating a systemic protective effect.

[255]

TÍTULO / TITLE: - Lennox-Gastaut Syndrome Symptomatic to Hypothalamic Hamartoma: Evolution and Long-term Outcome Following Surgery.

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

REVISTA / JOURNAL: - *Pediatr Neurol.* 2013 Jul;49(1):25-30. doi: 10.1016/j.pediatrneurol.2013.03.016.

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

1016/j.pediatrneurol.2013.03.016

AUTORES / AUTHORS: - Pati S; Deep A; Troester MM; Kossoff EH; Ng YT
INSTITUCIÓN / INSTITUTION: - Department of Neurology, Barrow Neurological Institute, Phoenix, Arizona.

RESUMEN / SUMMARY: - BACKGROUND: Lennox-Gastaut syndrome is a catastrophic childhood cryptogenic or symptomatic epilepsy. Hypothalamic hamartomas cause refractory epilepsy often consistent with Lennox-Gastaut syndrome. METHODS: Children with Lennox-Gastaut syndrome were defined by a triad of multiple generalized seizure types, slow spike-and-wave on EEG, and mental retardation. RESULTS: Twenty-one of 159 hypothalamic hamartoma patients (14%) met the diagnostic criteria of Lennox-Gastaut syndrome. The median age of patients at epilepsy onset was 0.9 years (range, birth to 9 years). Six of the 21 patients (28%) had preceding infantile spasms. All patients underwent different surgical approaches, including endoscopic, transcallosal, orbitozygomatic resections, and radiosurgery treatment. Five of the 21 (24%) were seizure free with an additional 9 (42%) having at least >90% seizure reduction. Only 1 patient was not effectively treated (<50% seizure reduction). Eighty-eight percent of parents reported improvement in behavioral functioning. Shorter duration of epilepsy prior to surgery was a significant predictor of surgical outcome. CONCLUSIONS: Patients with Lennox-Gastaut syndrome symptomatic to hypothalamic hamartomas have better postsurgical outcome due to other etiologies compared with cryptogenic and symptomatic Lennox-Gastaut syndrome patients. However, compared with overall hypothalamic hamartomas postsurgical outcomes, this cohort was less favorable. Earlier surgery may lead to better outcomes.

[256]

TÍTULO / TITLE: - Neogenin1 is a sonic hedgehog target in medulloblastoma and is necessary for cell cycle progression.

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

REVISTA / JOURNAL: - Int J Cancer. 2013 Jun 18. doi: 10.1002/ijc.28330.

●● [Enlace al texto completo \(gratis o de pago\) 1002/ijc.28330](#)

AUTORES / AUTHORS: - Milla LA; Arros A; Espinoza N; Remke M; Kool M; Taylor MD; Pfister SM; Wainwright BJ; Palma V

INSTITUCIÓN / INSTITUTION: - Department of Biology, Faculty of Sciences, University of Chile, Santiago, Chile; FONDAF Center for Genome Regulation, Santiago, Chile.

RESUMEN / SUMMARY: - The canonical Sonic Hedgehog (Shh)/Gli pathway plays multiples roles during central nervous system (CNS) development. To elucidate the molecular repertoire of Shh mediators, we have recently described novel transcriptional targets in response to Shh pathway modulation. Among them, we were able to identify Neogenin1 (Neo1), a death dependence receptor, as a new direct Shh downstream regulator in neural precursor proliferation. As appropriate Shh signaling is required for cerebellar growth and alterations

cause Shh-driven medulloblastoma (MB), here we have addressed the role of the Shh/Neogenin1 interaction in the context of cerebellar development and cancer. We demonstrate that the Shh pathway regulates Neogenin1 expression in mouse models that recapitulate the Shh MB subtype. We show that the canonical Shh pathway directly regulates the Neo1 gene acting through an upstream sequence in its promoter both in vitro and in vivo in granule neuron precursor cells. We also identified and characterized a functional Gli-binding site in the first intron of the human NEO1 gene. Gene expression profiling of more than 300 MB shows that NEO1 is indeed upregulated in SHH tumors compared to the other MB subgroups. Finally, we provide evidence that NEO1 is necessary for cell cycle progression in a human MB cell line, because a loss of function of NEO1 arrests cells in the G2/M phase. Taken together, these results highlight Neogenin1 as a novel downstream effector of the Shh pathway in MB and a possible therapeutic target.

[257]

TÍTULO / TITLE: - A pain model with a neuropathic somatosensory lesion: Morton neuroma.

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

REVISTA / JOURNAL: - Pain. 2013 Jul 23. pii: S0304-3959(13)00398-9. doi: 10.1016/j.pain.2013.07.030.

●● Enlace al texto completo (gratis o de pago) 1016/j.pain.2013.07.030

AUTORES / AUTHORS: - Quiding H; Akemark C; Segerdahl M; Reinholdsson I; Svensson H; Jonzon B

INSTITUCIÓN / INSTITUTION: - AstraZeneca R&D, Sodertalje, Sweden. Electronic address: hans.quiding@ymail.com.

RESUMEN / SUMMARY: - A randomized, double-blind, three-period cross-over study was performed to characterize the sensory phenotype and pain demographics in patients with Morton neuroma (n=27) and to explore the effects of local administration (2mL) of placebo and lidocaine (1 and 10mg/mL) around the neuroma. Using the pain quality assessment scale (PQAS), the highest rating was seen for unpleasant pain and intensity of deep pain and the lowest for sensitive skin. Ongoing pain was reported in 32% of patients. Patients reported mild to moderate average pain, and that pain had interfered with sleep only marginally. Quantitative sensory testing (QST) measurements in the innervation territory showed hypophenomena or hyperphenomena in all patients, indicating those with neuropathy. There was no particular QST modality that appeared to be specifically affected. Even the high-dose lidocaine resulted in limited effects on nerve-impulse conduction as judged by the effect on QST variables. However, both doses of lidocaine significantly reduced pain after step-ups, compared to placebo, indicating that lidocaine in this setting affected predominantly impulse generation and not impulse conduction. Following placebo treatment, pain after step-ups was similar in patients with

and without hyperalgesia, indicating that the presence of hyperalgesia does not affect the pain intensity evoked by step-ups or walking. This pain model in patients with Morton neuroma allows investigation of drugs in a cross-over design and provides an opportunity to explore drug effects on both pain and QST variables. Commonly, neuromas are surgically removed and can be characterized in depth in vitro, thereby allowing close links to be established between pathophysiology and drug effect.

[258]

TÍTULO / TITLE: - Autologous haematopoietic cell transplantation for non-Hodgkin lymphoma with secondary CNS involvement.

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

REVISTA / JOURNAL: - Br J Haematol. 2013 Jul 6. doi: 10.1111/bjh.12451.

●● Enlace al texto completo (gratis o de pago) 1111/bjh.12451

AUTORES / AUTHORS: - Maziarz RT; Wang Z; Zhang MJ; Bolwell BJ; Chen AI; Fenske TS; Freytes CO; Gale RP; Gibson J; Hayes-Lattin BM; Holmberg L; Inwards DJ; Isola LM; Khoury HJ; Lewis VA; Maharaj D; Munker R; Phillips GL; Rizzieri DA; Rowlings PA; Saber W; Satwani P; Waller EK; Maloney DG; Montoto S; Laport GG; Vose JM; Lazarus HM; Hari PN

INSTITUCIÓN / INSTITUTION: - Oregon Health & Science University, Portland, OR, USA.

RESUMEN / SUMMARY: - Pre-existing central nervous system (CNS) involvement may influence referral for autologous haematopoietic cell transplantation (AHCT) for patients with non-Hodgkin lymphoma (NHL). The outcomes of 151 adult patients with NHL with prior secondary CNS involvement (CNS+) receiving an AHCT were compared to 4688 patients without prior CNS lymphoma (CNS-). There were significant baseline differences between the cohorts. CNS+ patients were more likely to be younger, have lower performance scores, higher age-adjusted international prognostic index scores, more advanced disease stage at diagnosis, more aggressive histology, more sites of extranodal disease, and a shorter interval between diagnosis and AHCT. However, no statistically significant differences were identified between the two groups by analysis of progression-free survival (PFS) and overall survival (OS) at 5 years. A matched pair comparison of the CNS+ group with a subset of CNS- patients matched on propensity score also showed no differences in outcomes. Patients with active CNS lymphoma at the time of AHCT (n = 55) had a higher relapse rate and diminished PFS and OS compared with patients whose CNS lymphoma was in remission (n = 96) at the time of AHCT. CNS+ patients can achieve excellent long-term outcomes with AHCT. Active CNS lymphoma at transplant confers a worse prognosis.

[259]

TÍTULO / TITLE: - 149 Continuous dynamic mapping of the corticospinal tract during surgery of motor eloquent brain tumors: a prospective study.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:169. doi: 10.1227/01.neu.0000432740.79451.f9.

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

[1227/01.neu.0000432740.79451.f9](#)

AUTORES / AUTHORS: - Raabe A; Beck J; Schucht P; Seidel K

RESUMEN / SUMMARY: - INTRODUCTION: Object: To overcome the temporal and spatial limitations of classical subcortical mapping of the corticospinal tract. We evaluated the feasibility and safety of continuous and dynamic subcortical motor mapping especially at low motor thresholds. METHODS: We prospectively studied 69 patients who underwent tumor surgery adjacent to the CST with simultaneous subcortical monopolar motor mapping. Continuous (temporal coverage) and dynamic (spatial coverage) mapping was technically realized by integrating the mapping probe at the tip of a new suction device with the concept that this device will be in contact with the tissue where the resection is performed. Motor function was assessed 1 day after surgery, at discharge, and at 3 months. RESULTS: The initial evaluation in 24 patients showed a 1:1 correlation of MTs for stimulation sites simultaneously mapped with the new suction mapping device and the classic fingerstick probe (74 stimulation points, $r = 0.996$, $P < .001$). Thereafter, the fingerstick probe was no longer used and mapping was performed only using the continuous dynamic technique. All procedures were technically successful. Lowest individual motor thresholds (MTs) were as follows (MT, number of patients): >20 mA, $n = 7$; 11-20 mA, $n = 13$; 6-10 mA, $n = 8$; 4-5 mA, $n = 17$; 1-3 mA, $n = 24$. At 3 months, 2 patients had a persisting postoperative motor deficit (3%), both were caused by a vascular injury. There was no permanent motor deficit caused by a mechanical injury of the CST. CONCLUSION: Continuous dynamic mapping was found to be a feasible and ergonomic technique of localizing the exact site and distance to the CST. The acoustic feedback and the ability to continuously stimulate the tissue exactly at the site of tissue removal improves the accuracy of mapping especially at low (<5 mA) stimulation intensities. This new technique may increase the safety of motor eloquent tumor surgery.

[260]

TÍTULO / TITLE: - Reduced Cerebral Arterial Spin-Labeled Perfusion in Children with Neurofibromatosis Type 1.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 Jun 13.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3649](#)

AUTORES / AUTHORS: - Yeom KW; Lober RM; Barnes PD; Campen CJ

INSTITUCIÓN / INSTITUTION: - Departments of Radiology, Neurosurgery, and Neurology, Lucile Packard Children's Hospital, Stanford University, Palo Alto, California.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Neurofibromatosis type 1 is associated with increased risk for stroke, cerebral vasculopathy, and neurocognitive deficits, but underlying hemodynamic changes in asymptomatic children remain poorly understood. We hypothesized that children with neurofibromatosis type 1 have decreased cerebral blood flow. MATERIALS AND METHODS: Arterial spin-labeled CBF was measured in 14 children with neurofibromatosis type 1 (median age, 9.7 years; mean, 10.2 years; range, 22 months to 18 years) and compared with age-matched control subjects on 3T MR imaging. Three-dimensional pseudocontinuous spin-echo arterial spin-labeled technique was used. Measurements were obtained at cortical gray matter of bilateral cerebral hemispheres and centrum semiovale by use of the ROI method. Comparison by Mann-Whitney test was used, with Bonferroni-adjusted P values $\leq .004$ judged as significant. RESULTS: We identified 7 of 12 areas with significantly diminished arterial spin-labeled CBF in patients with neurofibromatosis type 1 compared with control subjects. These areas included the anterior cingulate gyrus (P = .001), medial frontal cortex (P = .004), centrum semiovale (P = .004), temporo-occipital cortex (P = .002), thalamus (P = .001), posterior cingulate gyrus (P = .002), and occipital cortex (P = .001). Among patients with neurofibromatosis type 1, there were no significant differences in these regions on the basis of the presence of neurofibromatosis type 1 spots or neurocognitive deficits. CONCLUSIONS: Reduced cerebral perfusion was seen in children with neurofibromatosis type 1, particularly in the posterior circulation and the vascular borderzones of the middle and posterior cerebral arteries.

[261]

TÍTULO / TITLE: - Anti-miRNA-23^a Oligonucleotide Suppresses Glioma Cells Growth by Targeting Apoptotic Protease Activating Factor-1.

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

REVISTA / JOURNAL: - Curr Pharm Des. 2013 Jul 16.

AUTORES / AUTHORS: - Lian S; Shi R; Bai T; Liu Y; Miao W; Wang H; Liu X; Fan Y

INSTITUCIÓN / INSTITUTION: - Department of Surgery, The First Hospital of Shanxi Medical University, Taiyuan 030001, PR China.

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RESUMEN / SUMMARY: - Background: Abnormal expression of microRNAs (miRNAs) is closely related to glioma, which is one of the most common malignant brain tumors. The current study is to identify the key miRNAs involved in the pathogenesis of glioma and to discover novel therapeutic targets for this disease. Materials and Methods: Total RNA was extracted from glioma tissues of 100 patients. The microRNA microarray and the northern blot were

used to detect the changes of miRNAs expression in 7 pairs of glioma specimens. Relative expressions of miR-23^a were validated by real-time reverse transcription polymerase chain reaction (RT-PCR) with specific Taqman probes. In order to evaluate the role of miR-23^a, the miR-23^a mimics and anti-miR-23^a oligonucleotides were transfected to glioma cell lines; the cell proliferation, apoptosis, cell cycle percentage, cell migration and invasion abilities were evaluated in vitro. The target genes of miR-23^a were also investigated using the bioinformatics tools. The expression of the apoptotic protease activating factor-1 (APAF1), which might be one of the direct targets of miR-23^a, was also analyzed using the luciferase reporter assay and western blot analysis in 293T cells and glioma cell line, respectively. Results: The microRNA microarray and the northern blot results showed that the expressions of miR-23^a in glioma tissues were significantly upregulated. The miR-23^a expression levels identified using real time RT-PCR in tumor tissues of 79 samples were higher than in the matched adjacent tissues. By transfection of anti-miR-23^a oligonucleotide, the results showed that the proliferation, migration, and invasion of glioma cell lines were significantly suppressed. The bioinformatics searching results showed that APAF1 might be a direct target gene of miR-23^a, and it was supported by the luciferase reporter gene assay and western blot analysis results. Finally, experiments showed that overexpression of APAF1 suppressed glioma cell growth and promoted cell apoptosis. Conclusions: Our findings characterized the expression properties of miR-23^a, contributed to the function and molecular mechanism of miR-23^a in glioma and implied that miR-23^a might be employed as novel prognostic markers and therapeutic targets of glioma.

[262]

TÍTULO / TITLE: - Update on the diagnosis, pathogenesis, and treatment strategies for central neurocytoma.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jun 26. pii: S0967-5868(13)00047-7. doi: 10.1016/j.jocn.2013.01.001.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2013.01.001

AUTORES / AUTHORS: - Patel DM; Schmidt RF; Liu JK

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, New Jersey Medical School, University of Medicine and Dentistry of New Jersey, 90 Bergen St, Suite 8100, Newark, NJ 07103, USA.

RESUMEN / SUMMARY: - Central neurocytomas are rare benign tumors of the central nervous system that are typically located in the lateral ventricles. Since they were first reported in the early 1980s, many advancements have been made in terms of their diagnosis and treatment. Despite the progress made, the origin of these rare tumors and effective newer treatment strategies remain elusive. Central neurocytomas represent 0.1-0.5% of all primary brain tumors.

Since they are typically intraventricular, these tumors tend to present clinically with hydrocephalus. CT scanning and MRI are useful in localizing these tumors; however, due to their numerous ambiguous features, the ultimate diagnosis relies on immunohistochemistry and electron microscopy studies of sampled tissue. Currently, surgical removal with a gross-total resection of these tumors is the treatment of choice. Various radiotherapy techniques, including both conventional radiotherapy and stereotactic radiosurgery, have been shown to be useful in cases of residual tumor after sub-total resection and tumor recurrence. The benign nature of these tumors tends to offer a favorable outcome for most patients; however, recurrence rates are relatively high and tumors with high-grade features or extraventricular location tend to have a less favorable prognosis. We present a comprehensive review of these rare tumors, including their epidemiology, clinical presentation, radiological presentation, histopathological findings, and options for intervention including surgery, radiation therapy, stereotactic radiosurgery, and chemotherapy.

[263]

TÍTULO / TITLE: - Incidental pineal cysts in children who undergo 3-T MRI.

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

REVISTA / JOURNAL: - *Pediatr Radiol.* 2013 Jul 14.

●● [Enlace al texto completo \(gratis o de pago\)](#) [1007/s00247-013-2742-](#)

[X](#)

AUTORES / AUTHORS: - Whitehead MT; Oh CC; Choudhri AF

INSTITUCIÓN / INSTITUTION: - Department of Radiology, University of Tennessee Health Science Center, Memphis, TN, USA,
matthewthomaswhitehead@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND: Pineal cysts, both simple and complex, are commonly encountered in children. More cysts are being detected with MR technology; however, nearly all pineal cysts are benign and require no follow-up. OBJECTIVE: To discover the prevalence of pineal cysts in children at our institution who have undergone high-resolution 3-T MRI. MATERIALS AND METHODS: We retrospectively reviewed 100 consecutive 3-T brain MRIs in children ages 1 month to 17 years (mean 6.8 +/- 5.1 years). We evaluated 3-D volumetric T1-W imaging, axial T2-W imaging, axial T2-W FLAIR (fluid attenuated inversion recovery) and coronal STIR (short tau inversion recovery) sequences. Pineal parenchymal and cyst volumes were measured in three planes. Cysts were analyzed for the presence and degree of complexity. RESULTS: Pineal cysts were present in 57% of children, with a mean maximum linear dimension of 4.2 mm (range 1.5-16 mm). Of these cysts, 24.6% showed thin septations or fluid levels reflecting complexity. None of the cysts demonstrated complete T2/FLAIR signal suppression. No cyst wall thickening or nodularity was present. There was no significant difference between the ages of children with and without cysts. Cysts were more commonly encountered in

girls than boys (67% vs. 52%; $P = 0.043$). There was a slight trend toward increasing pineal gland volume with age. CONCLUSION: Pineal cysts are often present in children and can be incidentally detected by 3-T MRI. Characteristic-appearing pineal cysts in children are benign, incidental findings, for which follow-up is not required if there are no referable symptoms or excessive size.

[264]

- CASTELLANO -

TÍTULO / TITLE: Estudio observacional retrospectivo sobre la efectividad del ácido 5-aminolevulinico en la cirugía de los gliomas malignos en España (Estudio VISIONA).

TÍTULO / TITLE: - Observational, retrospective study of the effectiveness of 5-aminolevulinic acid in malignant glioma surgery in España (The VISIONA study).

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

REVISTA / JOURNAL: - Neurologia. 2013 Jul 16. pii: S0213-4853(13)00123-0. doi: 10.1016/j.nrl.2013.05.004.

●● [Enlace al texto completo \(gratis o de pago\) 1016/j.nrl.2013.05.004](#)

AUTORES / AUTHORS: - Diez Valle R; Slob J; Galvan J; Arza C; Romariz C; Vidal C

INSTITUCIÓN / INSTITUTION: - Departamento de Neurocirugía, Clínica Universidad de Navarra, Pamplona, España. Electronic address: rdiezvalle@unav.es.

RESUMEN / SUMMARY: - OBJECTIVE: To assess effectiveness of 5-aminolevulinic acid (5-ALA, Gliolan®) in patients treated for malignant glioma under typical daily practice conditions in España, using complete resection rate (CR) and progression free survival at 6 months (PFS6). MATERIAL AND METHODS: Retrospective review of data from 18 neurosurgery departments that were categorised as either using or not using 5-ALA. The study included adult patients with suspected malignant gliomas for whom the intended treatment plan included complete resection followed by radiotherapy and chemotherapy with temozolomide. Postoperative MRI and clinical data representing at least 6 months were required for inclusion. Rates of CR and PFS6 were compared between patients with 5-ALA treatment and those without. RESULTS: The study included 251 evaluable cases. CR and PFS6 rates were significantly higher in the group of patients treated surgically with 5-ALA: CR, 67% versus 45%, $p=.000$; PFS6 for patients with grade IV tumours, 69% versus 48%; $p=.002$. The differences retained their significance and magnitude after adjusting for all covariates including age, functional status, and whether gliomas were located in eloquent areas. CONCLUSIONS: In this retrospective series, use of 5-ALA during habitual surgical procedures in

España was associated with a higher complete resection rate for malignant glioma and increased PFS6 for grade iv glioma.

[265]

TÍTULO / TITLE: - Single-fraction radiosurgery of benign cavernous sinus meningiomas.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Jun 28.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.5.JNS13206](#)

AUTORES / AUTHORS: - Pollock BE; Stafford SL; Link MJ; Garces YI; Foote RL

INSTITUCIÓN / INSTITUTION: - Departments of Neurological Surgery and.

RESUMEN / SUMMARY: - Object Stereotactic radiosurgery (SRS) is an important treatment option for patients with cavernous sinus meningiomas (CSM). To analyze factors associated with local tumor control and complications after single-fraction SRS, the authors reviewed cases involving patients treated with Gamma Knife SRS between 1990 and 2008. Methods Excluded were patients with WHO Grade II or III tumors, radiation-induced tumors, multiple meningiomas, neurofibromatosis Type 2, and prior or concurrent radiotherapy. Five patients were lost to follow-up and 3 patients refused research authorization. The remaining 115 patients (29 men, 86 women) had either histologically confirmed WHO Grade I (n = 46, 40%) or presumed (n = 69, 60%) CSM. The median treatment volume was 9.3 cm³ (range 1.3-42.2 cm³). The median margin dose was 16 Gy (range 12-20 Gy). The median follow-up after SRS was 89 months (range 12-251 months). Thirty-nine patients (34%) had 10 or more years of follow-up after SRS. Results Six patients (5%) had tumor progression (in field, n = 3; marginal, n = 3) at a median of 74 months (range 42-145 months) after SRS. The local tumor control rate was 99% at 5 years and 93% at 10 years after SRS. No analyzed factor was associated with local control after SRS. Fourteen patients (12%) had permanent complications at a median onset of 23 months (range 2-146 months) including trigeminal dysfunction (n = 9), diplopia (n = 2), ischemic stroke (n = 2), and hypopituitarism (n = 1). The 2-year, 5-year, and 10-year rates of complications were 7%, 10%, and 15%, respectively. Multivariate analysis found larger treatment volume (HR 1.1, 95% CI 1.02-1.2, p = 0.01) to be associated with complications after SRS. The complication rate for patients with a treatment volume of 9.3 cm³ or less was 3% (2 of 58 cases) compared with 21% (12 of 57 cases) for patients with a treatment volume greater than 9.4 cm³. Conclusions Single-fraction SRS at the radiation doses used in this series provided durable tumor control for patients with benign CSM. Larger tumor volume remains the primary factor associated with complications after single-fraction SRS of benign CSM despite advancements in SRS technique.

[266]

TÍTULO / TITLE: - Pooled analysis of case-control studies on acoustic neuroma diagnosed 1997-2003 and 2007-2009 and use of mobile and cordless phones.

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

REVISTA / JOURNAL: - Int J Oncol. 2013 Jul 22. doi: 10.3892/ijo.2013.2025.

●● Enlace al texto completo (gratis o de pago) [3892/ijo.2013.2025](#)

AUTORES / AUTHORS: - Hardell L; Carlberg M; Soderqvist F; Mild KH

INSTITUCIÓN / INSTITUTION: - Department of Oncology, University Hospital, SE-701 85 Orebro, Sweden.

RESUMEN / SUMMARY: - We previously conducted a case-control study of acoustic neuroma. Subjects of both genders aged 20-80 years, diagnosed during 1997-2003 in parts of Sweden, were included, and the results were published. We have since made a further study for the time period 2007-2009 including both men and women aged 18-75 years selected from throughout the country. These new results for acoustic neuroma have not been published to date. Similar methods were used for both study periods. In each, one population-based control, matched on gender and age (within five years), was identified from the Swedish Population Registry. Exposures were assessed by a self-administered questionnaire supplemented by a phone interview. Since the number of acoustic neuroma cases in the new study was low we now present pooled results from both study periods based on 316 participating cases and 3,530 controls. Unconditional logistic regression analysis was performed, adjusting for age, gender, year of diagnosis and socio-economic index (SEI). Use of mobile phones of the analogue type gave odds ratio (OR) = 2.9, 95% confidence interval (CI) = 2.0-4.3, increasing with >20 years latency (time since first exposure) to OR = 7.7, 95% CI = 2.8-21. Digital 2G mobile phone use gave OR = 1.5, 95% CI = 1.1-2.1, increasing with latency >15 years to an OR = 1.8, 95% CI = 0.8-4.2. The results for cordless phone use were OR = 1.5, 95% CI = 1.1-2.1, and, for latency of >20 years, OR = 6.5, 95% CI = 1.7-26. Digital type wireless phones (2G and 3G mobile phones and cordless phones) gave OR = 1.5, 95% CI = 1.1-2.0 increasing to OR = 8.1, 95% CI = 2.0-32 with latency >20 years. For total wireless phone use, the highest risk was calculated for the longest latency time >20 years: OR = 4.4, 95% CI = 2.2-9.0. Several of the calculations in the long latency category were based on low numbers of exposed cases. Ipsilateral use resulted in a higher risk than contralateral for both mobile and cordless phones. OR increased per 100 h cumulative use and per year of latency for mobile phones and cordless phones, though the increase was not statistically significant for cordless phones. The percentage tumour volume increased per year of latency and per 100 h of cumulative use, statistically significant for analogue phones. This study confirmed previous results demonstrating an association between mobile and cordless phone use and acoustic neuroma.

[267]

TÍTULO / TITLE: - Decrease in the apparent diffusion coefficient in peritumoral edema for the assessment of recurrent glioblastoma treated by bevacizumab.

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

REVISTA / JOURNAL: - Acta Neurochir Suppl. 2013;118:185-9. doi: 10.1007/978-3-7091-1434-6_34.

●● Enlace al texto completo (gratis o de pago) [1007/978-3-7091-1434-6_34](#)

AUTORES / AUTHORS: - Takano S; Kimu H; Tsuda K; Osuka S; Nakai K; Yamamoto T; Ishikawa E; Akutsu H; Matsuda M; Matsumura A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Tsukuba, Tsukuba city, Ibaraki, Japan. shingo4@md.tsukuba.ac.jp

RESUMEN / SUMMARY: - **PURPOSES:** Anti-edema effect of bevacizumab was evaluated using the apparent diffusion coefficient (ADC) of peritumoral edema associated with regional cerebral blood flow (rCBV) of the tumor. **MATERIALS AND METHODS:** Nine patients with recurrent glioblastoma were treated using bevacizumab for 4 approximately 36 months (average 12 months). MRI was performed every 2 months. For each MRI, ADC value, Gd-enhanced area on T1 imaging, area of peritumoral edema on T2 imaging, and rCBV on perfusion imaging were measured. ADC and rCBV values were determined by the use of regions of interest positioned in areas of high signal intensity, as seen on T2-weighted images and ADC maps. **RESULTS:** After 2 months of bevacizumab treatment, ADC values and rCBV decreased 49 and 32 % respectively, associated with marked diminishment of the Gd-enhanced area compared with pretreatment. After 6 months, in 5 of the 9 cases, the Gd-enhanced area appeared again with no change in the ADC value and rCBV. In the other four cases, the Gd-enhanced area as well as the ADC value and rCBV returned to the initial status. **CONCLUSION:** The anti-edema effect of bevacizumab for treatment of recurrent glioblastoma that was demonstrated by decreased ADC values and rCBV was dramatic and -prolonged at 6 months even with tumor progression.

[268]

TÍTULO / TITLE: - Trends in intracranial meningioma surgery and outcome: a Nationwide Inpatient Sample database analysis from 2001 to 2010.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 13.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1183-](#)

[6](#)

AUTORES / AUTHORS: - Ambekar S; Sharma M; Madhugiri VS; Nanda A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Louisiana State University Health Sciences Center, 1501 Kings Highway, Shreveport, LA, 71130-3932, USA.

RESUMEN / SUMMARY: - The objective of the present study was to analyze the risk of in-patient mortality, adverse outcome, practice patterns and regional variations in patients who underwent intracranial meningioma surgery in the United States between 2001 and 2010. We performed a retrospective cohort study using the Nationwide Inpatient Sample database. In-patient mortality and adverse outcome at discharge were the outcome predictors. Multivariate analyses were done to analyze the patient, hospital and physician characteristics. The annual case-volume of patients with meningioma increased from 2001 to 2010 by 40 %. The in-patient mortality rate remained the same at 1.3 % and the rate of adverse discharge disposition remained at 35 % between 2001 and 2010. Caucasian female patients in younger age group with private insurance who underwent treatment at a high case-volume center had the best outcomes. In older patients (≥ 70 years), the in-patient mortality rate decreased by 25 % whereas the adverse discharge disposition rate increased by 19 %. Patients treated at high case-volume centers and by high case-volume physicians had lower rates of in-patient mortality ($P < 0.05$) and adverse outcome at discharge ($P = 0 < 0.05$). There was a 54 % decrease in the number of hospitals performing one surgery/year through the decade. A 2 % relative decrease in mortality was observed in lowest volume hospitals. Though the highest increase in admission charges through the decade was seen in hospitals located in the north-east (165 % relative increase), the highest relative decrease in mortality and morbidity was observed in hospitals located in the mid-west and the south (67.6 and 22 % respectively).

[269]

TÍTULO / TITLE: - Imaging genomic mapping in glioblastoma.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:126-30. doi: 10.1227/01.neu.0000430773.18220.3f.

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

[1227/01.neu.0000430773.18220.3f](#)

AUTORES / AUTHORS: - Zinn PO; Colen RR

[270]

TÍTULO / TITLE: - Free anterolateral thigh flap with vascularized lateral femoral cutaneous nerve for the treatment of neuroma-in-continuity and recurrent carpal tunnel syndrome after carpal tunnel release.

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

REVISTA / JOURNAL: - Microsurgery. 2013 Jul 11. doi: 10.1002/micr.22135.

●● Enlace al texto completo (gratis o de pago) [1002/micr.22135](#)

AUTORES / AUTHORS: - Yamamoto T; Narushima M; Yoshimatsu H; Yamamoto N; Mihara M; Koshima I

INSTITUCIÓN / INSTITUTION: - Department of Plastic and Reconstructive Surgery, Graduate School of Medicine, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo, Japan.

RESUMEN / SUMMARY: - Treatment of recurrent carpal tunnel syndrome (CTS) is challenging, especially in a case with recurrent CTS and a neuroma formation. Resection of the neuroma causing the syndrome, reconstruction of the nerve gap of the median nerve, and covering up the reconstructed median nerve with well-vascularized soft tissue for prevention of CTS re-recurrence are the essential procedures. We report a case of recurrent CTS with severe pain due to a neuroma-in-continuity successfully treated using a free anterolateral thigh (ALT) flap with a vascularized lateral femoral cutaneous nerve (LFCN). A 2 cm neuroma existed in the median nerve and was resected. The nerve gap was repaired using a vascularized LFCN included in the ALT flap. The ALT flap was transferred to the wrist to cover the median nerve. The severe pain disappeared completely and the sensory and motor impairment of the median nerve improved 5 months after the free flap surgery, as the Tinel's sign moved distally away from the wrist and disappeared. The result of the Semmes-Weinstein test improved from 5.08 to 4.31 and she was able to flex and extend the right wrist and fingers without pain. CTS did not recur 15 months after the surgery. A free ALT flap with vascularized LFCN allows nerve reconstruction for the median nerve gap created after neuroma resection and coverage of the median nerve with well-vascularized soft tissue to prevent adhesion and CTS recurrence. © 2013 Wiley Periodicals, Inc. Microsurgery, 2013.

[271]

TÍTULO / TITLE: - BRAF V600E expression and distribution in desmoplastic infantile astrocytoma / ganglioglioma.

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

REVISTA / JOURNAL: - Neuropathol Appl Neurobiol. 2013 Jul 4. doi: 10.1111/nan.12072.

●● Enlace al texto completo (gratis o de pago) [1111/nan.12072](#)

AUTORES / AUTHORS: - Koelsche C; Sahm F; Paulus W; Mittelbronn M; Giangaspero F; Antonelli M; Meyer J; Lasitschka F; von Deimling A; Reuss D

INSTITUCIÓN / INSTITUTION: - Department of Neuropathology, Ruprecht-Karls-Universität Heidelberg, Heidelberg, Germany; Clinical Cooperation Unit Neuropathology, German Cancer Research Center (DKFZ), Heidelberg, Germany.

RESUMEN / SUMMARY: - AIMS: Desmoplastic infantile astrocytoma / ganglioglioma (DIA/DIG) is a rare primary neuroepithelial brain tumour typically affecting paediatric patients younger than 24 months. Knowledge about genetic alterations in DIA/DIG is limited. However, a previous study on BRAF V600E mutation in paediatric glioma revealed a BRAF mutation in one of two tested DIAs/DIGs. The limited number of cases in that study did not allow any

conclusion about mutation frequency of BRAF in this tumour entity. METHODS: We collected a series of 18 DIAs/DIGs for testing BRAF V600E mutational status by BRAF V600E immunohistochemistry (clone VE1). Cases with sufficient DNA were tested for BRAF V600E mutation by pyrosequencing. RESULTS: Three out of 18 DIAs/DIGs presented with VE1 binding. A considerable proportion of BRAF V600E mutated tumour cells was detected in the cortical tumour component, whereas the pronounced leptomeningeal tumoral stroma was predominantly negative for VE1 binding. Pyrosequencing confirmed BRAF V600E mutation in two of three VE1 positive cases. CONCLUSION: BRAF V600E mutation affects a subset of DIAs/DIGs and offers new therapeutic opportunities.

[272]

TÍTULO / TITLE: - Inversion-mediated gene fusions involving NAB2-STAT6 in an unusual malignant meningioma.

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

REVISTA / JOURNAL: - Br J Cancer. 2013 Jul 16. doi: 10.1038/bjc.2013.395.

●● Enlace al texto completo (gratis o de pago) [1038/bjc.2013.395](#)

AUTORES / AUTHORS: - Gao F; Ling C; Shi L; Commins D; Zada G; Mack WJ; Wang K

INSTITUCIÓN / INSTITUTION: - Zilkha Neurogenetic Institute, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA.

RESUMEN / SUMMARY: - Background: Meningiomas are the most common primary intracranial tumours, with approximately 3% meeting current histopathologic criteria for malignancy. Methods: In this study, we explored the transcriptome of meningiomas using RNA-Seq. Results: Inversion-mediated fusions between two adjacent genes, NAB2 and STAT6, were detected in one malignant tumour, creating two novel in-frame transcripts that were validated by RT-PCR and Sanger sequencing. Conclusion: Gene fusions of NAB2-STAT6 were recently implicated in the pathogenesis of solitary fibrous tumours; our study suggested that similar fusions may also have a role in a malignant meningioma with unusual histopathologic features. British Journal of Cancer advance online publication, 16 July 2013; doi:10.1038/bjc.2013.395 www.bjcancer.com.

[273]

TÍTULO / TITLE: - Autophagy inhibition induces enhanced proapoptotic effects of ZD6474 in glioblastoma.

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

REVISTA / JOURNAL: - Br J Cancer. 2013 Jul 9;109(1):164-71. doi: 10.1038/bjc.2013.306. Epub 2013 Jun 25.

●● Enlace al texto completo (gratis o de pago) [1038/bjc.2013.306](https://doi.org/10.38/bjc.2013.306)

AUTORES / AUTHORS: - Shen J; Zheng H; Ruan J; Fang W; Li A; Tian G; Niu X; Luo S; Zhao P

INSTITUCIÓN / INSTITUTION: - 1] Department of Cell Biology, Southern Medical University, Guangzhou, Gungdong, People's Republic of China [2] Cancer Center, Southern Medical University, Guangzhou, Guangdong, People's Republic of China.

RESUMEN / SUMMARY: - Background:Autophagy is a lysosomal degradation pathway that can provide energy through its recycling mechanism to act as a cytoprotective adaptive response mediating treatment resistance in cancer cells. We investigated the autophagy-inducing effects of ZD6474, a small-molecule inhibitor that blocks activities of vascular endothelial growth factor receptor (VEGFR), epidermal growth factor receptor (EGFR), and RET tyrosine kinases.Methods:We investigated the effects of ZD6474 on autophagy in glioblastomas cells. The ZD6474 mechanism of action was determined by western blot. We then examined the impacts of the inhibition of autophagy in combination with ZD6474 on cell apoptosis in vitro. Furthermore, we evaluated the synergistic anticancer activity of combination treatment with an autophagy inhibitor (chloroquine) and ZD6474 in U251 glioblastoma cells xenograft model.Results:ZD6474-induced autophagy was dependent on signalling through the phosphoinositide 3-kinase/Akt/mammalian target of rapamycin (PI3K/Akt/mTOR) pathway. ZD6474-induced autophagy was inhibited by both knockdown of the ATG7 and Beclin 1 gene, essential autophagy genes, and pharmacologic agents (chloroquine and 3-methylalanine) treatment. Both treatments also dramatically sensitised glioblastoma cells to ZD6474-induced apoptosis, decreasing cell viability in vitro. Furthermore, in a xenograft mouse model, combined treatment with ZD6474 and chloroquine significantly inhibited U251 tumour growth, and increased the numbers of apoptotic cells compared with treatment with either agent alone.Conclusion:Autophagy protects glioblastoma cells from the proapoptotic effects of ZD6474, which might contribute to tumour resistance against ZD6474 treatment.

[274]

TÍTULO / TITLE: - Update in the Treatment of High-grade Gliomas.

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

REVISTA / JOURNAL: - Neurol Clin. 2013 Aug;31(3):847-67. doi: 10.1016/j.ncl.2013.03.005. Epub 2013 Apr 6.

●● Enlace al texto completo (gratis o de pago) [1016/j.ncl.2013.03.005](https://doi.org/10.1016/j.ncl.2013.03.005)

AUTORES / AUTHORS: - Lukas RV; Nicholas MK

INSTITUCIÓN / INSTITUTION: - Department of Neurology, University of Chicago, 5841 South Maryland Avenue, MC 2030, Chicago, IL 60637, USA. Electronic address: rlukas@neurology.bsd.uchicago.edu.

RESUMEN / SUMMARY: - Advances in the molecular classification of high-grade gliomas are laying the groundwork for potential changes in the treatment of high-grade gliomas. Currently, a combined modality approach involving surgery, radiation therapy, and chemotherapy is most often used in the treatment of high-grade gliomas. The authors review recent advances in the treatment of these primary brain tumors.

[275]

TÍTULO / TITLE: - Primary multicentric anaplastic pleomorphic xanthoastrocytoma with atypical features.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 1. pii: S0967-5868(13)00039-8. doi: 10.1016/j.jocn.2012.09.046.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2012.09.046

AUTORES / AUTHORS: - Montano N; Papacci F; Cioni B; Gaudino S; Della Pepa GM; Conforti G; Bonaventura RD; Novello M; Lauriola L; Meglio M

INSTITUCIÓN / INSTITUTION: - Institute of Neurosurgery, Catholic University, Largo Agostino Gemelli, 8, 00168 Rome, Italy. Electronic address: nicolamontanomd@yahoo.it.

RESUMEN / SUMMARY: - Pleomorphic xanthoastrocytoma (PXA) is a rare tumor with good prognosis after surgery. Few cases of anaplastic PXA (either de novo or secondary to transformation of a recurrent low grade PXA) have been reported. Moreover, primary anaplastic PXA with dissemination at diagnosis has been described only in two patients, to our knowledge. We report the first case of primary multicentric anaplastic PXA and discuss its atypical features and the pertinent literature.

[276]

TÍTULO / TITLE: - miR-125b Inhibitor May Enhance the Invasion-Prevention Activity of Temozolomide in Glioblastoma Stem Cells by Targeting PIAS3.

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

REVISTA / JOURNAL: - BioDrugs. 2013 Jul 16.

●● Enlace al texto completo (gratis o de pago) [1007/s40259-013-0053-](http://1007/s40259-013-0053-2)

[2](#)

AUTORES / AUTHORS: - Shi L; Wan Y; Sun G; Zhang S; Wang Z; Zeng Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First People's Hospital of Kunshan affiliated with Jiangsu University, Suzhou, 215300, People's Republic of China.

RESUMEN / SUMMARY: - BACKGROUND: Temozolomide, an alkylating agent, is a promising chemotherapeutic agent for treating glioblastoma. Although chemotherapy with temozolomide may restrain tumor growth for some months, invariable tumor recurrence suggests that cancer stem cells maintaining these

tumors persist. Previous research has shown that temozolomide can inhibit the proliferation of human glioblastoma stem cells (GSCs); however, no research has focused on the invasion of GSCs, which is an important factor for glioblastoma recurrence. Accumulating evidence indicates that microRNA (miR)-125b over-expression in GSCs may increase their invasiveness. OBJECTIVE: Our objective was to identify the effects and mechanism of action of an miR-125b inhibitor combined with temozolomide in the invasive pathogenesis of GSCs. METHODS: We modified the levels of miR-125b expression in primary GSCs in order to observe the effect on sensitivity to temozolomide on invasion, and we further analyzed the differences in mechanism between miR-125b treatment alone and treatment with miR-125b plus temozolomide using the Cancer PathwayFinder PCR Array. RESULTS: Our results demonstrated that either an miR-125b inhibitor or temozolomide could modestly inhibit the invasiveness of GSCs. Furthermore, GSCs that were pre-transfected with an miR-125b inhibitor, then treated with temozolomide, showed significantly decreased invasiveness when compared with GSCs treated with an miR-125b inhibitor or temozolomide alone. Further research into the underlying mechanism demonstrated that the miR-125b inhibitor enhanced the invasion-prevention activity of temozolomide in GSCs through targeting PIAS3 (protein inhibitor of activated STAT [signal transducer and activator of transcription]), which contributed to reduced STAT3 transcriptional activity and subsequent decreased expression of matrix metalloproteinase (MMP)-2 and -9. CONCLUSIONS: miR-125b could play a role in the development of temozolomide resistance in GSCs. Inhibition of miR-125b expression may enhance sensitivity of GSCs to temozolomide by targeting PIAS3 on cell invasion.

[277]

TÍTULO / TITLE: - Transitioning from genotypes to epigenotypes: Why the time has come for medulloblastoma epigenomics.

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

REVISTA / JOURNAL: - Neuroscience. 2013 Jul 20. pii: S0306-4522(13)00612-X. doi: 10.1016/j.neuroscience.2013.07.030.

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

[1016/j.neuroscience.2013.07.030](#)

AUTORES / AUTHORS: - Batora N; Sturm D; Jones DT; Kool M; Pfister SM; Northcott PA

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Neurooncology, German Cancer Research Center (DKFZ), Im Neuenheimer Feld 280, Heidelberg 69120, Germany.

RESUMEN / SUMMARY: - Recent advances in genomic technologies have allowed for tremendous progress in our understanding of the biology underlying medulloblastoma, a malignant childhood brain tumor. Consensus molecular

subgroups have been put forth by the pediatric neuro-oncology community and next-generation genomic studies have led to an improved description of driver genes and pathways somatically altered in these subgroups. In contrast to the impressive pace at which advances have been made at the level of the medulloblastoma genome, comparable studies of the epigenome have lagged behind. Complementary data yielded from genomic sequencing and copy number profiling have verified frequent targeting of chromatin modifiers in medulloblastoma, highly suggestive of prominent epigenetic deregulation in the disease. Past studies of DNA methylation-dependent gene silencing and microRNA expression analyses further support the concept of medulloblastoma as an epigenetic disease. In this Review, we aim to summarize the key findings of past reports pertaining to medulloblastoma epigenetics as well as recent and ongoing genomic efforts linking somatic alterations of the genome with inferred deregulation of the epigenome. In addition, we predict what is on the horizon for medulloblastoma epigenetics and how aberrant changes in the medulloblastoma epigenome might serve as an attractive target for future therapies.

[278]

TÍTULO / TITLE: - Inhibition of polo-like kinase 1 in glioblastoma multiforme induces mitotic catastrophe and enhances radiosensitisation.

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

REVISTA / JOURNAL: - Eur J Cancer. 2013 Jun 18. pii: S0959-8049(13)00410-3. doi: 10.1016/j.ejca.2013.05.013.

●● Enlace al texto completo (gratis o de pago) 1016/j.ejca.2013.05.013

AUTORES / AUTHORS: - Tandle AT; Kramp T; Kil WJ; Halthore A; Gehlhaus K; Shankavaram U; Tofilon PJ; Caplen NJ; Camphausen K

INSTITUCIÓN / INSTITUTION: - Radiation Oncology Branch, National Cancer Institute, National Institutes of Health, Bethesda, MD, United States.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common primary brain tumour in the United States of America (USA) with a median survival of approximately 14 months. Low survival rates are attributable to the aggressiveness of GBM and a lack of understanding of the molecular mechanisms underlying GBM. The disruption of signalling pathways regulated either directly or indirectly by protein kinases is frequently observed in cancer cells and thus the development of inhibitors of specific kinases has become a major focus of drug discovery in oncology. To identify protein kinases required for the survival of GBM we performed a siRNA-based RNAi screen focused on the human kinome in GBM. Inhibition of the polo-like kinase 1 (PLK1) induced a reduction in the viability in two different GBM cell lines. To assess the potential of inhibiting PLK1 as a treatment strategy for GBM we examined the effects of a small molecule inhibitor of PLK1, GSK461364A, on the growth of GBM cells. PLK1 inhibition arrested cells in the mitotic phase of the cell cycle and induced

cell kill by mitotic catastrophe. GBM engrafts treated with GSK461364A showed statistically significant inhibition of tumour growth. Further, exposure of different GBM cells to RNAi or GSK461364A prior to radiation resulted in an increase in their radiosensitivity with dose enhancement factor ranging from 1.40 to 1.53 with no effect on normal cells. As a measure of DNA double strand breaks, gammaH2AX levels were significantly higher in the combined modality as compared to the individual treatments. This study suggests that PLK1 is an important therapeutic target for GBM and can enhance radiosensitivity in GBM.

[279]

TÍTULO / TITLE: - Intravoxel incoherent motion diffusion-weighted MR imaging of gliomas: feasibility of the method and initial results.

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

REVISTA / JOURNAL: - Neuroradiology. 2013 Jul 14.

●● Enlace al texto completo (gratis o de pago) [1007/s00234-013-1229-](http://1007/s00234-013-1229-7)

[7](#)

AUTORES / AUTHORS: - Bisdas S; Koh TS; Roder C; Braun C; Schittenhelm J; Ernemann U; Klose U

INSTITUCIÓN / INSTITUTION: - Department of Diagnostic and Interventional Neuroradiology, Eberhard Karls University, Hoppe Seyler Str. 3, 72076, Tubingen, Germany, sotirios.bisdas@med.uni-tuebingen.de.

RESUMEN / SUMMARY: - INTRODUCTION: The purpose of this study was to evaluate the feasibility of intravoxel incoherent motion (IVIM) imaging and its value in differentiating the histologic grade among human gliomas. METHODS: The IVIM model generated parametric images for apparent diffusion coefficient ADC, slow diffusion coefficient D (or D slow), fast diffusion coefficient D* (or D fast), and fractional perfusion-related volume f in 22 patients with gliomas (WHO grade II-IV) using monopolar Stejskal-Tanner diffusion-weighted imaging (DWI) scheme and 14 b values ranging from 0 s/mm² to a maximum of 1,300 s/mm². A region-of-interest analysis on the tumor as well as in the white matter was conducted. The parameter values were tested for significant differences. The repeatability of the measurements was tested by coefficient of variation and Bland-Altman plots. RESULTS: D, D*, and f in the high-grade gliomas demonstrated significant differences compared to the healthy white matter. D* and f showed a significant difference between low- and high-grade gliomas. D tended to be slightly lower in the WHO grade II compared to WHO grade III-IV tumors. f and D* demonstrated higher coefficients of variation than the ADC and D in tumor. The Bland-Altman plots demonstrated satisfactory results without any outliers outside the mean +/- 1.96 standard deviation. CONCLUSION: The IVIM-fitted post-processing of DWI-signal decay in human gliomas could show significantly different values of fractional perfusion-related volume and fast diffusion coefficient between low- and high-grade tumors, which might enable a noninvasive WHO grading in vivo.

[280]

TÍTULO / TITLE: - EMMPRIN expression positively correlates with WHO grades of astrocytomas and meningiomas.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1184-](#)

[5](#)

AUTORES / AUTHORS: - Tsai WC; Chen Y; Huang LC; Lee HS; Ma HI; Huang SM; Sytwu HK; Hueng DY

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan, ROC.

RESUMEN / SUMMARY: - High-grade primary brain tumors possessed poor outcome due to invasiveness. Extracellular matrix metalloproteinase inducer (EMMPRIN) stimulates peri-tumoral fibroblasts to secrete matrix metalloproteinase and promote invasiveness. This study hypothesized that high-grade brain tumors overexpress EMMPRIN. Analyzing the public delinked database from the Gene Expression Omnibus profile, the results showed that the EMMPRIN mRNA level was higher in WHO grade IV (n = 81) than in grade III (n = 19, p < 0.0005) astrocytomas and non-tumor brain tissue controls (n = 23, p < 0.00001). The results of tissue microarray-based immunohistochemical (IHC) staining revealed that EMMPRIN levels positively correlated with WHO grades for astrocytomas (p = 0.008) and meningiomas (p = 0.048). EMMPRIN mRNA levels in conventional glioma cell lines (n = 36) was not less than those in glioma primary culture cells (n = 27) and glioblastoma stem-like cells (n = 12). The GBM8401, U87MG, and LN229 human glioma cell lines also overexpressed EMMPRIN. Hematoxylin and eosin, IHC, and immunofluorescence staining of xenografts confirmed that high-grade brain tumors overexpressed EMMPRIN. Lastly, Kaplan-Meier analysis revealed poorer survival in WHO grade IV (n = 56) than in grade III astrocytomas (n = 21, by log-rank test; p = 0.0001, 95 % CI: 1.842-3.053). However, in high-grade astrocytomas, there was no difference in survival between high and low EMMPRIN mRNA levels. Thus, this study identified that high-grade brain tumors overexpress EMMPRIN, which positively correlates with WHO grades in human astrocytomas and meningiomas, and suggests that EMMPRIN may be a therapeutic target of brain tumor.

[281]

TÍTULO / TITLE: - Significance of COX-2 and VEGF expression in histopathologic grading and invasiveness of meningiomas.

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

REVISTA / JOURNAL: - APMIS. 2013 Jun 12. doi: 10.1111/apm.12079.

●● Enlace al texto completo (gratis o de pago) 1111/apm.12079

AUTORES / AUTHORS: - Lee SH; Lee YS; Hong YG; Kang CS

INSTITUCIÓN / INSTITUTION: - Department of Hospital Pathology, The Catholic University of Korea, College of Medicine, Seoul, Korea.

RESUMEN / SUMMARY: - Meningiomas are slow-growing neoplasms that recur locally. Their morphologic grading does not always correlate with patient outcome. We evaluated the status of several immunohistochemical markers with histopathologic parameters in various grades of meningioma. Eighty-eight meningioma specimens were examined immunohistochemically to determine the status of Ki-67, cyclin D1, epidermal growth factor receptor (EGFR), cyclooxygenase-2 (COX-2), vascular endothelial growth factor (VEGF), and bcl-2. Several clinical and pathological parameters were investigated. Forty-nine Grade I, 33 Grade II, and 6 Grade III meningiomas were observed. VEGF and Ki-67 expression was correlated with higher tumor grade. The association between grade and other immunohistochemical markers expression was not significant. A correlation was observed between COX-2 expression and invasiveness to the brain or adjacent soft tissue. Tumor recurrence was correlated with brain or adjacent soft tissue invasion. We also observed a relationship between VEGF level and COX-2 expression, and they were both correlated with necrosis. Immunohistochemical evaluation of VEGF, COX-2, and Ki-67 expression can provide information regarding the behavior of meningiomas, particularly for cases in which histological grading is not straightforward.

[282]

TÍTULO / TITLE: - Acoustic neuroma observation associated with an increase in symptomatic tinnitus: results of the 2007-2008 Acoustic Neuroma Association survey.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Jun 21.

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

3171/2013.5.JNS122301

AUTORES / AUTHORS: - Van Gompel JJ; Patel J; Danner C; Zhang AN; Samy Youssef AA; van Loveren HR; Agazzi S

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery and Brain Repair.

RESUMEN / SUMMARY: - Object Tinnitus is a known presenting symptom of acoustic neuromas, but little is known about the impact of observation or treatment on tinnitus. Most patients experience improvement with treatment, while others may worsen. Therefore, this study was designed to assess the overall impact of observation and treatment on tinnitus outcome in patients with acoustic tumors. Methods Data from the 2007-2008 Acoustic Neuroma Association survey were used. Tinnitus severity was graded both at presentation and at last follow-up for all patients questioned. This data set was

analyzed using the Student t-test and a linear regression model adjusted for possible confounders. Results Overall there were more patients receiving intervention (n = 1138) for their acoustic neuromas than observation (n = 289). Presenting tumor size positively correlated with tinnitus severity score. Regardless of treatment (microsurgery or stereotactic radiosurgery), tinnitus improved at last follow-up and worsened in those who were observed (p = 0.02). When comparing microsurgical options, retrosigmoid and translabyrinthine resection improved tinnitus symptoms (both p < 0.01). Stereotactic radiosurgery had a treatment effect similar to microsurgery. Conclusions Presenting tinnitus severity correlates strongly with tumor size. Furthermore, regardless of treatment, there appears to be an overall reduction in tinnitus severity for all forms of microsurgery and stereotactic radiosurgery. Importantly, observation leads to a worsening in symptomatic tinnitus and therefore should be weighed in the treatment recommendation.

[283]

TÍTULO / TITLE: - 129 Urinary biomarkers predict the onset and progression of medulloblastoma in a spontaneous murine model.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:162-3. doi: 10.1227/01.neu.0000432720.57542.fc.

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

1227/01.neu.0000432720.57542.fc

AUTORES / AUTHORS: - Smith ER; Majumder R; Han X; McNeish B; Dholakia A; Raber MR

RESUMEN / SUMMARY: - INTRODUCTION: Our laboratory is interested in the development of non-invasive urinary biomarkers to improve the accuracy of diagnosis and prognosis of brain tumors. In order to better study the efficacy of urinary biomarkers in a reproducible manner, with a particular focus on the study of early onset of tumor development, we now present our experience with correlating urinary biomarker expression with tumor progression in a transgenic murine model of spontaneous medulloblastoma. METHODS: SMO/SMO mice were genotyped to confirm presence of the mutation associated with tumor development. Tumor progression naturally occurred over months 2-6 of life, with urine as collected and correlated to simultaneous imaging and pathology. Tumor presence was confirmed radiographically by PET scan and pathologically by harvesting tissue analyzed by immunohistochemistry staining for cyclin D1, a medulloblastoma-specific marker. Urine was analyzed for the presence of putative biomarker species with Western blot and quantitatively assessed with ELISA, compared with matched control animals, and subjected to statistical analysis. RESULTS: Elevated levels of urinary cathepsin-B correlated with medulloblastoma presence (confirmed by imaging and pathology). After performing a Kolmogorov-Smirnov test to prove normality,

samples were subjected to a Student's 2-tailed T-test. Densitometry of western blots for Cathepsin-B showed elevated levels of protein in the urine of tumor-bearing mice but not in controls (n = 21, P = .0002). ELISA data confirmed significant increases in urinary Cathepsin-B levels in tumor-bearing SMO/SMO mice as compared to healthy controls (n = 18, P = .001). Using the 95% confidence interval, tumor mice have an average of 3-10 fold higher levels of Cathepsin-B in their urine. CONCLUSION: Urinary biomarkers reliably indicate presence of medulloblastoma in a spontaneous murine tumor model. This provides proof-of-principle data that facilitates study of tumor onset in a reliable fashion not possible in humans and has utility in the development of novel diagnostic and therapeutic techniques.

[284]

TÍTULO / TITLE: - The changing incidence of primary central nervous system lymphoma is driven primarily by the changing incidence in young and middle-aged men and differs from time trends in systemic diffuse large B-cell non-Hodgkin's lymphoma.

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

REVISTA / JOURNAL: - Am J Hematol. 2013 Jul 22. doi: 10.1002/ajh.23551.

●● Enlace al texto completo (gratis o de pago) [1002/ajh.23551](#)

AUTORES / AUTHORS: - O'Neill BP; Decker PA; Tieu C; Cerhan JR

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Mayo Clinic, Rochester, MN; Mayo Clinic Cancer Center, Mayo Clinic, Rochester, MN.

RESUMEN / SUMMARY: - Background. There has been an overall decline in the United States incidence of Primary CNS Lymphoma (PCNSL) from 1998-2008. This study's intent was to characterize the cohorts contributing to it. Methods. 1) Calculated PCNSL incidence rates from nine Surveillance, Epidemiology, and End Results (SEER) registries for time period 1973-2008. 2) Examined time trends overall and by age and gender. 3) Used 1992-2008 SEER data from the same registries to obtain overall trends for diffuse large B-cell lymphoma (DLBCL). 4) Rates were age-adjusted to the 2000 US standard population and reported per 100,000 person-years. Results. 1) Rates continued to increase in women at all ages and men aged 65 and older. 2) In men aged 20-39 and 40-64 years incidence rates peaked in 1995 and then declined dramatically, stabilizing after 1998. 3) The trends in the incidence of PCNSL over this time frame were significantly different from DLBCL for ages 20-39 (p<0.001) and 40-64 (p<0.001) years but were not different for the 65 years and older age group (p=0.99). Conclusion. The overall PCNSL incidence rate declined since 1995 and was driven primarily by the changing incidence in young and middle-aged men. The rate has continued to increase in men age 65 years and older and in women. The trends in incidence in the younger age groups over this time period did not parallel those observed for DLBCL.

[285]

TÍTULO / TITLE: - The pharmacokinetics of letrozole in brain and brain tumor in rats with orthotopically implanted C6 glioma, assessed using intracerebral microdialysis.

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

REVISTA / JOURNAL: - Cancer Chemother Pharmacol. 2013 Aug;72(2):349-57. doi: 10.1007/s00280-013-2205-y. Epub 2013 Jun 9.

●● Enlace al texto completo (gratis o de pago) [1007/s00280-013-2205-](#)

[y](#)

AUTORES / AUTHORS: - Dave N; Gudelsky GA; Desai PB

INSTITUCIÓN / INSTITUTION: - Department of Pharmaceutical Sciences, James L. Winkle College of Pharmacy, University of Cincinnati, Cincinnati, OH, USA.

RESUMEN / SUMMARY: - **PURPOSE:** Emerging evidence suggests that primary and metastatic brain tumors may be sensitive to hormonal manipulations. However, the pharmacokinetics of compounds against such targets in the brain and, more importantly, in the brain tumor are not well characterized. Here, we investigated the pharmacokinetics of letrozole, a third-generation aromatase inhibitor, in the normal brain and in orthotopically implanted C6 glioma in Sprague-Dawley rats. **METHODS:** Intracerebral microdialysis was employed to determine the concentrations of unbound letrozole in the brain extracellular fluid (ECF) while simultaneously collecting blood samples (via jugular vein) to assess plasma levels of letrozole. Letrozole was administered intravenously at doses of 4, 6, 8 and 12 mg/kg, and ECF and blood samples were collected over 8 h. For assessing normal versus tumoral brain pharmacokinetics, letrozole (4 or 8 mg/Kg; i.v.) was administered 10 days after implantation of C6 glioma in the brain. Dual-probe intracerebral microdialysis was employed for assessing ECF samples from tumor-free and tumor-bearing regions of the brain. **RESULTS:** Normal brain ECF and plasma C max and AUC0-8h increased linearly with letrozole doses up to 8 mg/kg dose, but at 12 mg/kg, the pharmacokinetics were nonlinear. The relative brain distribution coefficients, AUCECF/AUCplasma (ub), were 0.3-0.98. The tumoral uptake of letrozole was 1.5- to 2-fold higher relative to tumor-free region. **CONCLUSIONS:** Thus, letrozole permeability across the blood brain barrier is high, and the exposure to the brain is dose dependent. Furthermore, the brain tumoral letrozole levels are markedly higher than those in the tumor-free regions, which underscore potential selectivity of its activity against tumor cells.

[286]

TÍTULO / TITLE: - Classification methods for the differentiation of atypical meningiomas using diffusion and perfusion techniques at 3-T MRI.

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

REVISTA / JOURNAL: - Clin Imaging. 2013 Jul 11. pii: S0899-7071(13)00144-7. doi: 10.1016/j.clinimag.2013.03.006.

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

1016/j.clinimag.2013.03.006

AUTORES / AUTHORS: - Svolos P; Tsolaki E; Theodorou K; Fountas K; Kapsalaki E; Fezoulidis I; Tsougos I

INSTITUCIÓN / INSTITUTION: - Medical Physics Department, University of Thessaly, Biopolis, 41110, Larissa, Greece.

RESUMEN / SUMMARY: - The purpose was to investigate the contribution of machine learning algorithms using diffusion and perfusion techniques in the differentiation of atypical meningiomas from glioblastomas and metastases. Apparent diffusion coefficient, fractional anisotropy, and relative cerebral blood volume were measured in different tumor regions. Naive Bayes, k-Nearest Neighbor, and Support Vector Machine classifiers were used in the classification procedure. The application of classification methods adds incremental differential diagnostic value. Differentiation is mainly achieved using diffusion metrics, while perfusion measurements may provide significant information for the peritumoral regions.

[287]

TÍTULO / TITLE: - Clinical presentation of epignathus teratoma with cleft palate; and duplication of cranial base, tongue, mandible, and pituitary gland.

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

REVISTA / JOURNAL: - J Craniofac Surg. 2013 Jul;24(4):1486-91. doi: 10.1097/SCS.0b013e3182953b1f.

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

1097/SCS.0b013e3182953b1f

AUTORES / AUTHORS: - Maeda Y; Suenaga H; Sugiyama M; Saijo H; Hoshi K; Mori Y; Takato T

INSTITUCIÓN / INSTITUTION: - From the Department of Oral-Maxillofacial Surgery, Dentistry and Orthodontics, The University of Tokyo Hospital, Tokyo, Japan.

RESUMEN / SUMMARY: - A 2-day-old girl was diagnosed with an oral epignathus teratoma and an uncommon combination of orofacial malformations including cleft palate; tongue, mandible, cranial base, cervical vertebrae, lower lip, and pituitary gland duplications; and fistula of the glabella and lower lip. Computed tomography revealed that the mass within the nasal cavity had tooth-like calcifications and protruded into the nasopharynx and oral cavity. It was implanted on the anterior wall of the body of the sphenoid bone and was accompanied with mandibular duplication. Magnetic resonance imaging detected duplication of the pituitary gland and confirmed the absence of intracranial communication of the nasopharyngeal mass. The teratoma did not cause respiratory obstruction; however, the patient required continuous nasogastric tube feeding. Usually, an epignathus teratoma is associated with

few midline defects and can be corrected with multiple interventions at different time points. The current study describes the surgical procedure comprising excision of the tumor along with reconstructive surgeries of the mandible, tongue, and fistulae undertaken when the infant reached 7 months of age. The cleft palate was repaired at 18 months of age using the Kaplan buccal flap method. Histopathologic examination confirmed a grade 0 teratoma covered with keratinized skin and containing pilosebaceous and sweat glands, adipose tissue, and smooth muscle. The long-term success of this intervention was determined at the follow-up examination conducted at 3 years of age, with no signs of the teratoma recurrence observed.

[288]

TÍTULO / TITLE: - Breaking the brain barrier.

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

REVISTA / JOURNAL: - Sci Am. 2013 Jun;308(6):52-7.

AUTORES / AUTHORS: - Interlandi J

[289]

TÍTULO / TITLE: - A MEN1 syndrome with a paraganglioma.

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

REVISTA / JOURNAL: - Eur J Hum Genet. 2013 Jun 19. doi: 10.1038/ejhg.2013.128.

●● [Enlace al texto completo \(gratis o de pago\) 1038/ejhg.2013.128](#)

AUTORES / AUTHORS: - Jamilloux Y; Favier J; Pertuit M; Delage-Corre M; Lopez S; Teissier MP; Mathonnet M; Galinat S; Barlier A; Archambeaud F

INSTITUCIÓN / INSTITUTION: - 1] Department of Internal Medicine A, University Hospital of Limoges, Limoges, France [2] Department of Internal Medicine B, Endocrinology and Metabolic Diseases, University Hospital of Limoges, Limoges, France.

RESUMEN / SUMMARY: - Germline mutations of the MEN1 gene cause multiple endocrine neoplasia type 1 (MEN1), an autosomal dominant disorder characterized by tumors of the parathyroids, the pancreas, and the anterior pituitary. Paraganglioma (PGL) is a rare endocrine tumor, which can be sporadic or genetically determined. To date, PGL has never been reported as a feature of MEN1. We report here a patient presenting three features of MEN1 syndrome (hyperparathyroidism, pancreatic neuroendocrine tumor, and adrenocortical adenoma) associated with PGL. Genetic analysis of MEN1 gene revealed a new missense mutation in exon 5 (AGGshort right arrowAAG), causing the substitution of arginine by lysine at codon 275. Screening for other genetic disorders (SDHx, TMEM127, MAX, CDKN1B) causing PGL was negative. Immunohistochemical analyses showed normal levels of succinate dehydrogenase (SDH)A and SDHB in the PGL. The proband's sister, bearing

the mutation, had primary hyperparathyroidism. It was the first typical MEN1 syndrome reported with an extra-adrenal PGL. European Journal of Human Genetics advance online publication, 19 June 2013; doi:10.1038/ejhg.2013.128.

[290]

TÍTULO / TITLE: - Systemic tumor necrosis factor-alpha decreases brain stimulation reward and increases metabolites of serotonin and dopamine in the nucleus accumbens of mice.

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

REVISTA / JOURNAL: - Behav Brain Res. 2013 Jul 26;253C:191-195. doi: 10.1016/j.bbr.2013.07.038.

●● Enlace al texto completo (gratis o de pago) [1016/j.bbr.2013.07.038](#)

AUTORES / AUTHORS: - van Heesch F; Prins J; Korte-Bouws GA; Westphal KG; Lemstra S; Olivier B; Kraneveld AD; Korte SM

INSTITUCIÓN / INSTITUTION: - Division of Pharmacology, Utrecht Institute for Pharmaceutical Sciences (UIPS), Faculty of Science, Utrecht University, Universiteitsweg 99, 3584 CG Utrecht, The Netherlands. Electronic address: F.vanHeesch@uu.nl.

RESUMEN / SUMMARY: - Many patients with chronic inflammatory disorders have an abnormal high prevalence of major depression accompanied by elevated levels of tumor necrosis factor-alpha (TNF-alpha). We hypothesize that systemic TNF-alpha increases brain monoamine metabolism, which might induce anhedonia (i.e. a core symptom of major depression). The effect of an intraperitoneal TNF-alpha injection on extracellular monoamine and metabolite concentrations was investigated by in vivo microdialysis in the nucleus accumbens (NAc) of C57BL/6 mice. In another group, the effects of TNF-alpha on body weight and intracranial self-stimulation (ICSS) thresholds were measured. TNF-alpha reduced body weight and increased ICSS thresholds, suggesting a state of anhedonia. TNF-alpha did not affect serotonin levels, but increased its metabolite 5-HIAA in the NAc. Remarkably, TNF-alpha also increased the dopamine metabolite HVA, without affecting dopamine levels itself. These data concur with earlier findings that pro-inflammatory cytokines enhance serotonin transporter activity, and possibly also dopamine transporter activity in the brain. However, more research is needed to understand the precise molecular mechanisms by which TNF-alpha increases transporter activity and anhedonia.

[291]

TÍTULO / TITLE: - Arterial Spin-Labeled Perfusion Imaging Reflects Vascular Density in Nonfunctioning Pituitary Macroadenomas.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 May 30.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3564](https://doi.org/10.3174/ajnr.A3564)

AUTORES / AUTHORS: - Sakai N; Koizumi S; Yamashita S; Takehara Y; Sakahara H; Baba S; Oki Y; Hiramatsu H; Namba H

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery, Radiology, Diagnostic Pathology, and Endocrinology and Metabolism, Hamamatsu University School of Medicine, Hamamatsu, Japan.

RESUMEN / SUMMARY: - **BACKGROUND AND PURPOSE:** Angiogenesis is very important in clinical features of pituitary adenomas. We investigated the relationship between the blood flow of nonfunctioning pituitary macroadenomas measured by arterial spin-labeled perfusion imaging and the microvessel attenuation of the tissue. **MATERIALS AND METHODS:** Conventional MR imaging with contrast-enhanced T1WI and arterial spin-labeled perfusion imaging were performed before surgery in 11 consecutive patients with nonfunctioning pituitary macroadenomas. ROIs were drawn on the tumors, and the degrees of enhancement were calculated by dividing the signal intensity on the contrast-enhanced T1WI by that on the nonenhanced T1WI. As an index of tumor perfusion, a quantitative analysis was performed by using normalized tumor blood flow values calculated by dividing the mean value of the tumor region of interest by the mean region of interest values in the 2 cerebellar hemispheres. The relative microvessel attenuation was determined as the total microvessel wall area divided by the entire tissue area on CD-31-stained specimens. The degree of enhancement and the normalized tumor blood flow values were compared with relative microvessel attenuation. Additionally, intra- and postoperative tumor hemorrhages were visually graded. **RESULTS:** The degree of enhancement was not correlated with relative microvessel attenuation. Statistically significant correlations were observed between normalized tumor blood flow values and relative microvessel attenuation ($P < .05$). At surgery, 3 cases were visually determined to be hypervascular tumors, and 1 of these cases had symptomatic postoperative hemorrhage. A statistically significant difference in normalized tumor blood flow values was observed visually between the intraoperative hypovascular and hypervascular groups ($P < .05$). **CONCLUSIONS:** Arterial spin-labeled perfusion imaging reflects the vascular density of nonfunctioning pituitary macroadenomas, which may be useful in the preoperative prediction of intra- and postoperative tumor hemorrhage.

[292]

TÍTULO / TITLE: - Intra-Arterial Chemotherapy Is Not Superior to Intravenous Chemotherapy for Malignant Gliomas: A Systematic Review and Meta-Analysis.

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

REVISTA / JOURNAL: - Eur Neurol. 2013 Jul 17;70(1-2):124-132.

●● Enlace al texto completo (gratis o de pago) [1159/000346580](https://doi.org/10.1159/000346580)

AUTORES / AUTHORS: - Chen W; Wu Q; Mo L

INSTITUCIÓN / INSTITUTION: - Department of Head and Neck Surgery, Affiliated Tumor Hospital of Guangxi Medical University, Nanning, PR China.

RESUMEN / SUMMARY: - The efficacy and safety of intra-arterial (IA) chemotherapy versus intravenous (IV) chemotherapy for malignant gliomas were studied. We searched eight electronic databases to identify relevant randomized controlled trials that compared IA chemotherapy with IV chemotherapy in patients with malignant gliomas. This study was conducted in compliance with the Quality of Reporting of Meta-analysis (QUORUM) guidelines. The quality of data was assessed using the Grades of Recommendation, Assessment, Development, and Evaluation (GRADE) approach. Four eligible randomized controlled trials including 460 patients were retrieved. Comparing IA chemotherapy and IV chemotherapy for malignant gliomas, disease control rate, efficacy rate, 1-year, 2-year, and 3-year overall survival as well as grade $\frac{3}{4}$ leukocytopenia, thrombocytopenia, and anemia were not statistically different. In conclusion, IA chemotherapy is not superior to IV chemotherapy in terms of efficacy and overall survival as a treatment for malignant gliomas.

[293]

TÍTULO / TITLE: - Reduced-Dose Fractionated Stereotactic Radiotherapy for Acoustic Neuromas: Maintenance of Tumor Control with Improved Hearing Preservation.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Jul 24.

- Enlace al texto completo (gratis o de pago)

[1227/NEU.0000000000000019](#)

AUTORES / AUTHORS: - Champ CE; Shen X; Shi W; Mayekar SU; Chapman K; Werner-Wasik M; Farrell CJ; Gunn V; Downes MB; Liu H; Evans JJ; Andrews DW

INSTITUCIÓN / INSTITUTION: - 1Department of Radiation Oncology and 2Neurological Surgery, Kimmel Cancer Center and Jefferson Medical College of Thomas Jefferson University, Philadelphia, PA 3Department of Radiation Oncology, University of Kansas Medical Center.

RESUMEN / SUMMARY: - **BACKGROUND:** Fractionated Stereotactic Radiotherapy (FSRT) is a non-invasive treatment for acoustic neuromas (AN). Initial reports from our institution demonstrated that reduction of treatment dose to 46.8 Gy resulted in improved preservation of functional hearing status. **OBJECTIVE:** We now report the tumor control (TC), symptomatic outcome, and hearing preservation rate (HP) in patients treated with reduced-dose FSRT. **METHODS:** We analyzed all patients with AN treated from 2002 to 2011. All patients received 46.8 Gy in 1.8 Gy fractions. Follow-up audiogram and MRI were performed in = one-year intervals. TC and HP were calculated by the Kaplan-Meier method. Analysis of HP, defined as Gardner-Robertson value = 2,

was determined by audiometric data. Non-hearing related symptoms were defined by Common Terminology Criteria for Adverse Events version 4.

RESULTS:: In total, 154 patients were analyzed. At a median follow-up of 35 months (range 4-108) TC was achieved in 96% of patients (n=148/154) and at 3- and 5-years was 99% and 93%. Eighty-seven patients had serviceable hearing at time of FSRT and evaluable audiometric follow-up. Overall HP was 67% and at 3- and 5-years was 66% and 54%. Pure tone average decreased by a median of 13 decibels in all patients. Nineteen percent (n=31) of patients experienced symptom improvement and 8% (n=13) had worsening of symptoms. Cranial nerve dysfunction occurred in 3.8% of patients (n=6).

CONCLUSION:: Reduced-dose FSRT to 46.8 Gy for AN achieves excellent functional HP rates and limited toxicity without compromising long-term TC. Based on these promising outcomes, further attempts at dose de-escalation may be warranted.

[294]

TÍTULO / TITLE: - Characterization of a pituitary-tumor-derived cell line, TtT/GF, that expresses Hoechst efflux ABC transporter subfamily G2 and stem cell antigen 1.

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

REVISTA / JOURNAL: - Cell Tissue Res. 2013 Jul 24.

●● Enlace al texto completo (gratis o de pago) [1007/s00441-013-1686-](#)

[7](#)

AUTORES / AUTHORS: - Mitsuishi H; Kato T; Chen M; Cai LY; Yako H; Higuchi M; Yoshida S; Kanno N; Ueharu H; Kato Y

INSTITUCIÓN / INSTITUTION: - Division of Life Science, Graduate School of Agriculture, Meiji University, 1-1-1 Higashi-mita, Tama-ku, Kawasaki, Kanagawa, 214-8571, Japan.

RESUMEN / SUMMARY: - The anterior lobe of the pituitary gland is composed of five types of endocrine cells and of non-endocrine folliculo-stellate cells that produce various local signaling molecules. The TtT/GF cell line is derived from pituitary tumors, produces no hormones and has folliculo-stellate cell-like characteristics. The biological function of TtT/GF cells remains elusive but several properties have been postulated (support of endocrine cells, control of cell proliferation, scavenger function). Recently, we observed that TtT/GF cells have high resistance to the antibiotic G418 and low influx for Hoechst 33342, indicating the presence of ATP-binding cassette (ABC) transporters that efflux multiple drugs, i.e., a property similar to that of stem/progenitor cells. Therefore, we examine TtT/GF cells for the presence of ABC transporters, for the efflux ability of Hoechst 33342 and for those genes characteristic of TtT/GF cells. Real-time polymerase chain reaction (PCR) for ABC transporters demonstrated that Abcb1a, Abcb1b and Abcg2, regarded as stem cell markers, were characteristically expressed in TtT/GF cells but not in Tpit/F1 and LbetaT2 cells.

Furthermore, the remarkable low-efflux ability of Hoechst 33342 from TtT/GF cells was confirmed by using inhibitors and contrasted with the abilities of Tpit/F1 and LbetaT2 cells. The high and specific expression of stem cell antigen 1 (Sca1) in TtT/GF cells was confirmed by real-time PCR. We also demonstrated those genes that are expressed abundantly and characteristically in TtT/GF, suggesting that TtT/GF cells have unique characteristics similar to those of stem/progenitor cells of endothelial or mesenchymal origin. Thus, the present study has revealed an intriguing property of TtT/GF cells, providing a new clue for an understanding of the function of this cell line.

[295]

TÍTULO / TITLE: - Etoposide Improves Survival in High-grade Glioma: A Meta-Analysis.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Aug;33(8):3307-15.

AUTORES / AUTHORS: - Leonard A; Wolff JE

INSTITUCIÓN / INSTITUTION: - Children's National Medical Center, 111 Michigan Ave NW, Washington DC, 20010, U.S.A. aleonard@cnmc.org.

RESUMEN / SUMMARY: - BACKGROUND: The purpose of this meta-analysis was to evaluate the therapeutic efficacy of topoisomerase inhibitors in the treatment of high-grade gliomas (HGGs). MATERIALS AND METHODS: Using median overall survival (mOS) and survival gain, we compared the efficacy of chemotherapy drugs in a meta-analysis of 624 HGG studies, including 44,850 patients from studies published between 1976 and 2011. RESULTS: Patient cohorts treated with etoposide had significant improvement in mOS (15.66 months vs. 13.27 months, $p=0.026$, 49 vs. 795 cohorts) and significant survival gain advantage ($p=0.022$) over cohorts treated without etoposide. In contrast, patient cohorts treated with irinotecan had significantly worse mOS (10.20 vs. 13.55 months, $p=0.008$, 35 vs. 810 cohorts) and a disadvantage compared to cohorts treated without irinotecan in survival gain analysis. CONCLUSION: Results from this analysis suggest that etoposide may improve overall survival for patients with HGG, whereas the use of irinotecan might result in inferior outcomes.

[296]

TÍTULO / TITLE: - A population-based study of low-grade gliomas and mutated isocitrate dehydrogenase 1 (IDH1).

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 2.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1186-](https://doi.org/10.1007/s11060-013-1186-3)

[3](#)

AUTORES / AUTHORS: - Dahlrot RH; Kristensen BW; Hjelmberg J; Herrstedt J; Hansen S

INSTITUCIÓN / INSTITUTION: - Department of Oncology, Odense University Hospital, Sdr. Boulevard 29, 5000, Odense, Denmark, rikke.dahlrot@ouh.regionsyddanmark.dk.

RESUMEN / SUMMARY: - Low-grade gliomas (LGG) have a slow growth rate, but transformations into malignant gliomas with a rapid deterioration occur in many patients. The aim of this study was to evaluate clinical prognostic factors in a population-based cohort of patients with LGG. In addition we investigated the expression and prognostic value of the isocitrate dehydrogenase 1 (IDH1) R132H mutation. Seventy-four patients diagnosed between 2005 and 2009 in the Region of Southern Denmark were identified using the Danish Cancer Register and The Danish Pathology Databank. Survival analysis using Cox regression was performed in 52 patients with tumor samples useable for immunohistochemical evaluation of IDH1 status. Patients with a contrast enhancing tumor, neurological deficits, headache, an astrocytic tumor and PS 2-4 had an increased risk of recurrence. In univariate analysis age > 50 years (HR 2.14, 95 % CI 1.08-4.24), having neurological deficit (HR 2.28, 95 % CI 1.15-4.52), receiving post-surgical treatment (HR 2.52, 95 % CI 1.19-5.32), being in performance status 2-4 (HR 1.44, 95 % CI 1.15-1.81), and having an astrocytic tumor (HR 3.79, 95 % CI 1.64-8.73) were associated with poor survival. Mutated IDH1 (mIDH1) was identified in 46 % of the patients and was significantly correlated to a good survival in both univariate (HR 0.24, 95 % CI 0.11-0.53) and in multivariate analysis (HR 0.40, 95 % CI 0.17-0.91). The other clinical variables were not significant when adjusted for the effect of mIDH1 status. We find that young age, the absence of neurologic deficit, PS 0-1 and oligodendroglial histology were associated with better survival. IDH1 status showed independent prognostic information when adjusting for classical prognostic factors, and should be validated in a larger patient population.

[297]

TÍTULO / TITLE: - Platinum compounds and sodium metabolism in children with diencephalic glioma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 10.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1203-](http://dx.doi.org/10.1007/s11060-013-1203-6)

[6](#)

AUTORES / AUTHORS: - Puma N; Ruggiero A; Scalzone M; Coccia P; Triarico S; Trombatore G; Mastrangelo S; Riccardi R

INSTITUCIÓN / INSTITUTION: - Division of Paediatric Oncology, Pol. A. Gemelli, Catholic University of Rome, Largo A. Gemelli, 00168, Rome, Italy.

RESUMEN / SUMMARY: - In this brief report we have described eight children affected by optic pathway/hypothalamus gliomas and treated with carboplatin

and/or cisplatin, which developed a derangement of sodium and water metabolism, due to diabetes insipidus (DI) or to syndrome of inappropriate antidiuretic hormone secretion (SIADH) after surgical resection. In four out of these eight patients the treatment with platinum compounds produced prolonged haematological toxicity and in five out of them it caused neurosensorial bilateral hypoacusia. In addition cisplatin worsened electrolytes disturbances. Hence children with DI or SIADH should be carefully monitored before, during and after the treatment with platinum compounds.

[298]

TÍTULO / TITLE: - Reduction of Coil Mass Artifacts in High-Resolution Flat Detector Conebeam CT of Cerebral Stent-Assisted Coiling.

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

REVISTA / JOURNAL: - AJNR Am J Neuroradiol. 2013 May 30.

●● Enlace al texto completo (gratis o de pago) [3174/ajnr.A3561](#)

AUTORES / AUTHORS: - van der Bom IM; Hou SY; Puri AS; Spilberg G; Ruijters D; van de Haar P; Carelsen B; Vedantham S; Gounis MJ; Wakhloo AK

INSTITUCIÓN / INSTITUTION: - Department of Radiology, New England Center for Stroke Research, University of Massachusetts Medical School, Worcester, Massachusetts; and INTERVENTIONAL X-Ray, Philips Healthcare, Best, The Netherlands.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Developments in flat panel angiographic C-arm systems have enabled visualization of both the neurovascular stents and host arteries in great detail, providing complementary spatial information in addition to conventional DSA. However, the visibility of these structures may be impeded by artifacts generated by adjacent radio-attenuating objects. We report on the use of a metal artifact reduction algorithm for high-resolution contrast-enhanced conebeam CT for follow-up imaging of stent-assisted coil embolization. MATERIALS AND METHODS: Contrast-enhanced conebeam CT data were acquired in 25 patients who underwent stent-assisted coiling. Reconstructions were generated with and without metal artifact reduction and were reviewed by 3 experienced neuroradiologists by use of a 3-point scale. RESULTS: With metal artifact reduction, the observers agreed that the visibility had improved by at least 1 point on the scoring scale in >40% of the cases (kappa = 0.6) and that the streak artifact was not obscuring surrounding structures in 64% of all cases (kappa = 0.6). Metal artifact reduction improved the image quality, which allowed for visibility sufficient for evaluation in 65% of the cases, and was preferred over no metal artifact reduction in 92% (kappa = 0.9). Significantly higher scores were given with metal artifact reduction (P < .0001). CONCLUSIONS: Although metal artifact reduction is not capable of fully removing artifacts caused by implants with high x-ray absorption, we have shown that the image quality of contrast-enhanced conebeam CT data are improved drastically. The impact of the artifacts on the

visibility varied between cases, and yet the overall visibility of the contrast-enhanced conebeam CT with metal artifact reduction improved in most the cases.

[299]

TÍTULO / TITLE: - Effects of glial cell line-derived neurotrophic factor on microRNA expression in a 6-hydroxydopamine-injured dopaminergic cell line.

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

REVISTA / JOURNAL: - J Neural Transm. 2013 Jun 16.

●● Enlace al texto completo (gratis o de pago) [1007/s00702-013-1031-](#)

[Z](#)

AUTORES / AUTHORS: - Li L; Chen H; Chen F; Li F; Wang M; Wang L; Li Y; Gao D

INSTITUCIÓN / INSTITUTION: - Department of Human Anatomy, Histology and Embryology, School of the Basic Medicine, The Fourth Military Medical University, No.17, Changle West Road, Xian, 710032, Shanxi, China.

RESUMEN / SUMMARY: - Parkinson's disease (PD) is the second most prevalent, progressive neurodegenerative disease and is characterized by the irreversible and selective loss of nigrostriatal dopaminergic (DA) neurons. Glial cell line-derived neurotrophic factor (GDNF), which is a potent protective factor for DA neurons, is considered a promising neuroprotective candidate for PD. microRNAs (miRNAs) have been shown to be involved in a number of neurodegenerative diseases. Both miRNAs and GDNF affect DA neuronal processes, but the molecular crosstalk between these molecules remains unclear. The present study aimed to evaluate whether GDNF modulates miRNA expression. We used microarray analysis and real-time polymerase chain reaction (RT-PCR) to investigate miRNAs expression in 6-hydroxydopamine (6-OHDA)-injured MN9D cells treated with GDNF for 30 min, 1 h, or 3 h. Our results showed that GDNF treatment led to differential expression of 143 miRNAs. To further identify mechanisms by which GDNF exerts its effects, we compared miRNAs and mRNAs microarray data at the 1-h time point. We found that various biological processes and pathways were regulated at the miRNA level following GDNF treatment. Collectively, these results provide evidence of the capacity of GDNF to influence miRNAs expression, suggesting a new mechanism of GDNF action.

[300]

TÍTULO / TITLE: - Anaplastic ependymoma with ependymoblastic multilayered rosettes.

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

REVISTA / JOURNAL: - Hum Pathol. 2013 Jun 18. pii: S0046-8177(13)00140-8. doi: 10.1016/j.humpath.2013.03.012.

- Enlace al texto completo (gratis o de pago)

1016/j.humpath.2013.03.012

AUTORES / AUTHORS: - Nobusawa S; Suzuki A; Nagaishi M; Isoda K; Ikota H; Yokoo H; Hirato J; Nakazato Y

INSTITUCIÓN / INSTITUTION: - Department of Human Pathology, Gunma University Graduate School of Medicine, Gunma 371-8511, Japan. Electronic address: nobusawa@showa.gunma-u.ac.jp.

RESUMEN / SUMMARY: - Anaplastic ependymoma, World Health Organization grade III, is a malignant glioma with ependymal differentiation characterized by high mitotic activity often accompanied by microvascular proliferation and necrosis, where, generally, much fewer ependymal rosettes are found than in ependymoma, World Health Organization grade II. Ependymal rosettes, forming a single layer of tumor cells, differ from ependymoblastic multilayered rosettes, which are characteristic histologic features of ependymoblastoma, a variant of central nervous system primitive neuroectodermal tumor. Here, we report an autopsy case involving a 24-year-old woman with a frontal lobe tumor, which showed the aggregation of true rosettes with multilayering of tumor cells resembling the ependymoblastoma histology. Molecular and cytogenetic analyses revealed the absence of 19q13.42 amplification, a specific molecular hallmark of ependymoblastoma and embryonal tumor with abundant neuropil and true rosettes, supporting the diagnosis of anaplastic ependymoma.

[301]

TÍTULO / TITLE: - Effects of brain-derived and glial cell line-derived neurotrophic factors on startle response and disrupted prepulse inhibition in mice of DBA/2J inbred strain.

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

REVISTA / JOURNAL: - Neurosci Lett. 2013 Jul 3. pii: S0304-3940(13)00603-4. doi: 10.1016/j.neulet.2013.06.056.

- Enlace al texto completo (gratis o de pago)

1016/j.neulet.2013.06.056

AUTORES / AUTHORS: - Naumenko VS; Bazovkina DV; Morozova MV; Popova NK

INSTITUCIÓN / INSTITUTION: - Department of Behavioral Neurogenomics, Institute of Cytology and Genetics, Siberian Division of the Russian Academy of Science, Novosibirsk, Russia. Electronic address: naumenko2002@bionet.nsc.ru.

RESUMEN / SUMMARY: - Prepulse inhibition (PPI), the reduction in acoustic startle reflex when it is preceded by weak prepulse stimuli, is a measure of critical to normal brain functioning sensorimotor gating. PPI deficit was shown in a variety of psychiatric disorders including schizophrenia, and in DBA/2J mouse strain. In the current study, we examined the effects of brain-derived (BDNF) and glial cell line-derived (GDNF) neurotrophic factors on acoustic startle

response and PPI in DBA/2J mice. It was found that BDNF (300ng, i.c.v.) significantly increased amplitude of startle response and restored disrupted PPI in 7 days after acute administration. GDNF (800ng, i.c.v.) did not produce significant alteration neither in amplitude of startle response nor in PPI in DBA/2J mice. The reversal effect of BDNF on PPI deficit was unusually long-lasting: significant increase in PPI was found 1.5 months after single acute BDNF administration. Long-term ameliorative effect BDNF on disrupted PPI suggested the implication of epigenetic mechanism in BDNF action on neurogenesis. BDNF rather than GDNF could be a perspective drug for the treatment of sensorimotor gating impairments.

[302]

TÍTULO / TITLE: - Letter to the Editor: Diffuse glioma detection.

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

REVISTA / JOURNAL: - J Neurosurg. 2013 Aug;119(2):530-1. doi: 10.3171/2013.3.JNS13498. Epub 2013 Jun 7.

●● Enlace al texto completo (gratis o de pago) [3171/2013.3.JNS13498](#)

AUTORES / AUTHORS: - Tejada-Solis S; Diez-Valle R

INSTITUCIÓN / INSTITUTION: - Clinica Universidad de Navarra, Navarra, España.

[303]

TÍTULO / TITLE: - Sorafenib plus Daily Low-dose Temozolomide for Relapsed Glioblastoma: A Phase II Study.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Aug;33(8):3487-94.

AUTORES / AUTHORS: - Zustovich F; Landi L; Lombardi G; Porta C; Galli L; Fontana A; Amoroso D; Galli C; Andreuccetti M; Falcone A; Zagonel V

INSTITUCIÓN / INSTITUTION: - Istituto Oncologico Veneto-IRCCS, Medical Oncology 1 - Via Gattamelata, 64, 35128 Padova, Italy.

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RESUMEN / SUMMARY: - BACKGROUND: Bevacizumab has provided encouraging results in relapsed glioblastoma multiforme (GBM). Pre-clinical and clinical investigations also showed that continuous low-dose temozolomide has some antiangiogenic activity. Based on this evidence, a phase II trial was designed to investigate an oral regimen of sorafenib, an oral multikinase inhibitor, and metronomic temozolomide for relapsed GBM. PATIENTS AND METHODS: Forty-three patients (median age=60.0 years) naive for antiangiogenic agents received 400 mg sorafenib twice daily plus TMZ 40 mg/m(2)/day until disease progression. RESULTS: Toxicity, mostly grade 1-2, was manageable. Grade 3-4 toxicities were hand-foot syndrome (n=4), hypertension (n=2), and fatigue (n=3). Five patients (12%) achieved partial response, 18 (43%) stable disease, 20 (48%) showed progression. The median

time-to-progression was 3.2 months, 6-month progression-free survival was 26%, and median overall survival was 7.4 months. CONCLUSION: This combination of sorafenib and temozolomide was feasible and safe, showing some activity in patients with relapsed GBM.

[304]

TÍTULO / TITLE: - Deformable Anatomic Templates (DAT) Improve Analysis of Gliomas with Minimal Mass Effect in Eloquent Areas.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 May 30.

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

[1227/01.neu.0000431479.87160.e2](https://doi.org/10.1227/01.neu.0000431479.87160.e2)

AUTORES / AUTHORS: - Kumar VA; Hamilton J; Hayman LA; Kumar AJ; Rao G; Weinberg JS; Sawaya R; Prabhu SS

INSTITUCIÓN / INSTITUTION: - 1Department of Diagnostic Radiology and 2Department of Neurosurgery, The University of Texas MD Anderson Cancer Center, Houston, TX 3Anatom-e Information Systems, Ltd., Houston, TX.

RESUMEN / SUMMARY: - BACKGROUND:: Despite improvements in advanced MR imaging and intraoperative mapping, there remain cases where it is difficult to determine if viable eloquent structures are involved by a glioma. A novel software program, deformable anatomic templates (DAT), rapidly embeds the normal location of eloquent cortex and functional tracts in the MR images of glioma-bearing brain. OBJECTIVE:: To investigate the feasibility of the DAT technique in patients with gliomas related to eloquent brain. METHODS:: Forty cases of gliomas (grade II-IV) with minimal mass effect were referred for a prospective pre- and postoperative DAT analysis. The DAT results were compared to the patient's fMRI, DTI, operative stimulation and new postoperative clinical deficits. RESULTS:: Fifteen of the 40 glioma patients had overlap between tumor and eloquent structures. Immediate postoperative neurological deficits were seen in 9 cases in which the DAT showed the eloquent area both within the tumor and within or at the edge of the resection cavity. In 6 cases with no deficits, DAT placed the eloquent area in the tumor but outside of the resection cavity. CONCLUSION:: This is proof-of-concept that DAT can improve the analysis of diffuse gliomas of any grade, by efficiently alerting the surgeon to the possibility of eloquent area invasion. The technique is especially helpful in diffuse glioma, as these tumors tend to infiltrate rather than displace eloquent structures. DAT is limited by tract displacement in gliomas which produce moderate to severe mass effect.

[305]

TÍTULO / TITLE: - 143 Spinal cord astrocytomas: a modern 20-year experience at a single institution.

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

REVISTA / JOURNAL: - Neurosurgery. 2013 Aug;60 Suppl 1:167. doi: 10.1227/01.neu.0000432734.49026.0e.

- Enlace al texto completo (gratis o de pago)

[1227/01.neu.0000432734.49026.0e](#)

AUTORES / AUTHORS: - Babu R; Karikari I; Owens TR; Bagley CA

RESUMEN / SUMMARY: - INTRODUCTION: There are currently no clear treatment guidelines for the management of spinal cord astrocytomas. Additionally there is no conclusive evidence for the surgical resection of these tumors, with some studies even demonstrating worse survival with surgery. However, most studies have examined patients treated prior to the routine use of magnetic resonance imaging and advanced microsurgical techniques. In this study, the authors have examined the effect of resection on survival and neurological outcome in a modern cohort of patients with spinal cord astrocytomas. METHODS: A retrospective review was performed of patients with spinal cord astrocytomas treated at the Duke University Medical Center from 1992 to 2012. Univariate and multivariate analyses were utilized to identify variables associated with survival. RESULTS: A total of 46 consecutive patients were identified and included in the analysis, most of whom had low grade tumors (63.0%). The majority of patients (67.4%) underwent surgical resection, with the remaining only receiving biopsy. Of those who underwent resection, only 12.5% of patients underwent gross total resection, all of whom had low grade astrocytomas. Of all patients, 30.7% worsened compared to their preoperative baseline. The occurrence of worsening increased with high tumor grade (52.9% vs 27.6%, $P = .086$) and an increased extent of resection (66.7% vs 18.8%, $P = .0069$). Resection did not provide a survival benefit compared to biopsy alone ($P = .53$). Multivariate analysis revealed high grade histology (HR: 11.3; 95%CI: 2.41-53.2; $P = .0021$), tumor dissemination (HR:4.24;95%CI:1.22-14.8; $P = .023$), and an increasing number of tumor involved levels (HR:1.31;95%CI:0.99-1.74; $P = .058$) to be associated with worse survival. CONCLUSION: As surgical intervention is associated with a higher rate of neurological complications and lacks a clear benefit, the resection of spinal cord astrocytomas should be reserved for select cases and should be utilized sparingly. Synthes Skull Base Surgery Award.

[306]

TÍTULO / TITLE: - Radiation-induced upregulation of telomerase activity escapes PI3-kinase inhibition in two malignant glioma cell lines.

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

REVISTA / JOURNAL: - Int J Oncol. 2013 Aug;43(2):375-82. doi: 10.3892/ijo.2013.1970. Epub 2013 May 31.

- Enlace al texto completo (gratis o de pago) [3892/ijo.2013.1970](#)

AUTORES / AUTHORS: - Millet P; Granotier C; Etienne O; Boussin FD

INSTITUCIÓN / INSTITUTION: - CEA, DSV-IRCM-SCSR, Laboratory of Radiopathology, UMR 967, F-92260 FontenayauxRoses, France.

RESUMEN / SUMMARY: - Tumor relapse after radiotherapy is a great concern in the treatment of high-grade gliomas. Inhibition of the PI3-kinase/AKT pathway is known to radiosensitize cancer cells and to delay their DNA repair after irradiation. In this study, we show that the radiosensitization of CB193 and T98G, two high-grade glioma cell lines, by the PI3K inhibitor LY294002, correlates with the induction of G1 and G2/M arrest, but is inconsistently linked to a delayed DNA double-strand break (DSBs) repair. The PI3K/AKT pathway has been shown to activate radioprotective factors such as telomerase, whose inhibition may contribute to the radiosensitization of cancer cells. However, we show that radiation upregulates telomerase activity in LY-294002-treated glioma cells as well as untreated controls, demonstrating a PI3K/AKT-independent pathway of telomerase activation. Our study suggests that radiosensitizing strategies based on PI3-kinase inhibition in high-grade gliomas may be optimized by additional treatments targeting either telomerase activity or telomere maintenance.

[307]

TÍTULO / TITLE: - Response after Surgical Resection of Metastatic Pheochromocytoma and Paraganglioma: Can Postoperative Biochemical Remission Be Predicted?

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

REVISTA / JOURNAL: - J Am Coll Surg. 2013 Jul 25. pii: S1072-7515(13)00322-0. doi: 10.1016/j.jamcollsurg.2013.04.027.

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

1016/j.jamcollsurg.2013.04.027

AUTORES / AUTHORS: - Ellis RJ; Patel D; Prodanov T; Sadowski S; Nilubol N; Adams K; Steinberg SM; Pacak K; Kebebew E

INSTITUCIÓN / INSTITUTION: - Endocrine Oncology Branch, National Cancer Institute, National Institutes of Health, Bethesda, MD; Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA.

RESUMEN / SUMMARY: - BACKGROUND: Aggressive surgical resection with intent to cure and surgical debulking procedures are commonly recommended in patients with metastatic pheochromocytoma and paraganglioma. To date there are no data on operative outcomes of patients after surgical resection of metastatic pheochromocytoma and paraganglioma to determine if such an approach is appropriate and what factors may be associated with a favorable outcome. STUDY DESIGN: We performed a retrospective analysis of 30 patients with metastatic pheochromocytoma/paraganglioma who underwent surgical treatment. Clinical characteristics and genetic factors were analyzed as predictors of biochemical response to surgery. RESULTS: Thirty patients underwent a total of 42 operations, with a median follow-up time of 24 months

(range 1 to 114 months). Complete disease resection (R0/R1) was achieved in 18 (42.9%) cases; 24 cases (57.1%) were debulking (R2) procedures without intent to cure. Complete biochemical remission was achieved in 10 (23.8%) cases and partial biochemical response was achieved in 23 (54.8%) cases. Patients with disease confined to the abdomen were more likely to achieve and maintain a biochemical response postoperatively than those with extra-abdominal disease ($p = 0.0003$). Debulking operations were significantly less likely to achieve or maintain biochemical palliation, with only 1 patient maintaining a biochemical response 12 months postoperatively ($p < 0.0001$). Patients were less likely to obtain pharmacologic independence after debulking ($p = 0.0003$), with only 2 (8.3%) not requiring pharmacotherapy 6 months after the intervention. Factors not associated with biochemical response to surgery include sex, family history, SDHB mutation status, systemic therapy, and preoperative biochemical profile. CONCLUSIONS: Depending on the extent of disease, patients with metastatic pheochromocytoma/paraganglioma can benefit from aggressive operative intervention and resection with intent to cure. Debulking procedures are unlikely to achieve clinically significant biochemical response, with any biochemical response achieved being very short-lived.

[308]

TÍTULO / TITLE: - Detection of meningioma metastasis to liver and lung using somatostatin receptor scintigraphy.

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

REVISTA / JOURNAL: - Clin Nucl Med. 2013 Aug;38(8):668-70. doi: 10.1097/RLU.0b013e31829962ac.

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

[1097/RLU.0b013e31829962ac](#)

AUTORES / AUTHORS: - Lanfranchi M; Nikpoor N

INSTITUCIÓN / INSTITUTION: - From the Department of Radiology, Tufts Medical Center and Tufts University School of Medicine, Boston, MA.

RESUMEN / SUMMARY: - Extracranial meningioma metastasis is rare. We report a case of a 74-year-old Caucasian man with intracranial recurrence of atypical meningioma treated with a combination of surgical resection and gamma knife radiotherapy over a 4-year period. Somatostatin receptor scintigraphy using In pentreotide for surveillance of tumor recurrence showed multiple pulmonary and hepatic metastases.

[309]

TÍTULO / TITLE: - Significant improvement of fibromyalgia symptoms after excision of large meningioma - a case report.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Jun 14.

- Enlace al texto completo (gratis o de pago)

[3109/02688697.2013.804490](https://doi.org/10.1002/ajmg.b.3109)

AUTORES / AUTHORS: - Bhatti MI; Hollingworth P; Leach P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital of Wales, Cardiff, UK.

RESUMEN / SUMMARY: - We report a very unusual case of a 42-year-old patient with confirmed fibromyalgia and juvenile onset arthritis whose symptoms dramatically improved after surgical excision of a large, dominant hemisphere, parafalcine meningioma.

[310]

TÍTULO / TITLE: - Neural substrates for heightened anxiety in children with brain tumors.

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

REVISTA / JOURNAL: - Dev Neuropsychol. 2013 Jul;38(5):337-51. doi: 10.1080/87565641.2013.799673.

- Enlace al texto completo (gratis o de pago)

[1080/87565641.2013.799673](https://doi.org/10.1080/87565641.2013.799673)

AUTORES / AUTHORS: - Moitra E; Armstrong CL

INSTITUCIÓN / INSTITUTION: - a Department of Psychiatry and Human Behavior, Alpert Medical School of Brown University, Providence, Rhode Island.

RESUMEN / SUMMARY: - This study investigated anxiety symptoms' associations with cognitive functioning and tumor locus in pediatric brain tumor patients. Data from 91 patients were collected as part of a neuropsychological assessment. Significant relationships were found between anxiety symptoms and mental set shifting (Wisconsin Card Sorting). Analyses revealed patients with right cortical tumors or left cerebellar tumors had significantly greater anxiety than those with midline/bilateral tumor and those with left cortical or right cerebellar tumors. Results support the specific risk of anxiety with right cortical and left cerebellar tumors. Results highlight the association of anxiety and one important element of executive functioning.

[311]

TÍTULO / TITLE: - Differences of SiHa (human cancer of cervix) and BMG -1 (brain glioma) cell lines as 2D and 3D cultures.

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

REVISTA / JOURNAL: - J Cell Physiol. 2013 Jul 23. doi: 10.1002/jcp.24433.

- Enlace al texto completo (gratis o de pago) [1002/jcp.24433](https://doi.org/10.1002/jcp.24433)

AUTORES / AUTHORS: - Ravi M; Sah S; Bhammar R

INSTITUCIÓN / INSTITUTION: - Department of Human Genetics, Faculty of Biomedical Sciences, Technology and Research, Sri Ramachandra University, Porur, Chennai, 600116, India.

RESUMEN / SUMMARY: - Cell cultures have seen much progress in the numbers available cell lines, their applications and culture techniques. 3 dimensional cultures and co-cultures are examples of strategies that bring in vitro conditions closer to natural in vivo systems. We describe here, the formation of cell aggregates in 3 dimensional conditions for the cell lines SiHa and BMG-1 utilizing agarose hydrogels. The optimal conditions for best aggregate formation were identified and the culture phases for the cell lines as monolayers and as aggregates were compared. Differences in protein profiles, susceptibility to a genotoxic drug and the antigenic properties of the protein extracts of the two cell lines, as can be induced by their aggregate formation were studied. The results from the four approaches indicate the usefulness of culturing cells as aggregates. Such systems using simple material and methods offer us an efficient way of utilizing cell lines for a variety of applications. J. Cell. Physiol. © 2013 Wiley Periodicals, Inc.

[312]

TÍTULO / TITLE: - An unusual case of Cowden-like syndrome, neck paraganglioma and pituitary adenoma.

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

REVISTA / JOURNAL: - Head Neck. 2013 Jun 26. doi: 10.1002/hed.23420.

●● [Enlace al texto completo \(gratis o de pago\) 1002/hed.23420](#)

AUTORES / AUTHORS: - Efstathiadou ZA; Sapránidis M; Anagnostis P; Kita MD
INSTITUCIÓN / INSTITUTION: - Department of Endocrinology, "Hippokration" General Hospital of Thessaloniki, Thessaloniki, Greece.

RESUMEN / SUMMARY: - Background: Pituitary tumors, paragangliomas and Cowden syndrome do not usually occur together. Methods: The synchronous presentation of papillary thyroid carcinoma and neck paraganglioma was revealed in a 43-year-old female, who had been diagnosed with a microprolactinoma one decade before and now presented with a constellation of characteristics that are components of Cowden syndrome, specifically macrocephaly, multiple skin papules, fibrocystic mammary disease and uterine leiomyofibroma. Results: Germline mutation analysis of PTEN, SDHB, SDHC and SDHD was performed with revelation of 3 polymorphic sites in introns 1, 4, 8 of PTEN gene and 1 polymorphic site in exon 1 of SDHB gene, but absence of known pathogenic mutations. Conclusion: The co-existence of Cowden-like syndrome, neck paraganglioma and pituitary adenoma is described for the first time, and could represent a novel genetic syndrome with an as yet unidentified common genetic basis. Head Neck, 2013.

[313]

TÍTULO / TITLE: - Tumor-suppressive effects of miR-29c on gliomas.

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

REVISTA / JOURNAL: - Neuroreport. 2013 Aug 21;24(12):637-45. doi: 10.1097/WNR.0b013e3283630126.

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

[1097/WNR.0b013e3283630126](https://doi.org/10.1097/WNR.0b013e3283630126)

AUTORES / AUTHORS: - Wang Y; Li Y; Sun J; Wang Q; Sun C; Yan Y; Yu L; Cheng D; An T; Shi C; Xu J; Wei C; Liu J; Wen Y; Zhao S; Li H; Zhang H; Xu H; Yu S

INSTITUCIÓN / INSTITUTION: - Departments of aNeuropathology
bNeuroimmunology, Tianjin Neurological Institute, Tianjin Medical University
General Hospital cTianjin Key Laboratory of Injuries, Variations and
Regeneration of Nervous System dKey Laboratory of Post-trauma Neuro-repair
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eDepartment of Biochemistry, Basic Medical College of Tianjin Medical
University, Tianjin, China.

RESUMEN / SUMMARY: - Although miR-29c has been shown to be expressed less in various kinds of solid cancers, its expression pattern and tumor-suppressive effects in gliomas remain largely unknown. In this study, we detected miR-29c in 10 nontumoral brain tissues and 60 gliomas of various grades and found that its labeling indexes were significantly lower in gliomas (53.7% for the nontumoral brain tissues, and 18.9, 5.5, and 1.8% for the WHO grade I-II, grade III, and grade IV glioma groups, respectively). We then overexpressed miR-29c in the SNB19 glioblastoma cell line and found that it markedly downregulated the expression level of CDK6, and accordingly increased the percentage of the tumor cells in the G1 phase from 44.5 to 69.1% and decreased the colony formation efficiency from 81.1 to 51.5%. miR-29c overexpression also increased the percentage of apoptotic cells from 27.2 to 54.8%, and led to a more than 50% decrease in the migratory and invasive abilities of the tumor cells. Our study shows that miR-29c can effectively block the proliferation of glioblastoma cells by inducing G1 arrest, promote their apoptosis, and inhibit their migration and invasion. At least some of its tumor-suppressive effects are mediated by specifically downregulating the expression of CDK6. Therefore, miR-29c can be used as a tumor suppressor in the gene therapy of malignant gliomas.

[314]

TÍTULO / TITLE: - Congenital Glioblastoma Multiforme: Complete Resection with Long-Term Survival and a Novel Technique of Contralateral Cystoventriculostomy.

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

REVISTA / JOURNAL: - Pediatr Neurosurg. 2013 Jul 6.

●● Enlace al texto completo (gratis o de pago) [1159/000351411](https://doi.org/10.1159/000351411)

AUTORES / AUTHORS: - Boukas A; Panaretos P; Cowie C; Nicholson C; Jenkins A

INSTITUCIÓN / INSTITUTION: - Neurosurgical Department, Regional Neurosciences Centre, Royal Victoria Infirmary, Newcastle Upon Tyne, UK.

RESUMEN / SUMMARY: - Congenital glioblastomas are rare primary tumours of the central nervous system with poor prognosis if left untreated. We report the case of a 4-week-old infant with such a tumour treated by surgical excision and a course of postoperative chemotherapy. After the chemotherapy, the patient displayed a neurological deterioration and follow-up magnetic resonance imaging (MRI) scans revealed no signs of recurrence, but showed entrapment and significant distension of the right lateral ventricle. A novel technique of contralateral cystoventriculostomy was performed to attempt to decompress the cyst and improve the infant's neurological status. After surgery there was a significant neurological improvement, and 30 months after resection the child is alive, with mild hemiparesis and no signs of recurrence on follow-up MRI scan. The cystoventriculostomy is patent and continues to decompress the encapsulated ventricle.

[315]

TÍTULO / TITLE: - Synergistic interactions between camptothecin and EGFR or RAC1 inhibitors and between imatinib and Notch signaling or RAC1 inhibitors in glioblastoma cell lines.

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

REVISTA / JOURNAL: - Cancer Chemother Pharmacol. 2013 Aug;72(2):329-40. doi: 10.1007/s00280-013-2197-7. Epub 2013 Jun 5.

●● Enlace al texto completo (gratis o de pago) [1007/s00280-013-2197-](#)

[7](#)

AUTORES / AUTHORS: - Sooman L; Ekman S; Andersson C; Kultima HG; Isaksson A; Johansson F; Bergqvist M; Blomquist E; Lennartsson J; Gullbo J

INSTITUCIÓN / INSTITUTION: - Rudbeck Laboratory, Department of Radiation, Oncology and Radiation Science, Section of Oncology, Uppsala University, Dag Hammarskjölds väg 20, 751 85, Uppsala, Sweden, linda.sooman@onkologi.uu.se.

RESUMEN / SUMMARY: - PURPOSE: The current treatment strategies for glioblastoma have limited health and survival benefits for the patients. A common obstacle in the treatment is chemoresistance. A possible strategy to evade this problem may be to combine chemotherapeutic drugs with agents inhibiting resistance mechanisms. The aim with this study was to identify molecular pathways influencing drug resistance in glioblastoma-derived cells and to evaluate the potential of pharmacological interference with these pathways to identify synergistic drug combinations. METHODS: Global gene expressions and drug sensitivities to three chemotherapeutic drugs (imatinib, camptothecin and temozolomide) were measured in six human glioblastoma-derived cell lines. Gene expressions that correlated to drug sensitivity or resistance were identified and mapped to specific pathways. Selective inhibitors

of these pathways were identified. The effects of six combinations of inhibitors and chemotherapeutic drugs were evaluated in glioblastoma-derived cell lines. Drug combinations with synergistic effects were also evaluated in non-cancerous epithelial cells. RESULTS: Four drug combinations had synergistic effects in at least one of the tested glioblastoma-derived cell lines; camptothecin combined with gefitinib (epidermal growth factor receptor inhibitor) or NSC 23766 (ras-related C3 botulinum toxin substrate 1 inhibitor) and imatinib combined with DAPT (Notch signaling inhibitor) or NSC 23766. Of these, imatinib combined with DAPT or NSC 23766 did not have synergistic effects in non-cancerous epithelial cells. Two drug combinations had at least additive effects in one of the tested glioblastoma-derived cell lines; temozolomide combined with gefitinib or PF-573228 (focal adhesion kinase inhibitor). CONCLUSION: Four synergistic and two at least additive drug combinations were identified in glioblastoma-derived cells. Pathways targeted by these drug combinations may serve as targets for future drug development with the potential to increase efficacy of currently used/evaluated chemotherapy.

[316]

TÍTULO / TITLE: - Involvement of FOS-mediated miR-181b/miR-21 signalling in the progression of malignant gliomas.

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

REVISTA / JOURNAL: - Eur J Cancer. 2013 Jun 26. pii: S0959-8049(13)00407-3. doi: 10.1016/j.ejca.2013.05.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.ejca.2013.05.010](#)

AUTORES / AUTHORS: - Tao T; Wang Y; Luo H; Yao L; Wang L; Wang J; Yan W; Zhang J; Wang H; Shi Y; Yin Y; Jiang T; Kang C; Liu N; You Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of Nanjing Medical University, Nanjing 210029, China.

RESUMEN / SUMMARY: - Recently, a group of microRNAs (miRNAs) were shown to be dysregulated in gliomas, and involved in glioma development. However, the effect of miRNA-miRNA functional networks on gliomas is poorly understood. In this study, we identified that FBJ murine osteosarcoma viral oncogene homolog (FOS)-mediated miR-181b/miR-21 signalling was critical for glioma progression. Using microarrays and quantitative RT-PCR (qRT-PCR), we found increased FOS in high grade gliomas. FOS depletion (via FOS-shRNA), inhibited invasion and promoted apoptosis in glioma cells. Using microarrays, combined with Pearson correlation analysis, we found FOS positively correlated with miR-21 expression. Reduction of FOS inhibited miR-21 expression by binding to the miR-21 promoter using luciferase reporter assays. Introduction of miR-21 abrogated FOS knockdown-induced cell invasion and apoptosis. Moreover, bioinformatics and luciferase reporter assays showed that miR-181b modulated FOS expression by directly targeting the binding site within the 3'UTR. Expression of FOS with a FOS cDNA lacking

3'UTR overrided miR-181b-induced miR-21 expression and cell function. Finally, immunohistochemistry (IHC) and in situ hybridisation (ISH) analysis revealed a significant correlation in miR-181b, FOS and miR-21 expression in nude mouse tumour xenograft and human glioma tissues. To our knowledge, it is the first time to demonstrate that miR-181b/FOS/miR-21 signalling plays a critical role in the progression of gliomas, providing important clues for understanding the key roles of transcription factor mediated miRNA-miRNA functional network in the regulation of gliomas.

[317]

TÍTULO / TITLE: - Expression of ki-67 and p53 in meningiomas.

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

REVISTA / JOURNAL: - Neoplasma. 2013;60(5):480-5. doi: 10.4149/neo_2013_062.

●● Enlace al texto completo (gratis o de pago) [4149/neo_2013_062](#)

AUTORES / AUTHORS: - Pavelin S; Becic K; Forempoher G; Mrklic I; Pogorelic Z; Titlic M; Andelinovic S

RESUMEN / SUMMARY: - Meningiomas account for about 30% of all primary brain tumors. It is difficult to predict the behaviour of meningiomas, and identification of protein markers responsible for the regulation of cell proliferation can be very helpful. The aim of this study was to evaluate immunohistochemical expression of Ki-67 and p53 in 170 meningiomas. A total number of 170 meningioma samples were classified according to WHO, immunohistochemically stained for Ki-67 and p53 and analysed using light microscope. Of 170 meningiomas analysed, 142 were grade I, 17 grade II and 11 grade III. Female to male ratio was 1.42:1. Statistically significant correlation was found between tumor grade and Ki-67 ($p < 0.001$). There was significant correlation between Ki-67 levels and tumor subtypes ($p = 0.009$). The optimal cut-off value for Ki-67 was 3.195. Tumors with $Ki-67 \leq 3.195$ were 2 cm smaller than tumors with $Ki-67 > 3.195$. Statistically significant correlation was found regarding p53 expression and tumor size ($p = 0.034$). No correlation was established between Ki-67 or p53 and location of the tumor. According to positive correlation between tumor grade and subtype with Ki-67 levels, as well as positive correlation between Ki-67 and p53 with tumor size, indicate that Ki-67 and p53 might have influence on meningioma development and progression. Keywords: meningioma, Ki-67, p53, immunohistochemistry.

[318]

TÍTULO / TITLE: - Let-7b expression determines response to chemotherapy through the regulation of Cyclin D1 in Glioblastoma.

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

REVISTA / JOURNAL: - J Exp Clin Cancer Res. 2013 Jun 27;32(1):41. doi: 10.1186/1756-9966-32-41.

●● Enlace al texto completo (gratis o de pago) [1186/1756-9966-32-41](https://doi.org/10.1186/1756-9966-32-41)

AUTORES / AUTHORS: - Guo Y; Yan K; Fang J; Qu Q; Zhou M; Chen F

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RESUMEN / SUMMARY: - BACKGROUND: Glioblastoma is the most common type of primary brain tumors. Cisplatin is a commonly used chemotherapeutic agent for Glioblastoma patients. Despite a consistent rate of initial responses, cisplatin treatment often develops chemoresistance, leading to therapeutic failure. Cellular resistance to cisplatin is of great concern and understanding the molecular mechanisms is an utter need. METHODS: Glioblastoma cell line U251 cells were exposed to increasing doses of cisplatin for 6 months to establish cisplatin-resistant cell line U251R. The differential miRNA expression profiles in U251 and U251R cell lines were identified by microarray analysis and confirmed by Q-PCR. MiRNA mimics were transfected into U251R cells, and cellular response to cisplatin-induced apoptosis and cell cycle distribution were examined by FACS analysis. RESULTS: U251R cells showed 3.1-fold increase in cisplatin resistance compared to its parental U251 cells. Microarray analysis identified Let-7b and other miRNAs significantly down-regulated in U251R cells compared to U251 cells. Transfection of Let-7b mimics greatly re-sensitized U251R cells to cisplatin, while transfection of other miRNAs has no effect or slightly effect. Cyclin D1 is predicted as a target of Let-7b through bioinformatics analysis. Over-expression of Let-7b mimics suppressed cyclin D1 protein expression and inhibited cyclin D1-3'-UTR luciferase activity. Knockdown of cyclin D1 expression significantly increased cisplatin-induced G1 arrest and apoptosis. CONCLUSIONS: Collectively, our results indicated that cisplatin treatment leads to Let-7b suppression, which in turn up-regulates cyclin D1 expression. Let-7b may serve as a marker of cisplatin resistance, and can enhance the therapeutic benefit of cisplatin in glioblastoma cells.

[319]

TÍTULO / TITLE: - Disseminated Encephalomyelitis-Like Central Nervous System Neoplasm in Childhood.

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

REVISTA / JOURNAL: - J Child Neurol. 2013 Jul 19.

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

[1177/0883073813495444](https://doi.org/10.1177/0883073813495444)

AUTORES / AUTHORS: - Zhao J; Bao X; Fu N; Ye J; Li T; Yuan Y; Zhang C; Zhang Y; Zhang Y; Qin J; Wu X

INSTITUCIÓN / INSTITUTION: - 1Department of Pediatrics, Peking University First Hospital, Beijing, China.

RESUMEN / SUMMARY: - A malignant neoplasm in the central nervous system with diffuse white matter changes on magnetic resonance imaging (MRI) is rare in children. It could be misdiagnosed as acute disseminated encephalomyelitis. This report presents our experience based on 4 patients (3 male, 1 female; aged 7-13 years) whose MRI showed diffuse lesions in white matter and who were initially diagnosed with acute disseminated encephalomyelitis. All of the patients received corticosteroid therapy. After brain biopsy, the patients were diagnosed with gliomatosis cerebri, primitive neuroectodermal tumor and central nervous system lymphoma. We also provide literature reviews and discuss the differentiation of central nervous system neoplasm from acute disseminated encephalomyelitis.

[320]

TÍTULO / TITLE: - The miR-92b functions as a potential oncogene by targeting on Smad3 in glioblastomas.

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

REVISTA / JOURNAL: - Brain Res. 2013 Jul 26. pii: S0006-8993(13)01018-4. doi: 10.1016/j.brainres.2013.07.031.

- Enlace al texto completo (gratis o de pago)

[1016/j.brainres.2013.07.031](#)

AUTORES / AUTHORS: - Wu ZB; Cai L; Lin SJ; Lu JL; Yao Y; Zhou LF

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Huashan Hospital, Fudan University, 12# Wulumuqi middle Road, Shanghai 200040, China; Department of Neurosurgery, First Affiliated Hospital of Wenzhou Medical University, Wenzhou 325000, China.

RESUMEN / SUMMARY: - MicroRNAs(miR) play an important role in cell growth, differentiation, proliferation and apoptosis, which can function either as oncogenes or as tumor suppressors in their effect on tumor growth. Smad3 is often underexpressed in very diverse types of malignant tumors and has an important tumor suppressive function; however, the underlying mechanism in solid cancer including glioblastomas(GBM) is not fully explored. The aim of this study is to explore the role of miR-92b in regulation of smad3 in GBM. In our study, we found that miR-92b expression was significantly increased in GBM tissues compared with normal brain tissues by Q-RT-PCR and in situ hybridization (P<0.01). However, expression of smad3 in GBM samples was significantly reduced compared with normal brain tissues by western blot and immunohistochemistry (P<0.05). Using 3'UTR luciferase reporter gene assay, we found that miR-92b directly affected smad3 expression in GBM cells by targeting the 3'-untranslated region. Silencing of miR-92b was able to significantly inhibit the viability of GBM cells in three GBM cell lines through up-regulating the TGF-beta/smad3/p21 signaling pathway in vitro. Furthermore, the tumor growth and the weight of U87 cells in the miR-92b inhibitor group were significantly inhibited when compared with that of the control group in vivo. Our

data demonstrated that miR-92b may be considered as a tumor oncogene to promote GBM cell proliferation, and thus may serve as a potentially useful target for development of miRNA-based therapies in the future.

[321]

TÍTULO / TITLE: - Vandetanib combined with a p38 MAPK inhibitor synergistically reduces glioblastoma cell survival.

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

REVISTA / JOURNAL: - Med Oncol. 2013 Sep;30(3):638. doi: 10.1007/s12032-013-0638-0. Epub 2013 Jun 20.

●● Enlace al texto completo (gratis o de pago) [1007/s12032-013-0638-](#)

[0](#)

AUTORES / AUTHORS: - Sooman L; Lennartsson J; Gullbo J; Bergqvist M; Tsakonas G; Johansson F; Edqvist PH; Ponten F; Jaiswal A; Navani S; Alafuzoff I; Popova S; Blomquist E; Ekman S

INSTITUCIÓN / INSTITUTION: - Section of Oncology, Department of Radiology, Oncology and Radiation Sciences, Rudbeck Laboratory, 751 85, Uppsala, Sweden, linda.sooman@onkologi.uu.se.

RESUMEN / SUMMARY: - The survival for patients with high-grade glioma is poor, and only a limited number of patients respond to the therapy. The aim of this study was to analyze the significance of using p38 MAPK phosphorylation as a prognostic marker in high-grade glioma patients and as a therapeutic target in combination chemotherapy with vandetanib. p38 MAPK phosphorylation was analyzed with immunohistochemistry in 90 high-grade glioma patients. Correlation between p38 MAPK phosphorylation and overall survival was analyzed with Mann-Whitney U test analysis. The effects on survival of glioblastoma cells of combining vandetanib with the p38 MAPK inhibitor SB 203580 were analyzed in vitro with the median-effect method with the fluorometric microculture cytotoxicity assay. Two patients had phosphorylated p38 MAPK in both the cytoplasm and nucleus, and these two presented with worse survival than patients with no detectable p38 MAPK phosphorylation or phosphorylated p38 MAPK only in the nucleus. This was true for both high-grade glioma patients (WHO grade III and IV, n = 90, difference in median survival: 6.1 months, 95 % CI [0.20, 23], p = 0.039) and for the subgroup with glioblastoma patients (WHO grade IV, n = 70, difference in median survival: 6.1 months, 95 % CI [0.066, 23], p = 0.043). The combination of vandetanib and the p38 MAPK inhibitor SB 203580 had synergistic effects on cell survival for glioblastoma-derived cells in vitro. In conclusion, p38 MAPK phosphorylation may be a prognostic marker for high-grade glioma patients, and vandetanib combined with a p38 MAPK inhibitor may be useful combination chemotherapy for glioma patients.

[322]

TÍTULO / TITLE: - Diagnosis of primary cerebral lymphomas: possible value of PCR testing in equivocal cases requiring rebiopsy.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Jul 22.

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

[3109/02688697.2013.817531](#)

AUTORES / AUTHORS: - Shaw A; Iyer V; Rooney N; Wragg R; Waits P; Roberts E; Haynes HR; Kurian KM

INSTITUCIÓN / INSTITUTION: - Department of Neuropathology, Frenchay Hospital, Bristol, UK.

RESUMEN / SUMMARY: - Introduction. Rebiopsy rates as high as 12% have been reported in previous studies of Primary Central Nervous System Lymphoma (PCNSL). This can lead to secondary operations, increasing risks of morbidity to the patient and costs for the NHS. Polymerase Chain Reaction (PCR) testing for clonality in haematological malignancies has been applied to cases of lymphoma outwith the central nervous system (CNS), but is less commonly used in the diagnosis of CNS lymphomas. Clonality in B- and T-cell populations may indicate the presence of malignancy. We aimed to identify factors to reduce the rebiopsy rate in PCNSL. Methods. We examined a cohort of 102 suspected cerebral lymphoma cases biopsied at Frenchay Hospital, Bristol over a 10-year period (2000-2010). Clinical data, including age, sex, location, pre-biopsy steroid use, the need for rebiopsy and histological diagnosis, were collected. We retrospectively reviewed rebiopsied cases and they subsequently underwent PCR testing for clonality. Results. Overall, 96/102 (94%) cases achieved a histological diagnosis after one or more biopsies. 81/96 (84%) of these were lymphomas involving the brain and 15/96 (16%) were spinal lymphomas. The majority of these were B-cell lymphomas (95/96 (99%)), with one case of peripheral T-cell lymphoma (1/96 (1%)). Due to insufficient histological evidence of PCNSL after the first biopsy, 9/102 (9%) of cases had required rebiopsy. In 7/9 (78%) of these cases, we undertook PCR testing for clonality on tissue from the first biopsy. We found 3/7 (43%) cases were monoclonal for B or T populations, raising the possibility of PCNSL. Conclusions. We recommend that all CNS lymphoproliferative lesions be assessed by haematopathologists, with the inclusion of PCR testing particularly in equivocal cases. This would reduce the number of patients going for rebiopsy and reduce the patient morbidity and costs for the NHS.

[323]

TÍTULO / TITLE: - Expression of alarin in ependymoma and choroid plexus tumors.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jun 13.

- Enlace al texto completo (gratis o de pago) [1007/s11060-013-1177-](http://1007/s11060-013-1177-4)

[4](#)

AUTORES / AUTHORS: - Eberhard N; Weis S; Reitsamer H; Kofler B

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, Laura Bassi Centre of Expertise THERAPEP, Research Program for Receptor Biochemistry and Tumor Metabolism, Paracelsus Medical University, Mullner-Hauptstrasse 48, Salzburg, Austria.

RESUMEN / SUMMARY: - Alarin, a 25 amino acid splice variant of the galanin-like peptide, was originally discovered in gangliocytes of neuroblastic tumors and shown to be expressed in ganglioneuroblastoma and ganglioneuroma but not in undifferentiated neuroblastoma. Recently, in vivo studies have elucidated the physiological functions of alarin in the central nervous system (CNS). Alarin was shown to stimulate food intake, increase body weight, induce luteinizing hormone secretion and stimulate fos-expression in rats; the anatomical localization for these functions correlates well with the varied distribution of the alarin peptide in the brain. Because alarin was originally detected in neuroblastic tumors and is present in a wide range of nuclei in the CNS, we determined in the present study the expression of alarin in a variety of CNS tumors. Immunohistochemical analysis of 179 tumor samples resulted in different alarin-like immunoreactivity (alarin-LI) intensities, which were score-rated from 0 (no alarin stainin), 1 (low intensity), 2 (medium intensity) to 3 (high intensity). Immunohistochemical analyses revealed score 2 or 3 alarin-LI in all choroid plexus tumors (100 %, 7/7) and in the majority of ependymomas (90 %, 52/58), but only in a minority of astrocytomas (15 %, 5/33), meningiomas (14 %, 7/49) and tumors of the cranial nerves (7 %, 1/15). In oligodendrogliomas (0 %, 0/12) and oligoastrocytoma (0 %, 0/5) alarin-LI was not detectable. The high specificity (83 %) of alarin-LI suggests that it might be used as a diagnostic marker for ependymoma in differentiating them from other gliomas such as astrocytomas and oligodendrogliomas.

[324]

TÍTULO / TITLE: - Cryptotanshinone inhibits human glioma cell proliferation by suppressing STAT3 signaling.

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

REVISTA / JOURNAL: - Mol Cell Biochem. 2013 Sep;381(1-2):273-82. doi: 10.1007/s11010-013-1711-x. Epub 2013 Jun 6.

- Enlace al texto completo (gratis o de pago) [1007/s11010-013-1711-](http://1007/s11010-013-1711-x)

[X](#)

AUTORES / AUTHORS: - Lu L; Li C; Li D; Wang Y; Zhou C; Shao W; Peng J; You Y; Zhang X; Shen X

INSTITUCIÓN / INSTITUTION: - Laboratory of Pharmacology and Toxicology, School of Pharmaceutical Science, Sun Yat-Sen University, Guangzhou, 510006, China.

RESUMEN / SUMMARY: - Malignant gliomas (MGs) are among the most aggressive types of cancers in the human brain. Frequent tumor recurrence caused by a lack of effective therapeutic approaches results in a poor prognosis. Signal transducer and activator of transcription 3 (STAT3), an oncogenic protein, is constitutively activated in MGs and predicts a poor clinical outcome. STAT3 therefore is considered to be a promising target for the treatment of MGs. Cryptotanshinone (CTS), the main bioactive compound from the root of *Salvia miltiorrhiza* Bunge, has been reported to have various pharmacological effects. However, little is known about its function in MG cells. In this study, we evaluated the effect of CTS on the proliferation of human glioma cell lines (T98G and U87). Our results revealed that CTS significantly suppresses glioma cell proliferation. The phosphorylation of STAT3 Tyr705, but not Ser727, was inhibited by CTS, and STAT3 nuclear translocation was attenuated. Overexpression of constitutively active mutant STAT3C reversed the inhibitory effect of CTS, while knockdown STAT3 showed a similar inhibitory effect as CTS treatment. Following the downregulation of STAT3-regulated proteins cyclinD1 and survivin, cell cycle progression significantly arrested in G1/G0 phase. These results indicate that CTS may be a potential antiproliferation agent for the treatment of MGs and that its mechanism may be related to the inhibition of STAT3 signaling.

[325]

TÍTULO / TITLE: - Cytologic Features during Intraoperative Assessment of Central Neurocytoma: A Report of Three Cases and Review of the Literature.

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

REVISTA / JOURNAL: - Acta Cytol. 2013 Jul 12;57(4):400-405.

●● [Enlace al texto completo \(gratis o de pago\) 1159/000350893](#)

AUTORES / AUTHORS: - Hernandez-Martinez SJ; De Leija-Portilla JO; Medellin-Sanchez R

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Unidad Medica de Alta Especialidad No. 25, Centro Medico del Noreste del Instituto Mexicano del Seguro Social, Monterrey, Mexico.

RESUMEN / SUMMARY: - Background: Central neurocytomas (CNs) are infrequent intraventricular tumors with features of neuronal differentiation that affect young adults and have an excellent prognosis after total resection. The main differential intraoperative diagnoses are oligodendrogliomas, ependymomas and non-Hodgkin's lymphomas; therefore, an accurate and precise intraoperative diagnosis is essential, making the cytologic features the hallmark for cytopathologists, surgical pathologists and neurosurgeons alike. Seven previous reports have described 18 cases of CNs and have addressed the cytodagnostic criteria during intraoperative assessment in the English medical literature. Cases : Three patients (23 years old/male, 29 years old/female and 28 years old/male) were evaluated during intraoperative

assessment as CNs. They showed intraventricular tumors that measured 6.5, 3.5 and 6.6 cm, respectively. The cytologic features common in these cases were: (1) monotonous or isomorphic round cells, (2) small nuclei with stippled or granular chromatin, and (3) acellular fibrillary areas or neuropil (islands). Other cytologic features often encountered were: rosette-like structures, micronucleoli, perinuclear haloes, well-formed capillary-sized vessels and calcifications. Conclusion: Differential diagnosis of CNs can be a diagnostic challenge. The integration of radiologic imaging and touch preparations taking into account specific cytologic features and frozen sections is necessary for an optimal intraoperative assessment.

[326]

TÍTULO / TITLE: - Ependymoma misdiagnosed as tuberculoma, misguided by overemphasis on MR spectroscopy in endemic area.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Jul 6.

- Enlace al texto completo (gratis o de pago) 1007/s00701-013-1811-0

[0](#)

AUTORES / AUTHORS: - Futane S; Salunke P; Sahoo S; Mulinani N; Vyas S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, PGIMER, Sector 12, Chandigarh, India, 160012, sfutane@gmail.com.

RESUMEN / SUMMARY: - Ependymomas and tuberculomas are common paediatric posterior fossa lesions in developing countries and may be confused with each other due to some overlapping features. The distinction is important as the treatment for each is entirely different. We have described three young children in whom clinical-radiological features and the lipid peak seen on MR spectroscopy suggested the diagnosis of posterior fossa tuberculomas. All of them were started on empirical anti-tuberculosis therapy (ATT). Increase in size/no response to anti-tuberculosis therapy was disregarded as a paradoxical response. Finally, with clinical-radiological signs worsening, surgical excision was undertaken. Histopathology revealed ependymoma in all three children. This report highlights the overdiagnosis of tuberculosis in endemic areas due to biased clinical approach compounded by false positive investigations. Tissue diagnosis, though difficult by minimally invasive methods, should be sought before initiating ATT. The attempts to establish a tissue diagnosis should be continued even after starting empirical therapy, rather than waiting for the response.

[327]

TÍTULO / TITLE: - Pontine Extraventricular Neurocytoma in a Child.

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

REVISTA / JOURNAL: - Pediatr Neurosurg. 2013 Jul 2.

●● Enlace al texto completo (gratis o de pago) [1159/000351576](#)

AUTORES / AUTHORS: - Hawasli AH; Haydon DH; Dahiya S; Smyth MD

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Washington University School of Medicine, Saint Louis, Mo., USA.

RESUMEN / SUMMARY: - Extraventricular neurocytomas mimic central neurocytomas histologically but are located outside the lateral and/or third ventricles. Pontine neurocytomas represent an extremely rare subset of extraventricular neurocytomas, and reports are limited to 2 adults followed under 28 months. The authors present the case of a 14-year-old boy who initially underwent near-total resection of a pontine extraventricular neurocytoma. One-year postoperative surveillance imaging revealed a small, local recurrence treated with intensity-modulated radiation therapy. This case details the diagnosis and management of the first reported pontine extraventricular neurocytoma in a child with 4.5-year follow-up data.

[328]

TÍTULO / TITLE: - Trigeminal Neuralgia Associated with Cerebellopontine Angle Lipoma in Childhood.

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

REVISTA / JOURNAL: - Pediatr Neurosurg. 2013 Jun 21.

●● Enlace al texto completo (gratis o de pago) [1159/000351550](#)

AUTORES / AUTHORS: - Egemen E; Borcek AO; Karaaslan B; Baykaner MK
INSTITUCIÓN / INSTITUTION: - Division of Paediatric Neurosurgery, Medical School of Gazi University, Ankara, Turkey.

RESUMEN / SUMMARY: - Cerebellopontine angle lipomas are rare and more rarely associated with trigeminal neuralgia especially in childhood. Medical treatment provides relief from the pain; however, the effect may not be permanent. Surgical treatment is associated with a high morbidity rate; therefore, surgery should be considered only in intractable cases. In this article we describe the clinical course and radiological features of a 6-year-old girl with a cerebellopontine angle lipoma who presented with a 4-year history of left-side trigeminal neuralgia, especially in the mandibular area. Magnetic resonance imaging revealed an extra-axial fatty mass at the level of the 'dorsal-entry zone' of the trigeminal nerve. The pain improved with carbamazepine therapy.

[329]

TÍTULO / TITLE: - Retraction Note to: Glioma grading: sensitivity, specificity, positive and negative predictive values of diffusion and perfusion imaging.

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

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

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1205-](#)

[4](#)

AUTORES / AUTHORS: - Arvinda HR; Kesavadas C; Sarma PS; Thomas B; Radhakrishnan VV; Gupta AK; Kapilamoorthy TR; Nair S

INSTITUCIÓN / INSTITUTION: - Department of Imaging Sciences & Interventional Radiology, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, 695011, India.

[330]

TÍTULO / TITLE: - Ginsenoside Rg3 induces apoptosis in the U87MG human glioblastoma cell line through the MEK signaling pathway and reactive oxygen species.

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

REVISTA / JOURNAL: - Oncol Rep. 2013 Jun 20. doi: 10.3892/or.2013.2555.

●● Enlace al texto completo (gratis o de pago) [3892/or.2013.2555](#)

AUTORES / AUTHORS: - Choi YJ; Lee HJ; Kang DW; Han IH; Choi BK; Cho WH
INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery and Medical Research Institute, Pusan National University Hospital, Busan 602-739, Republic of Korea.

RESUMEN / SUMMARY: - Ginsenoside is known to have potential cancer-preventive activities. The major active components in red ginseng consist of a variety of ginsenosides including Rg3, Rg5 and Rk1, each of which has different pharmacological activities. Among these, Rg3 has been reported to exert anticancer activities through inhibition of angiogenesis and cell proliferation. However, the effects of Rg3 and its molecular mechanism on glioblastoma multiforme (GBM) remain unclear. Therefore, it is essential to develop a greater understanding of this novel compound. In the present study, we investigated the effects of Rg3 on a human glioblastoma cell line and its molecular signaling mechanism. The mechanisms of apoptosis by ginsenoside Rg3 were related with the MEK signaling pathway and reactive oxygen species. Our data suggest that ginsenoside Rg3 is a novel agent for the chemotherapy of GBM.

[331]

TÍTULO / TITLE: - Cilengitide response in ultra-low passage glioblastoma cell lines: relation to molecular markers.

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

REVISTA / JOURNAL: - J Cancer Res Clin Oncol. 2013 Aug;139(8):1425-31. doi: 10.1007/s00432-013-1457-6. Epub 2013 Jun 8.

●● Enlace al texto completo (gratis o de pago) [1007/s00432-013-1457-](#)

[6](#)

AUTORES / AUTHORS: - Mullins CS; Schubert J; Schneider B; Linnebacher M; Classen CF

INSTITUCIÓN / INSTITUTION: - University Children's Hospital, University Medicine, Ernst-Heydemann-Strasse 8, 18057, Rostock, Germany, christina.mullins@uni-rostock.de.

RESUMEN / SUMMARY: - PURPOSE: In glioblastoma multiforme (GBM), a tumor still characterized by dismal prognosis, recent research focuses on novel-targeted compounds, in addition to standard temozolomide (TMZ) chemotherapy. One of these emerging compounds is cilengitide (CGT), which by binding to integrins (i.e., $\alpha v \beta 3$ and $\alpha v \beta 5$) may inhibit angiogenesis and also is directly cytotoxic to tumor cells by interfering with intracellular signaling pathways. METHODS: A total of ten patient-derived ultra-low passage GBM cell lines were treated with increasing doses of CGT, TMZ, and a combination of both substances. Inhibitory concentrations of 50 % (IC50) were determined for the single agents and as a combination. Cell lines were stratified according to MGMT promoter methylation. The expression of relevant integrins was assessed by flow cytometry. RESULTS: In monotherapy, all GBM cell lines showed higher sensitivity to CGT than to TMZ, as determined by IC50 values in relation to clinically relevant patient plasma levels. MGMT promoter methylation correlated with a significantly higher TMZ response, but tended to be associated with a lower CGT response. Response to CGT was not correlated with cell surface integrin expression as measured by flow cytometry. Finally, addition of CGT to TMZ enhanced growth inhibition, but only in those cell lines with a methylated MGMT promoter. CONCLUSIONS: As suggested by this analysis, patients with MGMT promoter-methylated GBM may benefit from addition of CGT to the standard TMZ treatment, while patients with MGMT promoter-unmethylated GBM may better respond to CGT monotherapy.

[332]

TÍTULO / TITLE: - Low-expression of microRNA-107 inhibits cell apoptosis in glioma by upregulation of SALL4.

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

REVISTA / JOURNAL: - Int J Biochem Cell Biol. 2013 Jun 28;45(9):1962-1973. doi: 10.1016/j.biocel.2013.06.008.

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

[1016/j.biocel.2013.06.008](http://dx.doi.org/10.1016/j.biocel.2013.06.008)

AUTORES / AUTHORS: - He J; Zhang W; Zhou Q; Zhao T; Song Y; Chai L; Li Y
INSTITUCIÓN / INSTITUTION: - School of Life Science and Technology, Harbin Institute of Technology, Harbin, PR China.

RESUMEN / SUMMARY: - Glioma is the most common highly malignant primary brain tumor. The molecular pathways that result in the pathogenesis of glioma remain elusive. In this study, we found microRNA-107 (miR-107) was downregulated in glioma tissues and cell lines. Our results revealed miR-107 overexpression suppressed cell proliferation in glioma cells, whereas miR-107 knockdown promoted cell growth in MO59K. miR-107 expression induced

apoptosis in glioma cells possibly through the increase in Fas (TNFRSF6)-associated via death domain (FADD) expression and activation of caspases-8 and -3/7. Moreover, the activity of caspase-8 in miR-107-overexpressing SHG44 cells was suppressed with FADD knockdown. The tumor growth in nude mice bearing miR-107-overexpressing SHG44 cells was blocked through apoptosis induction. Sal-like 4 (Drosophila) (SALL4) level was reduced upon miR-107 overexpression in glioma cells, and the inverse was observed upon miR-107 knockdown in MO59K. Using a luciferase reporter system, SALL4 3'-UTR-dependent luciferase activity was reduced by miR-107 mimics or increased by an inhibitor of miR-107. In SHG44, SALL4 downregulation triggered growth inhibition and activated FADD-mediated cell apoptosis pathway. The caspase-8 activity in miR-107-overexpressing SHG44 cells was suppressed with SALL4 upregulation. Furthermore, primary glioma tumors with low miR-107 expression show elevated SALL4 level. An obvious inverse correlation was observed between miR-107 expression and SALL4 level in clinical glioma samples. Therefore, our results demonstrate upregulation of miR-107 suppressed glioma cell growth through direct targeting of SALL4, leading to the activation of FADD/caspase-8/caspase-3/7 signaling pathway of cell apoptosis. These data suggest miR-107 is a potential therapeutic target against glioma.

[333]

TÍTULO / TITLE: - Protease activated receptor-1 and brain edema formation in glioma models.

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

REVISTA / JOURNAL: - Acta Neurochir Suppl. 2013;118:191-4. doi: 10.1007/978-3-7091-1434-6_35.

●● Enlace al texto completo (gratis o de pago) [1007/978-3-7091-1434-6_35](#)

AUTORES / AUTHORS: - Xie Q; Xi G; Gong Y; Keep R; Muraszko K; Hua Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Michigan, Ann Arbor, MI 48109-2200, USA.

RESUMEN / SUMMARY: - Objective: Our previous studies showed that thrombin contributes to brain edema in gliomas. The present study investigated the role of a thrombin receptor, protease activated receptor-1 (PAR-1), in edema formation in glioma models. Methods: These experiments were performed in Fischer 344 rats, PAR-1 knockout mice, and wild-type C57BL/6 mice controls. F98 glioma cells were infused into the right caudate. Animals were euthanized and the brains were used for measurements of brain edema and PAR-1 expression. Results: In rats, implantation of glioma cells resulted in significant brain edema in the ipsilateral hemisphere (82.6 +/- 1.4 vs. 78.1 +/- 0.9 % in the contralateral hemisphere, p < 0.01). By Western blot analysis and RT-PCR, we found that both protein and mRNA levels of PAR-1 were upregulated in the

glioma ($p < 0.01$). In mice, implantation of glioma cells also caused brain edema in the ipsilateral hemisphere ($p < 0.05$). Glioma-induced brain edema was less in PAR-1 knockout mice (day 12: 79.4 \pm 1.3 vs. 81.5 \pm 1.1 % in the wild-type mice, $p < 0.05$). Conclusion: PAR-1 plays a role in glioma-induced brain edema. Clarification of the role of PAR-1 in edema formation should help to develop new therapeutic strategies for gliomas.

[334]

TÍTULO / TITLE: - Pulsed low-dose irradiation of orthotopic glioblastoma multiforme (GBM) in a pre-clinical model: Effects on vascularization and tumor control.

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

REVISTA / JOURNAL: - Radiother Oncol. 2013 Jun 19. pii: S0167-8140(13)00242-9. doi: 10.1016/j.radonc.2013.05.022.

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

[1016/j.radonc.2013.05.022](#)

AUTORES / AUTHORS: - Dilworth JT; Krueger SA; Dabjan M; Grills IS; Torma J; Wilson GD; Marples B

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Beaumont Health System, Royal Oak, USA.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: To compare dose-escalated pulsed low-dose radiation therapy (PLRT) and standard radiation therapy (SRT). METHODS AND MATERIALS: Intracranial U87MG GBM tumors were established in nude mice. Animals received whole brain irradiation with daily 2-Gy fractions given continuously (SRT) or in ten 0.2-Gy pulses separated by 3-min intervals (PLRT). Tumor response was evaluated using weekly CT and [18F]-FDG-PET scans. Brain tissue was subjected to immunohistochemistry and cytokine bead array to assess tumor and normal tissue effects. RESULTS: Median survival for untreated animals was 18 (SE \pm 0.5) days. A significant difference in median survival was seen between SRT (29 \pm 1.8days) and PLRT (34.2 \pm 1.9days). Compared to SRT, PLRT resulted in a 31% ($p < 0.01$), 38% ($p < 0.01$), and 53% ($p = 0.01$) reduction in normalized tumor volume and a 48% ($p < 0.01$), 51% ($p < 0.01$), and 70% ($p < 0.01$) reduction in tumor growth rate following the administration of 10Gy, 20Gy, and 30Gy, respectively. Compared to untreated tumors, PLRT resulted in similar tumor vascular density, while SRT produced a 40% reduction in tumor vascular density ($p = 0.05$). Compared to SRT, PLRT was associated with a 28% reduction in degenerating neurons in the surrounding brain parenchyma ($p = 0.05$). CONCLUSIONS: Compared to SRT, PLRT resulted in greater inhibition of tumor growth and improved survival, which may be attributable to preservation of vascular density.

[335]

TÍTULO / TITLE: - Serum miR-21 is a diagnostic and prognostic marker of primary central nervous system lymphoma.

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

REVISTA / JOURNAL: - Neurol Sci. 2013 Jul 6.

●● Enlace al texto completo (gratis o de pago) [1007/s10072-013-1491-9](#)

AUTORES / AUTHORS: - Mao X; Sun Y; Tang J

INSTITUCIÓN / INSTITUTION: - Department of Clinical Laboratory, Yixing People's Hospital, No. 75, Tongzhen Guan Rd, Yixing, Wuxi, 214200, Jiangsu, China, clinical123@126.com.

RESUMEN / SUMMARY: - The standard of care for primary central nervous system lymphoma (PCNSL) is systemic chemotherapy with or without whole brain radiotherapy or intrathecal chemotherapy. In contrast to treatment for other brain tumors, efforts at resection are discouraged. However, it is difficult to distinguish PCNSL from other central nervous system tumors which need aggressive surgery in both CT and MRI images. In this study, we assessed whether measurement of miR-21 in the serum could improve diagnostic accuracy for PCNSL. We found that serum miR-21 significantly increased in PCNSL when compared with other brain tumors and normal controls in both test and validation cohort. Further, serum miR-21 could discriminate PCNSL from all controls with an area under the curve of 0.930 for the test cohort and 0.916 for the validation cohort in ROC analysis. Similar results were also obtained in the validation cohort. Besides, raised concentrations of miR-21 in serum could differentiate PCNSL from glioblastoma under the curve of 0.883 for the test cohort and 0.851 for the validation cohort in ROC analysis. Furthermore, Kaplan-Meier curve analysis ($p = 0.03$ for test cohort and 0.02 for validation cohort) and Multivariable Cox regression ($p = 0.03$ for test cohort and 0.01 for validation cohort) revealed serum miR-21 as an independent and powerful predictor of overall survival. Taken together, our results demonstrate that serum miR-21 may represent a diagnostic and prognostic marker for PCNSL.

[336]

TÍTULO / TITLE: - Indocyanine green videoangiography (ICGV) in parasagittal meningiomas surgery. Considerations on veins management and brain function preservation.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1475-6. doi: 10.1007/s00701-013-1784-z. Epub 2013 Jun 4.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1784-z](#)

AUTORES / AUTHORS: - Della Puppa A; d'Avella E; Volpin F; Rustemi O; Gioffre' G; Scienza R

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Padua University Hospital, Azienda Ospedaliera di Padova, via Giustiniani, 2, 35128, Padova, Italy, alessandro.dellapuppa@sanita.padova.it.

[337]

TÍTULO / TITLE: - Continuous Tamoxifen and Dose-dense Temozolomide in Recurrent Glioblastoma.

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

REVISTA / JOURNAL: - Anticancer Res. 2013 Aug;33(8):3383-9.

AUTORES / AUTHORS: - DI Cristofori A; Carrabba G; Lanfranchi G; Menghetti C; Rampini P; Caroli M

INSTITUCIÓN / INSTITUTION: - Neurosurgery, IRCCS Ca' Granda Foundation Ospedale Maggiore Policlinico - 22, F. Sforza street, Milan 20122, Italy. man.caroli@tin.it; andrea.dicristofori@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND: The current standard-of-care for glioblastoma (GBM) is represented by concomitant radiotherapy (RT) and temozolomide (TMZ), according to Stupp's protocol. Second-line treatments for GBM have not been yet defined. Tamoxifen is an anti-estrogen molecule with anti-neoplastic effects whose role is under investigation. tamoxifen is generally well tolerated but thromboembolic complications have been reported. In this study, we report our experience on the administration of tamoxifen plus dose-dense TMZ in patients with recurrent GBM. PATIENTS AND METHODS: All patients underwent surgical resection of GBM and completed concomitant RT and TMZ. Eligibility criteria also included evidence of GBM recurrence and good general conditions [Karnofsky Performance Score (KPS) >70] at recurrence. Patients with rapidly progressive disease, clearly unfavorable prognosis, or history of deep-venous thrombosis were excluded. The second-line treatment consisted of dose-dense TMZ (75-150 mg/m²) one week on/ one week off) plus daily tamoxifen (80 mg/m²). Follow-up was performed with contrast-enhanced brain Magnetic Resonance Imaging (MRI) every three months. RESULTS: Thirty-two patients (18 males, 14 females; median age 57 years) with GBM relapse were included. Median overall survival time (OS) and time to tumor progression after recurrence (TTP-2) were 17.5 and 7 months, respectively. Interestingly, no differences in OS and TTP-2 were noted in GBM between those with methylated and unmethylated MGMT. None of the patients had complications related to TMZ plus tamoxifen administration. CONCLUSION: The combinatorial administration of tamoxifen and TMZ appeared to be well-tolerated, and potentially effective in increasing the efficacy of dose-dense TMZ schedule as a second-line therapeutic strategy.

[338]

TÍTULO / TITLE: - Late adult onset optic pathway astrocytoma.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jun 18. pii: S0967-5868(13)00035-0. doi: 10.1016/j.jocn.2012.09.044.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.09.044](#)

AUTORES / AUTHORS: - Liu Y; Zhang-Nunes S; Zhu X; Xu X; Sun X; Wu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Shanghai First People's Hospital, Shanghai Jiao Tong University School of Medicine, 100 Haining Road, Shanghai 200080, China.

RESUMEN / SUMMARY: - A 70-year-old man presented with left-sided eye pain, impaired vision and restricted left ocular motility, later developing progressive visual decline with development of ataxia and incontinence. Fundoscopic examination revealed significant optic nerve head edema and hemorrhage on the left eye. Neuroimaging revealed an optic pathway mass, extending from the right optic nerve to the chiasm, which enlarged on serial imaging. After surgical excision of the mass, pathology showed a grade III astrocytoma. The patient died 16 months after presentation, which is longer than previously reported for late adult onset optic pathway astrocytoma. We believe that neuroimaging and pathological studies should be performed early in such patients to allow early diagnosis and intervention.

[339]

TÍTULO / TITLE: - Intra-tumoral ultrasonic aspirator delivery of HO-A novel approach to resecting highly vascularized intracranial tumors. Technical note and case report.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Jun 10. pii: S0303-8467(13)00166-2. doi: 10.1016/j.clineuro.2013.05.010.

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

[1016/j.clineuro.2013.05.010](#)

AUTORES / AUTHORS: - Ammirati M; Lamki TT; Pillai P; Powers C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Ohio State University, Wexner Medical Center, N-1027 Doan Hall, 410 West 10th Ave, Columbus, USA; Skull Base Neurosurgery & Radiosurgery, The Ohio State University, Wexner Medical Center, N-1027 Doan Hall, 410 West 10th Ave, Columbus, USA. Electronic address: Mario.Ammirati@osumce.edu.

[340]

TÍTULO / TITLE: - MicroRNA-203 down-regulation is associated with unfavorable prognosis in human glioma.

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

REVISTA / JOURNAL: - J Surg Oncol. 2013 Aug;108(2):121-5. doi: 10.1002/jso.23315. Epub 2013 Jun 29.

●● Enlace al texto completo (gratis o de pago) [1002/jso.23315](https://doi.org/10.1002/jso.23315)

AUTORES / AUTHORS: - He J; Deng Y; Yang G; Xie W

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Chongqing Red Cross Hospital, Chongqing City, China.

RESUMEN / SUMMARY: - BACKGROUND AND OBJECTIVES: MicroRNA-203 (miR-203) serves as a tumor suppressor or a tumor promoter in different human malignancies. However, its involvement in human gliomas is still unclear. The aim of this study was to investigate the clinical significance of miR-203 expression in gliomas. METHODS: Real-time quantitative PCR was employed to measure the expression level of miR-203 in clinical glioma tissues. RESULTS: The expression of miR-203 was reduced in high WHO grade glioma tissues compared with that in low WHO grade and normal brain tissues, and decreased with ascending tumor WHO grades ($P < 0.001$). The reduced miR-203 expression in gliomas was significantly associated with higher WHO grade ($P < 0.001$), lower KPS score ($P = 0.008$) and poorer disease-specific survival of patients ($P = 0.001$). More importantly, subgroup analyses according to tumor WHO grade revealed that the disease-specific survival of patients with low miR-203 expression in high WHO grades (III-IV) subgroup was significantly shorter than those with high miR-203 expression ($P < 0.001$), but no significant difference was found for patients in WHO grades I-II subgroup ($P = 0.08$). CONCLUSION: Our data validate an important clinical significance of miR-203 in gliomas, and reveal that it might be an intrinsic regulator of tumor progression and a potential prognostic factor for this dismal disease. J. Surg. Oncol. 2013; 108:121-125. © 2013 Wiley Periodicals, Inc.

[341]

TÍTULO / TITLE: - Cerebellar pilocytic astrocytoma in adults: a management paradigm for a rare tumour.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1431-5. doi: 10.1007/s00701-013-1790-1. Epub 2013 Jun 22.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1790-](https://doi.org/10.1007/s00701-013-1790-1)

[1](#)

AUTORES / AUTHORS: - Wade A; Hayhurst C; Amato-Watkins A; Lammie A; Leach P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital of Wales, Heath Park, Cardiff, CF14 4XW, UK.

RESUMEN / SUMMARY: - BACKGROUND: Pilocytic astrocytoma is one of the commonest subtypes of glioma to affect children. However, they are rarely diagnosed in patients over the age of 18 years. In adults, these tumours appear more frequently supra-tentorially than in the cerebellum and some reports suggest a different clinical course in adults. We reviewed ten patients aged 18 or over who had been operated on for cerebellar pilocytic astrocytoma to

assess the impact of tumour biology and extent of resection on outcome in adults. METHOD: Patients were identified from a neuropathology database and a retrospective chart review of ten patients was performed. Recorded data included patient demographics, tumour location, presenting features, radiological appearance, extent of surgical resection, tumour recurrence and Ki-67 proliferation index. RESULTS: Nine patients were men and one patient was a woman. Median follow up is 41.5 months (range 15-334 months). Complete surgical resection was achieved in nine of the patients operated in our institution. One patient had prior subtotal resection elsewhere. Tumour recurrence was seen only in the two patients with subtotal resection, at 7 and 25 years. Ki-67 ranged from <1 to 10 % and appears to have no correlation to recurrence. No patients in this series had adjuvant treatment. CONCLUSIONS: Cerebellar pilocytic astrocytomas in adults should be treated with macroscopic complete surgical resection whenever possible. If this is achieved, long-term survival rates are excellent, whereas subtotal resection carries a high risk of tumour recurrence. Ki-67 is less important prognostically than the extent of initial resection.

[342]

TÍTULO / TITLE: - Small cell glioblastoma or small cell carcinoma: A case report and review of the literature.

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

REVISTA / JOURNAL: - Clin Neuropathol. 2013 Jul-Aug;32(4):303-10.

AUTORES / AUTHORS: - Hilbrandt C; Sathyadas S; Dahlrot RH; Kristensen BW

INSTITUCIÓN / INSTITUTION: - Department of Pathology and Department of Oncology, Odense University Hospital, Denmark.

RESUMEN / SUMMARY: - It is often easy to distinguish between primary brain tumors and metastases based on morphology alone. However, in some cases immunohistochemistry (IHC) is necessary to obtain a diagnosis, but, as the present case report illustrates, this is not always straightforward. A 75-year old man was admitted to the hospital with left-sided loss of motor function. A MRI revealed a 6 cm tumor in the right temporoparietal area. The histology was consistent with both glioblastoma multiforme (GBM) and small cell lung carcinoma (SCLC) but IHC was suggestive of a SCLC metastasis. PET-CT revealed no enhancement in the lung, so the tumor was treated as a GBM. Eight months after the primary diagnosis a new MRI revealed metastases in the spinal cord, but there was still no enhancement in the lungs. We reviewed the literature concerning markers used to differentiate between GBM and SCLC and found that most of these markers showed limited specificity. It is further discussed whether the case illustrates an example of spontaneous regression of primary SCLC or might be an example of a GMB metastasizing to the spinal cord. Although immunohistochemical markers are of great help in many

situations, the case illustrates important limitations and the need for better diagnostic markers.

[343]

TÍTULO / TITLE: - Synergistic lithium chloride and glial cell line-derived neurotrophic factor delivery for peripheral nerve repair in a rodent sciatic nerve injury model.

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

REVISTA / JOURNAL: - Plast Reconstr Surg. 2013 Aug;132(2):251e-62e. doi: 10.1097/PRS.0b013e31829588cf.

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

[1097/PRS.0b013e31829588cf](#)

AUTORES / AUTHORS: - Lin YC; Oh SJ; Marra KG

INSTITUCIÓN / INSTITUTION: - Pittsburgh, Pa. From the Departments of Plastic Surgery and Bioengineering and the McGowan Institute for Regenerative Medicine, University of Pittsburgh.

RESUMEN / SUMMARY: - BACKGROUND: Restoring peripheral nerve function after long gap peripheral nerve damage is challenging. Lithium chloride has demonstrated neuroprotective qualities and therefore shows great potential therapeutic benefit for some neurodegenerative diseases. This study examined the synergistic combination of glial cell line-derived neurotrophic factor and lithium chloride and its effect on peripheral nerve regeneration in a rat sciatic nerve injury model. METHODS: Polycaprolactone conduits with glial cell line-derived neurotrophic factor-loaded double-walled microspheres and local injections of lithium chloride, 1.5 or 2.5 mEq/kg body weight, were examined in a 15-mm rat sciatic nerve defect model. Eighteen Lewis male rats were divided randomly into control, 1.5-, and 2.5-mEq/kg lithium chloride injection groups. As an indicator of recovery, nerve sections were stained with S100, protein gene product 9.5 antibody, and toluidine blue. RESULTS: Nerves stained with S100 and protein gene product 9.5 antibody demonstrated a significantly increased density of Schwann cells and axons in the 2.5-mEq/kg lithium chloride injection-treated groups compared with both the control and 1.5-mEq/kg lithium chloride injection-treated groups ($p < 0.05$). At 6 weeks, histomorphometry revealed a significantly higher fiber density in the middle of the conduit for the 2.5-mEq/kg groups compared with the 1.5-mEq/kg group or the control group. CONCLUSION: Polycaprolactone nerve guides with glial cell line-derived neurotrophic factor-loaded double-walled microspheres and local injections of lithium chloride, 2.5-mEq/kg, represent a potentially viable guiding material for Schwann cell and axon migration and proliferation for the treatment of peripheral nerve regeneration.

[344]

TÍTULO / TITLE: - Secondary gliosarcoma with massive invasion of meninges, skull base, and soft tissue, and systemic metastasis.

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

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

●● Enlace al texto completo (gratis o de pago) [5414/NP300643](#)

AUTORES / AUTHORS: - Oberndorfer S; Wohrer A; Hainfellner JA; Calabek B; Tinchon A; Brandl I; Grisold W

[345]

TÍTULO / TITLE: - Awake language mapping and 3-Tesla intraoperative MRI-guided volumetric resection for gliomas in language areas.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 10. pii: S0967-5868(13)00068-4. doi: 10.1016/j.jocn.2012.10.042.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.10.042](#)

AUTORES / AUTHORS: - Lu J; Wu J; Yao C; Zhuang D; Qiu T; Hu X; Zhang J; Gong X; Liang W; Mao Y; Zhou L

INSTITUCIÓN / INSTITUTION: - Division of Glioma Surgery, Department of Neurosurgery, Huashan Hospital, Shanghai Medical College, Fudan University, Shanghai 200040, China.

RESUMEN / SUMMARY: - The use of both awake surgery and intraoperative MRI (iMRI) has been reported to optimize the maximal safe resection of gliomas. However, there has been little research into combining these two demanding procedures. We report our unique experience with, and methodology of, awake surgery in a movable iMRI system, and we quantitatively evaluate the contribution of the combination on the extent of resection (EOR) and functional outcome of patients with gliomas involving language areas. From March 2011 to November 2011, 30 consecutive patients who underwent awake surgery with iMRI guidance were prospectively investigated. The EOR was assessed by volumetric analysis. Language assessment was conducted before surgery and 1 week, 1 month, 3 months and 6 months after surgery using the Aphasia Battery of Chinese. Awake language mapping integrated with 3.0 Tesla iMRI was safely performed for all patients. An additional resection was conducted in 11 of 30 patients (36.7%) after iMRI. The median EOR significantly increased from 92.5% (range, 75.1-97.0%) to 100% (range, 92.6-100%) as a result of iMRI ($p < 0.01$). Gross total resection was achieved in 18 patients (60.0%), and in seven of those patients (23.3%), the gross total resection could be attributed to iMRI. A total of 12 patients (40.0%) suffered from transient language deficits; however, only one (3.3%) patient developed a permanent deficit. This study demonstrates the potential utility of combining awake craniotomy with iMRI; it is safe and reliable to perform awake surgery using a movable iMRI.

[346]

TÍTULO / TITLE: - Monitoring of extra-axial brain tumor response to radiotherapy using pseudo-continuous arterial spin labeling images: Preliminary results.

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

REVISTA / JOURNAL: - Magn Reson Imaging. 2013 Jun 25. pii: S0730-725X(13)00167-7. doi: 10.1016/j.mri.2013.04.011.

●● Enlace al texto completo (gratis o de pago) [1016/j.mri.2013.04.011](#)

AUTORES / AUTHORS: - Yamamoto T; Kinoshita K; Kosaka N; Sato Y; Shioura H; Takeuchi H; Kimura H

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Faculty of Medical Sciences, University of Fukui, Fukui, Japan. Electronic address: [yamatau_01eik@yahoo.co.jp](mailto:yamatatu_01eik@yahoo.co.jp).

RESUMEN / SUMMARY: - INTRODUCTION: Technological developments have increased the ease of performing perfusion MRI by arterial spin labeling (ASL) in clinical settings. The objective of this study was to evaluate the effects of radiotherapy on extra-axial brain tumors by using MR perfusion images obtained using the pseudo-continuous arterial spin labeling (pcASL) method. MATERIALS AND METHODS: Six consecutive patients (nine lesions) with extra-axial brain tumors treated only with radiotherapy were enrolled in this study. MR examinations, including pcASL imaging, were performed before and after radiotherapy. Cerebral blood flow, maximum tumor blood flow (mTBF), tumor volume and the ratio of signal enhancement by contrast material (enhancement ratio) were evaluated in serial examinations during the course of radiotherapy. Both the percentage change in mTBF (mTBF ratio) and the percentage change in volume (volume ratio) were calculated using values obtained before and after radiotherapy. The correlation between the volume ratio and the mTBF ratio was assessed using linear regression analysis and Spearman's rank correlation coefficient (rs). RESULTS: A strong correlation was demonstrated between the tumor volume ratio and the mTBF ratio before and after radiotherapy (rs=0.93, P<.01). However, no significant correlation was identified between changes in enhancement and volume ratio (rs=0.20) or between changes in enhancement and mTBF ratio (rs=0.30) before and after radiotherapy. CONCLUSION: The mTBF measured using pcASL may serve as an additive index for tumor volume when determining tumor response to radiotherapy even in the absence of contrast material.

[347]

TÍTULO / TITLE: - Diagnosis and management of optic nerve sheath meningiomas.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Aug;20(8):1045-56. doi: 10.1016/j.jocn.2013.03.008. Epub 2013 Jun 25.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.03.008](#)

AUTORES / AUTHORS: - Shapey J; Sabin HI; Danesh-Meyer HV; Kaye AH
INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The Royal London Hospital, Whitechapel, London E1 1BB, UK. Electronic address:
jshapey@doctors.org.uk.

RESUMEN / SUMMARY: - Optic nerve sheath meningiomas account for a third of all intrinsic tumours of the optic nerve. Despite their classification as histologically benign tumours they cause progressive visual loss that often leads to blindness if left untreated. Recent therapeutic advances have increased the treatment options available to clinicians but patient management remains controversial. We systematically review the progress made in the diagnosis and management of optic nerve sheath meningiomas, clarify current best practice, and suggest future avenues for research.

[348]

TÍTULO / TITLE: - Cauda Equina Syndrome After Spinal Epidural Steroid Injection Into an Unrecognized Paraganglioma.

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

REVISTA / JOURNAL: - Clin J Pain. 2013 Jun 11.

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

[1097/AJP.0b013e31829a4cc6](#)

AUTORES / AUTHORS: - Pikis S; Cohen JE; Gomori JM; Fellig Y; Chrysostomou C; Barzilay Y; Kaplan L; Itshayek E; Hasharoni A

INSTITUCIÓN / INSTITUTION: - Departments of *Neurosurgery daggerRadiology double daggerPathology section signAnesthesiology parallelOrthopedic Surgery, Hadassah-Hebrew University Medical Center, Jerusalem, Israel.

RESUMEN / SUMMARY: - **OBJECTIVE::** Clinically significant spinal hemorrhage is an extremely rare but potentially devastating complication of spinal epidural steroid injection. We report a rare case of cauda equina syndrome after spinal epidural injection that inadvertently penetrated an unrecognized spinal paraganglioma. **METHODS::** The clinical records for a patient presenting with cauda equina syndrome were retrospectively reviewed. A literature search was performed to identify reports of cauda equina syndrome in patients undergoing spinal epidural steroid injection, as well as recent large series describing complications associated with these injections. **CASE REPORT::** A 37-year-old man presented to our emergency department with severe low back pain radiating bilaterally to the lower extremities and urinary incontinence. His pain had greatly intensified 1 day after spinal epidural steroid injection. He had a 1-year history of low back pain diagnosed as disk herniation and managed conservatively but had experienced recent onset of a similar pain and new onset of nocturnal back pain causing sleep disturbance. Epidural injection had been administered based on the earlier diagnosis of disk herniation. Examination using magnetic resonance imaging revealed a previously unrecognized oval hemorrhagic mass lesion at L2-3, which had been

inadvertently penetrated during epidural injection. Emergent en bloc resection resolved the patient's neurological symptoms. At histopathologic analysis, the tumor was diagnosed as a spinal paraganglioma. DISCUSSION:: The presented case indicates the importance of a thorough history, physical examination, and imaging assessment before spinal epidural steroid injection.

[349]

TÍTULO / TITLE: - Magnetic resonance imaging appearance of the medial wall of the cavernous sinus for the assessment of cavernous sinus invasion by pituitary adenomas.

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

REVISTA / JOURNAL: - J Neuroradiol. 2013 Jul 22. pii: S0150-9861(13)00069-2. doi: 10.1016/j.neurad.2013.06.003.

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

[1016/j.neurad.2013.06.003](#)

AUTORES / AUTHORS: - Cao L; Chen H; Hong J; Ma M; Zhong Q; Wang S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Fuzhou General Hospital, 156, Xihuanbei Road, Fuzhou Fujian 350025, China; Capital Medical University, Beijing Neurosurgical Institute, 6, Tiantanxili, Beijing 100050, China.

RESUMEN / SUMMARY: - PURPOSE: The diagnostic criteria for cavernous sinus invasion (CSI) by pituitary adenomas are still unsatisfactory and controversial. For this reason, the study examined the appearance of the medial wall of the cavernous sinus (MWCS) on proton-density-weighted (PDW) magnetic resonance imaging (MRI) to determine its value for preoperative assessment of CSI. METHODS: A 3.0-Tesla MRI scanner was used to obtain preoperative PDW images and conventional MRI sequences of 48 consecutive pituitary adenomas, and the MWCS was examined in PDW images to determine the presence of CSI in comparison to surgical findings and three traditional MRI criteria: Knosp grading system (KGS); percentage of encasement of the internal carotid artery (PEICA); and replacement of cavernous sinus compartments (RCSC) by tumors. The value of the MWCS as seen on MRI was compared with that of the Ki-67 labelling index (Ki-67 LI). RESULTS: CSI images showed that continuity of the MWCS was interrupted and that tumor tissue had infiltrated the cavernous sinus (CS) compartments through the defects. In 96 CSs from 48 patients, the sensitivity of MRI visualization of the MWCS for detection of CSI was 93.3% with a specificity of 93.8%, which was significantly higher than with KGS, PEICA and RCSC (P=0.007, P=0.008 and P=0.056, respectively). Histopathological results showed no significant differences between MRI visualization of the MWCS and the Ki-67 LI. CONCLUSION: PDW imaging permits adequate visualization of the MWCS and is superior to traditional diagnostic criteria for the detection of CSI, providing accurate preoperative images for intraoperative navigation.

[350]

TÍTULO / TITLE: - Regulation of glioma cell phenotype in 3D matrices by hyaluronic acid.

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

REVISTA / JOURNAL: - Biomaterials. 2013 Oct;34(30):7408-17. doi: 10.1016/j.biomaterials.2013.06.024. Epub 2013 Jul 1.

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

1016/j.biomaterials.2013.06.024

AUTORES / AUTHORS: - Pedron S; Becka E; Harley BA

INSTITUCIÓN / INSTITUTION: - Institute for Genomic Biology, University of Illinois at Urbana-Champaign, Urbana, IL 61801, USA.

RESUMEN / SUMMARY: - Human glioblastoma multiforme (hGBM) is the most common, aggressive, and deadly form of brain cancer. A major obstacle to understanding the impact of extracellular cues on glioblastoma invasion is the absence of model matrix systems able to replicate compositional and structural elements of the glioma mass as well as the surrounding brain tissue. Contact with a primary extracellular matrix component in the brain, hyaluronan, is believed to play a pivotal role in glioma cell invasion and malignancy. In this study we report use of gelatin and poly(ethylene glycol) (PEG) based hydrogel platforms to evaluate the effect of extracellular (composition, mechanics, HA incorporation) and intracellular (epidermal growth factor receptor overexpression) factors on the malignant transformation of U87MG glioma cells. Three-dimensional culture platforms elicit significantly different responses of U87MG glioma cells versus standard 2D culture. Critically, grafting brain-mimetic hyaluronic acid (HA) into the hydrogel network was found to induce significant, dose-dependent alterations of markers of glioma malignancy versus non-grafted 3D gelatin or PEG hydrogels. Clustering of glioma cells was observed exclusively in HA containing gels and expression profiles of malignancy-associated genes were found to vary biphasically with incorporated HA content. We also found HA-induced expression of MMP-2 is blocked by +EGFR signaling, suggesting a connection between CD44 and EGFR in glioma malignancy. Together, this work describes an adaptable platform for manipulating the local extracellular microenvironment surrounding glioma cells and highlights the importance of developing such systems for investigating the etiology and early growth of glioblastoma multiforme tumors.

[351]

TÍTULO / TITLE: - Scalp necrosis following preoperative embolization for meningeal tumors: two cautionary tales.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1413-5. doi: 10.1007/s00701-013-1785-y. Epub 2013 Jun 11.

- Enlace al texto completo (gratis o de pago) [1007/s00701-013-1785-](https://doi.org/10.1007/s00701-013-1785-y)

[y](#)

AUTORES / AUTHORS: - Kirkman MA; Sethi H; Kitchen ND

INSTITUCIÓN / INSTITUTION: - Victor Horsley Department of Neurosurgery, The National Hospital for Neurology and Neurosurgery, Queen Square, London, WC1N 3BG, UK, matthew.kirkman@gmail.com.

[352]

TÍTULO / TITLE: - Current understanding of the role and targeting of tumor suppressor p53 in glioblastoma multiforme.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Aug;34(4):2063-74. doi: 10.1007/s13277-013-0871-3. Epub 2013 Jun 5.

- Enlace al texto completo (gratis o de pago) [1007/s13277-013-0871-](https://doi.org/10.1007/s13277-013-0871-3)

[3](#)

AUTORES / AUTHORS: - England B; Huang T; Karsy M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, New York Medical College, Valhalla, NY, 10595, USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common primary malignancy in the brain and confers a uniformly poor prognosis. Despite decades of research on the topic, limited progress has been made to improve the poor survival associated with this disease. GBM arises de novo (primary GBM) or via dedifferentiation of lower grade glioma (secondary GBM). While distinct mutations are predominant in each subtype, alterations of tumor suppressor p53 are the most common, seen in 25-30 % of primary GBM and 60-70 % of secondary GBM. Various roles of p53 that protect against neoplastic transformation include modulation of cell cycle, DNA repair, apoptosis, senescence, angiogenesis, and metabolism, resulting in an extremely complex signaling network. Mutations of p53 in GBM are most common in the DNA-binding domain, namely within six hotspot mutation sites (codons 175, 245, 248, 249, 273, and 282). These alterations generally result in loss-of-function, gain-of-function, and dominant-negative mutational effects for p53, however, the distinct effect of these mutation types in GBM pathogenesis remain unclear. Signaling alterations downstream from p53 (e.g., MDM2, MDM4, INK4/ARF), p53 isoforms (e.g., p63, p73), and microRNAs (e.g., miR-34) also play critical roles in modulating the p53 pathway. Despite novel mouse models of GBM showing that p53 combined with other mutation generate tumors de novo, the role of p53 as a molecular marker of GBM remains controversial with most studies failing to show an association with prognosis. Regarding treatment in GBM, p53 targeted-gene therapy and vaccinations have reached phase I clinical trials while therapeutic drugs are still in preclinical development. This review aims to discuss the most recent findings regarding the impact of p53 mutations on GBM pathogenesis, prognosis, and treatment.

[353]

TÍTULO / TITLE: - TCTP overexpression is associated with the development and progression of glioma.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Jun 9.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-0906-](#)

[9](#)

AUTORES / AUTHORS: - Miao X; Chen YB; Xu SL; Zhao T; Liu JY; Li YR; Wang J; Zhang J; Guo GZ

INSTITUCIÓN / INSTITUTION: - Department of Radiation Medicine, Ministry of Education Key Laboratory of Hazard Assessment and Control in Special Operational Environment, School of Public Health, Fourth Military Medical University, No. 169, Changle West Road, Xi'an, 710032, China.

RESUMEN / SUMMARY: - Upregulation of translationally controlled tumor protein (TCTP) has been reported in a variety of malignant tumors. However, the impact of TCTP in glioma remains unclear. The objective of this study was to investigate the expression and prognostic value of TCTP in glioma patients. Western blot analysis was used to characterize the expression patterns of TCTP in 45 glioma and 22 normal brain tissues. Immunohistochemistry on a tissue microarray containing 127 cases of glioma was performed to analyze the association between TCTP expression and clinicopathological features. Compared with normal brain tissues, TCTP expression was significantly higher in glioma tissues ($p < 0.001$). In addition, high TCTP expression in glioma was significantly associated with advanced pathological grade ($p = 0.018$). Kaplan-Meier analysis showed that patients with glioma and higher TCTP expression tend to have shorter overall survival time ($p < 0.001$). In multivariate analysis, TCTP expression was proved to be an independent prognostic factor for patients with glioma ($p < 0.001$). In conclusion, this study confirmed the overexpression of TCTP and its association with tumor progression in glioma. It also provided the first evidence that TCTP expression in glioma was an independent prognostic factor of patients, which might be a potential diagnostic and therapeutic target of glioma.

[354]

TÍTULO / TITLE: - CARMA3 is overexpressed in human glioma and promotes cell invasion through MMP9 regulation in A172 cell line.

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

REVISTA / JOURNAL: - Tumour Biol. 2013 Jul 27.

●● Enlace al texto completo (gratis o de pago) [1007/s13277-013-1018-](#)

[2](#)

AUTORES / AUTHORS: - Feng X; Miao G; Han Y; Xu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, General Hospital of Chinese People's Armed Police Forces, Beijing, 100039, China, fengxinjunpaper@163.com.

RESUMEN / SUMMARY: - Caspase recruitment domain-containing membrane-associated guanylate kinase protein 10 or CARMA3 (CARD10) is a recently characterized oncoprotein involved in the progression of several human malignancies. The present study aims to investigate the expression pattern and biological roles of CARMA3 protein in human glioma. CARMA3 expression was analyzed in 97 glioma specimens using immunohistochemistry. We observed negative staining in normal astrocytes and positive staining of CARMA3 in 25 out of 97 (25.8 %) glioma samples. Overexpression of CARMA3 correlated with tumor grade ($p < 0.001$). Small interfering RNA knockdown was performed in A172 cell line with relatively high CARMA3 expression. Using colony formation assay and Matrigel invasion assay, we showed that CARMA3 depletion in A172 cell line inhibited cell proliferation and cell invasion. In addition, mRNA and protein levels of matrix metalloproteinase 9 (MMP9) were downregulated, indicating CARMA3 might regulate invasion through MMP9. In conclusion, CARMA3 serves as an oncoprotein in human glioma by regulating cell invasion, possibly through MMP9 regulation.

[355]

TÍTULO / TITLE: - Multi-fractal Texture Estimation for Detection and Segmentation of Brain Tumors.

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

REVISTA / JOURNAL: - IEEE Trans Biomed Eng. 2013 Jun 27.

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

[1109/TBME.2013.2271383](#)

AUTORES / AUTHORS: - Islam A; Reza S; Iftekharuddin K

RESUMEN / SUMMARY: - A stochastic model for characterizing tumor texture in brain MR images is proposed. The efficacy of the model is demonstrated in patient-independent brain tumor texture feature extraction and tumor segmentation in magnetic resonance images (MRIs). Due to complex appearance in MRI, brain tumor texture is formulated using a multiresolution-fractal model known as multi-fractional Brownian motion (mBm). Detailed mathematical derivation for mBm model and corresponding novel algorithm to extract spatially-varying multi-fractal features are proposed. A multifractal feature-based brain tumor segmentation method is developed next. To evaluate efficacy, tumor segmentation performance using proposed multi-fractal feature is compared with that using Gabor like multi-scale texton feature. Furthermore, novel patient-independent tumor segmentation scheme is proposed by extending the well-known AdaBoost algorithm. The modification of AdaBoost algorithm involves assigning weights to component classifiers based on their

ability to classify difficult samples and confidence in such classification. Experimental results for fourteen patients with over three-hundred MRIs show the efficacy of the proposed technique in automatic segmentation of tumors in brain MRIs. Finally, comparison with other state-of-the art brain tumor segmentation works with publicly available low grade glioma BRATS2012 dataset show that our segmentation results are more consistent and on the average outperforms these methods for the patients where ground truth is made available.

[356]

TÍTULO / TITLE: - Spinal Neurofibromatosis with Central Nervous System Involvement in a Set of Twin Girls and a Boy: Further Expansion of the Phenotype.

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

REVISTA / JOURNAL: - Neuropediatrics. 2013 Jun 18.

●● Enlace al texto completo (gratis o de pago) [1055/s-0033-1343350](#)

AUTORES / AUTHORS: - Ruggieri M; Polizzi A; Salpietro V; Incorpora G; Nicita F; Pavone P; Falsaperla R; Nucifora C; Granata F; Distefano A; Padua L; Caltabiano R; Lanzafame S; Gabriele AL; Ortensi A; D'Orazi V; Panunzi A; Milone P; Mankad K; Platania N; Albanese V; Pavone V

INSTITUCIÓN / INSTITUTION: - Chair of Pediatrics, Department of Educational Sciences, University of Catania, Catania, Italy.

RESUMEN / SUMMARY: - Background Familial spinal neurofibromatosis is a form of neurofibromatosis 1 (NF1), consisting of extensive, symmetrical, histologically proven, multiple neurofibromas of the spinal roots at every level and of all major peripheral nerves sometimes associated with typical NF1 stigmata; most cases underlie NF1 gene mutations. Objectives The objectives of this study are (1) to report the findings in a set of 16-year-old monozygotic twin girls and a 14-year-old boy and (2) to review the existing literature. Methods and Results In this article, we report the cases of three children who (1) had manifested mildly different symptomatic neuropathy (twins, aged 4 years; and a boy, aged 9 years) associated with massive, symmetrical neurofibromas; (2) had few cafe-au-lait spots with irregular margins and pale brown pigmentation; (3) were presented with, at brain magnetic resonance imaging (MRI), bilateral, NF1-like high-signal abnormalities in the basal ganglia; (4) yielded missense NF1 gene mutations in exon 39; and (5) had unaffected parents with negative NF1 genetic testing as well as discuss 12 families and 20 sporadic and 5 additional cases that presented spinal neurofibromatosis within classical NF1 families (53 cases) that were reported in the literature. Conclusions This article presents the first report on (1) spinal neurofibromatosis in a set of affected monozygotic twins; (2) the earliest onset of the disease; and (3) the occurrence of high signal lesions in the brain at MRI.

[357]

TÍTULO / TITLE: - Increased size of a gas-filled intradural cyst causing acute foot drop: a case report.

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

REVISTA / JOURNAL: - Skeletal Radiol. 2013 Jun 21.

●● Enlace al texto completo (gratis o de pago) [1007/s00256-013-1668-](#)

[6](#)

AUTORES / AUTHORS: - Jeon CH; Park JU; Choo HS; Chung NS

INSTITUCIÓN / INSTITUTION: - Department of Orthopaedic Surgery, Ajou University School of Medicine, San 5 Wonchon-dong, Youngtong-gu, Suwon, Kyunggi-do, Republic of Korea.

RESUMEN / SUMMARY: - We describe the case of a 76-year-old man presenting with a gas-filled intradural cyst that increased in size over a 10-month period and caused acute bilateral foot drop. The gas-filled intradural cyst was resected from the adherent cauda equina, and histopathological examination identified cystic tissue with degenerated fibrocartilage. Leg pain disappeared immediately following surgery, and the bilateral foot drop resolved within 8 months.

[358]

TÍTULO / TITLE: - T7 peptide-functionalized nanoparticles utilizing RNA interference for glioma dual targeting.

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

REVISTA / JOURNAL: - Int J Pharm. 2013 Jul 15;454(1):11-20. doi: 10.1016/j.ijpharm.2013.07.019.

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

[1016/j.ijpharm.2013.07.019](#)

AUTORES / AUTHORS: - Kuang Y; An S; Guo Y; Huang S; Shao K; Liu Y; Li J; Ma H; Jiang C

INSTITUCIÓN / INSTITUTION: - Department of Pharmaceutics, School of Pharmacy, Fudan University, Shanghai, China.

RESUMEN / SUMMARY: - Among all the malignant brain tumors, glioma is the deadliest and most common form with poor prognosis. Gene therapy is regarded as a promising way to halt the progress of the disease or even cure the tumor and RNA interference (RNAi) stands out. However, the existence of the blood-brain barrier (BBB) and blood tumor barrier (BTB) limits the delivery of these therapeutic genes. In this work, the delivery system targeting to the transferrin (Tf) receptor highly expressed on both BBB and glioma was successfully synthesized and would not compete with endogenous Tf. U87 cells stably express luciferase were employed here to simulate tumor and the RNAi experiments in vitro and in vivo validated that the gene silencing activity was 2.17-fold higher with the targeting ligand modification. The dual-targeting gene delivery system exhibits a series of advantages, such as high efficiency, low

toxicity, stability and high transaction efficiency, which may provide new opportunities in RNAi therapeutics and nanomedicine of brain tumors.

[359]

TÍTULO / TITLE: - Enhancement in a brain glioma model: A comparison of half-dose gadobenate dimeglumine versus full-dose gadopentetate dimeglumine at 1.5 and 3 T.

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

REVISTA / JOURNAL: - J Magn Reson Imaging. 2013 Jun 4. doi: 10.1002/jmri.23965.

●● Enlace al texto completo (gratis o de pago) [1002/jmri.23965](#)

AUTORES / AUTHORS: - Morelli JN; Gerdes CM; Zhang W; Williams JM; Saettele MR; Ai F

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Scott & White Clinic and Hospital, Texas A&M University Health Science Center. Temple, Texas, USA.

RESUMEN / SUMMARY: - **PURPOSE:** To examine dose reduction comparing enhancement with full-dose gadopentetate dimeglumine (0.1 mmol/kg) to half-dose gadobenate dimeglumine in a rat brain glioma model. **MATERIALS AND METHODS:** Intra-axial parenchymal brain tumors were implanted in 17 experimental animals. The 13 surviving animals were imaged at 1.5 or 3 T. Either gadopentetate dimeglumine or gadobenate dimeglumine was injected in random order on consecutive days. Tumor signal-to-noise ratio (SNR), contrast-to-noise ratio (CNR), and contrast enhancement (CE) for each agent were obtained with region of interest analyses and compared. Lesions were confirmed histopathologically. **RESULTS:** Statistically significantly lower SNR, CNR, and CE parameters were found at both 1.5 and 3 T with half-dose gadobenate dimeglumine relative to full-dose gadopentetate dimeglumine ($P < 0.05$). SNR on average at 3 T was 70.0 +/- 14.4 for gadopentetate dimeglumine and 57.0 +/- 4.8 for gadobenate dimeglumine ($P < 0.02$). **CONCLUSION:** Improved r_1 relaxivity with gadobenate dimeglumine does not produce adequate half-dose contrast-enhancement relative to full-dose gadopentetate dimeglumine. J. Magn. Reson. Imaging 2012. Esta es una cita bibliográfica que va por delante de la publicación en papel. La fecha indicada en la cita provista, NO corresponde con la fecha o la cita bibliográfica de la publicación en papel. La cita bibliográfica definitiva (con el volumen y su paginación) saldrá en 1 ó 2 meses a partir de la fecha de la emisión electrónica-online. *** This is a bibliographic record ahead of the paper publication. The given date in the bibliographic record does not correspond to the date or the bibliographic citation on the paper publication. The publisher will provide the final bibliographic citation (with the volume, and pagination) within 1 or 2 months from the date the record was published online. © 2012 Wiley Periodicals, Inc.

[360]

TÍTULO / TITLE: - miR-146b-5p inhibits glioma migration and invasion by targeting MMP16.

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

REVISTA / JOURNAL: - Cancer Lett. 2013 Jun 22. pii: S0304-3835(13)00468-0. doi: 10.1016/j.canlet.2013.06.018.

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

[1016/j.canlet.2013.06.018](#)

AUTORES / AUTHORS: - Li Y; Wang Y; Yu L; Sun C; Cheng D; Yu S; Wang Q; Yan Y; Kang C; Jin S; An T; Shi C; Xu J; Wei C; Liu J; Sun J; Wen Y; Zhao S; Kong Y

INSTITUCIÓN / INSTITUTION: - Dept. of Neuropathology, Tianjin Neurologic Institute, Tianjin Medical University General Hospital, Tianjin 300052, China; Tianjin Key Laboratory of Injuries, Variations and Regeneration of the Nervous System, Tianjin 300052, China; Key Laboratory of Post-trauma Neuro-repair and Regeneration in Central Nervous System, Ministry of Education, Tianjin 300052, China.

RESUMEN / SUMMARY: - miR-146b-5p is frequently down-regulated in solid tumours, including prostate cancer, pancreatic cancer, and glioblastoma. However, the tumour-suppressive effects of miR-146b-5p in malignant gliomas have not been investigated thoroughly. Here, we found that decreased miR-146b-5p expression was strongly correlated with chromosome 10q loss in gliomas, especially glioblastomas. The overexpression of miR-146b-5p in glioblastoma cell lines led to MMP16 mRNA silencing, MMP2 inactivation, and the inhibition of tumour cell migration and invasion. Our results suggest that the restoration of miR-146b-5p expression may be a feasible approach for inhibiting the migration and invasion of malignant gliomas.

[361]

TÍTULO / TITLE: - Updates in the management of high-grade glioma.

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

REVISTA / JOURNAL: - J Neurol. 2013 Jul 16.

●● Enlace al texto completo (gratis o de pago) [1007/s00415-013-7032-](#)

[X](#)

AUTORES / AUTHORS: - Bradley D; Rees J

INSTITUCIÓN / INSTITUTION: - The National Hospital for Neurology and Neurosurgery, Queen Square, Mailbox 99, London, WC1N 3BG, UK, davidbradley@physicians.ie.

RESUMEN / SUMMARY: - The management of high-grade glioma (HGG) has evolved significantly over the last decade. Patients are managed in a multidisciplinary team setting in order to ensure their care is guided by the most current evidenced based treatments. The outcome in patients with HGG, while still poor, has improved in terms of both survival and quality of life during illness.

This review discusses a number of developments seen in the management of HGG over the last 5 years.

[362]

TÍTULO / TITLE: - Uptake of O-(2-[(18)F]fluoroethyl)-L-tyrosine in reactive astrocytosis in the vicinity of cerebral gliomas.

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

REVISTA / JOURNAL: - Nucl Med Biol. 2013 Aug;40(6):795-800. doi: 10.1016/j.nucmedbio.2013.05.001. Epub 2013 Jun 12.

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

1016/j.nucmedbio.2013.05.001

AUTORES / AUTHORS: - Piroth MD; Prasath J; Willuweit A; Stoffels G; Sellhaus B; van Osterhout A; Geisler S; Shah NJ; Eble MJ; Coenen HH; Langen KJ

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, RWTH Aachen University Hospital, Aachen, Germany; Julich-Aachen Research Alliance (JARA) - Section JARA-Brain.

RESUMEN / SUMMARY: - PET using O-(2-[(18)F]fluoroethyl)-L-tyrosine ((18)F-FET) allows improved imaging of tumor extent of cerebral gliomas in comparison to MRI. In experimental brain infarction and hematoma, an unspecific accumulation of (18)F-FET has been detected in the area of reactive astrogliosis which is a common cellular reaction in the vicinity of cerebral gliomas. The aim of this study was to investigate possible (18)F-FET uptake in the area of reactive gliosis in the vicinity of untreated and irradiated rat gliomas. **METHODS:** F98-glioma cells were implanted into the caudate nucleus of 33 Fisher CDF rats. Sixteen animals remained untreated and in 17 animals the tumor was irradiated by Gamma Knife 5-8days after implantation (2/50Gy, 3/75Gy, 6/100Gy, 6/150Gy). After 8-17 days of tumor growth the animals were sacrificed following injection of (18)F-FET. Brains were removed, cut in coronal sections and autoradiograms of (18)F-FET distribution were produced and compared with histology (toluidine blue) and reactive astrogliosis (GFAP staining). (18)F-FET uptake in the tumors and in areas of reactive astrocytosis was evaluated by lesion to brain ratios (L/B). **RESULTS:** Large F98-gliomas were present in all animals showing increased (18)F-FET-uptake which was similar in irradiated and non-irradiated tumors (L/B: 3.9±0.8 vs. 4.0±1.3). A pronounced reactive astrogliosis was noted in the vicinity of all tumors that showed significantly lower (18)F-FET-uptake than the tumors (L/B: 1.5±0.4 vs. 3.9±1.1). The area of (18)F-FET-uptake in the tumor was congruent with histological tumor extent in 31/33 animals. In 2 rats irradiated with 150Gy, however, high (18)F-FET uptake was noted in the area of astrogliosis which led to an overestimation of the tumor size. **CONCLUSIONS:** Reactive astrogliosis in the vicinity of gliomas generally leads to only a slight (18)F-FET-enrichment that appears not to affect the correct definition of tumor extent for treatment planning.

[363]

TÍTULO / TITLE: - Study on the Expression Levels of CXCR4, CXCL12, CD44, and CD147 and Their Potential Correlation with Invasive Behaviors of Pituitary Adenomas.

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

REVISTA / JOURNAL: - Biomed Environ Sci. 2013 Jul;26(7):592-8. doi: 10.3967/0895-3988.2013.07.011.

●● Enlace al texto completo (gratis o de pago) [3967/0895-3988.2013.07.011](#)

AUTORES / AUTHORS: - Xing B; Kong YG; Yao Y; Lian W; Wang RZ; Ren ZY

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery, Key Laboratory of Endocrinology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100730, China.

RESUMEN / SUMMARY: - **OBJECTIVE:** To evaluate the factors of CXCR4, CXCL12, CD44, and CD147 as early potential diagnostic biomarkers by determining their expression levels in invasive and non-invasive pituitary adenomas. **METHODS:** Fresh pituitary adenoma specimens were collected from 35 pituitary adenoma (21 invasive and 14 non-invasive) patients who underwent surgical treatment in our Neurosurgery Department between January and April of 2009. The expression levels of CXCR4, CXCL12, CD44, and CD147 were evaluated firstly by flow cytometry, fluorescence microscopy in single cell suspensions, and then by immunohistochemical staining of paraffin tissue sections. **RESULTS:** Flow cytometric analyses showed that the percentage of CXCR4- and CXCL12-positive cells from invasive pituitary adenomas (IPA) was significantly higher in the single cell suspensions than that from non-invasive pituitary adenomas (nIPA) ($P < 0.05$). Immunohistochemical staining revealed that CXCR4 and CXCL12 staining index scores of the invasive pituitary adenomas were significantly higher than those of the non-invasive pituitary adenomas ($P < 0.05$). In contrast, neither flow cytometry nor immunohistochemical staining demonstrated significant difference between CD44 and CD147 expression levels, respectively. **CONCLUSION:** Expression levels of CXCR4 and CXCL12 are correlated with the invasiveness of pituitary adenomas. Therefore, rather than CD44 and CD147, CXCR4 and CXCL12 may potentially serve as biomarkers for early detection of pituitary adenomas.

[364]

TÍTULO / TITLE: - Factors predicting the development of new onset post-operative Hydrocephalus following trans-sphenoidal surgery for pituitary adenoma.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Jun 13. pii: S0303-8467(13)00176-5. doi: 10.1016/j.clineuro.2013.05.020.

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

[1016/j.clineuro.2013.05.020](http://dx.doi.org/10.1016/j.clineuro.2013.05.020)

AUTORES / AUTHORS: - Sharma M; Ambekar S; Sonig A; Nanda A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Louisiana State University Health Science Center, Shreveport 71105, USA.

RESUMEN / SUMMARY: - BACKGROUND: The aim of this retrospective study was to identify the factors which can predict the development of new onset post-operative Hydrocephalus following transsphenoidal surgery for pituitary adenomas. METHODS: A total of 224 patients with the diagnosis of pituitary adenoma and without preoperative Hydrocephalus were identified from 1995 to 2012. Age, gender, tumor volumes, prior craniotomy and irradiation, outcome, hospital stay, CSF leak, infection and functional status of the tumor were included in the model for analysis. RESULTS: A total of 13 patients (5.8%) developed new onset post-operative Hydrocephalus. Intraoperative and post-operative CSF leaks were noted in 19 (8.5%) and 17 (7.6%) patients respectively. CSF infection was seen in only 7 (3.1%) patients. Age of the patient ($p=0.010$), length of hospital stay ($p=0.012$), intraoperative CSF leak ($p=0.000$), post-operative CSF leak ($p=0.000$) and CSF infection ($p=0.000$) had shown significant correlation with the de novo onset of postoperative HC. The independent predictors of post-operative HC were post-operative CSF leak [$p=0.002$, OR 27.898, 95% CI 3.350-232.311] and intra-operative CSF leak [$p=0.050$, OR 7.687, 95% CI 1.003-58.924]. CONCLUSION: Age of the patient, intra-operative and post-operative CSF leak, CSF infection and duration of hospital stay were correlated with the development of HC. Post-operative and intra-operative CSF leaks were the independent predictors of new onset HC.

[365]

TÍTULO / TITLE: - Meningioma arising from the anterior skull base and filling the nasal cavity.

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

REVISTA / JOURNAL: - J Craniofac Surg. 2013 Jul;24(4):e441-4. doi: 10.1097/SCS.0b013e3182942e93.

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

[1097/SCS.0b013e3182942e93](http://dx.doi.org/10.1097/SCS.0b013e3182942e93)

AUTORES / AUTHORS: - Keskin G; Ila K

INSTITUCIÓN / INSTITUTION: - From the Department of Otorhinolaryngology, Faculty of Medicine, Kocaeli University, Kocaeli, Turkey.

RESUMEN / SUMMARY: - Meningiomas are usually benign tumors that are frequently encountered in the intracranial region. They account for 15% of the overall intracranial tumors. Of the intracranial meningiomas, less than 3% extend up to the sinonasal region. The frequency of meningioma in females is 2

times higher than that in males; it is most commonly observed in the fifth decade of life. It is usually asymptomatic and detected incidentally. A small number of meningiomas may cause some symptoms including seizure attacks and cranial nerve paralysis according to their locations. On the physical examination of a 56-year-old woman, who presented with nasal obstruction, a mass that completely obliterated the left nasal passage was detected. An incisional biopsy finding of the mass revealed meningioma, and the patient was hospitalized in the clinic for surgical procedure. The mass was excised by endonasal endoscopic method. In this present article, we aimed to discuss a quite rare case, which had meningioma arising from the anterior skull base and completely obliterating the left nasal passage with the coexistence of right nasal polyp, in the light of the current literature.

[366]

TÍTULO / TITLE: - Mechanisms of proteasome inhibitor-induced cytotoxicity in malignant glioma.

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

REVISTA / JOURNAL: - Cell Biol Toxicol. 2013 Jun 5.

●● Enlace al texto completo (gratis o de pago) [1007/s10565-013-9248-](http://1007/s10565-013-9248-z)

[z](#)

AUTORES / AUTHORS: - Vlachostergios PJ; Voutsadakis IA; Papandreou CN

INSTITUCIÓN / INSTITUTION: - Department of Medical Oncology, Faculty of Medicine, University of Thessaly, University Hospital of Larissa, Larissa, 41110, Greece, pvlacho@med.uth.gr.

RESUMEN / SUMMARY: - The 26S proteasome constitutes an essential degradation apparatus involved in the consistent recycling of misfolded and damaged proteins inside cells. The aberrant activation of the proteasome has been widely observed in various types of cancers and implicated in the development and progression of carcinogenesis. In the era of targeted therapies, the clinical use of proteasome inhibitors necessitates a better understanding of the molecular mechanisms of cell death responsible for their cytotoxic action, which are reviewed here in the context of sensitization of malignant gliomas, a tumor type particularly refractory to conventional treatments.

[367]

TÍTULO / TITLE: - Blindness From Late Presenting Undiagnosed Pancraniosynostosis Mimicking Pseudotumor Cerebri.

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

REVISTA / JOURNAL: - J Child Neurol. 2013 Jul 17.

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

1177/0883073813495307

AUTORES / AUTHORS: - Bonfield CM; Tamber MS; Losee JE

INSTITUCIÓN / INSTITUTION: - 1Department of Neurological Surgery, Children's Hospital of Pittsburgh, University of Pittsburgh Medical Center, Pittsburgh, PA, USA.

RESUMEN / SUMMARY: - We report the unique case of late-onset pancraniosynostosis presenting with rapid visual deterioration, without other symptoms of increased intracranial pressure. A 10-year-old girl had episodes of blurry vision for 1 month. Magnetic resonance imaging (MRI) demonstrated a borderline Chiari I malformation. Ophthalmologic exam confirmed papilledema and decreased visual acuity. Opening pressure on lumbar puncture was 55 mmH₂O. The patient was diagnosed with pseudotumor cerebri and prescribed Diamox. Four days later, she re-presented with worsening vision and increased papilledema and was taken for emergent ventriculo-peritoneal shunt placement. A postoperative computed tomographic scan showed the absence of all cranial sutures. Vision had not improved. A cranial vault expansion and optic nerve fenestration was performed. Pancraniosynostosis must be considered in a child with rapid visual deterioration and increased intracranial pressure, or with the presumptive diagnosis of pseudotumor cerebri. Assurance of normal cranial suture anatomy by computed tomographic scan is imperative in patients with an atypical presentation of pseudotumor cerebri.

[368]

TÍTULO / TITLE: - The Incidental Suggestive Meningioma Presenting as High 18F FP-CIT Uptake on PET/CT Study.

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

REVISTA / JOURNAL: - Clin Nucl Med. 2013 Jul 19.

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

[1097/RLU.0b013e3182815d16](#)

AUTORES / AUTHORS: - Song IU; Lee SH; Chung YA

INSTITUCIÓN / INSTITUTION: - From the Departments of *Neurology and daggerRadiology, College of Medicine, The Catholic University of Korea, Seoul, South Korea.

RESUMEN / SUMMARY: - A 76-year-old woman with about a 13-month history of bradykinesia, gait disturbance and resting tremor of right upper extremity was referred to Nuclear Medicine Department. A PET-CT with 229 MBq of F FP-CIT was performed to diagnose suspected early Parkinson's disease (PD). The PET-CT showed a mass lesion with highly intense focal dopamine transporter uptake in the right frontal lobe. A subsequent brain magnetic resonance image also showed a mass in the right frontal lobe demonstrating homogeneous enhancement and extensive surrounding edema, highly suggestive of a brain tumor.

[369]

TÍTULO / TITLE: - C-erbB2/HER2 in Human Gliomas, Medulloblastomas, and Meningiomas: A Minireview.

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

REVISTA / JOURNAL: - Int J Surg Pathol. 2013 Jul 9.

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

[1177/1066896913492196](#)

AUTORES / AUTHORS: - Waage IS; Vreim I; Torp SH

RESUMEN / SUMMARY: - C-erbB2/HER2 serves as an important prognostic and predictive biomarker in various human tumors, especially in breast cancer, whereas its role in human intracranial tumors is more uncertain. We therefore performed a search in PubMed to get an update. This literature review comprises immunohistochemical studies on the clinical significance of c-erbB2/HER2 overexpression in gliomas, medulloblastomas, and meningiomas. In general, the findings were discrepant with regard to correlations between overexpression, tumor grade, and prognosis. Use of various antibodies may be a contributing factor to these discrepancies. Standardization of the immunohistochemical procedures is a relevant topic for discussion.

[370]

TÍTULO / TITLE: - Parotid gland metastasis originating from malignant meningioma.

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

REVISTA / JOURNAL: - Clin Imaging. 2013 Jul-Aug;37(4):740-3. doi: 10.1016/j.clinimag.2013.02.013. Epub 2013 Apr 8.

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

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

AUTORES / AUTHORS: - Dmytriw AA; Gullane P; Bartlett E; Perez-Ordóñez B; Yu E

INSTITUCIÓN / INSTITUTION: - Department of Medical Imaging, University Health Network, 101 College St, Toronto, ON, M5G 1L7, Canada.

adam.dmytriw@uhn.ca

RESUMEN / SUMMARY: - A case of malignant meningioma with metastasis to the parotid gland is reported. A 60-year-old woman with right-sided neurological symptoms secondary to malignant meningioma developed bilateral parotid masses with identical histology to the primary lesion. The primary lesion was differentiated from a benign oligodendroma with MRI, and the radiological features of this extraordinarily rare metastasis are chronicled with MRI and computed tomography.

[371]

TÍTULO / TITLE: - The antitumor effects of an arsthinol-cyclodextrin complex in a heterotopic mouse model of glioma.

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

REVISTA / JOURNAL: - Eur J Pharm Biopharm. 2013 Jul 4. pii: S0939-6411(13)00240-3. doi: 10.1016/j.ejpb.2013.06.021.

●● Enlace al texto completo (gratis o de pago) [1016/j.ejpb.2013.06.021](#)

AUTORES / AUTHORS: - Becherirat S; Lanhers MC; Socha M; Yemloul M; Astier A; Loboda C; Aniceto N; Gibaud S

INSTITUCIÓN / INSTITUTION: - EA 3452, CITHEFOR, Universite de Lorraine, Nancy, France.

RESUMEN / SUMMARY: - In this paper, we examined arsthinol-cyclodextrin complexes, which display an anticancer activity. The association constants were $17,502 \pm 522 \text{ M}^{-1}$ for hydroxypropyl-beta-cyclodextrin and $12,038 \pm 10,168 \text{ M}^{-1}$ for randomized methylated beta-cyclodextrin. ^1H NMR experiments in solution also confirmed the formation of these complexes and demonstrated an insertion of the arsthinol (STB) with its dithiarsolane extremity into the wide rim of the hydroxypropyl-beta-cyclodextrin cavity. Complexed arsthinol was more effective than arsenic trioxide (As_2O_3) and melarsoprol on the U87 MG cell line. Importantly, in the in vivo study, we observed significant antitumor activity against heterotopic xenografts, after i.p. administration and did not see any signs of toxicity. This remains to be verified using an orthotopic model.

[372]

TÍTULO / TITLE: - Gliomas of the pineal region.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Jul 3.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1200-](#)

[9](#)

AUTORES / AUTHORS: - Magrini S; Feletti A; Marton E; Longatti P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Treviso Regional Hospital, University of Padova, Piazzale Ospedale 1, 31100, Treviso, Italy.

RESUMEN / SUMMARY: - Although several series of pineal region tumors are available, the issue of pineal gliomas has been scarcely faced in the literature. Gliomas are usually included in largest series of pineal neoplasms. Therefore, whether pineal gliomas share the biological behavior of either hemispheric gliomas or other midline lesions is not yet defined. The aim of this retrospective study is to analyze long-term morbidity and mortality of these lesions. In English published literature gliomas account for about 14-22 % of all pineal region tumors. Most of these tumors are pilocytic astrocytomas, while glioblastoma multiforme is rare. We retrospectively analyzed all pineal region tumors operated on in our department in the last 28 years, and identified eight pineal astrocytomas, accounting for 14.03 % of all pineal tumors. The series includes four pilocytic astrocytomas, two grade II diffuse astrocytomas, and two

anaplastic astrocytomas. A comprehensive review of the available literature data shows that the mean survival time of WHO grade II gliomas is shorter when tumor grows in the pineal region than for hemispheric locations, although the limited amount of available data prevents a rigorous statistical analysis. This difference might be due to the peculiar infiltrating behavior of pineal tumors, which often can't be satisfactorily resected from vital structures.

[373]

TÍTULO / TITLE: - Glutamine synthetase functions as a negative growth regulator in glioma.

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

REVISTA / JOURNAL: - J Neurooncol. 2013 Aug;114(1):59-69. doi: 10.1007/s11060-013-1168-5. Epub 2013 Jun 19.

●● Enlace al texto completo (gratis o de pago) [1007/s11060-013-1168-](#)

[5](#)

AUTORES / AUTHORS: - Yin Y; Sun W; Xiang J; Deng L; Zhang B; Xie P; Qiao W; Zou J; Liu C

INSTITUCIÓN / INSTITUTION: - Department of Clinical Laboratory Science, Wuxi People's Hospital of Nanjing Medical University, 299 Qingyang Road, Wuxi, 214023, Jiangsu, People's Republic of China.

RESUMEN / SUMMARY: - Our recent study demonstrated that glutamine synthetase (GS) may not only serve as a glutamate-converting enzyme in glial cells, but may also function as a regulator of astrocyte migration after injury. In this report, we showed that GS expression increased in cultured rat C6 glioma cells that underwent long-term serially propagation. The stable overexpression of GS in C6 glioma cells resulted in growth arrest and motility suppression; however the stable knockdown of GS resulted in motility enhancement. In correlation with cell aggregation, N-cadherin levels increased at sites of cell-cell contact in C6 cells overexpressing GS, and decreased in C6 cells with stable GS knockdown; total N-cadherin expression levels remained unchanged in these cells. In addition, levels of p21, a potent cyclin-dependent kinase inhibitor, increased, while cyclin D1 levels decreased in C6 cells overexpressing GS. Our additional studies showed that N-cadherin-mediated cell-cell contacts were implicated in GS-induced cell growth arrest and impairment of cell migration, as evidenced by the inhibition of GS on cell growth and motility by the neutralizing anti-N-cadherin monoclonal antibody (GC-4 mAb). Collectively, these observations suggest a novel mechanism of growth regulation by GS that involves N-cadherin mediated cell-cell contact.

[374]

TÍTULO / TITLE: - Gliosarcoma with ependymal and PNET-like differentiation.

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

REVISTA / JOURNAL: - Clin Neuropathol. 2013 Jul 17.

●● Enlace al texto completo (gratis o de pago) [5414/NP300624](https://doi.org/10.1007/s12076-013-0624-4)

AUTORES / AUTHORS: - Shintaku M; Yoneda H; Hirato J; Nagaishi M; Okabe H

RESUMEN / SUMMARY: - A rare case of gliosarcoma which arose in the temporal lobe of a 39-year-old man was reported. The gliomatous area of the tumor showed ependymal differentiation, and also contained immature neuroectodermal tissue resembling a primitive neuroectodermal tumor (PNET) in addition to an ordinary glioblastomatous component. Tumor cells in the PNET-like component were immunoreactive for synaptophysin, CD99, neurogenin 3, and alpha-internexin, but not for glial fibrillary acidic protein (GFAP), Class III-beta tubulin, or Neu N. The mesenchymal area exhibited a compact fascicular proliferation of atypical spindle cells invested by fine reticulin fibrils. In addition, these cells were immunoreactive for Slug and Twist - transcription factors which are involved in the "epithelial-mesenchymal transition (EMT)" phenomenon. Gliosarcomas containing an ependymal or PNET-like component are rare, and to our knowledge, the present case is the first to be reported whose glial element exhibited differentiation toward these two components. The diverse differentiation in the glial element suggests that the tumor most likely originated from primitive neuroepithelial progenitor cells rather than from the neometaplasia of a glioblastoma. The immunoreactivity for transcription factors in the mesenchymal element indicated that EMT might be involved in the pathogenesis of this very rare type of gliosarcoma.

[375]

TÍTULO / TITLE: - Towards a glioma model for surgical technique evaluation in the rat.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Jul 10.

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

[3109/02688697.2013.804489](https://doi.org/10.1093/bjns/91.5.3109)

AUTORES / AUTHORS: - Keiner D; Heimann A; Kronfeld A; Sommer C; Mueller-Forell W; Kempfski O; Oertel J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Medical Center Saarland, Homburg-Saar, Germany.

RESUMEN / SUMMARY: - Introduction. Evaluation of new surgical techniques in animal models is frequently challenging. This article describes the pitfalls, peculiarities and the final best applicable model for evaluating surgical techniques for glioma resection. Methods. The C6 glioma cell line and the Sprague-Dawley rat strain were selected. Fifty-thousand glioma cells were stereotactically transplanted in the left hemisphere of 137 male adult rats. Evaluation of solid tumour formation, tumour growth and scheduling of surgical resection was performed by MR scanning at 1, 2, and 4 weeks after transplantation and 3 and 6 months after tumour resection. Microsurgical

tumour resection was performed with conventional techniques or with the waterjet dissector at a pressure of 6 bar. One subgroup of each surgical technique was sacrificed directly after surgery for histological analysis. The other subgroup was followed up for long-term analysis. Results. The transplantation site was of great importance. After transplantation of tumour cells posterior to the bregma, intra-ventricular tumour growth with spreading occurred. Homogenous and reproducible tumour growth was achieved after grafting cells lateral - 3 mm, anterior + 1 mm, and - 2.5 mm ventral to the bregma. After development of solid tumours on MR imaging, animals were subjected to surgery. MR and intra-operative findings corresponded well. However, MRI and intra-operative none-detectable perivascular tumour spreading was histologically observed in the majority of cases. Conclusions. The presented glioma rat model consisting of the C6 cell line and Sprague-Dawley rats as recipients is a well-suited model to investigate surgical techniques and their impact on tumour therapy. However, the site of transplantation, the preparation of cell grafts and the technique of tumour growth evaluation is of utmost importance to achieve reliable results.

[376]

TÍTULO / TITLE: - Heterogeneous phenotype of human glioblastoma. In vitro study.

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

REVISTA / JOURNAL: - Cell Biochem Funct. 2013 Jul 8. doi: 10.1002/cbf.2988.

●● Enlace al texto completo (gratis o de pago) [1002/cbf.2988](#)

AUTORES / AUTHORS: - Denysenko T; Gennero L; Juenemann C; Morra I; Masperi P; Ceroni V; Pragliola A; Ponzetto A; Melcarne A

INSTITUCIÓN / INSTITUTION: - Neurosurgery, ASO CTO, OIRM S. Anna, Turin, Italy.

RESUMEN / SUMMARY: - Glioblastomas (GBMs) are the most lethal primary brain tumours. Increasing evidence shows that brain tumours contain the population of stem cells, so-called cancer stem cells (CSCs). Stem cell marker CD133 was reported to identify CSC population in GBM. Further studies have indicated that CD133 negative cells exhibiting similar properties and are able to initiate the tumour, self-renew and undergo multilineage differentiation. GBM is a highly heterogeneous tumour and may contain different stem cell populations with different functional properties. We characterized five GBM cell lines, established from surgical samples, according to the marker expression, proliferation and differentiation potential. CD133 positive cell lines showed increased proliferation rate in neurosphere condition and marked differentiation potential towards neuronal lineages. Whereas two cell lines low-expressing CD133 marker showed mesenchymal properties in vitro, that is high proliferation rate in serum condition and differentiation in mesenchymal cell types. Further, we compared therapy resistance capacity of GBM cell lines treated with

hydroxyurea. Our results suggest that CSC concept is more complex than it was believed before, and CD133 could not define entire stem cell population within GBM. At least two different subtypes of GBM CSCs exist, which may have different biological characteristics and imply different therapeutic strategies. Copyright © 2013 John Wiley & Sons, Ltd.

[377]

TÍTULO / TITLE: - Casticin Induces Human Glioma Cell Death through Apoptosis and Mitotic Arrest.

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

REVISTA / JOURNAL: - Cell Physiol Biochem. 2013;31(6):805-14. doi: 10.1159/000350098. Epub 2013 Jun 3.

●● Enlace al texto completo (gratis o de pago) [1159/000350098](#)

AUTORES / AUTHORS: - Liu E; Kuang Y; He W; Xing X; Gu J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, General Hospital of People's Liberation Army Chengdu Military Region, Chengdu.

RESUMEN / SUMMARY: - Background: Malignant gliomas are the leading cause of morbidity and mortality in brain and central nervous system tumors. Recently, casticin has drawn wide attention to its critical role in tumor progression. However, the effect of casticin on glioma remains undefined. Methods: Following treatment with casticin, cell viability, apoptosis, and cell cycle arrest were examined in U251 glioma cells. Additionally, the involved molecular mechanism was assessed by western blotting and flow cytometry. Results: Casticin triggered an obvious dose-dependent decrease in U251, U87 and U373 glioma cell viability, and the growth inhibitory effect of casticin was correlated with cell cycle arrest and cell apoptosis. Further mechanistic analysis indicated that casticin induced G2/M phase arrest by attenuating the polymerization of tubulin. Furthermore, striking apoptosis was also confirmed, accompanied by the up-regulation of caspase-3, p53 and proapoptotic protein Bax. These effects were absent when the caspase inhibitor z-VAD-fmk or p53 inhibitor PFTalpha were applied, suggesting that casticin could trigger cell apoptosis in a caspase-3 and p53-dependent manner. Conclusion: These findings provide a prominent insight into how casticin abrogates the pathogenesis of glioma, and support its potential clinical prospect for further development of anti-brain cancer therapy.

[378]

TÍTULO / TITLE: - Brainstem epidermoid cyst in an individual with two previous intracranial epidermoid cysts: A rare diagnosis in a rare individual.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 May 30. pii: S0303-8467(13)00158-3. doi: 10.1016/j.clineuro.2013.05.002.

- Enlace al texto completo (gratis o de pago)

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

AUTORES / AUTHORS: - Mask-Bull L; Do B; Cattaneo JC

INSTITUCIÓN / INSTITUTION: - The University of Oklahoma School of Community Medicine, 4502 E. 41(st) St. Tulsa, OK 74135, USA. Electronic address: Lisa-Mask@ouhsc.edu.

[379]

TÍTULO / TITLE: - What does fluorescence depict in glioma surgery?

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Jun 25.

- Enlace al texto completo (gratis o de pago) [1007/s00701-013-1798-](#)

[6](#)

AUTORES / AUTHORS: - Stockhammer F

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Medicine Gottingen, Gottingen, Germany, florian.stockhammer@gmx.de.

[380]

TÍTULO / TITLE: - Oncocytic meningioma presenting with intratumoral hemorrhage.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 26. pii: S0967-5868(13)00115-X. doi: 10.1016/j.jocn.2012.11.023.

- Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.11.023](#)

AUTORES / AUTHORS: - Sasagawa Y; Tachibana O; Iida T; Iizuka H

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Kanazawa Medical University, 1-1 Daigaku, Uchinada 920-0293, Ishikawa, Japan. Electronic address: yacchan1218@yahoo.co.jp.

RESUMEN / SUMMARY: - Oncocytic meningiomas have been recently reported as a rare variant of meningiomas. Immunohistochemical analysis shows that neoplastic cells are positive for antimitochondrial antibodies. We report our first patient with oncocytic meningioma, presenting with intratumoral bleeding. A 72-year-old woman suffered from a disturbance of consciousness. A CT scan showed a tumor with intratumoral hemorrhage. An emergency craniotomy was performed and the tumor and hematoma were removed. Examination of the tumor revealed meningothelial cells with oncocytic change. We discuss the clinicopathological considerations of this uncommon variant and review the pertinent literature.

[381]

TÍTULO / TITLE: - Latency of intracranial germ cell tumors and diagnosis delay.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jun 29.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2164-](#)

[y](#)

AUTORES / AUTHORS: - Phi JH; Kim SK; Lee YA; Shin CH; Cheon JE; Kim IO; Yang SW; Wang KC

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

RESUMEN / SUMMARY: - BACKGROUND: Intracranial germ cell tumors (GCTs) frequently take an insidious clinical course before diagnosis. To date, clinical latency has been discussed in the context of germinoma in the suprasellar area and basal ganglia. OBJECTIVE: In this study, we classified the clinical latency of intracranial GCTs into three categories and described their characteristics in order to understand the full spectrum of the phenomenon. METHODS: In a cohort of 181 patients with intracranial GCTs, 17 patients had a delayed diagnosis of more than 3 months (90 days) from the initial brain magnetic resonance imaging to the definitive GCT diagnosis. Clinical records and radiological data of the patients were reviewed. RESULTS: The patients with a delayed diagnosis were categorized into three groups according to their tumor location: suprasellar (nine patients), basal ganglia (six patients), and pineal (two patients). Initial symptomatology corresponded with the tumor location: central diabetes insipidus for the suprasellar group, hemiparesis for the basal ganglia group, and precocious puberty for the pineal group. The overall survival of patients with germinoma and delayed diagnosis was significantly shorter than that of patients who were diagnosed within 3 months ($P = 0.002$). CONCLUSIONS: Clinical latency and delayed diagnosis are not restricted to germinomas in the suprasellar area and basal ganglia; they are canonical features of intracranial GCTs including pineal non-germinomatous GCTs. Early detection and proactive diagnosis of these tumors are required because diagnosis delay may negatively influence patient survival.

[382]

TÍTULO / TITLE: - Glycation of glutamate cysteine ligase by 2-deoxy-d-ribose and its potential impact on chemoresistance in glioblastoma.

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

REVISTA / JOURNAL: - Neurochem Res. 2013 Sep;38(9):1838-49. doi: 10.1007/s11064-013-1090-4. Epub 2013 Jun 7.

●● Enlace al texto completo (gratis o de pago) [1007/s11064-013-1090-](#)

[4](#)

AUTORES / AUTHORS: - Backos DS; Fritz KS; McArthur DG; Kepa JK; Donson AM; Petersen DR; Foreman NK; Franklin CC; Reigan P

INSTITUCIÓN / INSTITUTION: - Department of Pharmaceutical Sciences, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of Colorado Anschutz Medical Campus, 12850 East Montview Boulevard, V20-2102, Aurora, CO, 80045, USA.

RESUMEN / SUMMARY: - The antioxidant glutathione (GSH) plays a critical role in maintaining intracellular redox homeostasis but in tumors the GSH biosynthetic pathway is often dysregulated, contributing to tumor resistance to radiation and chemotherapy. Glutamate-cysteine ligase (GCL) catalyzes the first and rate-limiting reaction in GSH synthesis, and enzyme function is controlled by GSH feedback inhibition or by transcriptional upregulation of the catalytic (GCLC) and modifier (GCLM) subunits. However, it has recently been reported that the activity of GCLC and the formation of GCL can be modified by reactive aldehyde products derived from lipid peroxidation. Due to the susceptibility of GCLC to posttranslational modifications by reactive aldehydes, we examined the potential for 2-deoxy-D-ribose (2dDR) to glycate GCLC and regulate enzyme activity and GCL formation. 2dDR was found to directly modify both GCLC and GCLM in vitro, resulting in a significant inhibition of GCLC and GCL enzyme activity without altering substrate affinity or feedback inhibition. 2dDR-mediated glycation also inhibited GCL subunit heterodimerization and formation of the GCL holoenzyme complex while not causing dissociation of pre-formed holoenzyme. This PTM could be of particular importance in glioblastoma (GBM) where intratumoral necrosis provides an abundance of thymidine, which can be metabolized by thymidine phosphorylase (TP) to form 2dDR. TP is expressed at high levels in human GBM tumors and shRNA knockdown of TP in U87 GBM cells results in a significant increase in cellular GCL enzymatic activity.

[383]

TÍTULO / TITLE: - Hepatobiliary and Pancreatic: A huge liver paraganglioma.

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

REVISTA / JOURNAL: - J Gastroenterol Hepatol. 2013 Jul;28(7):1075. doi: 10.1111/jgh.12254.

●● Enlace al texto completo (gratis o de pago) 1111/jgh.12254

AUTORES / AUTHORS: - Koh PS; Koong JK; Westerhout CJ; Yoong BK

INSTITUCIÓN / INSTITUTION: - Department of Surgery, University of Malaya, Kuala Lumpur.

[384]

TÍTULO / TITLE: - Brain Tumor Presenting as Somnambulism in an Adolescent.

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

REVISTA / JOURNAL: - Pediatr Neurol. 2013 Jul 5. pii: S0887-8994(13)00275-0. doi: 10.1016/j.pediatrneurol.2013.04.022.

- Enlace al texto completo (gratis o de pago)

1016/j.pediatrneurol.2013.04.022

AUTORES / AUTHORS: - Prashad PS; Marcus CL; Brown LW; Dlugos DJ; Feygin T; Harding BN; Heuer GG; Alexander Mason TB

INSTITUCIÓN / INSTITUTION: - Sleep Center, The Children's Hospital of Philadelphia, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania. Electronic address: prashadps@hotmail.com.

RESUMEN / SUMMARY: - BACKGROUND: Sleepwalking is typically a benign and self-limited non-rapid eye movement parasomnia of childhood. PATIENT: This article describes an unusual case of a 15-year-old boy referred to our sleep center for new-onset sleepwalking. RESULTS: An overnight polysomnogram was normal from a respiratory standpoint, but a concurrent extended electroencephalogram montage showed frequent epileptiform discharges from the right parietal-temporal region and two electroclinical seizures arising from the right-frontal-central-temporal region during sleep. Magnetic resonance imaging scan revealed a right parasagittal parietal region lesion consistent with a low-grade neoplasm, and surgical resection of the lesion demonstrated a right parietal dysembryoplastic neuroepithelial tumor. Complex partial seizures and sleepwalking remitted completely with anticonvulsant therapy following surgery. CONCLUSION: This case highlights the differential diagnosis of nocturnal events appearing to be typical parasomnias, especially when they arise abruptly at an older age.

[385]

TÍTULO / TITLE: - Meningioma associated with non-traumatic subdural hematoma: an outstanding appearance of this common intracranial tumor.

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

REVISTA / JOURNAL: - Arq Neuropsiquiatr. 2013 Jun;71(6). pii: S0004-282X2013000600417. doi: 10.1590/0004-282X20130052.

- Enlace al texto completo (gratis o de pago) [1590/0004-](http://1590/0004-282X20130052)

282X20130052

AUTORES / AUTHORS: - Rocha AJ; Saade N; Silva AZ

INSTITUCIÓN / INSTITUTION: - Section of Neuroradiology, Santa Casa de Misericórdia de Sao Paulo, Sao Paulo, SP, Brazil.

[386]

TÍTULO / TITLE: - Extracapsular dissection technique with the Cotton Swab for pituitary adenomas through an endoscopic endonasal approach - How I do it.

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

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Jun 22.

- Enlace al texto completo (gratis o de pago) [1007/s00701-013-1766-](http://1007/s00701-013-1766-1)

[1](#)

AUTORES / AUTHORS: - Prevedello DM; Ebner FH; de Lara D; Filho LD; Otto BA; Carrau RL

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, Wexner Medical Center at The Ohio State University, Columbus, OH, USA.

RESUMEN / SUMMARY: - BACKGROUND: Pituitary adenomas are often encased in a histological pseudocapsule that separates the tumor from the normal gland. Transsphenoidal adenoma resection may be performed either in an intra- or an extracapsular technique. The extracapsular fashion offers anatomical orientation, removal of a security margin, reduced risk of opening the arachnoid layer with subsequent CSF flow and identification of invasion. METHOD: The sella turcica is approached through the classic endoscopic endonasal route. After opening the dura of the sellar floor, the interface between the compressed tissue and the normal gland is used as a surgical plane for dissection. Performing slight counter-traction with the suction tube, the cleavage plane is identified and stepwise unsealed in an atraumatic fashion with the cotton swab. Once the cleavage plane is partially loosened, repeated twisting movements are performed with the cotton swab to enucleate the pseudocapsule and adenoma. CONCLUSION: Both micro- and macroadenomas presenting a pseudocapsule may be resected in the extracapsular dissection technique with the cotton swab. Operating in an endoscopic three- to four hands technique enables to visualize the anatomic planes and perform twisting movements with the cotton swab separating pseudocapsule and tumor in order to enucleate the adenoma.

[387]

TÍTULO / TITLE: - Glycogen synthase kinase-3beta (GSK-3beta) and its dysregulation in glioblastoma multiforme.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jun 11. pii: S0967-5868(13)00119-7. doi: 10.1016/j.jocn.2013.02.003.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2013.02.003

AUTORES / AUTHORS: - Atkins RJ; Stylli SS; Luwor RB; Kaye AH; Hovens CM
INSTITUCIÓN / INSTITUTION: - Department of Surgery, The University of Melbourne, The Royal Melbourne Hospital, Grattan Street, Parkville, VIC 3050, Australia. Electronic address: ratkins@student.unimelb.edu.au.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most frequently occurring and devastating human brain malignancy, retaining almost universal mortality and a median survival of only 14 months, even with recent advances in multimodal treatments. Gliomas are characterised as being both highly resistant to chemo- and radiotherapy and highly invasive, rendering conventional interventions palliative. The continual dismal prognosis for GBM patients identifies an urgent need for the evolutionary development of new treatment modalities. This includes molecular targeted therapies as many signaling molecules and associated pathways have been implicated in the development

and survival of malignant gliomas including the protein kinase, glycogen synthase kinase 3 beta (GSK-3beta). Here we review the activity and function of GSK-3beta in a number of signaling pathways and its role in gliomagenesis.

[388]

TÍTULO / TITLE: - Enhanced accumulation of curcumin and temozolomide loaded magnetic nanoparticles executes profound cytotoxic effect in glioblastoma spheroid model.

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

REVISTA / JOURNAL: - Eur J Pharm Biopharm. 2013 Jul 25. pii: S0939-6411(13)00258-0. doi: 10.1016/j.ejpb.2013.07.013.

●● Enlace al texto completo (gratis o de pago) 1016/j.ejpb.2013.07.013

AUTORES / AUTHORS: - Dilnawaz F; Sahoo SK

INSTITUCIÓN / INSTITUTION: - Laboratory of Nanomedicine, Institute of Life Sciences, Bhubaneswar, India.

RESUMEN / SUMMARY: - Glioblastomas (GBMs) are highly lethal primary brain tumours. Treatment of these malignant gliomas remains ineffective as these are extremely resistant to chemotherapeutic applications. Furthermore, combination therapy for cancer treatment is becoming more popular because it generates synergistic anticancer effects, by reducing individual drug-related toxicity and associated side effects. Currently, magnetic nanoparticles (MNPs) based drug delivery system has attracted much more attention owing to its intrinsic magnetic properties and drug loading capacity. In the present study, MNPs based drug delivery approach for co-delivering of potent chemotherapeutic drugs such as Curcumin (herbal drug) and Temozolomide (DNA methylating agent) has been implemented. The dual drug loaded MNPs formulations were evaluated in two-dimensional (2-D) monolayer culture and three-dimensional (3-D) tumour spheroid culture of T-98G cells for understanding the therapeutic discrepancy. The dual drug loaded MNPs formulations demonstrated higher cytotoxic effect than single drug loaded MNPs formulations as compared to their corresponding native drugs in 2-D and 3-D culture. The combination index (CI) analysis revealed synergistic mode of action of dual drug loaded MNPs formulations, which was further confirmed by cell death induction assay mediated by acridine orange (AO)/propidium iodide (PI) staining, illustrating higher efficacy of the formulation towards GBM therapy.

[389]

TÍTULO / TITLE: - Central Nervous System Lymphoma Newly Developed 12 Years after Remission of an Ocular Adnexal Lymphoma.

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

REVISTA / JOURNAL: - Acta Haematol. 2013 Jul 11;130(4):247-250.

●● Enlace al texto completo (gratis o de pago) 1159/000350485

AUTORES / AUTHORS: - Morikawa K; Tsuji T; Yamasaki H; Toyozumi Y; Arima N; Ohshima K; Tsuda H

INSTITUCIÓN / INSTITUTION: - Department of Hematology and Oncology, Kumamoto City Hospital, Kumamoto, Japan.

RESUMEN / SUMMARY: - Recurrence of non-Hodgkin's lymphoma more than 5 years after the initial diagnosis is rare. When late relapse occurs, it is difficult to determine whether it is a true recurrence or a new lesion. We experienced a case of an 81-year-old woman who developed central nervous system (CNS) lymphoma 12 years after remission of ocular adnexal lymphoma. Both showed the histology of diffuse large B-cell lymphoma. To elucidate whether the CNS lymphoma was clonally related to the first lymphoma, rearrangement of the immunoglobulin heavy chain genes of each lymphoma was studied using a polymerase chain reaction-based method. The results revealed that the sizes of the amplified products of the rearranged regions from the two lymphomas were different. This suggested different clonal origins of the lymphomas. It is clinically important to determine the origin of a second neoplasm because patients with a clonally related second lymphoma are usually treated with more intensive regimens, while those with a clonally unrelated lymphoma receive standard first-line therapy. The present case shows that, in the case of recurrent non-Hodgkin's lymphoma, not only histological confirmation but also genetic assessment is important to clarify the origin of the second lymphoma.

[390]

TÍTULO / TITLE: - Viral-Induced Intracranial Hypertension Mimicking Pseudotumor Cerebri.

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

REVISTA / JOURNAL: - *Pediatr Neurol.* 2013 Jul 4. pii: S0887-8994(13)00191-4. doi: 10.1016/j.pediatrneurol.2013.03.007.

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

1016/j.pediatrneurol.2013.03.007

AUTORES / AUTHORS: - Ravid S; Shachor-Meyouhas Y; Shahar E; Kra-Oz Z; Kassis I

INSTITUCIÓN / INSTITUTION: - Pediatric Neurology Unit & Epilepsy Service, Meyer Children's Hospital, Rambam Health Care Campus, Haifa, Israel. Electronic address: s_ravid@rambam.health.gov.il.

RESUMEN / SUMMARY: - **BACKGROUND:** Pseudotumor cerebri or idiopathic intracranial hypertension is characterized by normal spinal fluid composition and increased intracranial pressure in the absence of a space-occupying lesion. **METHODS:** This study describes a subgroup of 10 patients with the same typical presenting symptoms (headache, vomiting, and papilledema) but without nuchal rigidity, meningeal signs, or change in mental status. Patients had normal neuroimaging studies and intracranial hypertension but also pleocytosis in the cerebrospinal fluid, suggesting central nervous system infection. From the

results it can be hypothesized that those children represent a unique subgroup of viral-induced intracranial hypertension when comparing their risk factors, clinical course, treatment, and outcome with 58 patients who had idiopathic intracranial hypertension. RESULTS: All patients with viral-induced intracranial hypertension presented with papilledema but none had reduced visual acuity or abnormal visual fields, compared with 20.7% of patients who had idiopathic intracranial hypertension. They also responded better to treatment with acetazolamide, needed a shorter duration of treatment (7.7 +/- 2.6 months vs 12.2 +/- 6.3 months, P = 0.03), and had no recurrences. CONCLUSION: The results suggest that children who fulfill the typical presenting signs and symptoms and all diagnostic criteria for pseudotumor cerebri other than the normal cerebrospinal fluid component may represent a unique subgroup of viral-induced intracranial hypertension and should be managed accordingly. The overall prognosis is excellent.

[391]

TÍTULO / TITLE: - Esthesioneuroblastoma of the Nasal Cavity.

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

REVISTA / JOURNAL: - Am J Clin Oncol. 2013 Jul 3.

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

[1097/COC.0b013e31829b5631](#)

AUTORES / AUTHORS: - Hollen TR; Morris CG; Kirwan JM; Amdur RJ; Werning JW; Vaysberg M; Mendenhall WM

INSTITUCIÓN / INSTITUTION: - Departments of *Radiation Oncology and Otolaryngology, University of Florida College of Medicine, Gainesville, FL.

RESUMEN / SUMMARY: - OBJECTIVES:: Esthesioneuroblastoma is an uncommon cancer of the nasal cavity. We describe the outcomes for 26 patients treated with curative intent with photon radiotherapy (RT) at the University of Florida. METHODS:: Between May 1972 and June 2007, 26 patients received RT for previously untreated esthesioneuroblastoma of the nasal cavity. Sixteen patients were males and 10 were females with a median age of 55 years (range, 3 to 82 y). The modified Kadish stage distribution was: B, 7 patients; C, 17 patients; and D, 2 patients. Treatment modalities included the following: definitive RT, 5 patients; preoperative RT, 2 patients; and postoperative RT after resection, 19 patients. Elective neck irradiation (ENI) was performed in 17 (71%) of 24 N0 patients. RESULTS:: Rates of local control, cause-specific survival, and absolute overall survival at 5 years were 79%, 72%, and 69%, respectively. Overall survival among patients treated with definitive RT was 20% at 5 years, compared with 81% among those who underwent surgery and adjuvant RT (P=0.01). One (6%) of 17 patients who received ENI developed a recurrence in the neck and was successfully salvaged. Ultimate neck control was 100% at 5 years for patients who received

ENI versus 69% among those not receiving ENI (P=0.0173). CONCLUSIONS:: Resection combined with adjuvant RT is more effective than surgery or RT alone in the treatment of esthesioneuroblastoma. ENI reduces the risk of regional relapse in patients with Kadish stage B and C cancers.

[392]

TÍTULO / TITLE: - Different immunohistochemical levels of Hsp60 and Hsp70 in a subset of brain tumors and putative role of Hsp60 in neuroepithelial tumorigenesis.

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

REVISTA / JOURNAL: - Eur J Histochem. 2013 Jun 28;57(2):e20. doi: 10.4081/ejh.2013.e20.

●● Enlace al texto completo (gratis o de pago) [4081/ejh.2013.e20](#)

AUTORES / AUTHORS: - Rappa F; Unti E; Baiamonte P; Cappello F; Scibetta N

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RESUMEN / SUMMARY: - In this work we analysed, by immunohistochemistry, a series of brain tumors to detect the levels and cellular distribution of Hsp60 and Hsp70. We found that Hsp60 levels were significantly higher than those of Hsp70 in neuroepithelial tumors, while levels of both molecules were not significantly different from each other in meningeal neoplasms. In particular, Hsp60 immunopositivity was present mainly at the cytoplasmic level, while Hsp70 immunopositivity was found both in the cytoplasm and in the nucleus of tumor cells. The levels of these molecules in healthy control cells were always very low. Finally, Hsp60 and Hsp70 levels did not correlate with the different types (WHO grade) of neoplasm. Our results are partially in agreement with previous studies and suggest that Hsp60 is not increased by a passive phenomenon (e.g., due to the stress caused by the peritumor environment on cancer cells) but may be actively implicated in tumor progression, e.g. inhibiting tumor cell death or antitumor immune system response, as already postulated in vitro. We also briefly discuss the most recent publications on the extramitochondrial localization of Hsp60 in tumor cells and its role in tumor progression.

[393]

TÍTULO / TITLE: - Propranolol for Cerebral Cavernous Angiomatosis: A Magic Bullet.

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

REVISTA / JOURNAL: - Clin Pediatr (Phila). 2013 Jun 25.

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

[1177/0009922813492885](#)

AUTORES / AUTHORS: - Berti I; Marchetti F; Skabar A; Zennaro F; Zanon D; Ventura A

INSTITUCIÓN / INSTITUTION: - 1Institute for Maternal and Child Health, IRCCS “Burlo Garofolo”, Trieste, Italy.

[394]

TÍTULO / TITLE: - Evaluation of pattern electroretinogram as a visual prognosticator in chiasmatic tumors.

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

REVISTA / JOURNAL: - Clin Experiment Ophthalmol. 2013 Jun 18. doi: 10.1111/ceo.12138.

●● Enlace al texto completo (gratis o de pago) [1111/ceo.12138](#)

AUTORES / AUTHORS: - Goyal JL; Thangkhiew L; Yadava U; Arora R; Jain P

INSTITUCIÓN / INSTITUTION: - Guru Nanak Eye Centre, Maulana Azad Medical College, New Delhi - 110002, India.

RESUMEN / SUMMARY: - BACKGROUND: Tumors compressing the optic pathway may lead to irreversible loss of vision which can be detected by pattern electroretinogram (PERG) owing to its relation to ganglion cell function. This study aims to assess whether PERG is a useful tool to predict visual outcome following decompressive surgery for sellar and parasellar tumors. DESIGN: prospective non randomized study. PARTICIPANTS: 40 eyes of 20 patients with radiologically confirmed tumors in and around the sellar region. METHODS: Patients were followed for 6 weeks following surgical intervention (transphenoidal or transfrontal approach). MAIN OUTCOME MEASURES: Best corrected visual acuity, visual fields (Humphrey 30-2 standard automated perimetry) and PERG. The ratio N95/P50 (N2/P1) was calculated for each recording. RESULTS: 35.4% eyes with normal N2/P51 ratio (>1.1) showed improvement in visual fields post operatively as compared to 22.2% with abnormal ratio. Also, 9.6% eyes with normal ratio and 11.1% with an abnormal ratio deteriorated post operatively. No association was found between PERG and visual fields preoperatively and post operatively ($p = 0.093$). CONCLUSIONS: PERG may not be a useful prognostic indicator in the preoperative assessment of tumors causing chiasmal compression. An abnormal N2/P1 ratio is not necessarily associated with lesser or no clinical improvement following surgery as compared to an eye with a normal PERG.

[395]

TÍTULO / TITLE: - Intravascular large B-cell lymphoma presenting as acute hemorrhagic cerebral infarct with delirium.

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

REVISTA / JOURNAL: - Ann Clin Lab Sci. 2013 Summer;43(3):305-10.

AUTORES / AUTHORS: - Haninger DM; Davis TA; Parker JR; Slone SP; Parker JC Jr

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RESUMEN / SUMMARY: - Intravascular large B-cell lymphoma (IVLBCL) is a cumbersome diagnosis to make in vivo, particularly because of its elusive nature and ability to be a relatively nonspecific 'great mimicker'. Although it frequently has skin manifestations, it often escapes diagnosis due to its angiotrophism and predilection for vessels that are difficult to biopsy (e.g., cerebral vasculature). IVLBCL can involve the vasculature of virtually any organ but typically spares the lymph nodes themselves, and likely due to defects in adhesion molecules, remains stationary in the vessels. Histologically, the malignant lymphocytes are large and mitotically active with prominent nucleoli. Immunohistochemically, the cells stain as B-cells. The disease has an overall poor prognosis. Here we present a case of IVLBCL diagnosed at autopsy that presented as a hemorrhagic frontal lobe infarct, which progressed to delirium.

[396]

TÍTULO / TITLE: - Evolution of Fetal Subependymal Cysts throughout Gestation.

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

REVISTA / JOURNAL: - Fetal Diagn Ther. 2013 Jun 19.

●● Enlace al texto completo (gratis o de pago) [1159/000346571](#)

AUTORES / AUTHORS: - Correa F; Lara C; Carreras E; Vazquez E; Serra V

INSTITUCIÓN / INSTITUTION: - Maternal-Fetal Medicine Unit, Valencian University Institute of Infertility, Valencia, España.

RESUMEN / SUMMARY: - Subependymal cysts are secondary to brain germinal matrix hemorrhage or infarction and are associated with fetal chromosomal and metabolic conditions, as well as infections. They are found in 1-3% of neonates in the first days of life and have been described in fetuses, although much less frequently. We report the prenatal diagnosis of a case of subependymal cysts first visualized at 12 weeks' gestation and its evolution throughout pregnancy and after birth. As far as we know, this is the first time that such a condition is described before 16 weeks' gestation as well as its longitudinal evolution. Knowledge that subependymal cysts can be seen as early as 12 weeks' gestation and their natural evolution is important to avoid equivocal diagnoses. The prognosis of isolated subependymal cysts remains uncertain.

[397]

TÍTULO / TITLE: - Factors predisposing to small lacunar versus large non-lacunar cerebral infarcts: is left ventricular mass involved?

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

REVISTA / JOURNAL: - Neurol Res. 2013 Jul 26.

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

1179/1743132813Y.0000000240

AUTORES / AUTHORS: - Muscari A; Puddu GM; Fabbri E; Napoli C; Vizioli L; Zoli M

RESUMEN / SUMMARY: - **OBJECTIVES:** To find some specific determinants of lacunar strokes (LS), this study compared LS and non-LS patients using the size and location of cerebral lesions as discriminant between the two groups. **METHODS:** The main cardiovascular risk factors and some echocardiographic parameters were assessed in 225 ischemic stroke patients aged 75.1±11.4 (SD) years, including 101 patients with symptoms and lesions of lacunar type (deep hypodensities with diameter >1.5 cm) and 124 patients with non-lacunar lesions. **RESULTS:** LS patients tended to be younger and had a higher prevalence of smokers than non-LS patients. In a subgroup undergoing echocardiogram, those with LS had a higher left ventricular mass index (LVMI) than non-LS patients (141.6±44.9 vs. 115.1±31.8 g/m², P = 0.005). The prevalence of hypertension, diabetes, and carotid stenoses. 50% was similar in the two groups. In multivariable analysis the ever-smoker status (OR = 1.9, P = 0.02), atrial fibrillation (inverse association, OR = 0.5, P = 0.03), LVMI >130 g/m² (OR = 6.6, P = 0.001), and age >72 years (OR = 5.9, P = 0.003) remained independently associated with LS. **CONCLUSIONS:** The patients with lacunar cerebral lesions had a greater left ventricular mass than those with non-lacunar lesions, while blood pressure values did not differ. Lacunar lesions were also associated with smoking and a younger age.

[398]

TÍTULO / TITLE: - 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 Jun 5.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1788-](http://1007/s00701-013-1788-8)

[8](#)

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.

RESUMEN / SUMMARY: - **BACKGROUND:** Over the past decade, the endoscopic endonasal trans-sphenoidal approach has been used to resect pituitary adenomas. However, in the use of this procedure, some research teams prefer a two-nostril method, whereas other groups are in favor of the one-nostril method. Here, we present a series of pituitary adenomas and try to confirm whether or not one nostril is enough for endoscopic resection of most pituitary adenomas. **METHODS:** A total of 250 consecutive patients who underwent an

endoscopic endonasal trans-sphenoidal approach were reviewed retrospectively, of which 200 were via the unilateral nostril (group 1) and 50 were via bilateral nostrils (group 2). Surgical and clinical outcomes were analyzed. RESULTS: For microadenomas, intrasellar macroadenomas and macroadenomas with moderate extrasellar extension, the prevalence of gross total resection (GTR), hormonal outcome and visual improvement were similar between the two groups. The one-nostril group had better results for duration of surgery and blood loss, with fewer rhinological complications. However, for macroadenomas with extensive extrasellar invasion, GTR was obtained in two of seven patients in group 2 but none in group 1. CONCLUSION: The one-nostril method, which is relatively fast and minimally invasive, is adequate for endoscopic resection of most pituitary adenomas with moderate extension.

[399]

TÍTULO / TITLE: - Myxopapillary ependymoma of the conus medullaris presenting with intratumoral hemorrhage during weight lifting in a teenager.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jul 3.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2218-](#)

[1](#)

AUTORES / AUTHORS: - Khalatbari MR; Moharamzad Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Arad Hospital, Somayeh St., between Dr. Shariati & Bahar Ave, Tehran, Iran, mrkhalatbari@hotmail.com.

RESUMEN / SUMMARY: - Intratumoral hemorrhage within a myxopapillary ependymoma of the conus medullaris and cauda equina is rare. Most patients with myxopapillary ependymoma present insidiously, but they may present with hemorrhage or cauda equina syndrome. Limited number of case reports available has described this condition only in adult patients. We report our experience with intratumoral hemorrhage of myxopapillary ependymoma of the conus medullaris during weight lifting in a 15-year-old boy.

[400]

TÍTULO / TITLE: - Safety of Long-term Treatment with Cabergoline on Cardiac Valve Disease in Patients with Prolactinomas.

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

REVISTA / JOURNAL: - Eur J Endocrinol. 2013 Jul 3.

●● Enlace al texto completo (gratis o de pago) [1530/EJE-13-0231](#)

AUTORES / AUTHORS: - Auriemma RS; Pivonello R; Perone Y; Grasso LF; Ferreri L; Simeoli C; Iacuanello D; Gasperi M; Colao AA

INSTITUCIÓN / INSTITUTION: - R Auriemma, Dipartimento di Medicina Clinica e Chirurgia, Sezione di Endocrinologia, Federico II University, Naples, Italy.

RESUMEN / SUMMARY: - OBJECTIVE: Cabergoline (CAB) has been found to be associated with increased risk of cardiac valve regurgitation in Parkinson's disease (PD), whereas several retrospective analyses failed to detect a similar relation in hyperprolactinemic patients. The current study aimed at investigating cardiac valve disease before and after 24 and 60 months of continuous treatment with CAB only in patients with hyperprolactinemia. MATERIALS AND METHODS: Forty patients (11 men, 29 women, aged 38.7+/-12.5 years) newly diagnosed with hyperprolactinemia entered the study. Cumulative CAB dose ranged 12-588 mg (median 48 mg) at 24 months, and 48-1260 mg (median 149 mg) at 60 months. All patients underwent a complete trans-thoracic echocardiographic examination. Valve regurgitation was assessed according to the American Society of Echocardiography. RESULTS: At baseline the prevalence of trace mitral, aortic, pulmonic and tricuspid regurgitation was respectively 20%, 2.5%, 10% and 40%, with no patient showing clinically relevant valvulopathy. After 24 months, no change in the prevalence of trace mitral (p=0.78) and pulmonic (p=0.89) regurgitation and of mild aortic (p=0.89) and tricuspid (p=0.89) regurgitation was found as compared to baseline. After 60 months, the prevalence of trace tricuspid regurgitation only was slightly increased as compared to 24 months (37,5%; p=0.82) but none of the patients developed significant valvulopathy. No correlation was found between cumulative dose and prevalence or grade of valve regurgitation at both evaluations. Prolactin levels normalized in all patients but one. CONCLUSIONS: CAB does not increase the risk of significant cardiac valve regurgitation in prolactinomas after the first five years of treatment.

[401]

TÍTULO / TITLE: - Skull Asymmetry as an Unusual Presentation of an Intracranial Tumour.

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

REVISTA / JOURNAL: - *Pediatr Neurosurg*. 2013 Jun 25.

●● Enlace al texto completo (gratis o de pago) [1159/000351548](#)

AUTORES / AUTHORS: - Boyle M; Hurley A; Curtis E

INSTITUCIÓN / INSTITUTION: - Department of General and Developmental Pediatrics, The Adelaide and Meath Hospital Incorporating the National Children's Hospital, Tallaght, Ireland.

[402]

TÍTULO / TITLE: - An analysis of T2 mapping on brain tumors.

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

REVISTA / JOURNAL: - *Acta Neurochir Suppl*. 2013;118:195-9. doi: 10.1007/978-3-7091-1434-6_36.

- Enlace al texto completo (gratis o de pago) [1007/978-3-7091-1434-](https://doi.org/10.1007/978-3-7091-1434-6_36)

[6_36](#)

AUTORES / AUTHORS: - Nakai K; Nawashiro H; Shima K; Kaji T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Fukuoka University Chikushi Hospital, Fukuoka, Japan. neuroivr@gmail.com

RESUMEN / SUMMARY: - PURPOSE: Vasogenic edema on glioblastoma multiforme (GBM) or a metastatic brain tumor (METS) may have different T2 relaxation time values because it involves an increased water component. In this study, we assessed the diagnostic utility of T2 mapping techniques in distinguishing GBM from METS. MATERIALS AND METHODS: We studied a glioblastoma (GBM) patient and a metastatic brain tumor (METS) patient who had not undergone previous surgery or treatment. All MR imaging was carried out using a 3.0-T whole-body unit, and axial T2 maps were generated with five TEs (TE = 20, 40, 60, 80, and 100 ms). Data were analyzed by using image processing and analysis software. RESULTS: The T2 map of a GBM case showed that the peritumoral area at a T2 relaxation time of 120-160 ms is prominent compared with the area at 210-240 ms. In contrast, the peritumoral area at 210-240 ms was prominent compared with the area at 120-160 ms in a METS case. CONCLUSION: The distribution of T2 relaxation time in the peritumoral area shows different patterns in glioblastomas and metastatic brain tumors.

[403]

TÍTULO / TITLE: - 'Goose bumps' as presenting feature of intraventricular glioblastoma multiforme.

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

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

- Enlace al texto completo (gratis o de pago)

[3109/02688697.2013.817530](https://doi.org/10.1007/978-3-7091-1434-6_36)

AUTORES / AUTHORS: - Asha MJ; Tansey RJ; Gan YC

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Queen Elizabeth Hospital, University Hospital of Birmingham, Edgbaston, Birmingham, UK.

RESUMEN / SUMMARY: - 'Goose-bumps' seizures are rare manifestations of epilepsy. They are rarely reported by patients and can be easily dismissed by clinicians. Clinically, it carries some diagnostic localising value especially with unilateral onset. In this report, we present a case of intraventricular glioblastoma multiforme with ipsilateral goose bumps and review the literature.

[404]

TÍTULO / TITLE: - Experiential auditory hallucinations due to chronic epileptic discharges after radiotherapy for oligoastrocytoma.

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

REVISTA / JOURNAL: - Epileptic Disord. 2013 Jun;15(2):188-92. doi: 10.1684/epd.2013.0574.

●● Enlace al texto completo (gratis o de pago) 1684/epd.2013.0574

AUTORES / AUTHORS: - Sasaki T; Kodaka F; Taniguchi G; Nishikawa T; Watanabe M

INSTITUCIÓN / INSTITUTION: - Department of Psychiatry and Behavioral Sciences, Tokyo Medical and Dental University Graduate School, Tokyo, Japan. sasapsyc@tmd.ac.jp

RESUMEN / SUMMARY: - Experiential auditory hallucinations have been reported in patients with epilepsy. We report the case of a 46-year-old woman with a history of more than three years of experiential auditory hallucinations caused by chronic epileptic discharges, which developed after radiotherapy for an oligoastrocytoma in the left temporal lobe. Electroencephalography revealed frequent spikes in the left temporal lobe. In response to clonazepam, but not antipsychotics, her auditory hallucinations almost completely disappeared and spikes were reduced. Her auditory hallucinations exhibited the characteristics of first-rank symptoms of schizophrenia, however, the content of experiential auditory hallucinations endured by our patient suggested an epileptic origin. We believe that the persistent subictal discharges, in combination with hyperexcitability of the temporal neocortex near radiation-induced necrotic lesions, were the cause of the auditory hallucinations.

[405]

TÍTULO / TITLE: - Primary diffuse leptomeningeal atypical teratoid/rhabdoid tumour in an adolescent.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Jun 29. pii: S0303-8467(13)00208-4. doi: 10.1016/j.clineuro.2013.05.036.

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

1016/j.clineuro.2013.05.036

AUTORES / AUTHORS: - Livermore LJ; Dabbous B; Hofer M; Kueker W; Jayamohan J; Wimalaratna S

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[406]

TÍTULO / TITLE: - Comparative results of infratemporal fossa approach with or without facial nerve rerouting in jugular fossa tumors.

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

REVISTA / JOURNAL: - Eur Arch Otorhinolaryngol. 2013 Jul 24.

●● Enlace al texto completo (gratis o de pago) [1007/s00405-013-2642-](https://doi.org/10.1007/s00405-013-2642-6)

[6](#)

AUTORES / AUTHORS: - Llorente JL; Obeso S; Lopez F; Rial JC; Coca A; Suarez C

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RESUMEN / SUMMARY: - Jugular fossa tumors are uncommon diseases. During the surgery and due to the interposition of the facial nerve in the tumor approach, the facial nerve must be elevated from the fallopian canal and placed permanently into an anterior position. Although this maneuver provides a wide exposure, most of the patients suffer a long-term total or partial facial palsy. The purpose of this article is to check whether the infratemporal fossa approach without transposition of the facial nerve is equivalent to the approach with rerouting of the facial nerve regarding postsurgical morbidity. The clinical records of 52 patients who underwent an infratemporal fossa approach were reviewed in which 34 patients were segregated into two comparable groups regarding the presence or absence of transposition of the facial nerve. There were 19 women and 15 males. The majority of the patients (73 %) had jugular paragangliomas. The mean follow-up of the full series was 66 months. It was statistically significant that the worst facial nerve function at hospital discharge was in the patients who underwent facial nerve transposition ($p = 0.001$). Equally the facial nerve function in the no-rerouting group 1 year after the surgery was significantly much better than in the rerouting group ($p = 0.003$). Regarding to survival, recurrence or complications no significant differences were observed between both groups. Our study suggests that most of cases avoiding facial nerve transposition allow significant better functional results thereof without affecting other parameters such as recurrence, complications or survival.

[407]

TÍTULO / TITLE: - Metastatic paraganglioma presenting as a primary shoulder mass.

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

REVISTA / JOURNAL: - Skeletal Radiol. 2013 May 31.

●● Enlace al texto completo (gratis o de pago) [1007/s00256-013-1651-](https://doi.org/10.1007/s00256-013-1651-2)

[2](#)

AUTORES / AUTHORS: - Rekhi B; Verma A; Gulia A; Kumar R; Dhanda S; Jambhekar NA

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RESUMEN / SUMMARY: - Paragangliomas uncommonly metastasize, including to the bones, wherein these tumors are designated as malignant paragangliomas. A 56-year-old man presented with pain and immobility in his right arm for 1

year. He had a history of controlled hypertension and diabetes mellitus for 2 years. He had also been taking anti-anxiety medications for 25 years. His shoulder imaging revealed an expansile, lytic, destructive lesion in the glenoid cavity, measuring 4.6 x 3.9 x 3.2 cm, involving the adjacent bones and soft tissues. A whole-body PET-CT scan revealed a hypermetabolic destructive mass in the right glenoid cavity and another lesion in his abdomen in the aortocaval region. Initial biopsy and subsequent scapular resection microscopically revealed a multinodular tumor with polygonal cells arranged in a nesting and diffuse pattern, in a vascularized and sclerotic stroma. Tumor cells displayed moderate to abundant, eosinophilic to clear cytoplasm, fine nuclear chromatin, focal intranuclear inclusions, and scattered mitotic figures. Immunohistochemically, tumor cells were positive for vimentin, synaptophysin, chromogranin, and CD56 and negative for AE1/AE3, CK, EMA, CD10, SMA, Melan A, HMB-45, desmin, and S100-P. Biopsy of the abdominal mass revealed foci of tumor cells resembling the scapular tumor. Diagnosis of a malignant paraganglioma was finally offered. The patient's post-operative blood pressure is controlled. Currently, his urinary vanillylmandelic acid and metanephrine levels are normal. He is asymptomatic 11 months post-surgery and is on follow-up. This unusual case is presented to increase a diagnostic index of suspicion for a malignant paraganglioma, including at unconventional musculoskeletal sites. The diagnostic challenge and therapeutic implications are discussed herewith.

[408]

TÍTULO / TITLE: - Management of neuromas of the upper extremity.

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

REVISTA / JOURNAL: - Hand Clin. 2013 Aug;29(3):409-20. doi: 10.1016/j.hcl.2013.04.007.

●● Enlace al texto completo (gratis o de pago) 1016/j.hcl.2013.04.007

AUTORES / AUTHORS: - Brogan DM; Kakar S

INSTITUCIÓN / INSTITUTION: - Department of Orthopedic Surgery, Mayo Clinic, 200 First Street Southwest, Rochester, MN 55905, USA.

RESUMEN / SUMMARY: - Neuromas primarily arise from iatrogenic injury, trauma, or chronic irritation. Given the disabling symptoms of neuromas, an array of treatment strategies exist, with varied results. Successful treatment relies on accurate identification of the offending nerve, containment of the regenerating fascicles, and cessation of mechanical or other noxious stimuli over the regenerating nerve end. The choice of treatment depends in part on the nerve affected, whether it involves critical or noncritical sensation, and its location.

[409]

TÍTULO / TITLE: - Kinin-generating cellular model obtained from human glioblastoma cell line U-373.

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

REVISTA / JOURNAL: - Acta Biochim Pol. 2013 Jun 12.

AUTORES / AUTHORS: - Guevara-Lora I; Blonska B; Fausner A; Kozik A

INSTITUCIÓN / INSTITUTION: - Department of Analytical Biochemistry, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Krakow, Poland.

RESUMEN / SUMMARY: - Kinins, a group of important pro-inflammatory peptides, are abundantly found in tissues and biological fluids of cancer patients. Bradykinin, the major representative of kinins, induces vascular permeability and, in consequence, promotes tumor expansion. Additionally, the kinin-induced inflammatory responses, especially those mediated by kinin metabolites without the C-terminal arginine residue, lead to enhanced tumor growth. The present study aimed at analyzing the ability of the human glioblastoma cell line U-373, derived from a malignant tumor, to produce kinin peptides. The proteins involved in kinin generation, i.e., the kininogens and the kallikreins, were shown to be expressed in these cells. Moreover, tumor necrosis factor alpha, a proinflammatory cytokine that mediates tumorigenesis, was found to enhance the expression of enzymes associated with kinin production. The strong binding of kininogen to the cell surface and the enzymatic degradation of this protein by cells suggest the activation of kinin-generating systems. Indeed, glioblastoma cells, pre-treated with tumor necrosis factor alpha, released kinin peptides from exogenous kininogen. The expression of kinin receptors in these cells was also shown to increase under the influence of this cytokine. Our results suggest that the human glioblastoma cell line U-373 constitutes a good cellular model that can be helpful in cancer research focused on kinin-induced inflammation. Furthermore, our findings can contribute to new approaches in cancer treatment with the use of kinin receptor antagonists and inhibitors of kinin production.

[410]

TÍTULO / TITLE: - Giant cranionasal and cystic-solid craniopharyngioma associated with extensive bone erosion and ossification.

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

REVISTA / JOURNAL: - J Craniofac Surg. 2013 Jul;24(2):e398-401. doi: 10.1097/SCS.0b013e318280249f.

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

[1097/SCS.0b013e318280249f](#)

AUTORES / AUTHORS: - Chen H; Zhou L; Luo L; Jiang S; Guo G; You C

INSTITUCIÓN / INSTITUTION: - From the *Department of Neurosurgery, daggerState Key Laboratory of Biotherapy and Cancer Center, West China Hospital, and double daggerDepartment of Anesthesiology, West China Second Hospital, Sichuan University, Chengdu, China.

RESUMEN / SUMMARY: - Craniopharyngioma (CP), a rare benign and slow-growing epithelial tumor, is mainly located within the sellar/parasellar region. Primary CP involving the nasal cavity and the sellar region with extensive erosion of the skull base and ossification simultaneity has not been described previously. The authors report a 23-year-old man who presented to our institute with complaints of repeated nasal cavity bloodshed, liquid flow, and progressive visual loss. A neuroimaging examination showed a giant cranionasal and cystic-solid CP extending from the suprasellar region to the nasopharynx with inhomogeneous enhancement, which is associated with extensive erosion of the skull base and ossification. The patient underwent a transsphenoidal surgery to resect the nasopharyngeal component of CP and a subfrontal craniotomy with a total removal of intracranial component by grinding 3 months later. A histopathologic examination revealed characteristic features of adamantinomatous CP associated with ossification. The current study demonstrates that CP can exhibit cranionasal growth pattern and arise from residue of craniopharyngeal duct. Extensive erosion of the skull base, calcification, and ossification can present in tumor simultaneity. A 2-stage stratagem is important for its total removal because of the peculiar hardness. Postsurgical course is unevenly and should be dealt with carefully.

[411]

TÍTULO / TITLE: - O-Linked Mannose beta-1,2-N-acetylglucosaminyltransferase 1 Correlated With the Malignancy in Glioma.

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

REVISTA / JOURNAL: - J Craniofac Surg. 2013 Jul;24(4):1441-6. doi: 10.1097/SCS.0b013e318295378b.

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

[1097/SCS.0b013e318295378b](#)

AUTORES / AUTHORS: - Lan J; Guo P; Chen M; Wu B; Mao Q; Qiu Y

INSTITUCIÓN / INSTITUTION: - From the *Department of Neurosurgery, Ren Ji Hospital, Shanghai Jiao Tong University School of Medicine; daggerShanghai Institute of Head Trauma; and double daggerRenji Clinic Medical School, Shanghai Jiao Tong University School of Medicine, Shanghai, China.

RESUMEN / SUMMARY: - O-linked mannose beta-1,2-N-acetylglucosaminyltransferase 1 (PomGnT1) constitutes one third of the O-linked glycoproteins in brain tissue. However, its functions have been seldom investigated in brain cancers. In this study, immunohistochemistry was used for the detection of the PomGnT1 protein in 133 cases of glioma tissues. Spearman correlation analysis was used for the relationship between PomGnT1 staining and the glioma grade. Receiver operating characteristic curve was used to measure the diagnostic value of PomGnT1 protein in the degree of glioma malignance. We found that PomGnT1 expression was correlated with glioma grade, and it could be used as a marker to distinguish low- and high-

grade gliomas. Stably transfected U87 cells were constructed to overexpress short hairpin RNA of PomGnT1. Immunofluorescence test detected that this protein also could restrain the generation of U87 cells' pseudopodia. Western blotting further showed that the PomGnT1 protein had an impact on the c-myc protein level. In conclusion, our data suggest that PomGnT1 protein was correlated with the malignance of glioma progression, the mechanism involved in glioma cell's pseudopodium formation, and the expression of c-myc protein.

[412]

TÍTULO / TITLE: - A giant mastoid cholesteatoma with posterior cranial extension causing mass effect and obstructive hydrocephalus.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Jun 18. pii: S0303-8467(13)00194-7. doi: 10.1016/j.clineuro.2013.05.023.

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

[1016/j.clineuro.2013.05.023](#)

AUTORES / AUTHORS: - Sabir BI; Rahmat K; Bux SI; Rajagopal NS; Looi LM; Sia SF

INSTITUCIÓN / INSTITUTION: - Department of Biomedical Imaging, University Malaya Research Imaging Centre, Malaysia.

[413]

TÍTULO / TITLE: - Metatarsal Shortening Osteotomy for Decompression of Morton's Neuroma.

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

REVISTA / JOURNAL: - Foot Ankle Int. 2013 Jul 26.

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

[1177/1071100713499905](#)

AUTORES / AUTHORS: - Park EH; Kim YS; Lee HJ; Koh YG

INSTITUCIÓN / INSTITUTION: - Yonsei Sarang Hospital, Seoul, Korea.

RESUMEN / SUMMARY: - BACKGROUND: Among the various operative treatments of Morton's neuroma, deep transverse metatarsal ligament (DTML) release has been performed for decompression of neuroma. However, the main lesion of Morton's neuroma is located between the metatarsal head and the metatarsophalangeal (MTP) joint and more distal than the DTML. Hence we performed the metatarsal shortening osteotomy along with DTML release for decompression of neuroma, and investigated the clinical outcomes of it and compared the outcomes with those of DTML release alone. METHODS: We retrospectively reviewed 84 consecutive patients (86 neuromas) who underwent surgery for a Morton's neuroma between February 2008 and March 2011. The first 46 neuroma (group A) were treated with DTML release alone, and the next 40 neuroma (group B) underwent the metatarsal shortening osteotomy with

DTML release. Clinical outcomes were compared between the groups and the associations between clinical outcomes and neuroma size were assessed. RESULTS: Clinical outcomes were significantly improved after surgery in both groups but there were significant differences in clinical outcomes between the 2 groups at final follow-up. There were significant correlations between neuroma size and outcomes in group A, whereas no significant correlations were found between neuroma size and outcomes in group B. CONCLUSION: The metatarsal shortening osteotomy with DTML release resulted in better outcomes compared with DTML release alone in patients with Morton's neuromas. LEVEL OF EVIDENCE: Level III, retrospective comparative series.

[414]

TÍTULO / TITLE: - Management of hydrocephalus secondary to pineal region tumors.

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

REVISTA / JOURNAL: - Clin Neurol Neurosurg. 2013 Jun 3. pii: S0303-8467(13)00165-0. doi: 10.1016/j.clineuro.2013.05.009.

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

[1016/j.clineuro.2013.05.009](#)

AUTORES / AUTHORS: - Zhang Z; Wang H; Cheng H; Fan Y; Hang C; Sun K; Zhu L

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Jinling Hospital, School of Medicine, Nanjing University, 305 East Zhongshan Road, Nanjing 210002, Jiangsu Province, China.

RESUMEN / SUMMARY: - BACKGROUND: Hydrocephalus is often secondary to pineal region tumors. Hydrocephalus can lead to high intracranial pressure, which in turn results in disturbance of consciousness, cerebral hernia, and even death. Hydrocephalus management is important in the treatment of pineal region tumors. It is still controversial regarding to when and how to treat hydrocephalus secondary to pineal region tumors. The objective of this study is to investigate the management of hydrocephalus secondary to pineal region tumors. METHODS: We retrospectively analyzed records for 51 patients admitted to the department of Neurosurgery, Jinling Hospital from April 1997 to September 2010 with hydrocephalus secondary to pineal region tumors treated through occipital transtentorial approach. RESULTS: Preoperative ventricular drainage was performed on one patient, and ventriculoperitoneal shunts were performed on two patients. Intraoperative ventriculocisternal shunts were performed on 35 patients (the remission rate was 88.6%), no treatments on 15 patients (the remission rate was 46.7%), and ventricular drainages on three patients. VP shunts were performed on 12 patients with no remission after the operation. CONCLUSION: Pineal region tumors resection usually should be performed before shunting, unless there is an acute obstructive hydrocephalus. The posterior third ventricle should be opened after tumor resection.

Intraoperative third ventriculostomy and ventriculocisternal shunt are reliable ways to manage hydrocephalus secondary to pineal region tumors.

[415]

TÍTULO / TITLE: - Supratentorial brain schwannomas: An uncommon location for a common tumour.

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

REVISTA / JOURNAL: - Br J Neurosurg. 2013 Jul 24.

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

[3109/02688697.2013.815320](#)

AUTORES / AUTHORS: - Sanmillan JL; Plans G; Vidal N; Acebes JJ

INSTITUCIÓN / INSTITUTION: - Neurosurgery Department, Bellvitge University Hospital, Hospitalet de Llobregat, Barcelona, España.

RESUMEN / SUMMARY: - Introduction. Intracranial schwannomas not related to cranial nerves are uncommon brain tumours. Such tumours account for less than 1% of all surgically treated schwannomas. Only 79 cases have been reported in the literature. Methods. We describe two cases treated in our centre. The patients are young women with seizures as a presenting symptom. Both underwent surgery with the presumptive diagnosis of benign brain tumour. Histopathological examination revealed the certain diagnosis of Schwannoma. Results. Good outcome was achieved with total excision of the tumour. Based on the literature, demographic data, clinical aspects, imaging features and theories on the possible origin of this rare tumour are discussed. Conclusions. These tumours should be included in the differential diagnosis of supratentorial benign tumours in young adults. Total excision, whenever possible, is the treatment of choice.

[416]

TÍTULO / TITLE: - Parenchymal Anaplastic Astrocytoma Presenting With Visual Symptoms Due to Bilateral Optic Nerve Sheath Involvement.

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

REVISTA / JOURNAL: - J Neuroophthalmol. 2013 Jul 16.

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

[1097/WNO.0b013e318298fab2](#)

AUTORES / AUTHORS: - Bui KM; Farooq AV; Moss HE; Lin AY; Valyi-Nagy T; Villano JL

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Chicago, Chicago, Illinois Department of Oncology, University of Illinois at Chicago, Chicago, Illinois.

[417]

TÍTULO / TITLE: - Primary alveolar soft part sarcoma arising from the cerebellopontine angle.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jun 22.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2193-](#)

[6](#)

AUTORES / AUTHORS: - Ahn SH; Lee JY; Wang KC; Park SH; Cheon JE; Phi JH; Kim SK

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

RESUMEN / SUMMARY: - INTRODUCTION: Alveolar soft part sarcoma (ASPS), a rare soft tissue malignant neoplasm, frequently metastasizes to the brain. However, primary intracranial ASPS is extremely rare. We present a case of primary intracranial ASPS arising from the cerebellopontine angle (CPA) without demonstrable systemic lesions. CASE REPORT: An 11-year-old girl presented with a recurrent tumor in the right CPA after a partial resection and radiation therapy (RT). Near-total resection with a minimal tumor left in the jugular foramen was performed. The pathological diagnosis was ASPS. There was no evidence of primary extracranial tumors. She underwent adjuvant chemotherapy and gamma knife surgery. At 29 months after the second surgery, magnetic resonance imaging revealed multifocal enhancing lesions at the prepontine cistern, right CPA and medulla oblongata, despite intensive treatment. However, extracranial metastasis was not noted. This case suggested a poor outcome of primary intracranial ASPS, similar to extracranial ASPS.

[418]

TÍTULO / TITLE: - Rosette-forming glioneuronal tumor of the fourth ventricle with neurocytoma component.

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

REVISTA / JOURNAL: - Childs Nerv Syst. 2013 Jul 2.

●● Enlace al texto completo (gratis o de pago) [1007/s00381-013-2216-](#)

[3](#)

AUTORES / AUTHORS: - Chiba K; Aihara Y; Eguchi S; Tanaka M; Komori T; Okada Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tokyo Women's Medical University, 8-1 Kawada-cho Shinjuku-ku, 162-8666, Tokyo, Japan.

RESUMEN / SUMMARY: - Rosette-forming glioneuronal tumor (RGNT) was first published in 2002 and was described as a benign and indolent tumor. It was also included in the 2007 World Health Organization (WHO) classification of tumors as a grade 1 tumor for its benign clinical behavior and the possibility of surgical cure. Pathologically, RGNT is a mixed neuronal-glial tumor which consists of two distinct histological components-one with uniform neurocytes forming rosettes and/or perivascular pseudorosettes and the other being astrocytic in nature resembling pilocytic astrocytoma (biphasic pattern). We present the clinical course and pathological findings of two distinctively different cases. The first one was a 4-year-old girl with head trauma and a tumor which was incidentally found by CT. Pathology revealed that the tumor contained neurocytoma components and areas of relatively high proliferative ability with the first report of the presence of midsized bright elliptic cells. The other case was a 19-year-old girl whose imaging studies showed hydrocephalus and a brain stem tumor. She underwent endoscopic third ventriculostomy and biopsy, followed by observation. An MRI taken 6 months later showed progression of the tumor and she subsequently had the tumor excised. We are considering the possibility for our RGNT cases to correspond to a higher WHO grade as they have shown rapid progression, contrary to the already established, and their character, origin, differential diagnosis, and treatment plans have been discussed.

[419]

TÍTULO / TITLE: - Malignant peripheral nerve sheath tumour following radiotherapy for pituitary adenoma.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 2. pii: S0967-5868(13)00274-9. doi: 10.1016/j.jocn.2013.02.042.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2013.02.042

AUTORES / AUTHORS: - Guo F; Song L; Meng Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of Zhengzhou University, Jianshe East Road, No 1, Zhengzhou, HeNan Province 450052, China. Electronic address:

quofuyou888@yahoo.com.cn.

RESUMEN / SUMMARY: - Intracranial malignant peripheral nerve sheath tumour (MPNST) is an extremely rare lesion. We report a patient with an MPNST in the sellar region following radiotherapy for pituitary adenoma.

[420]

TÍTULO / TITLE: - 18F-DOPA PET/CT in the Evaluation of Hereditary SDH-Deficiency Paraganglioma-Pheochromocytoma Syndromes.

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

REVISTA / JOURNAL: - Clin Nucl Med. 2013 Jul 12.

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

[1097/RLU.0b013e31829aface](https://doi.org/10.1097/RLU.0b013e31829aface)

AUTORES / AUTHORS: - Marzola MC; Chondrogiannis S; Grassetto G; Rampin L; Maffione AM; Ferretti A; Opocher G; Schiavi F; Colletti PM; Rubello D

INSTITUCIÓN / INSTITUTION: - From the *Department of Nuclear Medicine, PET/CT Centre, daggerMedical Physics Unit, “Santa Maria della Misericordia Hospital”, Rovigo, Italy; double daggerDepartment of Medicine-DIMED, University of Padova, Padova, Italy; section signFamilial Cancer Clinic & Oncoendocrinology, Veneto Institute of Oncology, IRCCS, Milan, Italy; and paragraph signDepartment of Radiology, University of Southern California, Los Angeles, CA.

RESUMEN / SUMMARY: - **PURPOSE:** This study aims to evaluate the role of F-DOPA PET/CT in staging and follow-up of paraganglioma syndromes succinate dehydrogenase (SDH)-mutation-related patients, comparing F-DOPA PET/CT results with morphological imaging and biochemical results. **PATIENTS AND METHODS:** We retrospectively studied 10 consecutive patients (3 F, 7 M, mean age 32 yrs), all with a genetically demonstrated SDH mutation (5 SDH-D, 4 SDH-B, and 1 SDH-C) and all addressed to F-DOPA PET/CT scan. Seven patients had already been operated on for one or more pheochromocytomas and/or paragangliomas and were submitted to F-DOPA PET/CT scan according to clinical, biochemical, or radiological suspicion of recurrence, while 3 were only genetically positive, with no previous symptom/sign of the disease. For all patients, biochemical analysis (plasma and/or urinary catecholamine) and results of high-resolution morphological imaging studies (CT and/or MRI) were available. Histologic/cytologic findings or imaging and biochemical follow-up were taken as gold standard in all cases. **RESULTS:** Seven out of 10 patients showed one or more areas of pathological F-DOPA accumulation. PET/CT demonstrated the presence of the disease in 4/6 patients with no increase in catecholamine levels (“biochemically silent”). Positive detection rate was 100% in SDH-D and 40% in “non-SDHD”. Analyzing per lesion, F-DOPA PET/CT demonstrated more lesions than anatomical imaging (16 vs. 7) especially in head and neck paragangliomas. **CONCLUSIONS:** F-DOPA PET/CT seems to be the more accurate method for staging and restaging patients with SDH-mutations-related paraganglioma syndromes. F-DOPA is particularly useful in detecting head and neck and biochemically silent paragangliomas, and also in apparently healthy mutation-carrying people.

[421]

TÍTULO / TITLE: - CCRK depletion inhibits glioblastoma cell proliferation in a cilium-dependent manner.

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

REVISTA / JOURNAL: - EMBO Rep. 2013 Aug 1;14(8):741-7. doi: 10.1038/embor.2013.80. Epub 2013 Jun 7.

●● Enlace al texto completo (gratis o de pago) [1038/embor.2013.80](https://doi.org/10.1038/embor.2013.80)

AUTORES / AUTHORS: - Yang Y; Roine N; Makela TP

INSTITUCIÓN / INSTITUTION: - Institute of Biotechnology, University of Helsinki, PO Box 56, Viikinkaari 9 (Biocenter 1), Helsinki 00790, Finland.

RESUMEN / SUMMARY: - Loss of primary cilia is frequently observed in tumour cells, including glioblastoma cells, and proposed to benefit tumour growth, but a causal link has not been established. Here, we show that CCRK (cell cycle-related kinase) and its substrate ICK (intestinal cell kinase) inhibit ciliogenesis. Depletion of CCRK leads to accumulation of ICK at ciliary tips, altered ciliary transport and inhibition of cell cycle re-entry in NIH3T3 fibroblasts. In glioblastoma cells with deregulated high levels of CCRK, its depletion restores cilia through ICK and an ICK-related kinase MAK, thereby inhibiting glioblastoma cell proliferation. These results indicate that inhibition of ciliogenesis might be a mechanism used by cancer cells to provide a growth advantage.

[422]

TÍTULO / TITLE: - Unrecognized Paraganglioma of the Urinary Bladder as a Cause for Basilar-Type Migraine.

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

REVISTA / JOURNAL: - Urol Int. 2013 May 28.

●● Enlace al texto completo (gratis o de pago) [1159/000348829](https://doi.org/10.1159/000348829)

AUTORES / AUTHORS: - Pichler R; Heidegger I; Klinglmair G; Kroiss A; Uprimny C; Gasser RW; Schafer G; Steiner H

INSTITUCIÓN / INSTITUTION: - Department of Urology, Medical University Innsbruck, Innsbruck, Austria.

RESUMEN / SUMMARY: - Extra-adrenal paraganglioma with isolated localization in the urinary bladder is a rare neuroendocrine tumor. Although the typical symptoms like headache, nausea, weight loss, flushing, heart palpitation or paroxysmal hypertension during micturition are well established, we present an unusual case of bladder paraganglioma, 'misdiagnosed' with basilar-type migraine due to headache for the past 8 years. As urologists linked the presence of a tumor (by CT) and symptoms connected with micturition, no cystoscopy and no transurethral resection of the bladder was performed prior to detailed diagnostic workup. After diagnosis of an extra-adrenal paraganglioma, the patient was scheduled for open partial cystectomy. In consideration of the fact that bladder paraganglioma is an infrequent genitourinary cancer, this case report clearly points out the importance of an exact anamnesis and clinical examination to minimize the probability of misdiagnosis with possible fatal consequences in any case with clinical suspicion of bladder paraganglioma.

[423]

TÍTULO / TITLE: - Multiple melanonychia as a sign of pituitary adenoma.

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

REVISTA / JOURNAL: - Clin Exp Dermatol. 2013 Aug;38(6):689-90. doi: 10.1111/ced.12060. Epub 2013 Jun 13.

●● Enlace al texto completo (gratis o de pago) [1111/ced.12060](#)

AUTORES / AUTHORS: - Schepis C; Siragusa M; Palazzo R; Piraccini BM

INSTITUCIÓN / INSTITUTION: - Department of Dermatology, Oasi Institute IRCCS, Troina, Italy.

[424]

TÍTULO / TITLE: - Spinal ependymomas: Benefits of extent of resection for different histological grades.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jun 11. pii: S0967-5868(13)00082-9. doi: 10.1016/j.jocn.2012.12.010.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.12.010](#)

AUTORES / AUTHORS: - Oh MC; Tarapore PE; Kim JM; Sun MZ; Safaee M; Kaur G; Aranda DM; Parsa AT

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of California San Francisco, 505 Parnassus Avenue, San Francisco, CA 94117, USA.

RESUMEN / SUMMARY: - Although the World Health Organization (WHO) categorizes spinal ependymomas into three histological grades, difference in surgical outcomes between WHO grades I and II tumors are unclear. For these benign tumors, prognosis may be best determined by factors other than tumor grade alone, such as extent of resection. To analyze the effects of the extent of resection on different grades of spinal ependymomas, we performed a comprehensive literature review to identify adult spinal ependymoma patients who received surgical resection with a clearly identifiable WHO grade. A total of 175 patients were identified. While grade III tumors carried the worst prognosis as expected ($p < 0.001$), grade I and II tumors did not differ significantly in outcomes following surgery. Overall, gross total resection (GTR, 68.7%, 114/166) provided significantly improved progression-free survival (PFS, $p < 0.001$) and overall survival (OS, $p = 0.022$) compared to the subtotal resection group. Surprisingly, the highest GTR rate was achieved for grade II tumors (78.8%, 78/99; $p < 0.001$) followed by grade I (58.9%, 33/56) and grade III tumors (27.3%, 3/11). Interestingly, PFS was significantly improved by GTR for grade II tumors ($p < 0.001$), but not for grade I ($p = 0.705$). Similar trends, although not statistically significant, were found for OS. Our results show that while GTR provides the best overall outcomes, GTR is most effective for classic grade II ependymomas, but not for grade I ependymomas. Despite having a lower WHO

grade, myxopapillary ependymomas have a lower GTR rate, and benefit less from GTR.

[425]

TÍTULO / TITLE: - Pituicytoma with Gelsolin Amyloid Deposition.

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

REVISTA / JOURNAL: - Endocr Pathol. 2013 Jul 2.

●● Enlace al texto completo (gratis o de pago) [1007/s12022-013-9254-](https://doi.org/10.1007/s12022-013-9254-y)

[y](#)

AUTORES / AUTHORS: - Ida CM; Yan X; Jentoft ME; Kip NS; Scheithauer BW; Morris JM; Dogan A; Parisi JE; Kovacs K

INSTITUCIÓN / INSTITUTION: - Department of Laboratory Medicine and Pathology, Mayo Clinic, 200 First Street, SW, Rochester, MN, 55905, USA.

RESUMEN / SUMMARY: - Pituicytoma is a rare low-grade (WHO grade I) sellar region glioma. Among sellar tumors, pituitary adenomas, mainly prolactinomas, may show amyloid deposits. Gelsolin is a ubiquitous calcium-dependent protein that regulates actin filament dynamics. Two known gene point mutations result in gelsolin amyloid deposition, a characteristic feature of a rare type of familial amyloid polyneuropathy (FAP), the Finnish-type FAP, or hereditary gelsolin amyloidosis (HGA). HGA is an autosomal-dominant systemic amyloidosis, characterized by slowly progressive neurological deterioration with corneal lattice dystrophy, cranial neuropathy, and cutis laxa. A unique case of pituicytoma with marked gelsolin amyloid deposition in a 67-year-old Chinese woman is described. MRI revealed a 2.6-cm well-circumscribed, uniformly contrast-enhancing solid sellar mass with suprasellar extension. Histologically, the lesion was characterized by solid sheets and fascicles of spindle cells with slightly fibrillary cytoplasm and oval nuclei with pinpoint nucleoli. Surrounding brain parenchyma showed marked reactive piloid gliosis. Remarkably, conspicuous amyloid deposits were identified as pink homogeneous spherules on light microscopy that showed apple-green birefringence on Congo red with polarization. Mass spectrometric-based proteomic analysis identified the amyloid as gelsolin type. Immunohistochemically, diffuse reactivity to S100 protein and TTF1, focal reactivity for GFAP, and no reactivity to EMA, synaptophysin, and chromogranin were observed. HGA-related mutations were not identified in the tumor. No recurrence was noted 14 months after surgery. To the knowledge of the authors, amyloid deposition in pituicytoma or tumor-associated gelsolin amyloidosis has not been previously described. This novel finding expands the spectrum of sellar tumors that may be associated with amyloid deposition.

[426]

TÍTULO / TITLE: - Suprasellar and sellar paraganglioma presenting as a nonfunctioning pituitary macroadenoma.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 19. pii: S0967-5868(13)00124-0. doi: 10.1016/j.jocn.2013.02.004.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2013.02.004](#)

AUTORES / AUTHORS: - Chaudhry NS; Ahmad F; Blieden C; Morcos JJ

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of Miami Miller School of Medicine, Lois Pope Life Center, 1095 NW 14th Terrace, D4-6, Miami, FL 33136, USA.

RESUMEN / SUMMARY: - It is extremely rare for paragangliomas to be present in the brain. We present a 44-year-old man with a suprasellar-sellar paraganglioma encasing the internal carotid arteries. We review all such tumors reported in the literature and conclude that paraganglioma should be kept in the differential diagnosis of unusual suprasellar-sellar lesions.

[427]

TÍTULO / TITLE: - High-grade intracranial chondrosarcoma presenting with haemorrhage.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jun 5. pii: S0967-5868(13)00057-X. doi: 10.1016/j.jocn.2012.10.036.

●● Enlace al texto completo (gratis o de pago) [1016/j.jocn.2012.10.036](#)

AUTORES / AUTHORS: - Little A; Chung C; Perez-Ordóñez B; Mikulis D; Valiante TA

INSTITUCIÓN / INSTITUTION: - University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada.

RESUMEN / SUMMARY: - Chondrosarcomas are rare sarcomas that produce malignant cartilage, infrequently arising as a primary intracranial tumour. We present a patient with intracranial chondrosarcoma with intratumoural haemorrhage arising in an unusual location and with unusual imaging findings. A 46-year-old man presented with headache, nausea, and vomiting over the previous 24 hours. Physical and neurological examinations were normal. Cranial CT scans and MRI revealed a large right pre-frontal (subdural) and interhemispheric heterogeneous density associated with a frontal, partially calcified mass and midline shift. An awake craniotomy was performed. With the intra-operative quick section favouring subdural hematoma, the lesion was subtotally resected. Follow-up imaging confirmed residual mass. Pathology examination revealed a high-grade malignant neoplasm with chondroid differentiation, diagnosed as conventional Grade III chondrosarcoma. The patient was referred to oncology for follow-up and radiation therapy. Intracranial chondrosarcoma was first reported in 1899, and since then continues to be an extremely rare malignancy of the brain. These tumours commonly present as

extra-axial masses, originating from the skull base, and produce symptoms due to progressive enlargement and compression of local structures. Unusual presentations of these tumours, such as vascularity, intratumoural haemorrhage, and intra-axial location, may complicate pre-surgical decision making by altering the provisional diagnosis prior to intervention. This patient emphasises the importance of careful analysis and incorporation of imaging findings into surgical decision making. Specific imaging characteristics that, in such unusual situations, are suggestive of chondrosarcoma should motivate an aggressive surgical approach to optimise adjuvant interventions.

[428]

TÍTULO / TITLE: - Progressive visual loss following rupture of an intracranial dermoid cyst.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 26. pii: S0967-5868(13)00125-2. doi: 10.1016/j.jocn.2013.02.005.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2013.02.005

AUTORES / AUTHORS: - Skovrlj B; Mascitelli JR; Steinberger JM; Weiss N

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Mount Sinai School of Medicine, Annenberg Building 8-28, 1 Gustave L. Levy Place, Box 1136, New York, NY 10029, USA. Electronic address: skovrlj.branko@gmail.com.

RESUMEN / SUMMARY: - A 51-year-old man with several months of headache and progressive visual decline was found to have bilateral optic disc pallor with significant impairment of visual acuity. Despite a thorough ophthalmologic evaluation, the cause of visual loss could not be elucidated. MRI of the brain revealed a lesion in the left anterior Sylvian fissure as well as disseminated foci of subarachnoid fat consistent with a diagnosis of a ruptured dermoid cyst. The decision for open surgical resection was chosen to minimize the risk of cyst re-rupture and further visual or neurologic decline. The diagnosis of dermoid cyst was confirmed at the time of surgery. Vasospasm-induced ischemia of the optic nerves, optic chiasm or bilateral optic tracts secondary to the inflammatory reaction following cyst rupture is the most likely mechanism of visual loss in this patient. To the authors' knowledge, this report represents the first reported case of visual loss secondary to rupture of an intracranial dermoid cyst not related to mass effect of the tumor on the optic apparatus, visual pathways or visual cortex.

[429]

TÍTULO / TITLE: - An unusual anatomic and geographic location of primary germinoma of the fourth ventricle.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 Jul 26. pii: S0967-5868(13)00118-5. doi: 10.1016/j.jocn.2012.11.025.

●● Enlace al texto completo (gratis o de pago) 1016/j.jocn.2012.11.025

AUTORES / AUTHORS: - Khan AA; Kirkman MA; Anderson C; Jaunmuktane Z; Morris RC; Kitchen ND

INSTITUCIÓN / INSTITUTION: - Victor Horsley Department of Neurosurgery, The National Hospital for Neurology and Neurosurgery, Queen Square, London WC1N 3BG, UK. Electronic address: Akbar.Khan@uclh.nhs.uk.

RESUMEN / SUMMARY: - Intracranial germinoma is most commonly found in the pineal and suprasellar regions. The medulla oblongata and fourth ventricle are rare sites of primary germinoma, with only 12 previous patients reported, all from the Far East. To our knowledge, we report the first patient from Europe. A 25-year-old female of Afro-Caribbean origin presented with several weeks of worsening migraines, dizziness, tachycardia and veering to the right whilst walking. MRI revealed a lesion in the fourth ventricle, which was treated with surgical debulking and post operative radiotherapy. Two months following completion of radiotherapy, MRI showed almost complete resolution of the enhancing disease within the primary tumour area and no intraspinal pathological enhancement. This patient highlights the importance of considering germinoma in the differential diagnosis of all medullary masses with extension into the fourth ventricle irrespective of geographic location.

[430]

TÍTULO / TITLE: - Intradural extramedullary lesion of the conus medullaris. Solitary fibrous tumor.

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

REVISTA / JOURNAL: - J Clin Neurosci. 2013 May;20(5):715, 765.

AUTORES / AUTHORS: - Montano N; Rigante L; Papacci F; Novello M; Lauriola L; Meglio M

INSTITUCIÓN / INSTITUTION: - Institute of Neurosurgery, Catholic University School of Medicine, Largo Gemelli n. 8, Rome 00173, Italy.

[431]

TÍTULO / TITLE: - Bilateral ganglioglioma of the trigeminal nerve in an 83-year-old man.

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

REVISTA / JOURNAL: - Neuropathology. 2013 Jul 29. doi: 10.1111/neup.12054.

●● Enlace al texto completo (gratis o de pago) 1111/neup.12054

AUTORES / AUTHORS: - Hargus G; Bink A; Nagel I; Paulus W; Harder A

INSTITUCIÓN / INSTITUTION: - Institute of Neuropathology, University Hospital Munster.

RESUMEN / SUMMARY: - Gangliogliomas are well-differentiated, mixed glioneuronal tumors of the CNS that are most frequently localized within the temporal lobe. In a minority of cases, gangliogliomas have been described in the brain stem where they may critically impinge anatomical structures. Rarely, ganglioglioma develop in cranial nerves, almost exclusively in the optic pathway, where they usually present as singular space-occupying masses. Here, we report on an 83-year-old patient who presented with unusual symmetrical, bilateral gangliogliomas of the trigeminal nerves. These tumors showed an exophytic growth within the subarachnoid space toward the Gasserian ganglion and surprisingly appeared as isointense masses on T1- and T2-weighted MRI. Due to their bilateral appearance, we performed array-comparative genomic hybridization (aCGH) on the gangliogliomas to address the possibility of an underlying tumor syndrome in this patient. To our knowledge, this is the first case of bilateral ganglioglioma of the trigeminal nerve described so far.

[432]

TÍTULO / TITLE: - Glioblastoma in a former Chernobyl resident 24 years later.

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

REVISTA / JOURNAL: - CMAJ. 2013 Jul 2.

●● Enlace al texto completo (gratis o de pago) [1503/cmaj.121660](#)

AUTORES / AUTHORS: - Dmytriw AA; Pickett GE

[433]

TÍTULO / TITLE: - Long-term disease-free survival in a patient with cerebral recurrence from adenocarcinoma of the fallopian tube.

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

REVISTA / JOURNAL: - J Obstet Gynaecol Res. 2013 Jul 2. doi: 10.1111/jog.12076.

●● Enlace al texto completo (gratis o de pago) [1111/jog.12076](#)

AUTORES / AUTHORS: - Shimada C; Todo Y; Minobe S; Okamoto K; Kato H

INSTITUCIÓN / INSTITUTION: - Division of Gynecologic Oncology, National Hospital Organization, Hokkaido Cancer Center, Sapporo, Japan.

RESUMEN / SUMMARY: - Cerebral recurrence from Mullerian cancer is a rare event and prognosis of patients with such a condition is poor. We report a case of cerebral recurrence from International Federation of Gynecology and Obstetrics classification stage IV tubal cancer presenting with inguinal lymphadenopathy. The patient achieved more than 7 years' disease-free survival after irradiation to the brain despite the inauspicious event. The present case had a rare clinical course in terms of primary site, primary symptom, failure site, and clinical outcome. Patients with brain metastasis from Mullerian cancer have a chance for long-term survival under specified circumstances, such as

solitary metastasis, no extracranial metastasis, no recurrence preceding brain metastasis and small tumor size.

[434]

TÍTULO / TITLE: - Biomarker-based adaptive trials for patients with glioblastoma—lessons from I-SPY 2.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Aug;15(8):972-8. doi: 10.1093/neuonc/not088. Epub 2013 Jul 14.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not088](#)

AUTORES / AUTHORS: - Alexander BM; Wen PY; Trippa L; Reardon DA; Yung WK; Parmigiani G; Berry DA

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Brian M. Alexander, MD, MPH, Dana-Farber/Brigham and Women's Cancer Center, Department of Radiation Oncology, 75 Francis Street, ASB1-L2 Boston, MA 02115. bmalexander@lroc.harvard.edu.

RESUMEN / SUMMARY: - The traditional clinical trials infrastructure may not be ideally suited to evaluate the numerous therapeutic hypotheses that result from the increasing number of available targeted agents combined with the various methodologies to molecularly subclassify patients with glioblastoma. Additionally, results from smaller screening studies are rarely translated to successful larger confirmatory studies, potentially related to a lack of efficient control arms or the use of unvalidated surrogate endpoints. Streamlining clinical trials and providing a flexible infrastructure for biomarker development is clearly needed for patients with glioblastoma. The experience developing and implementing the I-SPY studies in breast cancer may serve as a guide to developing such trials in neuro-oncology.

[435]

TÍTULO / TITLE: - The safety and effectiveness of low field intraoperative MRI guidance in frameless stereotactic biopsies of brain tumours-design and interim analysis of a prospective randomized trial.

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

REVISTA / JOURNAL: - Neurosurg Rev. 2013 Jul 3.

●● Enlace al texto completo (gratis o de pago) [1007/s10143-013-0486-](#)

[6](#)

AUTORES / AUTHORS: - Czyz M; Tabakow P; Weiser A; Lechowicz-Glogowska BE; Zub LW; Jarmundowicz W

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Wroclaw Medical University, Ul. Borowska 213, 50-556, Wroclaw, Poland, mt.czyz@gmail.com.

RESUMEN / SUMMARY: - The aim of the study was to assess the safety and effectiveness of stereotactic brain tumour biopsy (STx biopsy) guided by low-

field intraoperative magnetic resonance imaging (iMRI) in comparison with its frameless classic analogue based on a prospective randomized trial. A pilot group of 42 brain tumour patients was prospectively randomized into a low-field iMRI group and a control group that underwent a frameless STx biopsy. The primary endpoints of the analysis were postoperative complication rate and diagnostic yield, and the secondary endpoints were length of hospital stay and duration of operation. The iMRI group (21 patients) and the control group (21 patients) did not differ significantly according to demographic and epidemiological data. No major postoperative complications were noted in either group. In addition, no significant differences in the diagnostic yield ($p = 1.00$) and length of hospital stay ($p = 0.16$) were observed. The mean total OR time was 111 +/- 24 min in iMRI and 78 +/- 29 min in the control group ($p = 0.0001$). Usage of iMRI may prolong the time of the procedure but seems to be comparable in safety and effectiveness to the standard frameless STx biopsy.

[436]

TÍTULO / TITLE: - Gene expression signature-based prognostic risk score in patients with glioblastoma.

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

REVISTA / JOURNAL: - Cancer Sci. 2013 Jun 7. doi: 10.1111/cas.12214.

●● [Enlace al texto completo \(gratis o de pago\) 1111/cas.12214](#)

AUTORES / AUTHORS: - Kawaguchi A; Yajima N; Tsuchiya N; Homma J; Sano M; Natsumeda M; Takahashi H; Fujii Y; Kakuma T; Yamanaka R

INSTITUCIÓN / INSTITUTION: - Biostatistic Center, Kurume University School of Medicine, Kurume, Japan.

RESUMEN / SUMMARY: - The present study aimed to identify genes associated with patient survival to improve our understanding of the underlying biology of gliomas. We investigated whether the expression of genes selected using random survival forests models could be used to define glioma subgroups more objectively than standard pathology. The RNA from 32 non-treated grade 4 gliomas were analyzed using the GeneChip Human Genome U133 Plus 2.0 Expression array (which contains approximately 47 000 genes). Twenty-five genes whose expressions were strongly and consistently related to patient survival were identified. The prognosis prediction score of these genes was most significant among several variables and survival analyses. The prognosis prediction score of three genes and age classifiers also revealed a strong prognostic value among grade 4 gliomas. These results were validated in an independent samples set ($n = 488$). Our method was effective for objectively classifying grade 4 gliomas and was a more accurate prognosis predictor than histological grading.

[437]

TÍTULO / TITLE: - Genetic variants in telomerase-related genes are associated with an older age at diagnosis in glioma patients: evidence for distinct pathways of gliomagenesis.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Aug;15(8):1041-7. doi: 10.1093/neuonc/not051. Epub 2013 Jun 3.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not051](#)

AUTORES / AUTHORS: - Walsh KM; Rice T; Decker PA; Kosel ML; Kollmeyer T; Hansen HM; Zheng S; McCoy LS; Bracci PM; Anderson E; Hsuang G; Wiemels JL; Pico AR; Smirnov I; Molinaro AM; Tihan T; Berger MS; Chang SM; Prados MD; Lachance DH; Sicotte H; Eckel-Passow JE; Wiencke JK; Jenkins RB; Wrensch MR

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Kyle M. Walsh, PhD, UCSF Helen Diller Family Comprehensive Cancer Center, Box 0520, 1450 3rd Street HD276, San Francisco, CA 94143-0520. kyle.walsh@ucsf.edu.

RESUMEN / SUMMARY: - Background Genome-wide association studies have implicated single nucleotide polymorphisms (SNPs) in 7 genes as glioma risk factors, including 2 (TERT, RTEL1) involved in telomerase structure/function. We examined associations of these 7 established glioma risk loci with age at diagnosis among patients with glioma. Methods SNP genotype data were available for 2286 Caucasian glioma patients from the University of California, San Francisco (n = 1434) and the Mayo Clinic (n = 852). Regression analyses were performed to test for associations between “number of risk alleles” and “age at diagnosis,” adjusted for sex and study site and stratified by tumor grade/histology where appropriate. Results Four SNPs were significantly associated with age at diagnosis. Carrying a greater number of risk alleles at rs55705857 (CCDC26) and at rs498872 (PHLDB1) was associated with younger age at diagnosis (P = 1.4 x 10⁽⁻²²⁾ and P = 9.5 x 10⁽⁻⁷⁾, respectively). These SNPs are stronger risk factors for oligodendroglial tumors, which tend to occur in younger patients, and their association with age at diagnosis varied across tumor subtypes. In contrast, carrying more risk alleles at rs2736100 (TERT) and at rs6010620 (RTEL1) was associated with older age at diagnosis (P = 6.2 x 10⁽⁻⁴⁾ and P = 2.5 x 10⁽⁻⁴⁾, respectively). These SNPs are risk factors for all glioma grades/histologies, and their association with age at diagnosis was consistent across tumor subgroups. Conclusions Carrying a greater number of risk alleles might be expected to decrease age at diagnosis. However, glioma susceptibility conferred by variation in telomerase-related genes did not follow this pattern. This supports the hypothesis that telomerase-related mechanisms of telomere maintenance are more associated with gliomas that develop later in life than those utilizing telomerase-independent mechanisms (ie, alternative lengthening of telomeres).

TÍTULO / TITLE: - Management of CNS-related Disease Manifestations in Patients With Tuberous Sclerosis Complex.

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

REVISTA / JOURNAL: - Curr Treat Options Neurol. 2013 Jul 13.

- Enlace al texto completo (gratis o de pago) [1007/s11940-013-0249-](#)

[2](#)

AUTORES / AUTHORS: - Krueger DA

INSTITUCIÓN / INSTITUTION: - Departments of Pediatrics and Neurology, University of Cincinnati College of Medicine and Division of Child Neurology, Cincinnati Children's Hospital Medical Center, 3333 Burnet Avenue ML #2015, Cincinnati, OH, 45229, USA, Krueger_darcy@cchmc.org.

RESUMEN / SUMMARY: - OPINION STATEMENT: Historically, before the advent of modern imaging and genetic testing, Tuberous Sclerosis Complex (TSC) was more of a diagnostic challenge and less of a treatment challenge. This is because the natural history of TSC was poorly understood and TSC-specific treatments were non-existent. In the current era, diagnosis is more straightforward but management is much more complex. Disease manifestations vary by age, severity, and organ system. Management issues in the first few months of life, including neurologic manifestations, are very different than late childhood, adolescence, and adulthood. With increasing numbers of TSC diagnoses being made prenatally or shortly after birth, the opportunity for interventions that may improve long-term developmental and epilepsy outcomes now may precede the onset of neurological clinical symptoms. Familiarity and anticipation of these neurologic complications and rapid response to their emergence is crucial. Periodic imaging surveillance for development of subependymal giant cell astrocytoma (SEGA), preferably by magnetic resonance imaging (MRI) every 1-3 years, is now standard of care. Early SEGA detection provides opportunity to initiate pharmacologic treatment with everolimus if appropriate, thereby negating the need for invasive surgery. Routine electroencephalography (EEG) in asymptomatic infants for the first year or two of life is becoming increasingly accepted, with treatment initiation of vigabatrin dependent on concerning EEG findings instead of waiting until onset of clinical seizures, the traditional approach. Effective SEGA treatment and optimal seizure control remain principal during the first few decades of life for the clinical neurologist involved in the management of TSC. However, during the same period and extending through adulthood, assessment of TSC-associated neuropsychiatric disorder (TAND) is also key to the best clinical outcome and quality of life for affected individuals and their surrounding family and caregivers.

[439]

TÍTULO / TITLE: - Subsequent brain tumors in patients with autoimmune disease.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 11.

●● Enlace al texto completo (gratis o de pago) 1093/neuonc/ot070

AUTORES / AUTHORS: - Hemminki K; Liu X; Forsti A; Ji J; Sundquist J; Sundquist K

INSTITUCIÓN / INSTITUTION: - Division of Molecular Genetic Epidemiology, German Cancer Research Center, Heidelberg, Germany (K.H., A.F.); Center for Primary Health Care Research, Lund University, Malmö, Sweden (K.H., X.L., A.F., J.J., J.S., K.S.); College of Lab Medicine, Hebei North University, Zhangjiakou, China (X.L.); Stanford Prevention Research Center, Stanford University School of Medicine, Stanford, California (J.S., K.S.).

RESUMEN / SUMMARY: - Background Previous studies have reported increased risk of brain tumors after allergic conditions, but no systematic analyses of these tumors in patients with autoimmune disease (Aid) have been performed. No data are available on survival among patients with Aid from brain tumors. We analyzed systematically risks and survival in histological types of brain tumors among patients who received a diagnosis of 33 different Aids. Patients and Methods Standardized incidence ratios (SIRs) for brain tumors or hazard ratios (HRs) of deaths after brain tumors were calculated up to 2008 in 402 462 patients hospitalized for Aid after 1964 and were compared with data on the population not hospitalized for Aids. Results Brain tumors were diagnosed in 880 patients with Aid. No increased or decreased risks (SIRs) were noted for glioma, whereas the increased SIRs for meningioma after many Aids were likely to be attributable to surveillance bias. The data on survival showed overall decreases for glioma (HR, 1.15) and meningioma (HR, 1.26). The survival in both was decreased in patients with chronic rheumatic heart disease, multiple sclerosis, and rheumatoid arthritis. Overall, HRs were increased for glioma after 6 Aids and for meningioma after 7 Aids. Conclusions The present data showed that none of the 33 Aids influenced the risk of glioma. However, many Aids negatively influence survival in glioma and meningioma, probably through added physical burden or therapeutic limitations. Information of an existing Aid in patients with newly diagnosed brain tumors should help the prognostic assessment and the design of treatment.

[440]

TÍTULO / TITLE: - Multimodal treatment and long-term outcome of patients with esthesioneuroblastoma.

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

REVISTA / JOURNAL: - Oral Oncol. 2013 Aug;49(8):830-4. doi: 10.1016/j.oraloncology.2013.04.013. Epub 2013 Jun 5.

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

1016/j.oraloncology.2013.04.013

AUTORES / AUTHORS: - Modesto A; Blanchard P; Tao YG; Rives M; Janot F; Serrano E; Benlyazid A; Guigay J; Ferrand FR; Delord JP; Bourhis J; Daly-Schweitzer N

INSTITUCIÓN / INSTITUTION: - Institut Gustave Roussy, Department of Radiation Oncology, 114 rue Edouard-Vaillant, 94805 Villejuif, France; Institut Claudius Regaud, Department of Radiation Oncology, 20-24 rue du Pont Saint-Pierre, 31000 Toulouse, France. Electronic address:

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RESUMEN / SUMMARY: - **PURPOSE/OBJECTIVES:** To analyze the clinical features, treatment modalities and outcome of patients treated for a localized esthesioneuroblastoma (ENB). **MATERIALS AND METHODS:** Forty-three consecutive patients with biopsy proven ENB treated at two referral cancer centers between 1998 and 2010 were retrospectively reviewed. **RESULTS:** Overall, 5 patients had stage A disease, 13 stage B, 16 stage C and 9 stage D according to the modified Kadish classification. Neo-adjuvant chemotherapy was performed in 23 patients leading to a 74 % response rate. Thirty-one patients were treated by surgery. Thirty-nine patients (90.6%) underwent radiation therapy. Twelve patients received bilateral cervical lymph node irradiation (LNI). After a median follow-up of 77 months, the 5-year overall and progression free survival were 65% and 57%. Twelve patients (28%) had a locoregional relapse leading to 10 ENB-related deaths. The major prognostic factor was the modified Kadish stage with a 3-year survival for stage A-B, C and D of 100%, 48% and 22% respectively ($p < 0.0001$). Two (9%) isolated cervical lymph node relapses occurred among staged B and C patients treated without elective LNI and none after elective or adjuvant LNI. **CONCLUSION:** The high risk of locoregional failure in ENB justifies the use of multimodal therapy. Induction chemotherapy leads to a high response rate. Elective LNI might prevent regional failure in locally advanced disease.

[441]

TÍTULO / TITLE: - Are we ready for a randomized trial of valproic acid in newly diagnosed glioblastoma?

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul;15(7):809-10. doi: 10.1093/neuonc/not095.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not095](#)

AUTORES / AUTHORS: - Weller M

[442]

TÍTULO / TITLE: - Increase in tumor-associated macrophages after antiangiogenic therapy is associated with poor survival among patients with recurrent glioblastoma.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Aug;15(8):1079-87. doi: 10.1093/neuonc/not082. Epub 2013 Jul 4.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not082](#)

AUTORES / AUTHORS: - Lu-Emerson C; Snuderl M; Kirkpatrick ND; Goveia J; Davidson C; Huang Y; Riedemann L; Taylor J; Ivy P; Duda DG; Ancukiewicz M; Plotkin SR; Chi AS; Gerstner ER; Eichler AF; Dietrich J; Stemmer-Rachamimov AO; Batchelor TT; Jain RK

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Rakesh K. Jain, PhD, Steele Laboratory, COX-734, Massachusetts General Hospital, 100 Blossom St., Boston, MA 02114. jain@steele.mgh.harvard.edu.

RESUMEN / SUMMARY: - Antiangiogenic therapy is associated with increased radiographic responses in glioblastomas, but tumors invariably recur. Because tumor-associated macrophages have been shown to mediate escape from antiangiogenic therapy in preclinical models, we examined the role of macrophages in patients with recurrent glioblastoma. We compared autopsy brain specimens from 20 patients with recurrent glioblastoma who received antiangiogenic treatment and chemoradiation with 8 patients who received chemotherapy and/or radiotherapy without antiangiogenic therapy or no treatment. Tumor-associated macrophages were morphologically and phenotypically analyzed using flow cytometry and immunohistochemistry for CD68, CD14, CD163, and CD11b expression. Flow cytometry showed an increase in macrophages in the antiangiogenic-treated patients. Immunohistochemical analysis demonstrated an increase in CD68+ macrophages in the tumor bulk ($P < .01$) and infiltrative areas ($P = .02$) in antiangiogenic-treated patients. We also observed an increase in CD11b+ cells in the tumor bulk ($P < .01$) and an increase in CD163+ macrophages in infiltrative tumor ($P = .02$). Of note, an increased number of CD11b+ cells in bulk and infiltrative tumors ($P = .05$ and $P = .05$, respectively) correlated with poor overall survival among patients who first received antiangiogenic therapy at recurrence. In summary, recurrent glioblastomas showed an increased infiltration in myeloid populations in the tumor bulk and in the infiltrative regions after antiangiogenic therapy. Higher numbers of CD11b+ cells correlated with poor survival among these patients. These data suggest that tumor-associated macrophages may participate in escape from antiangiogenic therapy and may represent a potential biomarker of resistance and a potential therapeutic target in recurrent glioblastoma.

[443]

TÍTULO / TITLE: - Peptide receptor radionuclide therapy in a patient with disabling non-functioning pituitary adenoma.

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

REVISTA / JOURNAL: - Pituitary. 2013 Jun 6.

- Enlace al texto completo (gratis o de pago) [1007/s11102-013-0494-](https://doi.org/10.1007/s11102-013-0494-0)

[0](#)

AUTORES / AUTHORS: - Komor J; Reubi JC; Christ ER

INSTITUCIÓN / INSTITUTION: - , Buhlstrasse 5, 3012, Bern, Switzerland.

RESUMEN / SUMMARY: - Non-functioning pituitary adenoma (NFPA) with higher proliferation index (WHO II) are often a therapeutical challenge. Low somatostatin receptor expression in these tumors usually prevents a treatment with somatostatin analogs. In 1996, a 55-year-old patient was referred due to right-sided headache. A pituitary macroadenoma with infiltration into the right cavernous sinus was diagnosed. There was no visual field deficit and the clinical and biochemical work up was consistent with a NFPA. The patient underwent transsphenoidal surgery. Residual adenoma remained in the right cavernous sinus. Histologically, a null-cell adenoma with a high proliferation index was documented (MIB-1: 11.6 %, WHO II). Somatostatin receptor autoradiography was performed in the surgical specimen showing a homogenous expression of sst2 receptors. Radiosurgery was completed with stable disease for 8 years. In 2004, the patient was diagnosed with an incomplete palsy of the right oculomotorius nerve and a significant increase in the volume of the adenoma in the right cavernous sinus. After a positive Octreoscan® the patient consented to an experimental therapy approach using Lutetium DOTATOC (3 x 200 mCi). The palsy of the oculomotorius nerve improved and remained stable until today (March 2013), the follow-up MRI scans demonstrated stable disease. This is the first case of a patient with a NFPA (WHO II) in whom PRRT successfully improved the local complications of the tumor for more than 8 years after ineffective surgery and gamma knife therapy. The determination of sst2 in vitro using autoradiography and in vivo by Octreoscan was instrumental to administer this therapy in a challenging situation.

[444]

TÍTULO / TITLE: - Title: Endoscopic transsphenoidal pituitary surgery: a good and safe primary treatment option for Cushing's disease, even in case of macroadenomas or invasive adenomas.

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

REVISTA / JOURNAL: - Eur J Endocrinol. 2013 Jun 20.

- Enlace al texto completo (gratis o de pago) [1530/EJE-13-0325](https://doi.org/10.1007/s11102-013-0325-5)

AUTORES / AUTHORS: - Wagenmakers MA; Boogaarts JD; Roerink SH; Timmers HJ; Stikkelbroeck N; Smit JW; van Lindert EJ; Netea-Maier RT; Grotenhuis AJ; Hermus A

INSTITUCIÓN / INSTITUTION: - M Wagenmakers, Department of Medicine, Division of Endocrinology, Radboud University Medical Center, Nijmegen, Netherlands.

RESUMEN / SUMMARY: - CONTEXT: Although the endoscopic technique of transsphenoidal pituitary surgery (TS) has been widely adopted, reports on its results in Cushing's disease (CD) are still scarce and no studies have investigated long-term recurrence rates. This is the largest endoscopic series published up till now. OBJECTIVE: To gain insight in the role of endoscopic TS as a primary treatment option for CD, especially in patients with MRI negative CD and (invasive) macroadenomas. DESIGN: retrospective cohort study. PATIENTS AND METHODS: The medical records of 86 patients with CD who underwent endoscopic TS were examined. Data on preoperative and postoperative evaluation, perioperative complications and follow-up were collected. Remission was defined as disappearance of clinical symptoms with a fasting plasma cortisol level ≤ 50 nmol/l either basal or after 1 mg dexamethasone. RESULTS: The remission rate in different adenoma subclasses varied significantly: 60% in MRI negative CD (n=20), 83% in microadenomas (n=35), 94% in non-invasive macroadenomas (n=16) and 40% in macroadenomas that invaded the cavernous sinus (n=15). The rate of recurrence was 16% after 71 +/- 39 months follow-up (mean +/- SD, range 10-165). CONCLUSIONS: Endoscopic TS is a safe and effective treatment for all patients with CD. Recurrence rates after endoscopic TS are comparable to those published for microscopic TS. Our data suggest that in patients with non-invasive and invasive macroadenomas the endoscopic technique of TS should be the technique of choice as remission rates seem to be higher than remission rates reported for microscopic TS, although no comparative study has been performed.

[445]

TÍTULO / TITLE: - Prognostic values of initial responses to low-dose I-MIBG therapy in patients with malignant pheochromocytoma and paraganglioma.

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

REVISTA / JOURNAL: - Ann Nucl Med. 2013 Jul 18.

- Enlace al texto completo (gratis o de pago) [1007/s12149-013-0755-](#)

Z

AUTORES / AUTHORS: - Wakabayashi H; Taki J; Inaki A; Nakamura A; Kayano D; Fukuoka M; Matsuo S; Nakajima K; Kinuya S

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine, Kanazawa University Hospital, 13-1 Takara-machi, Kanazawa, Ishikawa, 920-8641, Japan, wakabayashi@nmd.m.kanazawa-u.ac.jp.

RESUMEN / SUMMARY: - PURPOSE: We retrospectively examined whether or not initial responses of first low-dose ¹³¹I-meta-iodo-benzyl-guanidine radiotherapy (¹³¹I-MIBG therapy) in patients with malignant pheochromocytoma and paraganglioma had prognostic values. MATERIALS AND METHODS: This study included 26 patients with malignant pheochromocytoma (n = 18) and paraganglioma (n = 8) who underwent the first

131I-MIBG therapy between October 2001 and September 2007. Based on the initial subjective, hormonal, scintigraphic, and objective responses to 131I-MIBG therapy, the responses were divided into progression disease (PD) and non-PD. We examined the following factors for prognostic significance: sex, age, disease, initial diagnosis (benign or malignant pheochromocytoma), hypertension, diabetes mellitus, palpitations, symptoms related to bone metastases, and number of low-dose 131I-MIBG therapy. Univariate Cox proportional regression analysis was used to identify prognostic factors for overall survival. Overall survival was analyzed by Kaplan-Meier method and the curves were compared using the log-rank test. RESULTS: The median survival time was 56 months. In the follow-up period, 16 patients died from exacerbation of their diseases. Univariate analysis showed that the hormonal PD [hazard ratio (HR) 3.20, P = 0.034, confidence interval (CI) 1.09-9.93], objective PD (HR 11.89, P = 0.0068, CI 2.14-65.85), single-time 131I-MIBG therapy (HR 3.22, P = 0.020, CI 1.21-8.79), hypertension (HR 2.93, P = 0.044, CI 1.02-10.50), and symptoms related to bone metastases (HR 3.54, P = 0.023, CI 1.18-13.04) were bad prognostic factors for overall survival. Kaplan-Meier analysis demonstrated that the hormonal non-PD (P = 0.026), objective non-PD (P = 0.0002), multiple-time 131I-MIBG therapy (P = 0.013), and no symptom related to bone metastases (P = 0.024) were significantly associated with good prognosis. Overall survival rate was 70 and 50 % at 5 years from the initial diagnosis and from the first 131I-MIBG therapy, respectively. CONCLUSION: The hormonal and objective responses to the first low-dose 131I-MIBG therapy as well as complication of hypertension and symptoms related to bone metastases may be prognostic factors in patients with malignant pheochromocytoma and paraganglioma.

[446]

TÍTULO / TITLE: - Phase II trial of temozolomide plus concurrent whole-brain radiation followed by TNV regimen as adjuvant therapy for patients with newly diagnosed primary CNS lymphoma.

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

REVISTA / JOURNAL: - Neurol India. 2013 May-Jun;61(3):260-4. doi: 10.4103/0028-3886.115065.

●● Enlace al texto completo (gratis o de pago) [4103/0028-3886.115065](#)

AUTORES / AUTHORS: - Wang Y; Liu B; Xu D; Zhao H; Zhu Y; Xu J; Tao R

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Shandong Cancer Hospital, Jinan 250117, China.

RESUMEN / SUMMARY: - Background: Primary central nervous system lymphoma (PCNSL) is an aggressive extranodal non-Hodgkin's lymphoma limited to the CNS. Treatment of PCNSL with high-dose methotrexate (HD-MTX)-based chemotherapy and whole-brain radiotherapy (WBRT) is associated with high

rates of relapse and severe treatment-related neurotoxicity. Aim: To report our experience of treating newly diagnosed PCNSL with temozolomide, nedaplatin, and vincristine (TNV), as the replacement of HD-MTX, in combination with concurrent chemoradiotherapy. Materials and Methods: Newly diagnosed PCNSL patients were given concurrent temozolomide (75 mg/m², orally) daily during WBRT. Then, the TNV regimen was given after four weeks. The TNV regimen consisted of temozolomide (200 mg/m² orally: Days 1-5), nedaplatin (80 mg/m² intravenous: Day 1), and vincristine (1.4 mg/m² intravenous: Day 1). Each cycle was of a duration of four weeks and a maximum of six cycles were applied. The primary end point was response to treatment obtained by magnetic resonance imaging (MRI). Secondary end points were progression-free survival (PFS) and fewer toxic effects. Results: The study subjects included 14 patients (median age: 53.5, median Karnofsky Performance Scale (KPS): 75). The median number of TNV cycles given was five. Response to treatment: Complete response in 12 (85.7%) patients, partial response in 2 (14.3%) patients, and none with progressive disease. The objective response rate was 100%, and median PFS was 21.4 months. Toxicity was relatively mild, which mainly included nausea in six and fatigue in five, grade 3-4 hematotoxicity in one, and abnormal liver functions in five patients. No neurotoxicity has been observed till date. Conclusion: The efficacy outcomes in this study are comparable to other reported HD-MTX-based regimens plus WBRT, with an added favorable toxicity profile. Prospective, randomized controlled trials are warranted to confirm such results.

[447]

TÍTULO / TITLE: - The Role of Temozolomide in the Treatment of a Patient with a Pure Silent Pituitary Somatotroph Carcinoma.

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

REVISTA / JOURNAL: - Endocr Pract. 2013 Jun 27:1-15.

●● Enlace al texto completo (gratis o de pago) [4158/EP12400.CR](#)

AUTORES / AUTHORS: - Neto LV; Chimelli L; da M Pereira PJ; Gasparetto EL; Bines J; Wildemberg LE; 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 Endocrinology Section, Federal Hospital of Lagoa.

RESUMEN / SUMMARY: - Objective: to describe a case of a pure silent somatotroph pituitary carcinoma. Methods: We describe a 54-year-old female patient with a clinically non-functioning pituitary macroadenoma diagnosed 15 years ago. Results: The patient underwent transsphenoidal surgery, and no visible tumor remnant was observed for six years, when the magnetic resonance imaging (MRI) detected the recurrence of a 1.2x1.5 cm macroadenoma. The patient was submitted to conventional radiotherapy (4,500 cGy), and the tumor volume remained stable for seven years. Then, the MRI

revealed a slight increase in tumor size, and two years later, a subsequent MRI detected a very large, invasive pituitary mass. The patient was resubmitted to transsphenoidal surgery, and the histopathological examination showed diffuse positivity for GH. The nadir GH level during an oral glucose tolerance test was 0.06 ng/mL, and the pre- and postoperative IGF-I levels were within the normal range. Abdominal, chest, brain and spine MRI showed multiple small and hypervascular liver and bone lesions suggestive of metastases. Liver biopsy confirmed metastasis of GH-producing pituitary carcinoma. The patient has been treated with temozolomide and zoledronic acid for seven months and with octreotide-LAR for four months. The primary tumor and metastases are stable. Conclusion: Despite being an extremely rare event, pituitary carcinoma may develop several years after the successful treatment of even a silent GH-producing pituitary adenoma, which suggests that close long-term follow-up is necessary.

[448]

TÍTULO / TITLE: - End-of-life caregivers' perception of medical and psychological support during the final weeks of glioma patients: a questionnaire-based survey.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 28.

●● Enlace al texto completo (gratis o de pago) 1093/neuonc/not089

AUTORES / AUTHORS: - Heese O; Vogeler E; Martens T; Schnell O; Tonn JC; Simon M; Schramm J; Krex D; Schackert G; Reithmeier T; Nikkhah G; Sabel M; Steiger HJ; Schlegel U; Loffler M; Weller M; Westphal M

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University Medical Center Hamburg-Eppendorf, Hamburg, Germany (O.H., E.V., T.M., M.W.); Department of Neurosurgery, University of Munich LMU, Munich, Germany (O.S., J.-C.T.); Department of Neurosurgery, University of Bonn Medical Center, Bonn, Germany (M.S., J.S.); Department of Neurosurgery, Technical University Dresden, Dresden, Germany (D.K., G.S.); Department of Stereotactic Neurosurgery, University of Freiburg, Breisach, Germany (T.R., G.N.); Department of Neurosurgery, Medical Faculty, Heinrich-Heine University Dusseldorf, Dusseldorf, Germany (M.S., H.-J.S.); Department of Neurology, Ruhr-University Bochum, Bochum, Germany (U.S.); Institute of Medicinal Informatics, Statistics and Epidemiology, University of Leipzig, Leipzig, Germany (M.L.); Department of Neurology, University Hospital Zurich, Zurich, Switzerland (M.W.).

RESUMEN / SUMMARY: - BackgroundThe prognosis for glioma remains dismal, and little is known about the final disease phase. To obtain information about this period, we surveyed caregivers of patients who were registered in the German Glioma Network and who died from the disease.MethodsA questionnaire with 15 items, focusing on medical, logistic, and mental health support and symptom control during the final 4 weeks, was sent to caregivers.

For some of the questions, a scale from 1 (inadequate) to 10 (excellent) was used. Results of 1655 questionnaires, 605 were returned (36.6%) and evaluated. We found that 67.9% of the patients were taken care of at home for the last 4 weeks; 47.7% died at home, 22.6% died in hospitals, and 19.3% died in hospice facilities. Medical support was provided by general practitioners in 72.3% of cases, by physicians affiliated with a nursing home or hospice in 29.9%, and by general oncologists in 17%. Specialized neuro-oncologists were involved in 6%. The caregivers ranked the medical support with a mean of 7.2 (using a 10-point scale), nursing service with 8.1, and mental health support with 5.5. In 22.9% of cases, no support for the caregivers themselves was offered by medical institutions. Conclusions Although these data reflect the caregivers' subjective views, they are useful in understanding and improving current patterns of care. While patients and their caregivers are supported mainly by neuro-oncologists for most of the disease phase, the end-of-life phase is managed predominantly by general practitioners and specialists in palliative care. Close cooperation between these specialties is necessary to meet the specific needs of glioma patients.

[449]

TÍTULO / TITLE: - Patient-specific dosimetry for intracavitary P-chromic phosphate colloid therapy of cystic brain tumours.

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

REVISTA / JOURNAL: - Eur J Nucl Med Mol Imaging. 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago) [1007/s00259-013-2451-](http://1007/s00259-013-2451-6)

[6](#)

AUTORES / AUTHORS: - Denis-Bacelar AM; Romanchikova M; Chittenden S; Saran FH; Mandeville H; Du Y; Flux GD

INSTITUCIÓN / INSTITUTION: - Joint Department of Physics, Institute of Cancer Research, Sutton, London, SM2 5NG, UK, ana.denisbacelar@icr.ac.uk.

RESUMEN / SUMMARY: - PURPOSE: 32P-chromic phosphate colloid treatments of astrocytoma and craniopharyngioma cystic brain tumours in paediatric patients are conventionally based on a sphere model under the assumption of uniform uptake. The aims of this study were to determine the distribution of the absorbed dose delivered by 32P on a patient-specific basis and to evaluate the accuracy with which this can be predicted from a pretherapy administration of 99mTc-Sn colloid. METHODS: Three patients were treated with 32P-chromic phosphate colloid following 99mTc-Sn colloid administrations. Convolution dosimetry was performed using pretherapy and posttherapy sequential SPECT imaging, and verified with EGSnrc Monte Carlo radiation transport simulations. Mean absorbed doses to the cyst wall and dose-volume histograms were also calculated and compared with those obtained by the sphere model approach. RESULTS: Highly nonuniform uptake distributions of both the 99mTc and 32P colloids were observed and characterized by dose-volume histograms to the

cyst wall. Mean absorbed doses delivered to the cyst wall, obtained with the convolution method, were on average 21 % (SD 18 %) and 50 % (SD 30 %) lower than those predicted by the ^{99m}Tc distribution and the uniform assumption of the sphere model, respectively. CONCLUSION: Absorbed doses delivered to the cyst wall by ³²P are more accurately predicted from image-based patient-specific convolution dosimetry than from simple sphere models. These results indicate the necessity to perform personalized treatment planning and verification for intracavitary irradiation of cystic brain tumours treated with radiocolloids. Patient-specific dosimetry can be used to guide the frequency and levels of repeated administrations and would facilitate data collection and comparison to support the multicentre trials necessary to progress this therapy.

[450]

TÍTULO / TITLE: - Clinical features and analysis in 1385 Chinese patients with pituitary adenomas.

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

REVISTA / JOURNAL: - J Neurosurg Sci. 2013 Sep;57(3):267-75.

AUTORES / AUTHORS: - Shao S; Li X

INSTITUCIÓN / INSTITUTION: - Division of Endocrinology, Tongji Hospital, Tongji Medical College of Huazhong, University of Science and Technology, Wuhan, PR China - shaoshiying@hotmail.com.

RESUMEN / SUMMARY: - Aim: The prevalence of pituitary adenomas (PAs) is increasing as the development of imaging techniques. Few studies systematically documented the profile of these tumors in Chinese population. Our study is aimed to investigate the clinical features of PAs including the clinicopathologies, manifestations, and tumor recurrence. Methods: A retrospective analysis of clinic records of patients (median age, 39 years) with PAs was performed. A total of 1385 patients diagnosed and treated surgically at Tongji hospital, Hubei Province, China during the years 1987 through 2009 were identified that met our inclusion criteria and formed the study group. Results: The distribution of each PA subtype was nonfunctioning pituitary adenomas (NFPA) occupying 40.0% of the total subjects, pure prolactin-secreting (PRL+) adenomas 18.6%, mixed adenomas 14.4%, growth hormone-secreting (GH+) adenomas 6.0%, follicle-stimulating hormone/luteinizing hormone-secreting (FSH/LH+) adenomas 5.9%, adrenocorticotrophic hormone-secreting (ACTH+) adenomas 4.6%, and thyroid-stimulating hormone-secreting (TSH+) adenomas 0.6%. The most common initial symptoms were visual disturbances (N.=664), endocrine disturbances (N.=645), and headaches (N.=532). Patients who complained of endocrine disturbances mostly presented menstrual dysfunction in females whereas acromegaly in males. A total of 45 cases developed to recurrence, most of which occurred within 3 years after surgery. PRL+ adenoma showed the lowest frequency of recurrence (0.8%). Conclusion: Most adenomas were secretory PAs, with prolactinomas

being the most common subtype. Visual defects, endocrine disorders, and headaches were the most common symptoms. Patients with PRL+ adenoma had the lowest chance to undertake recurrence. More clinical care and research activities are needed to improve the outcome of these patients.

[451]

TÍTULO / TITLE: - Assessment of genetic markers and glioblastoma stem-like cells in activation of dendritic cells.

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

REVISTA / JOURNAL: - Hum Cell. 2013 Jun 5.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s13577-013-0065-](#)

[8](#)

AUTORES / AUTHORS: - Yurtsever A; Haydaroglu A; Biray Avci C; Gunduz C; Otkar N; Dalbasti T; Caglar HO; Attar R; Kitapcioglu G

INSTITUCIÓN / INSTITUTION: - Cancer Research Center, Ege University, Bornova, 35100, Izmir, Turkey.

RESUMEN / SUMMARY: - Glioblastoma (GBM) is the most common and aggressive intraparenchymal primary brain tumor in adults. The principal reasons for the poor outcomes of GBM are the high rates of recurrence and resistance to chemotherapy. The aim of this study was to determine the role of tailored cellular therapy for GBM with a poor prognosis and compare the activity of dendritic cells (DCs) that have encountered GBM cells. Detecting the correlations between methylation and expression of MGMT and PTEN genes and GBM cancer stem cells (CSCs) markers after co-cultures with a mononuclear cell cocktail are also aims for this study. Allogenic umbilical cord blood (UCB)-derived DCs were labeled with the CD11a and CD123 for immature DCs, and CD80 and CD11c for mature DCs. CD34, CD45, and CD56 cells were isolated from allogenic UCB for using in DCs maturation. GBM CSCs were detected with CD133/1 and CD111 antibodies after co-culture studies. DC activation was carried out via GBM cells including CD133 and CD111 cells and a mononuclear cells cocktail including CD34, CD45, and CD56 natural killer cells. Real-time PCR was performed to detect the expression and promoter methylation status of PTEN and MGMT genes. The expression of CSCs markers was found in all GBM cases, and a statistically significant correlation was found among them after co-culture studies. The most pronounced affinity of DCs to GBM cells was observed at dilutions between $\frac{1}{4}$ and $\frac{1}{256}$ in co-cultures. There was a statistically significant correlation between cellularity and granularity ratios for CD123 and CD11c. PTEN and MGMT gene expression and methylation values were evaluated with respect to CSCs expression and no statistical significance was found. Activation of DCs might associate with CSCs and the mononuclear cells cocktail including CD34, CD45, and CD56 cells which were obtained from allogenic UCB.

[452]

TÍTULO / TITLE: - microRNA-17 regulates the expression of ATG7 and modulates the autophagy process, improving the sensitivity to temozolomide and low-dose ionizing radiation treatments in human glioblastoma cells.

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

REVISTA / JOURNAL: - Cancer Biol Ther. 2013 Jul 1;14(7):574-86. doi: 10.4161/cbt.24597. Epub 2013 May 10.

●● Enlace al texto completo (gratis o de pago) [4161/cbt.24597](#)

AUTORES / AUTHORS: - Comincini S; Allavena G; Palumbo S; Morini M; Durando F; Angeletti F; Pirtoli L; Miracco C

INSTITUCIÓN / INSTITUTION: - Dipartimento di Biologia e Biotechnologie; Università di Pavia; Pavia, Italy.

RESUMEN / SUMMARY: - ATG7 is a key autophagy-promoting gene that plays a critical role in the regulation of cell death and survival of various cell types. We report here that microRNAs (miRNAs), a class of endogenous 22-24 nucleotide noncoding RNA molecules able to affect stability and translation of mRNA, may represent a novel mechanism for regulating ATG7 expression and therefore autophagy. We demonstrated that ATG7 is a potential target for miR-17, and this miRNA could negatively regulate ATG7 expression, resulting in a modulation of the autophagic status in T98G glioblastoma cells. Treatment of these tumor cells with the miR-17 mimic decreased, and with the antagomir increased, the expression of ATG7 protein. Dual luciferase reporter assay confirmed that a specific miR-17 binding sequence in the 3'-UTR of ATG7 contributed to the modulation of the expression of the gene by miR-17. Interestingly, our results showed that anti-miR-17 administration activated autophagy through autophagosome formation, as resulted by LC3B and ATG7 protein expression increase, and by the analysis of GFP-LC3 positive autophagosome vesicles in living cells. Furthermore, the autophagy activation by anti-miR-17 resulted in a decrease of the threshold resistance at temozolomide doses in T98G cells, while miR-17 modulation in U373-MG glioblastoma cells resulted in a sensitization to low ionizing radiation doses. Our study of the role of miR-17 in regulating ATG7 expression and autophagy reveals a novel function for this miRNA sequence in a critical cellular event with significant impacts in cancer development, progression and treatment.

[453]

TÍTULO / TITLE: - Successful Intra-arterial Thrombolysis in a Patient with an Intracranial Meningioma.

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

REVISTA / JOURNAL: - J Stroke Cerebrovasc Dis. 2013 Jul 4. pii: S1052-3057(13)00176-6. doi: 10.1016/j.jstrokecerebrovasdis.2013.05.009.

- Enlace al texto completo (gratis o de pago)

1016/j.istrokecerebrovasdis.2013.05.009

AUTORES / AUTHORS: - Baiense RF; Abrahao A; Ricarte IF; Fukuda TG; Oliveira RA; Silva GS; Costa M; Teixeira MJ

INSTITUCIÓN / INSTITUTION: - Hospital do Coracao, Sao Paulo, Brazil; Department of Neurology and Neurosurgery, Universidade Federal de Sao Paulo, Sao Paulo, Brazil.

RESUMEN / SUMMARY: - Alteplase (recombinant tissue plasminogen activator [rt-PA]) label approval by the Food and Drug Administration remarks the contraindication of its use with known intracranial neoplasm because of potential bleeding complications. Despite this concern, the real risk of intracerebral bleeding in patients with intracranial neoplasms treated with rt-PA is unknown, and there are few reports of thrombolysis in patients with brain tumors. We report a case of a 78-year-old man who was seen in our emergency department within 2 hours from sudden onset of aphasia, right-sided hemiplegia, hypoesthesia, and homonymous hemianopsia. The National Institutes of Health Stroke Scale (NIHSS) score at admission was 20. Intra-arterial thrombolysis was performed with administration of .3 mg/kg of alteplase combined with mechanical thrombectomy. At discharge, his NIHSS score was 1, and after 90 days, his modified Rankin score was 1. To our knowledge, this is the first report of intra-arterial thrombolysis in a patient with acute ischemic stroke with an intracranial tumor.

[454]

TÍTULO / TITLE: - The incidence of symptomatic neuroma in amputation and neurorrhaphy patients.

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

REVISTA / JOURNAL: - J Plast Reconstr Aesthet Surg. 2013 Jul 8. pii: S1748-6815(13)00356-2. doi: 10.1016/j.bjps.2013.06.019.

- Enlace al texto completo (gratis o de pago) 1016/j.bjps.2013.06.019

AUTORES / AUTHORS: - van der Avoort DJ; Hovius SE; Selles RW; van Neck JW; Coert JH

INSTITUCIÓN / INSTITUTION: - Department of Plastic, Reconstructive and Hand Surgery, Erasmus MC, University Medical Center, Rotterdam, The Netherlands. Electronic address: d.j.vanderavoort@gmail.com.

RESUMEN / SUMMARY: - **PURPOSE:** The incidence of symptomatic neuroma in finger nerve injuries varies widely in the literature. In this retrospective study, we evaluated the incidence of symptomatic neuroma after repair of digital nerve injuries (neurorrhaphy) and after amputation of one or more fingers. We also determined the need for re-operation on symptomatic neuroma patients. **METHODS:** In a retrospective study, we collected data from medical files. All patients who were treated for a hand trauma in the emergency department during the last 10 years were included. We gathered data on the presence of

symptomatic neuroma and re-operation of the patients. RESULTS: In our database, 583 people had a peripheral nerve injury of whom 177 people had an amputation. The incidence of digital nerve injury without amputation followed by neurolysis was 1%. In digital nerve injuries with amputation the incidence was 7.8%, which is significantly higher than after digital nerve injuries without amputation. CONCLUSIONS: People with an amputation injury have significantly more symptomatic neuroma than people who undergo neurolysis. People who have a symptomatic neuroma after digital nerve injuries have been operated significantly more than people who have a non-symptomatic neuroma or no neuroma at all. This information can be of help when treating digital nerve injuries. Type of study/Level of evidence (LOE): Prognostic.

[455]

TÍTULO / TITLE: - Radiotherapy plus nimotuzumab or placebo in the treatment of high grade glioma patients: results from a randomized, double blind trial.

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

REVISTA / JOURNAL: - BMC Cancer. 2013 Jun 19;13:299. doi: 10.1186/1471-2407-13-299.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-299](#)

AUTORES / AUTHORS: - Solomon MT; Selva JC; Figueredo J; Vaquer J; Toledo C; Quintanal N; Salva S; Dominguez R; Alert J; Marinello JJ; Catala M; Griego MG; Martell JA; Luaces PL; Ballesteros J; de-Castro N; Bach F; Crombet T

INSTITUCIÓN / INSTITUTION: - Center of Molecular Immunology, PO BOX 16040, Havana 11600, Cuba. taniac@cim.sld.cu.

RESUMEN / SUMMARY: - BACKGROUND: The prognosis of patients bearing high grade glioma remains dismal. Epidermal Growth Factor Receptor (EGFR) is well validated as a primary contributor of glioma initiation and progression. Nimotuzumab is a humanized monoclonal antibody that recognizes the EGFR extracellular domain and reaches Central Nervous System tumors, in nonclinical and clinical setting. While it has similar activity when compared to other anti-EGFR antibodies, it does not induce skin toxicity or hypomagnesemia. METHODS: A randomized, double blind, multicentric clinical trial was conducted in high grade glioma patients (41 anaplastic astrocytoma and 29 glioblastoma multiforme) that received radiotherapy plus nimotuzumab or placebo. Treatment and placebo groups were well-balanced for the most important prognostic variables. Patients received 6 weekly doses of 200 mg nimotuzumab or placebo together with irradiation as induction therapy. Maintenance treatment was given for 1 year with subsequent doses administered every 3 weeks. The objectives of this study were to assess the comparative overall survival, progression free survival, response rate, immunogenicity and safety. RESULTS: The median cumulative dose was 3200 mg of nimotuzumab given over a median number of 16 doses. The combination

of nimotuzumab and RT was well-tolerated. The most prevalent related adverse reactions included nausea, fever, tremors, anorexia and hepatic test alteration. No anti-idiotypic response was detected, confirming the antibody low immunogenicity. The mean and median survival time for subjects treated with nimotuzumab was 31.06 and 17.76 vs. 21.07 and 12.63 months for the control group. CONCLUSIONS: In this randomized trial, nimotuzumab showed an excellent safety profile and significant survival benefit in combination with irradiation. TRIAL REGISTRATION: Cuban National Register for clinical trials (No. 1745) (<http://registroclinico.sld.cu/ensayos>).

[456]

TÍTULO / TITLE: - Seizure control following radiotherapy in patients with diffuse gliomas: a retrospective study.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 28.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not109](#)

AUTORES / AUTHORS: - Ruda R; Magliola U; Bertero L; Trevisan E; Bosa C; Mantovani C; Ricardi U; Castiglione A; Monagheddu C; Soffiotti R

INSTITUCIÓN / INSTITUTION: - Department of Neuro-Oncology, University of Turin, Turin, Italy (R.R., U.M., L.B., E.T., C.B., R.S.); Department of Radiotherapy, University of Turin, Turin, Italy (C.M., U.R.); Department of Clinical Epidemiology, AO Citta della Salute e della Scienza di Torino, Turin, Italy (A.C., C.M.).

RESUMEN / SUMMARY: - Background Little information is available regarding the effect of conventional radiotherapy on glioma-related seizures. Methods In this retrospective study, we analyzed the seizure response and outcome following conventional radiotherapy in a cohort of 43 patients with glioma (33 grade II, 10 grade III) and medically intractable epilepsy. Results At 3 months after radiotherapy, seizure reduction was significant ($\geq 50\%$ reduction of frequency compared with baseline) in 31/43 patients (72%) of the whole series and in 25/33 patients (76%) with grade II gliomas, whereas at 12 months seizure reduction was significant in 26/34 (76%) and in 19/25 (76%) patients, respectively. Seizure reduction was observed more often among patients displaying an objective tumor response on MRI, but patients with no change on MRI also had a significant seizure reduction. Seizure freedom (Engel class I) was achieved at 12 months in 32% of all patients and in 38% of patients with grade II tumors. Timing of radiotherapy and duration of seizures prior to radiotherapy were significantly associated with seizure reduction. Conclusions This study showed that a high proportion of patients with medically intractable epilepsy from diffuse gliomas derive a significant and durable benefit from radiotherapy in terms of epilepsy control and that this positive effect is not strictly associated with tumor shrinkage as shown on MRI. Radiotherapy at tumor progression seems as effective as early radiotherapy

after surgery. Prospective studies must confirm and better characterize the response to radiotherapy.

[457]

TÍTULO / TITLE: - Prolactinomas in infertile women: clinical and endocrine characteristics before and after 24 months of treatment with bromocriptine.

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

REVISTA / JOURNAL: - Med Arh. 2013;67(3):181-4.

AUTORES / AUTHORS: - Hajder M; Hajder E; Dervisefendic M; Samardzic R; Alic E

INSTITUCIÓN / INSTITUTION: - Department of Endocrinology, Internal Clinic, University Clinical Center Tuzla, Tuzla, Bosnia and Herzegovina.

RESUMEN / SUMMARY: - INTRODUCTION: Prolactinomas are the most common tumors of the pituitary gland and cause of gonadal dysfunction and infertility. OBJECTIVE: To determine the effects of bromocriptin to normalize prolactin, gonadal function more tumor mass and infertility. PATIENTS AND METHODS: A prospective clinical study included 30 infertile women with micro-macro prolactinoma. We analyzed clinical parameters, the function of sex hormones, the maximum tumor diameter before and after 24-month therapy with bromocriptine. RESULTS: Micro prolactinomas were significantly (66.3% vs. 33.7%, $p < 0.001$) over-represented in infertile women compared to macro prolactinomas. Galactorrhea / amenorrhea, and infertility are common symptoms of macro-micro prolactinomas. Infertile women with present macro prolactinomas had significantly higher mean values of PRL (1900.3 vs. 7.8, $p < 0.001$), significantly lower mean FSH (3.4 vs. 4.6, $p < 0.001$), LH (2.9 vs. 5.2, $p < 0.001$), luteal progesterone (2.5 vs. 14.8, $p < 0.001$) and estradiol (E2) (98.2 vs. 180.1, $p < 0.001$) compared to the control group. Infertile women with micro prolactinomas had significantly higher values of PRL (170.4 vs. 7.8, $p < 0.001$), significantly lower mean FSH (4.1 vs. 4.6, $p < 0.01$), LH (3.8 vs. 5.2, $p < 0.01$) luteal progesterone (2.7 vs. 14.8, $p < 0.001$) and E2 (120.3 vs. 180.1, $p < 0.001$) compared to the control group. After 24-month therapy bromocriptine in infertile women with micro-macro prolactinomas followed by a significant decrease in PRL ($p < 0.05$), a significant reduction of the maximal tumor diameter ($p < 0.05$), a significant increase in FSH, LH, E2 ($p < 0.05$) compared to baseline values before treatment and a significant reduction in fertility ($p < 0.05$). CONCLUSION: The syndrome amenorrhea/galactorrhea and infertility are the most common symptoms of prolactinomas. Micro prolactinomas are more frequent in women. Bromocriptine is an effective drug in the treatment of hyperprolactinemia with prolactinomas. It effectively normalize prolactin, establishing gonadal function and reduces tumor mass.

[458]

TÍTULO / TITLE: - Brain tumor stem cells: Molecular characteristics and their impact on therapy.

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

REVISTA / JOURNAL: - Mol Aspects Med. 2013 Jul 4. pii: S0098-2997(13)00044-7. doi: 10.1016/j.mam.2013.06.004.

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

[1016/j.mam.2013.06.004](#)

AUTORES / AUTHORS: - Schonberg DL; Lubelski D; Miller TE; Rich JN

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

RESUMEN / SUMMARY: - Glioblastoma (GBM) is the most prevalent primary brain tumor and ranks among the most lethal of human cancers with conventional therapy offering only palliation. Great strides have been made in understanding brain cancer genetics and modeling these tumors with new targeted therapies being tested, but these advances have not translated into substantially improved patient outcomes. Multiple chemotherapeutic agents, including temozolomide, the first-line treatment for glioblastoma, have been developed to kill cancer cells. However, the response to temozolomide in GBM is modest. Radiation is also moderately effective but this approach is plagued by limitations due to collateral radiation damage to healthy brain tissue and development of radioresistance. Therapeutic resistance is attributed at least in part to a cell population within the tumor that possesses stem-like characteristics and tumor propagating capabilities, referred to as cancer stem cells. Within GBM, the intratumoral heterogeneity is derived from a combination of regional genetic variance and a cellular hierarchy often regulated by distinct cancer stem cell niches, most notably perivascular and hypoxic regions. With the recent emergence as a key player in tumor biology, cancer stem cells have symbiotic relationships with the tumor microenvironment, oncogenic signaling pathways, and epigenetic modifications. The origins of cancer stem cells and their contributions to brain tumor growth and therapeutic resistance are under active investigation with novel anti-cancer stem cell therapies offering potential new hope for this lethal disease.

[459]

TÍTULO / TITLE: - Sigmoid Colon Perforation Related to Bevacizumab in a Patient With Glioblastoma.

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

REVISTA / JOURNAL: - Am J Ther. 2013 Jun 18.

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

[1097/MJT.0b013e318296ee50](#)

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[460]

TÍTULO / TITLE: - Thrombolysis for Ischemic Stroke in Patients with Brain Tumors.

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

REVISTA / JOURNAL: - J Stroke Cerebrovasc Dis. 2013 Jun 11. pii: S1052-3057(13)00171-7. doi: 10.1016/j.jstrokecerebrovasdis.2013.05.004.

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

[1016/j.jstrokecerebrovasdis.2013.05.004](#)

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RESUMEN / SUMMARY: - BACKGROUND: Thrombolysis is the most successful therapy in acute ischemic stroke. Limitations comprise strict eligibility criteria including many contraindications for thrombolysis, and in particular clinical situations lack of evidence-based data resulting in recommendations based on single experiences. Therefore, the risk-benefit effect of thrombolysis in the presence of brain tumor is unknown. METHODS: We conducted a systematic literature research of electronic databases (MEDLINE, Google Scholar) covering the period from 1990 to 2012 including search terms “thrombolysis,” “stroke,” “brain tumor,” and “intracranial neoplasm.” In addition, we report 1 new case of a 71-year-old patient with a large right frontal meningioma who fully recovered with thrombolysis from a severe ischemic stroke. RESULTS: Our literature research retrieved 12 patients with different brain tumors who were treated with thrombolysis for different reasons. Intracerebral hemorrhage occurred in 1 patient (8.3%) with a glioblastoma, and in the other 11 patients (91.7%), no hemorrhage was documented. In the subgroup of 8 stroke patients, both patients with a glioblastoma had no stroke but rather a focal seizure. Two of 3 patients with meningiomas showed a very good benefit from thrombolysis. CONCLUSIONS: In summary, very limited data exist about thrombolysis in patients with brain tumors. Differentiation of tumor by additional neuroimaging before thrombolysis in ischemic stroke is recommended as thrombolysis might be considered in extra-axial benign appearing neoplasms (eg, meningioma) but is not advisable in intra-axial primary or metastatic neoplasm. Further reporting of thrombolysis in patients with brain tumors is recommended.

[461]

TÍTULO / TITLE: - Cognitive deficits in patients with low and high grade gliomas.

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

REVISTA / JOURNAL: - J Neurosurg Sci. 2013 Sep;57(3):259-66.

AUTORES / AUTHORS: - Raysi Dehcordi S; Mariano M; Mazza M; Galzio RJ

INSTITUCIÓN / INSTITUTION: - Department of Life, Health and Environmental Sciences University of L'Aquila, L'Aquila, Italy - soheila.raysi@alice.it.

RESUMEN / SUMMARY: - Aim: Studies in the literature with specific information concerning the neuropsychological alterations in patients with high and low grade gliomas are poor. The aim of the present study was to investigate and compare the cognitive functioning in patients with high and low-grade glioma pre- and postoperatively. Methods: Between January 2009 and January 2011 27 patients with high-grade glioma (HG group) and 15 patients with low-grade glioma (LG group) were neuropsychologically assessed in the preoperative time, as well as 6 months and 1 year after surgery. During the examination, memory, visuo-constructive abilities, language and executive functions were tested. In addition in the preoperative time, the effect on cognition of lateralization, size and edema was analyzed for each group. Results: Both in the HG and LG group statistical comparisons of the pre- and postoperative assessments of cognitive abilities showed a postoperative improvement in memory functions and in processing speed ($P < 0.05$). In particular the analysis of the significance of clinical factors in the postoperative outcome of patients with glioma showed that lesion size, edema and lateralization affect cognitive functioning in varying degree. Conclusion: These findings demonstrated different levels of impairments in executive and memory domains and in processing speed in patients with low and high grade gliomas. These deficits may have a strong impact on quality of life. Psychiatric interventions may be useful for patients and their families; in particular for helping the patient to become aware of the illness, in bolstering coping strategies, and for facilitating their support at home.

[462]

TÍTULO / TITLE: - Gamma knife in the treatment of pituitary adenomas: results of a single center.

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

REVISTA / JOURNAL: - Can J Neurol Sci. 2013 Jul;40(4):546-52.

AUTORES / AUTHORS: - Zeiler FA; Bigder M; Kaufmann A; McDonald PJ; Fewer D; Butler J; Schroeder G; West M

INSTITUCIÓN / INSTITUTION: - Section of Neurosurgery, Department of Surgery, University of Manitoba, Winnipeg, Manitoba, Canada.

RESUMEN / SUMMARY: - Introduction: Gamma Knife (GK) radiosurgery for pituitary adenomas can offer a means of tumor and biologic control with acceptable risk and low complication rates. Methods: Retrospective review of all

the patients treated at our center with GK for pituitary adenomas from Nov 2003 to June 2011. Results: We treated a total of 86 patients. Ten were lost to follow-up. Mean follow was 32.8 months. There were 21 (24.4%) growth hormone secreting adenomas (GH), 8 (9.3%) prolactinomas (PRL), 8 (9.3%) adrenocorticotrophic hormone secreting (ACTH) adenomas, 2 (2.3%) follicle stimulating hormone/luteinizing hormone secreting (FSH/LH) adenomas, and 47 (54.7%) null cell pituitary adenomas that were treated. Average maximum tumor diameter and volume was 2.21cm and 5.41cm³, respectively. The average dose to the 50% isodose line was 14.2 Gy and 23.6 Gy for secreting and non-secreting adenomas respectively. Mean maximal optic nerve dose was 8.87 Gy. Local control rate was 75 of 76 (98.7%), for those with followup. Thirty-three (43.4%) patients experienced arrest of tumor growth, while 42 (55.2%) patients experienced tumor regression. Of the 39 patients with secreting pituitary tumors, 6 were lost to follow-up. Improved endocrine status occurred in 16 (50.0%), while 14 (43.8%) demonstrated stability of hormone status on continued pre-operative medical management. Permanent complications included: panhypopituitarism (4), hypothyroidism (4), hypocortisolemia (1), diabetes insipidus (1), apoplexy (1), visual field defect (2), and diplopia (1). Conclusions: Gamma Knife radiosurgery is a safe and effective means of achieving tumor growth control and endocrine remission/stability in pituitary adenomas.

[463]

TÍTULO / TITLE: - Changes in presentation, treatment, and outcomes of adult low-grade gliomas over the past fifty years.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Aug;15(8):1102-10. doi: 10.1093/neuonc/not080. Epub 2013 Jun 27.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not080](#)

AUTORES / AUTHORS: - Youland RS; Schomas DA; Brown PD; Nwachukwu C; Buckner JC; Giannini C; Parney IF; Laack NN

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Nadia N. Laack, MD, Department of Radiation Oncology, Mayo Clinic, 200 First St. SW, Rochester, MN 55905. laack.nadia@mayo.edu.

RESUMEN / SUMMARY: - Background To identify changes in patient presentation, treatment, and outcomes of low-grade gliomas (LGGs) over the past 50 years. Methods Records of 852 adults who received a diagnosis at Mayo Clinic from 1960 through 2011 with World Health Organization grade II LGGs were reviewed and grouped by those who received a diagnosis before (group I: 1960-1989) and after (group II: 1990-2011) the routine use of postoperative MRI. Results Median follow-up was 23.3 and 8.7 years for groups I and II, respectively. Patients in group I more often presented with seizures, headaches, sensory/motor impairment, and astrocytoma histology. Over time,

more gross total resections (GTRs) were achieved, fewer patients received postoperative radiotherapy (PORT), and more received chemotherapy. Median progression-free survival (PFS) and overall survival (OS) were 4.4 and 8.0 years, respectively. Although PFS was similar, 10-year OS was better in group II (47%) than in group I (33%; $P < .0001$). Improved PFS in multivariate analysis was associated with group I patients, nonastrocytoma histology, small tumor size, successful GTR, or radical subtotal resection (rSTR), PORT, and postoperative chemotherapy. Factors associated with improved OS in multivariate analysis were younger age, nonastrocytoma histology, small tumor size, and GTR/rSTR. Conclusions OS for LGG has improved over the past 50 years, despite similar rates of progression. In the modern cohort, more patients are receiving a diagnosis of oligodendroglioma and are undergoing extensive resections, both of which are associated with improvements in OS. Because of risk factor stratification by clinicians, the use of PORT has decreased and is primarily being used to treat high-risk tumors in modern patients.

[464]

TÍTULO / TITLE: - Enhancement effect of cytotoxicity response of silver nanoparticles combined with thermotherapy on C6 rat glioma cells.

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

REVISTA / JOURNAL: - J Nanosci Nanotechnol. 2013 Jun;13(6):3851-4.

AUTORES / AUTHORS: - Wang R; Chen C; Yang W; Shi S; Wang C; Chen J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Fujian Medical University Affiliated Union Hospital, Fuzhou 350001, China.

RESUMEN / SUMMARY: - The present studies reveal that silver nanoparticles (AgNPs) can induce apoptosis and enhance radio-sensitivity on cancer cells. In this paper, we mainly investigated the effect of AgNPs on rat glioma C6 cells upon the combination treatment of hyperthermia treatment (HTT). AgNPs were synthesized by a polyol process and the mean size was 15 nm. The particles showed dose-dependent cytotoxicity on C6 cells from the experimental data. Besides, we found that heating cells could enhance the contents of cell uptake of AgNPs. From the survival curves, AgNPs showed the ability to enhance thermo-sensitivity on C6 cells. Our results revealed that AgNPs could have a potential application in enhancing effect on HTT induced killing of glioma cells.

[465]

TÍTULO / TITLE: - Temozolomide downregulates P-glycoprotein expression in glioblastoma stem cells by interfering with the Wnt3a/glycogen synthase-3 kinase/beta-catenin pathway.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 28.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not104](#)

AUTORES / AUTHORS: - Riganti C; Salaroglio IC; Caldera V; Campia I; Kopecka J; Mellai M; Annovazzi L; Bosia A; Ghigo D; Schiffer D

INSTITUCIÓN / INSTITUTION: - Department of Oncology, University of Turin, Turin, Italy (C.R., I.C.S., I.C., J.K., A.B., D.G.); Center for Experimental Research and Medical Studies, University of Turin, Turin, Italy (C.R., A.B., D.G.); Neuro-bio-oncology Center, Policlinico di Monza Foundation, Vercelli, Italy (V.C., M.M., L.A., D.S.).

RESUMEN / SUMMARY: - Background Glioblastoma multiforme stem cells display a highly chemoresistant phenotype, whose molecular basis is poorly known. We aim to clarify this issue and to investigate the effects of temozolomide on chemoresistant stem cells. Methods A panel of human glioblastoma cultures, grown as stem cells (neurospheres) and adherent cells, was used. Results Neurospheres had a multidrug resistant phenotype compared with adherent cells. Such chemoresistance was overcome by apparently noncytotoxic doses of temozolomide, which chemosensitized glioblastoma cells to doxorubicin, vinblastine, and etoposide. This effect was selective for P-glycoprotein (Pgp) substrates and for stem cells, leading to an investigation of whether there was a correlation between the expression of Pgp and the activity of typical stemness pathways. We found that Wnt3a and ABCB1, which encodes for Pgp, were both highly expressed in glioblastoma stem cells and reduced by temozolomide. Temozolomide-treated cells had increased methylation of the cytosine-phosphate-guanine islands in the Wnt3a gene promoter, decreased expression of Wnt3a, disrupted glycogen synthase-3 kinase/beta-catenin axis, reduced transcriptional activation of ABCB1, and a lower amount and activity of Pgp. Wnt3a overexpression was sufficient to transform adherent cells into neurospheres and to simultaneously increase proliferation and ABCB1 expression. On the contrary, glioblastoma stem cells silenced for Wnt3a lost the ability to form neurospheres and reduced at the same time the proliferation rate and ABCB1 levels. Conclusions Our work suggests that Wnt3a is an autocrine mediator of stemness, proliferation, and chemoresistance in human glioblastoma and that temozolomide may chemosensitize the stem cell population by downregulating Wnt3a signaling.

[466]

TÍTULO / TITLE: - Early post-bevacizumab progression on contrast-enhanced MRI as a prognostic marker for overall survival in recurrent glioblastoma: results from the ACRIN 6677/RTOG 0625 Central Reader Study.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul;15(7):945-54. doi: 10.1093/neuonc/not049. Epub 2013 Jun 19.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not049](#)

AUTORES / AUTHORS: - Boxerman JL; Zhang Z; Safriel Y; Larvie M; Snyder BS; Jain R; Chi TL; Sorensen AG; Gilbert MR; Barboriak DP

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Jerrold L. Boxerman, MD, PhD, Rhode Island Hospital, Department of Diagnostic Imaging, 593 Eddy St., Providence, RI 02903. jboxerman@lifespan.org.

RESUMEN / SUMMARY: - Background RTOG 0625/ACRIN 6677 is a multicenter, randomized, phase II trial of bevacizumab with irinotecan or temozolomide in recurrent glioblastoma (GBM). This study investigated whether early posttreatment progression on FLAIR or postcontrast MRI assessed by central reading predicts overall survival (OS). Methods Of 123 enrolled patients, 107 had baseline and at least 1 posttreatment MRI. Two central neuroradiologists serially measured bidimensional (2D) and volumetric (3D) enhancement on postcontrast T1-weighted images and volume of FLAIR hyperintensity. Progression status on all posttreatment MRIs was determined using Macdonald and RANO imaging threshold criteria, with a third neuroradiologist adjudicating discrepancies of both progression occurrence and timing. For each MRI pulse sequence, Kaplan-Meier survival estimates and log-rank test were used to compare OS between cases with or without radiologic progression. Results Radiologic progression occurred after 2 chemotherapy cycles (8 weeks) in 9 of 97 (9%), 9 of 73 (12%), and 11 of 98 (11%) 2D-T1, 3D-T1, and FLAIR cases, respectively, and 34 of 80 (43%), 21 of 58 (36%), and 37 of 79 (47%) corresponding cases after 4 cycles (16 weeks). Median OS among patients progressing at 8 or 16 weeks was significantly less than that among nonprogressors, as determined on 2D-T1 (114 vs 278 days and 214 vs 426 days, respectively; $P < .0001$ for both) and 3D-T1 (117 vs 306 days [$P < .0001$] and 223 vs 448 days [$P = .0003$], respectively) but not on FLAIR (201 vs 276 days [$P = .38$] and 303 vs 321 days [$P = .13$], respectively). Conclusion Early progression on 2D-T1 and 3D-T1, but not FLAIR MRI, after 8 and 16 weeks of anti-vascular endothelial growth factor therapy has highly significant prognostic value for OS in recurrent GBM.

[467]

TÍTULO / TITLE: - Na⁺/K⁺-ATPase beta2-subunit (AMOG) expression abrogates invasion of glioblastoma-derived brain tumor-initiating cells.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 25.

●● Enlace al texto completo (gratis o de pago) 1093/neuonc/not099

AUTORES / AUTHORS: - Sun MZ; Kim JM; Oh MC; Safaee M; Kaur G; Clark AJ; Bloch O; Ivan ME; Kaur R; Oh T; Fouse SD; Phillips JJ; Berger MS; Parsa AT

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RESUMEN / SUMMARY: - Background Mechanisms of glioma invasion remain to be fully elucidated. Glioma cells within glioblastoma multiforme (GBM) range from well-differentiated tumor cells to less-differentiated brain tumor-initiating cells (BTICs). The beta2-subunit of Na⁺/K⁺-ATPase, called the adhesion molecule on glia (AMOG), is highly expressed in normal glia but is thought to be universally downregulated in GBM. To test our hypothesis that expression of AMOG is heterogeneous in GBM and confers a less invasive phenotype, we compared it between BTICs and differentiated cells from patient-matched GBM and then tested GBM invasion in vitro after AMOG overexpression. Methods Immunohistochemistry, immunoblotting, and real-time PCR were used to characterize AMOG protein and mRNA expression in tumor samples, BTICs, and differentiated cells. Matrigel invasion assay, scratch assay, and direct cell counting were used for testing in vitro invasion, migration, and proliferation, respectively. Results While AMOG expression is heterogeneous in astrocytomas of grades II-IV, it is lost in most GBM. BTICs express higher levels of AMOG mRNA and protein compared with patient-matched differentiated tumor cells. Overexpression of AMOG decreased GBM cell and BTIC invasion without affecting migration or proliferation. Knockdown of AMOG expression in normal human astrocytes increased invasion. Conclusions AMOG expression inhibits GBM invasion. Its downregulation increases invasion in glial cells and may also represent an important step in BTIC differentiation. These data provide compelling evidence implicating the role of AMOG in glioma invasion and provide impetus for further investigation.

[468]

TÍTULO / TITLE: - TGM2 inhibition attenuates ID1 expression in CD44-high glioma-initiating cells.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 21.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not079](#)

AUTORES / AUTHORS: - Fu J; Yang QY; Sai K; Chen FR; Pang JC; Ng HK; Kwan AL; Chen ZP

INSTITUCIÓN / INSTITUTION: - State Key Laboratory of Oncology in South China and Department of Neurosurgery/Neuro-oncology, Cancer Center, Sun Yat-Sen University, Guangzhou, China (J.F., Q.-Y.Y., K.S., F.-R.C., A.-L.K., Z.-P.C.) State Key Laboratory of Oncology in South China, and Department of Anatomical & Cellular Pathology, The Chinese University of Hong Kong, Hong Kong, China (J.C.S.P., H.-K.N.).

RESUMEN / SUMMARY: - Background CD44 is a molecular marker associated with cancer stem cell populations and treatment resistance in glioma. More effective therapies will result from approaches aimed at targeting glioma cells high in CD44. Methods Glioma-initiating cell lines were derived from fresh

surgical glioblastoma samples. Expression of tissue transglutaminase 2 (TGM2) was attenuated through lentivirus-mediated short hairpin RNA knockdown. MTT assay [(3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide)] was used to evaluate the growth inhibition induced by TGM2 inhibitor. Terminal deoxynucleotidyl transferase deoxyuridine triphosphate nick end labeling was used to evaluate cell apoptosis following TGM2 inhibition. CD44+ glioma stem cells were sorted by flow cytometry. A nude mice orthotopic xenograft model was used to evaluate the in vivo effect of TGM2 inhibitor. Results TGM2 was highly expressed in CD44-high glioblastoma tissues and tumor-derived glioma-initiating cell lines. TGM2 knockdown impaired cell proliferation and induced apoptosis in CD44-high glioma-initiating cell lines. Further studies indicated that expression of inhibitor of DNA binding 1 protein (ID1) is regulated by TGM2 and might be an important mediator for TGM2-regulated cell proliferation in CD44-high glioma-initiating cell lines. TGM2 inhibitor reduces ID1 expression, suppresses cell proliferation, and induces apoptosis in CD44-high glioma-initiating cell lines. Furthermore, TGM2 is highly expressed in CD44+ glioma stem cells, while pharmacological inhibition of TGM2 activity preferentially eliminates CD44+ glioma stem cells. Consistently, TGM2 inhibitor treatment reduced ID1 expression and induced apoptosis in our orthotopic mice xenograft model, which can be translated into prolonged median survival in tumor-bearing mice. Conclusions TGM2 regulates ID1 expression in glioma-initiating cell lines high in CD44. Targeting TGM2 could be an effective strategy to treat gliomas with high CD44 expression.

[469]

TÍTULO / TITLE: - The soluble form of the tumor suppressor Lrig1 potently inhibits in vivo glioma growth irrespective of EGF receptor status.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 May 30.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not054](#)

AUTORES / AUTHORS: - Johansson M; Oudin A; Tiemann K; Bernard A; Golebiewska A; Keunen O; Fack F; Stieber D; Wang B; Hedman H; Niclou SP

INSTITUCIÓN / INSTITUTION: - NorLux Neuro-Oncology Laboratory, Department of Oncology, Centre de Recherche Public de la Sante, Luxembourg, Luxembourg (M.J., A.O., K.T., A.B., O.K., F.F., A.G., D.S., S.P.N.); Department of Radiation Sciences, Oncology, Umea University, Umea, Sweden (M.J., B.W., H.H.).

RESUMEN / SUMMARY: - BackgroundDeregulated growth factor signaling is a major driving force in the initiation and progression of glioblastoma. The tumor suppressor and stem cell marker Lrig1 is a negative regulator of the epidermal growth factor receptor (EGFR) family. Here, we addressed the therapeutic potential of the soluble form of Lrig1 (sLrig1) in glioblastoma treatment and the mechanism of sLrig1-induced growth inhibition. MethodsWith use of encapsulated cells, recombinant sLrig1 was locally delivered in orthotopic

glioblastoma xenografts generated from freshly isolated patient tumors. Tumor growth and mouse survival were evaluated. The efficacy of sLrig1 and the affected downstream signaling was studied in vitro and in vivo in glioma cells displaying variable expression of wild-type and/or a constitutively active EGFR mutant (EGFRvIII). Results Continuous interstitial delivery of sLrig1 in genetically diverse patient-derived glioma xenografts led to strong tumor growth inhibition. Glioma cell proliferation in vitro and tumor growth in vivo were potently inhibited by sLrig1, irrespective of EGFR expression levels. Of importance, tumor growth was also suppressed in EGFRvIII-driven glioma. sLrig1 induced cell cycle arrest without changing total receptor level or phosphorylation. Affected downstream effectors included MAP kinase but not AKT signaling. Of importance, local delivery of sLrig1 into established tumors led to a 32% survival advantage in treated mice. Conclusions To our knowledge, this is the first report demonstrating that sLrig1 is a potent inhibitor of glioblastoma growth in clinically relevant experimental glioma models and that this effect is largely independent of EGFR status. The potent anti-tumor effect of sLrig1, in combination with cell encapsulation technology for in situ delivery, holds promise for future treatment of glioblastoma.

[470]

TÍTULO / TITLE: - Updated therapeutic strategy for adult low-grade glioma stratified by resection and tumor subtype.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(7):447-54.

AUTORES / AUTHORS: - Nitta M; Muragaki Y; Maruyama T; Iseki H; Ikuta S; Konishi Y; Saito T; Tamura M; Chernov M; Watanabe A; Okamoto S; Maebayashi K; Mitsuhashi N; Okada Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Graduate School of Medicine, Tokyo Women's Medical University.

RESUMEN / SUMMARY: - The importance of surgical resection for patients with supratentorial low-grade glioma (LGG) remains controversial. This retrospective study of patients (n = 153) treated between 2000 to 2010 at a single institution assessed whether increasing the extent of resection (EOR) was associated with improved progression-free survival (PFS) and overall survival (OS). Histological subtypes of World Health Organization grade II tumors were as follows: diffuse astrocytoma in 49 patients (32.0%), oligoastrocytoma in 45 patients (29.4%), and oligodendroglioma in 59 patients (38.6%). Median pre- and postoperative tumor volumes and median EOR were 29.0 cm³ (range 0.7-162 cm³) and 1.7 cm³ (range 0-135.7 cm³) and 95%, respectively. Five- and 10-year OS for all LGG patients were 95.1% and 85.4%, respectively. Eight-year OS for diffuse astrocytoma, oligoastrocytoma, and oligodendroglioma were 70.7%, 91.2%, and 98.3%, respectively. Five-year PFS for diffuse astrocytoma, oligoastrocytoma, and oligodendroglioma were 42.6%, 71.3%, and 62.7%,

respectively. Patients were divided into two groups by EOR $\geq 90\%$ and $< 90\%$, and OS and PFS were analyzed. Both OS and PFS were significantly longer in patients with $\geq 90\%$ EOR. Increased EOR resulted in better PFS for diffuse astrocytoma but not for oligodendroglioma. Multivariate analysis identified age and EOR as parameters significantly associated with OS. The only parameter associated with PFS was EOR. Based on these findings, we established updated therapeutic strategies for LGG. If surgery resulted in EOR $< 90\%$, patients with astrocytoma will require second-look surgery, whereas patients with oligodendroglioma or oligoastrocytoma, which are sensitive to chemotherapy, will be treated with chemotherapy.

[471]

TÍTULO / TITLE: - The effect of the ANKK1/DRD2 Taq1A polymorphism on weight changes of dopaminergic treatment in prolactinomas.

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

REVISTA / JOURNAL: - Pituitary. 2013 Jun 6.

- Enlace al texto completo (gratis o de pago) [1007/s11102-013-0496-](http://1007/s11102-013-0496-4)

[y](#)

AUTORES / AUTHORS: - Athanasoulia AP; Sievers C; Uhr M; Ising M; Stalla GK; Schneider HJ

INSTITUCIÓN / INSTITUTION: - Department of Internal Medicine, Endocrinology and Clinical Chemistry, Max Planck Institute of Psychiatry, Kraepelinstrasse 2-10, 80804, Munich, Germany, athanasoulia@mpipsykl.mpg.de.

RESUMEN / SUMMARY: - Treatment with dopamine agonists in patients with prolactinomas has been associated with weight loss in short term studies. However, long-term studies on weight changes are lacking. Taq1A is a restriction fragment length polymorphism considered as a gene marker for the DRD2 gene. The presence of at least one A1 allele is linked to reduced brain dopaminergic activity due to reduced receptor binding and lower density of the dopamine 2 receptor. We aimed at testing the hypothesis that the dopaminergic treatment in prolactinoma patients leads to sustained weight loss and that the presence of diminished weight loss response under dopamine agonists is associated with the minor A1 allele of Taq1A. We included n = 44 patients (17 male and 27 female, 26 macroadenomas and 18 microadenomas) with prolactinomas treated with dopamine agonists. Outcome measures were weight and body mass index (BMI) change under dopaminergic treatment after 2 years with regard to Taq1A status and sex. We observed that the dopaminergic treatment leads to a significant mean weight loss of 3.1 +/- 6.25 kg after 2 years. Regarding Taq1A polymorphisms, 21 patients were carriers of at least one A1 allele and 23 patients had a genotype of A2/A2. However, the presence of the A1 allele was neither associated with the mean BMI at baseline nor with an altered weight loss response under dopamine agonist therapy. Our results implicate that the dopaminergic treatment leads to a sustained weight loss in

patients with prolactinomas after 2 years. However, there was no association to the A1 allele of Taq1A, observation that needs to be analysed in larger cohorts.

[472]

TÍTULO / TITLE: - Lentiviral Vector Mediated Delivery of RHBDD1 shRNA Down Regulated the Proliferation of Human Glioblastoma Cells.

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

REVISTA / JOURNAL: - Technol Cancer Res Treat. 2013 Jul 23.

●● Enlace al texto completo (gratis o de pago) 7785/tcrt.2012.500362

AUTORES / AUTHORS: - Wei X; Lv T; Chen D; Guan J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Sheng Jing Hospital of China Medical University, Shenyang 110004, Liaoning Province, China.
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RESUMEN / SUMMARY: - Rhomboid domain containing 1 (RHBDD1) gene, a new member of rhomboid family of proteins is highly responsible for the regulation of apoptosis by cleaving pro-apoptotic Bcl-2 family protein BIK. Therefore, the higher expression levels of RHBDD1 in cancer tissues may have a direct influence on cancer progression by arresting apoptosis. With this background this study was focused to find out the effect of RHBDD1 silencing on the progression of human brain glioblastoma cells, U251 and U87MG. The results indicated that both cell lines show a higher expression level of RHBDD1 and RNA interference (RNA) mediated gene silencing successfully down regulated the RHBDD1 gene expression. As a result of RHBDD1 silencing the proliferation of both cell types was reduced by over 50%, 5 days after silencing. Moreover the colony formation was completely inhibited and there were no cells present following two week RHBDD1 gene silencing. The cell proliferation was inhibited as a result of cell cycle arrest due to RHBDD1 absence. Therefore, these results clearly indicate that, RHBDD1 is essential for the progression of glioblastoma cells and silencing of it is resulting in significant inhibition of cell cycle progression and cell proliferation. Collectively, this study shows that RHBDD1 gene engineering could be used as an effective tool in malignant brain tumor therapy.

[473]

TÍTULO / TITLE: - Clinical characteristics and neuroimaging findings in 12 cases of recurrent glioblastoma with communicating hydrocephalus.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(7):474-81.

AUTORES / AUTHORS: - Onuma K; Ishikawa E; Matsuda M; Hirata K; Osuka S; Yamamoto T; Masumoto T; Zaboronok A; Matsumura A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Faculty of Medicine, University of Tsukuba.

RESUMEN / SUMMARY: - Clinically, recurrent glioblastoma multiforme (GBM) is often associated with communicating hydrocephalus. We hypothesized that there are specific magnetic resonance (MR) imaging findings at the diagnosis of recurrent GBM that predict subsequent hydrocephalus. Various clinical characteristics were investigated including outcome and MR imaging findings in 12 patients with recurrent GBM followed by hydrocephalus (Hydro group) and 21 patients with recurrent GBM without hydrocephalus (Non-hydro group). Patient age and presence of communicating hydrocephalus were significantly associated with poor outcome. Median survival with recurrent GBM was longer in the Non-hydro group than in the Hydro group. Low Karnofsky performance status (KPS) and poor recursive partitioning analysis (RPA) class (RPA class 3, 5, 6, or 7) at the diagnosis of recurrent GBM were associated with the presence of hydrocephalus. The incidence of leptomeningeal dissemination after recurrent GBM was higher in the Hydro group than in the Non-hydro group. Evans index and fractional anisotropy value showed no difference at the diagnosis of recurrent GBM, but some MR imaging findings indicated that lesion attached to the basal cistern and/or ventricle was closely associated with subsequent hydrocephalus. We recommend careful monitoring of the ventricle size and leptomeningeal dissemination, especially in patients with low KPS and/or poor RPA class, if MR imaging indicates that the lesion is attached to the basal cistern and/or ventricle at recurrence of GBM.

[474]

TÍTULO / TITLE: - MiR-145 functions as a tumor-suppressive RNA by targeting Sox9 and adducin 3 in human glioma cells.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 28.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not090](#)

AUTORES / AUTHORS: - Rani SB; Rathod SS; Karthik S; Kaur N; Muzumdar D; Shiras AS

INSTITUCIÓN / INSTITUTION: - National Centre for Cell Science, Pune, India (S.B.R., S.S.R., S.K., N.K., A.S.); Seth GS Medical College and KEM Hospital, Mumbai, India (D.M.).

RESUMEN / SUMMARY: - BackgroundMicroRNAs (miRNAs) are increasingly being recognized as being involved in cancer development and progression in gliomas. MethodsUsing a model cell system developed in our lab to study glioma progression comprising human neuroglial culture (HNGC)-1 and HNGC-2 cells, we report here that miR-145 is one of the miRNAs significantly downregulated during malignant transformation in glioblastoma multiforme (GBM). In a study using tumor samples derived from various glioma grades, we show that expression of miR-145 is decreased in a graded manner, with GBM patients showing lowest expression relative to lower-grade gliomas ($P < .05$) and normal brain tissues ($P < .0001$). Functional studies involving ectopic

expression of miR-145 in glioma cells had a negative impact on cell proliferation and tumor development, as well as invasion and induced apoptosis, providing further support to the concept that inactivation of miR-145 is important for glioma disease pathogenesis. More notably, these growth-suppressive effects of miR-145 are mediated through its target proteins Sox9 and the cell adhesion-associated molecule adducin 3 (ADD3). Results Inhibiting Sox9 and ADD3 rescued effects of miR-145 loss. Interestingly, miR-145 loss in glioma cells led to overexpression of molecules involved in cell proliferation, like cyclin D1, c-myc, and N-myc, as well as enhanced expression of cell adhesion- and invasion-related molecules N-cadherin and E-cadherin, an effect which was again restored upon miR-145 overexpression in glioma cells. The miR-145 promoter was methylated at its cytosine-phosphate-guanine (CpG) islands in the glioma cell lines studied. Conclusion Our study demonstrates that miR-145 has a tumor-suppressive function in glioblastoma in that it reduces proliferation, adhesion, and invasion of glioblastoma cells, apparently by suppressing the activity of oncogenic proteins Sox9 and ADD3. Reduced levels of miR-145 may lead to neoplastic transformation and malignant progression in glioma due to unregulated activity of these proteins.

[475]

TÍTULO / TITLE: - Erratum to: MGMT methylation analysis of glioblastoma on the Infinium methylation BeadChip identifies two distinct CpG regions associated with gene silencing and outcome, yielding a prediction model for comparisons across datasets, tumor grades, and CIMP-status.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Jul;126(1):159. doi: 10.1007/s00401-013-1134-5. Epub 2013 Jun 8.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1134-](#)

[5](#)

AUTORES / AUTHORS: - Bady P; Sciuscio D; Diserens AC; Bloch J; van den Bent MJ; Marosi C; Dietrich PY; Weller M; Mariani L; Heppner FL; Macdonald DR; Lacombe D; Stupp R; Delorenzi M; Hegi ME

INSTITUCIÓN / INSTITUTION: - Department of Clinical Neurosciences, Lausanne University Hospital, Lausanne, Switzerland.

[476]

TÍTULO / TITLE: - Protein expression profiling of brain tumor tissue using SELDI-MS.

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

REVISTA / JOURNAL: - Methods Mol Biol. 2013;1023:191-202. doi: 10.1007/978-1-4614-7209-4_13.

●● Enlace al texto completo (gratis o de pago) [1007/978-1-4614-7209-4_13](https://doi.org/10.1007/978-1-4614-7209-4_13)

AUTORES / AUTHORS: - Wibom C

INSTITUCIÓN / INSTITUTION: - Department of Oncology, Institution for Radiation Sciences, Umea, Sweden.

RESUMEN / SUMMARY: - Surface-enhanced laser desorption/ionization mass spectrometry (SELDI-MS) is an established, chip-based method for protein profiling, typically used for biomarker discovery. By combining retention chromatography and mass spectrometry on the same analytical platform, it allows for reliable analyses of small sample quantities in a high-throughput fashion. As such, it is a highly useful tool for a wide range of research fields. We have successfully applied it on brain tumor tissue samples to screen for differences in protein expression between invasive and noninvasive benign meningioma. This chapter lays out the details of the protocols we used, and can serve as a guide for protein expression profiling experiments on brain tumor tissue using SELDI-MS.

[477]

TÍTULO / TITLE: - The radiosensitizing effect of CpG ODN107 on human glioma cells is tightly related to its antiangiogenic activity via suppression of HIF-1alpha/VEGF pathway.

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

REVISTA / JOURNAL: - Int Immunopharmacol. 2013 Jun 19;17(2):237-244. doi: 10.1016/j.intimp.2013.06.002.

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

[1016/j.intimp.2013.06.002](https://doi.org/10.1016/j.intimp.2013.06.002)

AUTORES / AUTHORS: - Liu D; Cao G; Cen Y; Liu T; Peng W; Sun J; Li X; Zhou H

INSTITUCIÓN / INSTITUTION: - Department of Pharmacology, College of Pharmacy, the Third Military Medical University, Chongqing 400038, China.

RESUMEN / SUMMARY: - Malignant glioma displays invasive growth and is difficult to be completely excised; surgery combined with subsequent radiotherapy is a standard treatment for patients. CpG oligodeoxynucleotides (CpG ODN) can enhance radiotherapeutic effect in some tumors. Angiogenesis is crucial for tumor progression and metastasis. Anti-angiogenic strategy thus may be effective for tumor treatment. Herein, the antiangiogenic activity and radiosensitizing effect of CpG ODN107 on glioma were investigated. Our results showed that the growth of glioma cell line U87 was significantly inhibited by CpG ODN107 (10µg/ml) in combination with irradiation (5Gy) in vitro. In orthotopic implantation model of nude mice, the survival rate of mice significantly increased after treatment with CpG ODN107 (0.083mg/kg) in combination with radiotherapy (10Gy) as compared with treatment with local radiotherapy alone. CpG ODN107 in combination with radiotherapy significantly

decreased microvessel density (MVD), VEGF level and HIF-1alpha expression in orthotopic implantation glioma. In conclusion, CpG ODN107 significantly increased the radiosensitivity of U87 human glioma cells in vitro and in vivo. The radiosensitizing effect of CpG ODN 107 is tightly related to its anti-angiogenic activity via suppression of HIF-1alpha/VEGF pathway.

[478]

TÍTULO / TITLE: - Combined Inhibition of HER1/EGFR and RAC1 Results in a Synergistic Antiproliferative Effect on Established and Primary Cultured Human Glioblastoma Cells.

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

REVISTA / JOURNAL: - Mol Cancer Ther. 2013 Jul 5.

●● Enlace al texto completo (gratis o de pago) [1158/1535-7163.MCT-13-0052](#)

AUTORES / AUTHORS: - Karpel-Massler G; Westhoff MA; Zhou S; Nonnenmacher L; Dwucet A; Kast RE; Bachem MG; Wirtz CR; Debatin KM; Halatsch ME

INSTITUCIÓN / INSTITUTION: - 1Department of Neurosurgery, University of Ulm.

RESUMEN / SUMMARY: - Glioblastoma is the most frequent brain tumor of glial origin in adults. With the best available standard of care, patients with this disease have a life expectancy of only approximately 15 months after diagnosis. Since the epidermal growth factor receptor (HER1/EGFR) is one of the most commonly dysregulated oncogenes in glioblastoma, HER1/EGFR-targeted agents such as erlotinib were expected to provide a therapeutic benefit. However, their application in the clinical setting failed. Seeking an explanation for this finding, we previously identified several candidate genes for resistance of human glioblastoma cell lines towards erlotinib. Based on this panel of genes, we aimed at identifying drugs that synergistically enhance the antiproliferative effect of erlotinib on established and primary glioblastoma cell lines. We found that NSC23766, an inhibitor of RAC1, enhanced the antineoplastic effects of erlotinib in U87MG, T98MG and A172MG glioblastoma cell lines for the most part in a synergistic or at least in an additive manner. In addition, the synergistic antiproliferative effect of erlotinib and NSC23766 was confirmed in primary cultured cells, indicating a common underlying cellular and molecular mechanism in glioblastoma. Therefore, agents that suppress RAC1 activation may be useful therapeutic partners for erlotinib in a combined targeted treatment for glioblastoma.

[479]

TÍTULO / TITLE: - MicroRNA-128 coordinately targets Polycomb Repressor Complexes in glioma stem cells.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 3.

●● Enlace al texto completo (gratis o de pago) 1093/neuonc/ot055

AUTORES / AUTHORS: - Peruzzi P; Bronisz A; Nowicki MO; Wang Y; Ogawa D; Price R; Nakano I; Kwon CH; Hayes J; Lawler SE; Ostrowski MC; Chiocca EA; Godlewski J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Brigham and Women's Hospital, Boston, Massachusetts (A.B., M.O.N., D.O., E.A.C., J.G.); Dardinger Laboratory for Neuro-oncology and Neurosciences, Department of Neurological Surgery (P.P., M.O.N., Y.W., D.O., R.P., I.N., C.-H.K., E.A.C., J.G.); Department of Molecular and Cellular Biochemistry (A.B., M.C.O.); Solid Tumor Program, The Ohio State University Medical Center and James Comprehensive Cancer Center, Columbus, Ohio (C.-H.K.); Leeds Institute of Molecular Medicine and St. James's University Hospital, University of Leeds, Leeds, UK (J.H., S.E.L.).

RESUMEN / SUMMARY: - BackgroundThe Polycomb Repressor Complex (PRC) is an epigenetic regulator of transcription whose action is mediated by 2 protein complexes, PRC1 and PRC2. PRC is oncogenic in glioblastoma, where it is involved in cancer stem cell maintenance and radioresistance. MethodsWe used a set of glioblastoma patient samples, glioma stem cells, and neural stem cells from a mouse model of glioblastoma. We characterized gene/protein expression and cellular phenotypes by quantitative PCR/Western blotting and clonogenic, cell-cycle, and DNA damage assays. We performed overexpression/knockdown studies by lentiviral infection and microRNA/small interfering RNA oligonucleotide transfection. ResultsWe show that microRNA-128 (miR-128) directly targets mRNA of SUZ12, a key component of PRC2, in addition to BMI1, a component of PRC1 that we previously showed as a target as well. This blocks the partially redundant functions of PRC1/PRC2, thereby significantly reducing PRC activity and its associated histone modifications. MiR-128 and SUZ12/BMI1 show opposite expression in human glioblastomas versus normal brain and in glioma stemlike versus neural stem cells. Furthermore, miR-128 renders glioma stemlike cells less radioresistant by preventing the radiation-induced expression of both PRC components. Finally, miR-128 expression is significantly reduced in neural stem cells from the brain of young, presymptomatic mice in our mouse model of glioblastoma. This suggests that loss of miR-128 expression in brain is an early event in gliomagenesis. Moreover, knockdown of miR-128 expression in nonmalignant mouse and human neural stem cells led to elevated expression of PRC components and increased clonogenicity. ConclusionsMiR-128 is an important suppressor of PRC activity, and its absence is an early event in gliomagenesis.

[480]

TÍTULO / TITLE: - Erlotinib resistance in EGFR-amplified glioblastoma cells is associated with upregulation of EGFRvIII and PI3Kp110delta

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 21.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not093](#)

AUTORES / AUTHORS: - Schulte A; Liffers K; Kathagen A; Riethdorf S; Zapf S; Merlo A; Kolbe K; Westphal M; Lamszus K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital Hamburg-Eppendorf, Hamburg, Germany (A.S., K.L., A.K., S.Z., K.K., M.W., K.L.); Institute for Tumor Biology, University Hospital Hamburg-Eppendorf, Hamburg, Germany (S.R.); Laboratory of Molecular Neuro-Oncology, Department of Clinical and Biological Sciences, University of Basel, Basel, Switzerland (A.M.).

RESUMEN / SUMMARY: - BackgroundThe treatment efficacy of epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors like erlotinib has not met expectations for glioblastoma therapy, even for EGFR-overexpressing tumors. We determined possible mechanisms of therapy resistance using the unique BS153 glioblastoma cell line, which has retained amplification of the egfr gene and expression of EGFR variant (v)III.MethodsFunctional effects of erlotinib, gefitinib, and cetuximab on BS153 proliferation, migration, and EGFR-dependent signal transduction were systematically compared in vitro. The tumor-initiating capacity of parental and treatment-resistant BS153 was studied in Naval Medical Research Institute/Foxn1nu mice. Potential mediators of resistance were knocked down using small interfering (si)RNA.ResultsErlotinib and gefitinib inhibited proliferation and migration of BS153 in a dose-dependent manner, whereas cetuximab had no effect. BS153 developed resistance to erlotinib (BS153resE) but not to gefitinib. Resistance was associated with strong upregulation of EGFRvIII and subsequent activation of the phosphatidylinositol-3-OH kinase (PI3K) pathway in BS153resE and an increased expression of the regulatory 110-kDa delta subunit of PI3K (p110delta). Knockdown of EGFRvIII in BS153resE largely restored sensitivity to erlotinib. Targeting PI3K pharmacologically caused a significant decrease in cell viability, and specifically targeting p110delta by siRNA partially restored erlotinib sensitivity in BS153resE. In vivo, BS153 formed highly invasive tumors with an unusual growth pattern, displaying numerous satellites distant from the initial injection site. Erlotinib resistance led to delayed onset of tumor growth as well as prolonged overall survival of mice without changing tumor morphology.ConclusionsEGFRvIII can mediate resistance to erlotinib in EGFR-amplified glioblastoma via an increase in PI3Kp110delta. Interfering with PI3Kp110delta can restore sensitivity toward the tyrosine kinase inhibitor.

[481]

TÍTULO / TITLE: - Phase II study of irinotecan in combination with temozolomide (TEMIRI) in children with recurrent or refractory medulloblastoma: a joint ITCC and SIOPE brain tumor study.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 14.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not097](#)

AUTORES / AUTHORS: - Grill J; Georger B; Gesner L; Perek D; Leblond P; Canete A; Aerts I; Madero L; de Toledo Codina JS; Verlooy J; Estlin E; Cisar L; Breazna A; Dorman A; Bailey S; Nicolin G; Grundy RG; Hargrave D

INSTITUCIÓN / INSTITUTION: - Institut Gustave Roussy, University Paris-Sud XI, Villejuif, France (J.G., B.G.); Department of Radiology, St. Barnabas Medical Center, Livingston, New Jersey (L.G.); Memorial Health Institute, Warsaw, Poland (D.P.); Centre Oscar-Lambret, Unite d'Oncologie Pediatrique, Lille Cedex, France (P.L.); Hospital Universitario La Fe, Valencia, España (A.C.); Institut Curie, Paris, France (I.A.); Hospital Infantil Universitario Nino Jesus, Madrid, España (L.M.); Vall d'Hebron Children's Hospital, Barcelona, España (J.S. de T.C.); Ghent University Hospital, Ghent University, Ghent, Belgium (J.V.); Royal Manchester Children's Hospital, Manchester, UK (E.E.); Pfizer, New York, New York (L.C., A.B., A.D.); Sir James Spence Institute, University of Newcastle Upon Tyne, Royal Victoria Infirmary, Newcastle Upon Tyne, UK (S.B.); Southampton University Hospitals NHS Trust, Southampton General Hospital, Southampton, UK (G.N.); Queen's Medical Centre, Nottingham, UK (R.G.G.); Royal Marsden NHS Foundation Trust, Sutton, UK (D.H.).

RESUMEN / SUMMARY: - Background This multicenter phase II study investigated temozolomide + irinotecan (TEMIRI) treatment in children with relapsed or refractory medulloblastoma. Methods Patients received temozolomide 100-125 mg/m²/day (days 1-5) and irinotecan 10 mg/m²/day (days 1-5 and 8-12) every 3 weeks. The primary endpoint was tumor response within the first 4 cycles confirmed \geq 4 weeks and assessed by an external response review committee (ERRC). In a 2-stage Optimum Simon design, \geq 6 responses in the first 15 evaluable patients were required within the first 4 cycles for continued enrollment; a total of 19 responses from the first 46 evaluable patients was considered successful. Results Sixty-six patients were treated. Seven responses were recorded during stage 1 and 15 in the first 46 ERRC evaluated patients (2 complete responses and 13 partial responses). The objective response rate during the first 4 cycles was 32.6% (95% confidence interval [CI], 19.5%-48.0%). Median duration of response was 27.0 weeks (7.7-44.1 wk). In 63 patients evaluated by local investigators, the objective response rate was 33.3% (95% CI, 22.0%-46.3%), and 68.3% (95% CI, 55.3%-79.4%) experienced clinical benefit. Median survival was 16.7 months (95% CI, 13.3-19.8). The most common grade 3 treatment-related nonhematologic adverse event was diarrhea (7.6%). Grade 3/4 treatment-related hematologic adverse events included neutropenia (16.7%), thrombocytopenia (12.1%), anemia (9.1%), and lymphopenia (9%). Conclusions The planned study primary endpoint was not met. However, its tolerability makes TEMIRI a suitable candidate chemotherapy backbone for molecularly targeted agents in future trials in this setting.

[482]

TÍTULO / TITLE: - Therapeutic targeting of EGFR-activated metabolic pathways in glioblastoma.

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

REVISTA / JOURNAL: - Expert Opin Investig Drugs. 2013 Aug;22(8):1023-40. doi: 10.1517/13543784.2013.806484. Epub 2013 Jun 4.

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

[1517/13543784.2013.806484](#)

AUTORES / AUTHORS: - Gao Q; Lei T; Ye F

INSTITUCIÓN / INSTITUTION: - Huazhong University of Science and Technology, Tongji Hospital, Tongji Medical College, Cancer Biology Research Center , wuhan , China.

RESUMEN / SUMMARY: - Introduction: The highly divergent histological heterogeneities, aggressive invasion and extremely poor response to treatment make glioblastoma (GBM) one of the most lethal and difficult cancers in humans. Among key elements driving its behavior is epidermal growth factor receptor (EGFR), however, neither traditional therapy including neurosurgery, radiation, temozolomide, nor targeted EGFR therapeutics in clinic has generated promising results to date. Strategies are now focusing on blocking the downstream EGFR-activated metabolic pathways and the key phosphorylated kinases. Areas covered: Here, we review two major EGFR-activated downstream metabolic pathways including the PI3K/AKT/mTOR and RAS/RAF/MAPK pathways and their key phosphorylated kinase alterations in GBMs. This review also discusses potential pharmacological progress from bench work to clinical trials in order to evaluate specific inhibitors as well as therapeutics targeting PI3K and RAS signaling pathways. Expert opinion: Several factors impede clinical progress in targeting GBM, including the high rates of acquired resistance, heterogeneity within and across the tumors, complexity of signaling pathways and difficulty in traversing the blood-brain barrier (BBB). Substantial insight into genetic and molecular pathways and strategies to better tap the potential of these agents include rational combinatorial regimens and molecular phenotype-based patient enrichment, each of which will undoubtedly generate new therapeutic approaches to combat these devastating disabilities in the near future.

[483]

TÍTULO / TITLE: - Multidisciplinary rehabilitation after primary brain tumor treatment.

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

REVISTA / JOURNAL: - J Pain Palliat Care Pharmacother. 2013 Jun;27(2):180. doi: 10.3109/15360288.2013.810898.

- Enlace al texto completo (gratis o de pago)

[3109/15360288.2013.810898](http://dx.doi.org/10.1002/1471-2575.2013.810898)

AUTORES / AUTHORS: - Wiffen PJ

INSTITUCIÓN / INSTITUTION: - Philip J. Wiffen, BPharm, MSc, is a member of the Oxford Regional Pain Relief Unit, an Editor of the Cochrane Collaboration Pain Palliative and Supportive Care Collaborative Review Group, and formerly Director of Operations and Training at the UK Cochrane Centre. He is a visiting Professor at the Department of Pharmacy and Pharmacology, University of Bath, Bath, UK. He now runs a small business in providing training and support for those undertaking systematic reviews.

RESUMEN / SUMMARY: - ABSTRACT The Cochrane Library of Systematic Reviews is published quarterly as a DVD but monthly online (<http://www.thecochranelibrary.com>). The January 2013 issue (1st DVD for 2013) contains 5328 complete reviews, 2291 protocols for reviews in production, and almost 19,600 short summaries of systematic reviews published in the general medical literature. In addition, there are citations of 681,000 randomized controlled trials, and 15,700 cited papers in the Cochrane methodology register. The health technology assessment database contains some 12,000 citations. One hundred and twenty-two new reviews have been published in the previous 3 months, of which five have potential relevance for practitioners in pain and palliative medicine. The impact factor of the Cochrane Library stands at 5.715. Readers are encouraged to access the full report for any articles of interest as only a brief commentary is provided.

[484]

TÍTULO / TITLE: - Visualization of rodent brain tumor angiogenesis and effects of antiangiogenic treatment using 3D DeltaR-muMRA.

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

REVISTA / JOURNAL: - Angiogenesis. 2013 Jun 5.

- Enlace al texto completo (gratis o de pago) [1007/s10456-013-9355-](http://dx.doi.org/10.1007/s10456-013-9355-8)

[8](#)

AUTORES / AUTHORS: - Lin CY; Siow TY; Lin MH; Hsu YH; Tung YY; Jang T; Recht L; Chang C

INSTITUCIÓN / INSTITUTION: - Institute of Biomedical Sciences, Academia Sinica, N123, 128 Sec. 2, Academia Road, Nankang, Taipei, 11529, Taiwan, ROC.

RESUMEN / SUMMARY: - Understanding of structural and functional characteristics of the vascular microenvironment in gliomas and the impact of antiangiogenic treatments is essential for developing better therapeutic strategies. Although a number of methods exist in which this process can be studied experimentally, no single noninvasive test has the capacity to provide information concerning both microvascular function and morphology. The purpose of present study is to demonstrate the feasibility of using a novel three-dimensional DeltaR2-based microscopic magnetic resonance angiography (3D

DeltaR2-muMRA) technique for longitudinal imaging of tumor angiogenesis and monitoring the effects of antiangiogenic treatment in rodent brain tumor models. Using 3D DeltaR2-muMRA, a generally consistent early pattern of vascular development in gliomas was revealed, in which a single feeding vessel was visualized first (arteriogenesis), followed by sprouting angiogenesis. Considerable variability of the tumor-associated vasculature was then noted at later stages of tumor evolution. DeltaR2-muMRA revealed that anti-vascular endothelial growth factor treatment induced a rapid and significant alteration of the intratumoral angiogenic phenotype. In summary, 3D DeltaR2-muMRA enables high-resolution visualization of tumor-associated vessels while simultaneously providing functional information on the tumor microvasculature. It can serve as a useful tool for monitoring both the temporal evolution of tumor angiogenesis and the impact of antiangiogenic therapies.

[485]

TÍTULO / TITLE: - Current Knowledge and Treatment Strategies for Grade II Gliomas.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(7):429-37.

AUTORES / AUTHORS: - Narita Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery and Neuro-Oncology, National Cancer Center Hospital.

RESUMEN / SUMMARY: - World Health Organization grade II gliomas (GIIGs) include diffuse astrocytoma, oligodendroglioma, and oligoastrocytoma. GIIG is a malignant brain tumor for which the treatment outcome can still be improved. Review of previous clinical trials found the following: (1) GIIG increased in size by 3-5 mm per year when observed or treated with surgery alone; (2) after pathological diagnosis, the survival rate was increased by early aggressive tumor removal at an earlier stage compared to observation alone; (3) although the prognosis after total tumor removal was significantly better than that after partial tumor removal, half of the patients relapsed within 5 years; (4) comparing postoperative early radiotherapy (RT) and non-early RT after relapse, early RT prolonged progression-free survival (PFS) but did not affect overall survival (OS); (5) local RT of 45 to 64.8 Gy did not impact PFS or OS; (6) in patients with residual tumors, RT combined with chemotherapy (procarbazine plus lomustine plus vincristine) prolonged PFS compared with RT alone but did not affect OS; and (7) poor prognostic factors included astrocytoma, non-total tumor removal, age ≥ 40 years, largest tumor diameter ≥ 4 -6 cm, tumor crossing the midline, and neurological deficit. To improve treatment outcomes, surgery with functional brain mapping or intraoperative magnetic resonance imaging or chemoradiotherapy with temozolomide is important. In this review, current knowledge regarding GIIG is described and treatment strategies are explored.

[486]

TÍTULO / TITLE: - An update on vaccine therapy and other immunotherapeutic approaches for glioblastoma.

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

REVISTA / JOURNAL: - Expert Rev Vaccines. 2013 Jun;12(6):597-615. doi: 10.1586/erv.13.41.

●● Enlace al texto completo (gratis o de pago) [1586/erv.13.41](#)

AUTORES / AUTHORS: - Reardon DA; Wucherpennig KW; Freeman G; Wu CJ; Chiocca EA; Wen PY; Curry WT Jr; Mitchell DA; Fecci PE; Sampson JH; Dranoff G

INSTITUCIÓN / INSTITUTION: - Center for Neuro-Oncology, Dana-Farber/Brigham and Women's Cancer Center, Boston, MA, USA.

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RESUMEN / SUMMARY: - Outcome for glioblastoma (GBM), the most common primary CNS malignancy, remains poor. The overall survival benefit recently achieved with immunotherapeutics for melanoma and prostate cancer support evaluation of immunotherapies for other challenging cancers, including GBM. Much historical dogma depicting the CNS as immunoprivileged has been replaced by data demonstrating CNS immunocompetence and active interaction with the peripheral immune system. Several glioma antigens have been identified for potential immunotherapeutic exploitation. Active immunotherapy studies for GBM, supported by preclinical data, have focused on tumor lysate and synthetic antigen vaccination strategies. Results to date confirm consistent safety, including a lack of autoimmune reactivity; however, modest efficacy and variable immunogenicity have been observed. These findings underscore the need to optimize vaccination variables and to address challenges posed by systemic and local immunosuppression inherent to GBM tumors. Additional immunotherapy strategies are also in development for GBM. Future studies may consider combinatorial immunotherapy strategies with complementary actions.

[487]

TÍTULO / TITLE: - Invasion as target for therapy of glioblastoma multiforme.

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

REVISTA / JOURNAL: - Biochim Biophys Acta. 2013 Jul 25. pii: S0304-419X(13)00038-3. doi: 10.1016/j.bbcan.2013.07.001.

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

[1016/j.bbcan.2013.07.001](#)

AUTORES / AUTHORS: - Vehlow A; Cordes N

INSTITUCIÓN / INSTITUTION: - OncoRay - National Center for Radiation Research in Oncology, Medical Faculty Carl Gustav Carus, Dresden University of Technology, Fetscherstrasse 74, 01307 Dresden, Germany.

RESUMEN / SUMMARY: - The survival of cancer patients suffering from glioblastoma multiforme is limited to just a few months even after treatment with the most advanced techniques. The indefinable borders of glioblastoma cell infiltration into the surrounding healthy tissue prevent complete surgical removal. In addition, genetic mutations, epigenetic modifications and microenvironmental heterogeneity cause resistance to radio- and chemotherapy altogether resulting in a hardly to overcome therapeutic scenario. Therefore, the development of efficient therapeutic strategies to combat these tumors requires a better knowledge of genetic and proteomic alterations as well as the infiltrative behavior of glioblastoma cells and how this can be targeted. Among many cell surface receptors, members of the integrin family are known to regulate glioblastoma cell invasion in concert with extracellular matrix degrading proteases. While preclinical and early clinical trials suggested specific integrin targeting as a promising therapeutic approach, clinical trials failed to deliver improved cure rates up to now. Little is known about glioblastoma cell motility, but switches in invasion modes and adaption to specific microenvironmental cues as a consequence of treatment may maintain tumor cell resistance to therapy. Thus, understanding the molecular basis of integrin and protease function for glioblastoma cell invasion in the context of radiochemotherapy is a pressing issue and may be beneficial for the design of efficient therapeutic approaches. This review article summarizes the latest findings on integrins and extracellular matrix in glioblastoma and adds some perspective thoughts on how this knowledge might be exploited for optimized multimodal therapy approaches.

[488]

TÍTULO / TITLE: - Hypothalamic hamartomas. Part 1. Clinical, neuroimaging, and neurophysiological characteristics.

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

REVISTA / JOURNAL: - Neurosurg Focus. 2013 Jun;34(6):E6. doi: 10.3171/2013.3.FOCUS1355.

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

[3171/2013.3.FOCUS1355](#)

AUTORES / AUTHORS: - Mittal S; Mittal M; Montes JL; Farmer JP; Andermann F

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Comprehensive Epilepsy Center, Wayne State University, Detroit Medical Center, Detroit, MI 48201, USA. smittal@med.wayne.edu

RESUMEN / SUMMARY: - Hypothalamic hamartomas are uncommon but well-recognized developmental malformations that are classically associated with gelastic seizures and other refractory seizure types. The clinical course is often

progressive and, in addition to the catastrophic epileptic syndrome, patients commonly exhibit debilitating cognitive, behavioral, and psychiatric disturbances. Over the past decade, investigators have gained considerable knowledge into the pathobiological and neurophysiological properties of these rare lesions. In this review, the authors examine the causes and molecular biology of hypothalamic hamartomas as well as the principal clinical features, neuroimaging findings, and electrophysiological characteristics. The diverse surgical modalities and strategies used to manage these difficult lesions are outlined in the second article of this 2-part review.

[489]

TÍTULO / TITLE: - Pheochromocytoma/Paraganglioma: Review of perioperative management of blood pressure and update on genetic mutations associated with pheochromocytoma.

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

REVISTA / JOURNAL: - J Clin Hypertens (Greenwich). 2013 Jun;15(6):428-34. doi: 10.1111/jch.12084. Epub 2013 Mar 15.

●● Enlace al texto completo (gratis o de pago) [1111/jch.12084](#)

AUTORES / AUTHORS: - Fishbein L; Orłowski R; Cohen D

INSTITUCIÓN / INSTITUTION: - Department of Medicine, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA, USA.

RESUMEN / SUMMARY: - Pheochromocytomas and paragangliomas are rare tumors with high morbidity rates caused by excessive catecholamine secretion, even though the majority of tumors are benign. The use of perioperative blockade regimens, together with improved surgical techniques, has greatly impacted the perioperative morbidity associated with these tumors. The old dogma of the “tumor of tens” no longer holds true. For example, at least one third of all pheochromocytomas and paragangliomas are hereditary, with mutations in 1 of 10 well-characterized susceptibility genes, and one quarter of all tumors are malignant. This review focuses on the perioperative management of pheochromocytoma and paragangliomas and the clinical implications of the associated genetic mutations.

[490]

TÍTULO / TITLE: - The “hot cross bun” sign in leptomeningeal carcinomatosis.

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

REVISTA / JOURNAL: - Can J Neurol Sci. 2013 Jul;40(4):597-8.

AUTORES / AUTHORS: - Zhang H; Tian Y; Jin T; Zhang H; Sun L

INSTITUCIÓN / INSTITUTION: - Department of Neurology, The First Bethune Hospital of Jilin University, Jilin University, Changchun.

[491]

TÍTULO / TITLE: - Non-invasive imaging of glioma vessel size and densities in correlation with tumour cell proliferation by small animal PET and MRI.

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

REVISTA / JOURNAL: - Eur J Nucl Med Mol Imaging. 2013 Jun 11.

●● Enlace al texto completo (gratis o de pago) [1007/s00259-013-2464-](http://dx.doi.org/10.1007/s00259-013-2464-1)

[1](#)

AUTORES / AUTHORS: - Viel T; Boehm-Sturm P; Rasic S; Monfared P; Neumaier B; Hoehn M; Jacobs AH

INSTITUCIÓN / INSTITUTION: - European Institute for Molecular Imaging (EIMI) and Department of Nuclear Medicine of the University Hospital of Munster, Westfälische Wilhelms-Universität (WWU), Munster, Germany.

RESUMEN / SUMMARY: - **PURPOSE:** Angiogenesis is a key event in the progression of glioblastomas (GBM). Our goal was to measure different anatomical and physiological parameters of GBM vessels using steady-state contrast-enhanced magnetic resonance imaging (SSCE-MRI), together with the assessment of biochemical parameters on GBM proliferation and angiogenesis using [11C]methyl-L-methionine (MET) and 3'-deoxy-3'-[18F]fluorothymidine (FLT) and positron emission tomography (PET). We focused on how these anatomical and biochemical read-outs correlate with one another and with immunohistochemistry. **METHODS:** SSCE-MRI together with 11C-MET and 18F-FLT PET were performed 3 weeks after intracranial implantation of human GBM spheroids in nude rats (n = 8). Total cerebral blood volume (tCBV), blood volume present in microvessels (muCBV), vessel density and size were calculated. Rats were treated with bevacizumab (n = 4) or vehicle (n = 4) for 3 weeks. Imaging was repeated at week 6, and thereafter immunohistochemistry was performed. **RESULTS:** Three weeks after implantation, MRI showed an increase of vessel density and muCBV in the tumour compared to the contralateral brain. At week 6, non-treated rats showed a pronounced increase of 11C-MET and 18F-FLT tumour uptake. Between weeks 3 and 6, tCBV and vessel size increased, whereas vessel density and muCBV decreased. In rats treated with bevacizumab muCBV values were significantly smaller at week 6 than in non-treated rats, whereas the mean vessel size was higher. Accumulation of both radiotracers was lower for the treated versus the non-treated group. Most importantly, non-invasive measurement of tumour vessel characteristics and tumour proliferation correlated to immunohistochemistry findings. **CONCLUSION:** Our study demonstrates that SSCE-MRI enables non-invasive assessment of the anatomy and physiology of the vasculature of experimental gliomas. Combined SSCE-MRI and 11C-MET/18F-FLT PET for monitoring biochemical markers of angiogenesis and proliferation in addition to vessel anatomy could be useful to improve our understanding of therapy response of gliomas.

[492]

- CASTELLANO -

TÍTULO / TITLE: Strahlentherapeutische Behandlung von Kindern mit pilozytischen Astrozytomen : Eine Subgruppenanalyse innerhalb der prospektiven multizentrischen Behandlungsstudie HIT-LGG 1996 der Deutschen Gesellschaft für Padiatrische Onkologie und Hamatologie (GPOH).

TÍTULO / TITLE: - Radiotherapy in pediatric pilocytic astrocytomas : A subgroup analysis within the prospective multicenter study HIT-LGG 1996 by the German Society of Pediatric Oncology and Hematology (GPOH).

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

REVISTA / JOURNAL: - Strahlenther Onkol. 2013 Aug;189(8):647-655. Epub 2013 Jul 7.

●● Enlace al texto completo (gratis o de pago) 1007/s00066-013-0357-7

[7](#)

AUTORES / AUTHORS: - Muller K; Gnekow A; Falkenstein F; Scheiderbauer J; Zwiener I; Pietsch T; Warmuth-Metz M; Voges J; Nikkhah G; Flentje M; Combs SE; Vordermark D; Kocher M; Kortmann RD

INSTITUCIÓN / INSTITUTION: - Department of Radiotherapy and Radiation-Oncology, University of Leipzig, Stephanstr. 9^a, 04103, Leipzig, Germany, Klaus.Mueller@medizin.uni-leipzig.de.

RESUMEN / SUMMARY: - **PURPOSE:** We evaluated clinical outcomes in the subset of patients who underwent radiotherapy (RT) due to progressive pilocytic astrocytoma within the Multicenter Treatment Study for Children and Adolescents with a Low Grade Glioma HIT-LGG 1996. **PATIENTS AND METHODS:** Eligibility criteria were fulfilled by 117 patients. Most tumors (65 %) were located in the supratentorial midline, followed by the posterior fossa (26.5 %) and the cerebral hemispheres (8.5 %). Median age at the start of RT was 9.2 years (range 0.7-17.4 years). In 75 cases, external fractionated radiotherapy (EFRT) was administered either as first-line nonsurgical treatment (n = 58) or after progression following primary chemotherapy (n = 17). The median normalized total dose was 54 Gy. Stereotactic brachytherapy (SBT) was used in 42 selected cases. **RESULTS:** During a median follow-up period of 8.4 years, 4 patients (3.4 %) died and 33 (27.4 %) experienced disease progression. The 10-year overall (OS) and progression-free survival (PFS) rates were 97 and 70 %, respectively. No impact of the RT technique applied (EFRT versus SBT) on progression was observed. The 5-year PFS was 76 +/- 5 % after EFRT and 65 +/- 8 % after SBT. Disease progression after EFRT was not influenced by gender, neurofibromatosis type 1 (NF1) status, tumor location (hemispheres versus supratentorial midline versus posterior fossa), age or prior chemotherapy. Normalized total EFRT doses of more than 50.4 Gy did not improve PFS rates. **CONCLUSION:** EFRT plays an integral role in the treatment of pediatric pilocytic astrocytoma and is characterized by excellent tumor control. A reduction of the normalized total dose from 54 to 50.4 Gy appears to

be feasible without jeopardizing tumor control. SBT is an effective treatment alternative.

[493]

TÍTULO / TITLE: - Usefulness of PRESTO Magnetic Resonance Imaging for the Differentiation of Schwannoma and Meningioma in the Cerebellopontine Angle.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(7):482-9.

AUTORES / AUTHORS: - Tomogane Y; Mori K; Izumoto S; Kaba K; Ishikura R; Ando K; Wakata Y; Fujita S; Shirakawa M; Arita N

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Hyogo College of Medicine.

RESUMEN / SUMMARY: - The principles of echo-shifting with a train of observations (PRESTO) magnetic resonance (MR) imaging technique employs an MR sequence that sensitively detects susceptibility changes in the brain. The effectiveness of PRESTO MR imaging was examined for distinguishing between cerebellopontine angle (CPA) schwannomas and meningiomas in 24 patients with CPA tumors, 12 with vestibular schwannomas, and 12 with meningiomas. Histopathological study of surgical specimens showed that 11 of the 12 schwannomas contained hemosiderin deposits and all had microhemorrhages. One meningioma contained hemosiderin deposits and two involved microhemorrhages. Abnormal vessel proliferation, and dilated and thrombosed vessels were observed in all schwannomas and in 4 meningiomas. In addition to MR imaging with all basic sequences, PRESTO MR imaging and computed tomography were performed. PRESTO imaging showed significantly more schwannomas (n = 12) than meningiomas (n = 2) exhibited intratumoral spotty signal voids which were isointense to air in the mastoid air cells (p < 0.001). These spotty signal voids were significantly associated with histopathologically demonstrated hemosiderin deposits (p < 0.001), microhemorrhages (p < 0.01), and abnormal vessels (p < 0.04). The visualization of spotty signal voids on PRESTO images is useful to distinguish schwannomas from meningiomas.

[494]

TÍTULO / TITLE: - Co-polysomy of chromosome 1q and 19p predicts worse prognosis in 1p/19q codeleted oligodendroglial tumors: FISH analysis of 148 consecutive cases.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 16.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not092](#)

AUTORES / AUTHORS: - Ren X; Jiang H; Cui X; Cui Y; Ma J; Jiang Z; Sui D; Lin S

INSTITUCIÓN / INSTITUTION: - Neurosurgery (X.R., H.J., Y.C., J.M., Z.J., D.S., S.L.) and Pharmacology (X.C.), Beijing Tiantan Hospital, Capital Medical University, Beijing, China.

RESUMEN / SUMMARY: - Background This study aimed to evaluate the prognostic significance of co-polysomy of chromosome 1q and 19p in 1p/19q codeleted oligodendroglial tumors (ODGs). Methods In a series of 148 ODGs with 1p/19q deletion, co-polysomy of 1q and 19p was detected by fluorescence in situ hybridization (FISH). Log-rank analysis and Cox regression methods were used to compare Kaplan-Meier plots and identify factors associated with worse prognosis. Results There were 104 (70.3%) low-grade ODGs and 44 (29.7%) high-grade ODGs. Co-polysomy was independently associated with shorter progression-free survival and overall survival in 1p/19q codeleted ODGs, irrespective of tumor grades. The odds ratio of without and with co-polysomy was 0.263 (95% confidence interval [CI], 0.089-0.771; P = .015) for progression-free survival and 0.213 (95% CI, 0.060-0.756; P = .017) for overall survival. Subgroup analysis confirmed this trend in both low-grade and high-grade ODGs, although the P value for high-grade ODGs was marginally significant. Conclusions Co-polysomy of 1q and 19p could be used as a marker to independently predict worse prognoses and guide individual therapy in 1p/19q codeleted ODGs.

[495]

TÍTULO / TITLE: - Upregulating mutations in the TERT promoter commonly occur in adult malignant gliomas and are strongly associated with total 1p19q loss.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Aug;126(2):267-76. doi: 10.1007/s00401-013-1141-6. Epub 2013 Jun 14.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1141-](#)

[6](#)

AUTORES / AUTHORS: - Arita H; Narita Y; Fukushima S; Tateishi K; Matsushita Y; Yoshida A; Miyakita Y; Ohno M; Collins VP; Kawahara N; Shibui S; Ichimura K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery and Neuro-Oncology, National Cancer Center, 5-1-1 Tsukiji, Chuo-ku, Tokyo, 104-0045, Japan.

RESUMEN / SUMMARY: - Telomere lengthening is one of the key events in most cancers, and depends largely on telomerase activation. Telomerase activation is a well-known phenomenon in gliomas; however, its mechanism remains obscure. In this study, we investigated the presence of mutations in the promoter of the telomerase reverse transcriptase (TERT) gene in a series of 546 gliomas. We found a high incidence of mutually exclusive mutations located at two hot spots, C228T and C250T, in all subtypes of gliomas (55 %). The frequency of mutation was particularly high among primary glioblastomas (70 %) and pure oligodendroglial tumors (74 %), while relatively low in diffuse

astrocytomas and anaplastic astrocytomas (19 and 25 %, respectively). The expression level of TERT in tumors carrying those mutations was on average 6.1 times higher than that of wild-type tumors, indicating that the mutated promoter leads to upregulation of TERT. TERT promoter mutations were observed in almost all tumors harboring concurrent total 1p19q loss and IDH1/2 mutations (98 %). Otherwise TERT promoter mutations were mostly observed among IDH wild-type tumors. Most EGFR amplifications (92 %) were also associated with TERT promoter mutations. Our data indicate that mutation of the TERT promoter is one of the major mechanisms of telomerase activation in gliomas. The unique pattern of TERT promoter mutations in relation to other genetic alterations suggests that they play distinct roles in the pathogenesis of oligodendroglial and astrocytic tumors. Our results shed a new light on the role of telomerase activation in the development of adult gliomas.

[496]

TÍTULO / TITLE: - Osteopontin expressions correlate with WHO grades and predict recurrence in meningiomas.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Jun 21.

- Enlace al texto completo (gratis o de pago) [1007/s10014-013-0152-](#)

[2](#)

AUTORES / AUTHORS: - Arikok AT; Onder E; Seckin H; Kacar A; Fesli R; Oguz AS; Alper M

INSTITUCIÓN / INSTITUTION: - Department of Pathology, S.B Ankara Diskapi Research and Training Hospital, Ankara, Turkey, atalina2005@yahoo.com.

RESUMEN / SUMMARY: - Recurrence of meningiomas is a major prognostic issue. Although World Health Organization (WHO) histopathological grading correlates strongly with recurrence, it has some limitations, and predicting the biological behavior of grade I meningiomas is particularly difficult. Osteopontin (OPN) is a protein known to be involved in tumor progression. The purpose of this study is to determine expression of OPN in meningiomas and to investigate its correlation with WHO grades and tumor recurrence. Immunohistochemical (IHC) evaluation of expression of OPN was performed by two different methods to ensure reliability. OPN IHC and Allred scores were calculated on the basis of intensity and extent of staining. Both scores were in agreement and correlated significantly with meningioma grade and Ki-67 index. OPN scores were also significantly correlated with recurrence of WHO grade I meningiomas. Cut-off values for OPN IHC and OPN Allred scores between non-recurrent and recurrent grade I meningiomas were calculated as 70 and 5.5 respectively. We concluded that OPN is a valuable marker for grading meningiomas and for predicting the recurrence in WHO grade I tumors.

[497]

TÍTULO / TITLE: - Transcriptome analysis of MENX-associated rat pituitary adenomas identifies novel molecular mechanisms involved in the pathogenesis of human pituitary gonadotroph adenomas.

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

REVISTA / JOURNAL: - Acta Neuropathol. 2013 Jul;126(1):137-50. doi: 10.1007/s00401-013-1132-7. Epub 2013 Jun 12.

●● Enlace al texto completo (gratis o de pago) [1007/s00401-013-1132-](#)

[7](#)

AUTORES / AUTHORS: - Lee M; Marinoni I; Irmeler M; Psaras T; Honegger JB; Beschorner R; Anastasov N; Beckers J; Theodoropoulou M; Roncaroli F; Pellegata NS

INSTITUCIÓN / INSTITUTION: - Institute of Pathology, Helmholtz Zentrum Munchen, Neuherberg, Germany.

RESUMEN / SUMMARY: - Gonadotroph adenomas comprise 15-40 % of all pituitary tumors, are usually non-functioning and are often large and invasive at presentation. Surgery is the first-choice treatment, but complete resection is not always achieved, leading to high recurrence rates. As gonadotroph adenomas poorly respond to conventional pharmacological therapies, novel treatment strategies are needed. Their identification has been hampered by our incomplete understanding of the molecular pathogenesis of these tumors. Recently, we demonstrated that MENX-affected rats develop gonadotroph adenomas closely resembling their human counterparts. To discover new genes/pathways involved in gonadotroph cells tumorigenesis, we performed transcriptome profiling of rat tumors versus normal pituitary. Adenomas showed overrepresentation of genes involved in cell cycle, development, cell differentiation/proliferation, and lipid metabolism. Bioinformatic analysis identified downstream targets of the transcription factor SF-1 as being up-regulated in rat (and human) adenomas. Meta-analyses demonstrated remarkable similarities between gonadotroph adenomas in rats and humans, and highlighted common dysregulated genes, several of which were not previously implicated in pituitary tumorigenesis. Two such genes, CYP11A1 and NUSAP1, were analyzed in 39 human gonadotroph adenomas by qRT-PCR and found to be up-regulated in 77 and 95 % of cases, respectively. Immunohistochemistry detected high P450scc (encoded by CYP11A1) and NuSAP expression in 18 human gonadotroph tumors. In vitro studies demonstrated for the first time that Cyp11a1 is a target of SF-1 in gonadotroph cells and promotes proliferation/survival of rat pituitary adenoma primary cells and cell lines. Our studies reveal clues about the molecular mechanisms driving rat and human gonadotroph adenomas development, and may help identify previously unexplored biomarkers for clinical use.

[498]

- CASTELLANO -

TÍTULO / TITLE: Bestrahlung der kraniospinalen Achse mit simultaner Gabe von Temozolomid und Nimotuzumab bei einem Kind mit primär metastasiertem diffus intrinsischem Ponsgliom : Ein individueller Heilversuch.

TÍTULO / TITLE: - Craniospinal irradiation with concurrent temozolomide and nimotuzumab in a child with primary metastatic diffuse intrinsic pontine glioma : A compassionate use treatment.

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

REVISTA / JOURNAL: - Strahlenther Onkol. 2013 Aug;189(8):693-696. Epub 2013 Jun 12.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s00066-013-0370-](#)

[X](#)

AUTORES / AUTHORS: - Muller K; Schlamann A; Seidel C; Warmuth-Metz M; Christiansen H; Vordermark D; Kortmann RD; Kramm CM; von Bueren AO

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, University Medical Center Leipzig, Stephan-Str. 9^a, 04103, Leipzig, Germany, Klaus.Mueller@medizin.uni-leipzig.de.

RESUMEN / SUMMARY: - Primary metastatic diffuse intrinsic pontine glioma (DIPG) is relatively rare and associated with a dismal prognosis. Combining craniospinal irradiation (CSI) with concurrent temozolomide and nimotuzumab therapy may slightly improve tumor control and overall survival. However, little is known about the feasibility and toxicity of this treatment approach. Here, we describe the case of an 8-year-old girl with primary metastatic DIPG who received craniospinal radiotherapy, a local boost, and concurrent temozolomide and nimotuzumab treatment based on an individual therapy recommendation. Radiotherapy could be completed without any interruption. However, concurrent temozolomide had to be disrupted several times due to considerable acute myelotoxicity (grade III-IV). Maintenance immunochemotherapy could be started with a delay of 5 days and was performed according to treatment schedule. The disease could be stabilized for a few months. A routine MRI scan finally depicted disease progression 5.7 months after the start of irradiation. The patient died 1.9 months later.

[499]

TÍTULO / TITLE: - Preoperative Evaluation of the Petrosal Vein With Contrast-Enhanced PRESTO Imaging in Petroclival Meningiomas to Establish Surgical Strategy.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(7):490-5.

AUTORES / AUTHORS: - Morisako H; Goto T; Chokyu I; Ishibashi K; Ohata K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Osaka City University Graduate School of Medicine.

RESUMEN / SUMMARY: - The present detailed radiological study investigated the relationship between petroclival meningiomas and petrosal veins with contrast-enhanced (CE) principles of echo-shifting with a train of observations (PRESTO) imaging to assess the potential contribution of the findings to the surgical strategy. Fourteen patients (13 women and 1 man) with unilateral petroclival meningiomas underwent microsurgical resection at Osaka City University Hospital between April 2009 and February 2011. Preoperatively, patients were examined using computed tomography (CT) and magnetic resonance (MR) imaging, including CE PRESTO imaging, focusing on the relationship between the tumor and the petrosal vein, and compared to the sensitivity of three-dimensional CT (3D-CT) venography or conventional MR imaging, including CE MR venography and constructive interference in steady-state (CISS) MR imaging. In 11 of 14 cases, we could identify the petrosal veins with intraoperative findings. In 10 of these 14 cases, the anatomical relationship between the tumor and the petrosal vein was detected preoperatively with CE PRESTO imaging, compared to 5 of 14 cases with 3D-CT venography, 5 of 14 cases with CE MR venography, and only 4 of 14 cases using CISS MR imaging. CE PRESTO imaging compares favorably to other approaches. There was no venous complication related to the surgery in any of the cases. CE PRESTO imaging is a non-invasive and useful method to assess the status of the petrosal vein in patients with petroclival meningiomas.

[500]

TÍTULO / TITLE: - CT scans in childhood: leukaemia, brain tumours.

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

REVISTA / JOURNAL: - Prescrire Int. 2013 Jun;22(139):160.

RESUMEN / SUMMARY: - Radiation exposure from CT scans exposes children to an increased risk of leukaemia and brain tumours.

[501]

TÍTULO / TITLE: - Dual kinin B1 and B2 receptor activation provides enhanced blood-brain barrier permeability and anticancer drug delivery into brain tumors.

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

REVISTA / JOURNAL: - Cancer Biol Ther. 2013 Jun 14;14(9).

AUTORES / AUTHORS: - Cote J; Savard M; Neugebauer W; Fortin D; Lepage M; Gobeil F

INSTITUCIÓN / INSTITUTION: - Department of Pharmacology; Faculty of Medicine and Health Sciences; Universite de Sherbrooke; Sherbrooke, Canada; Department of Nuclear Medicine and Radiobiology; Faculty of Medicine and Health Sciences; Universite de Sherbrooke; Sherbrooke, Canada; Institute of Pharmacology (IPS); Faculty of Medicine and Health Sciences; Universite de Sherbrooke; Sherbrooke, Canada.

RESUMEN / SUMMARY: - The low permeability of the BBB is largely responsible for the lack of effective systemic chemotherapy against primary and metastatic brain tumors. Kinin B1R and B2R have been shown to mediate reversible tumor-selective BBB disruption in preclinical animal models. We investigated whether co-administration of two novel potent kinin B1R and B2R agonists offers an advantage over administering each agonist alone for enhancing BBB permeability and tumor targeting of drugs in the malignant F98 glioma rat model. A new covalent kinin heterodimer that equally stimulates B1R and B2R was also constructed for the purpose of our study. We found that co-administration of B1R and B2R agonists, or alternatively administration of the kinin heterodimer more effectively delivered the MRI contrast agent Gd-DTPA and the anticancer drug carboplatin to brain tumors and surrounding tissues than the agonists alone (determined by MRI and ICP-MS methods). Importantly, the efficient delivery of carboplatin by the dual kinin receptor targeting on the BBB translated into increased survival of glioma-bearing rats. Thus, this report describes a potential strategy for maximizing the brain bioavailability and therapeutic efficacy of chemotherapeutic drugs.

[502]

TÍTULO / TITLE: - Use of high-field intraoperative magnetic resonance imaging during endoscopic transsphenoidal surgery for functioning pituitary microadenomas and small adenomas located in the intrasellar region.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(7):501-10.

AUTORES / AUTHORS: - Tanei T; Nagatani T; Nakahara N; Watanabe T; Nishihata T; Nielsen ML; Takebayashi S; Hirano M; Wakabayashi T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Nagoya Central Hospital.

RESUMEN / SUMMARY: - The usefulness of 1.5-T high-field intraoperative magnetic resonance (iMR) imaging during transsphenoidal surgery for functioning pituitary adenomas was retrospectively evaluated based on long-term endocrine remission from the records of 14 patients who underwent transsphenoidal surgery with iMR imaging for functioning pituitary microadenomas and small adenomas located in the intrasellar region. The maximum tumor diameter was 9.3 +/- 2.6 mm. Patients were diagnosed with acromegaly (n = 7), prolactinoma (n = 4), and Cushing's disease (n = 3). If iMR imaging detected tumor remnants after resection, the resection cavity was reexamined and further resection was performed. Postoperative endocrine follow-up period was mean 33.7 +/- 13.3 months. Tumor remnants were detected after the first resection in seven patients. Further resection was performed in five of these patients, and three achieved long-term endocrine remission. As a result, the overall long-term endocrine remission rate was 78.5% (11/14), instead of the 57.1% (8/14) that would be expected if iMR

imaging had not been performed. Long-term endocrine remission had a tendency to be associated with the absence of tumor remnants on the final iMR images, but this was not significant ($p = 0.09$). Long-term endocrine remission was associated with presence of tumor remnants in the cavernous sinus on the final iMR images ($p = 0.03$). High-field iMR imaging is useful for depicting tumor remnants after resection, and increased the long-term endocrine remission rate for patients with functioning pituitary microadenomas and small adenomas.

[503]

TÍTULO / TITLE: - ERBB3 is a marker of a ganglioneuroblastoma/ganglioneuroma-like expression profile in neuroblastic tumours.

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

REVISTA / JOURNAL: - Mol Cancer. 2013 Jul 8;12(1):70.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1476-4598-12-70](#)

AUTORES / AUTHORS: - Wilzen A; Krona C; Sveinbjornsson B; Kristiansson E; Dalevi D; Ora I; De Preter K; Stallings RL; Maris J; Versteeg R; Nilsson S; Kogner P; Abel F

RESUMEN / SUMMARY: - BACKGROUND: Neuroblastoma (NB) tumours are commonly divided into three cytogenetic subgroups. However, by unsupervised principal components analysis of gene expression profiles we recently identified four distinct subgroups, r1-r4. In the current study we characterized these different subgroups in more detail, with a specific focus on the fourth divergent tumour subgroup (r4). METHODS: Expression microarray data from four international studies corresponding to 148 neuroblastic tumour cases were subject to division into four expression subgroups using a previously described 6-gene signature. Differentially expressed genes between groups were identified using Significance Analysis of Microarray (SAM). Next, gene expression network modelling was performed to map signalling pathways and cellular processes representing each subgroup. Findings were validated at the protein level by immunohistochemistry and immunoblot analyses. RESULTS: We identified several significantly up-regulated genes in the r4 subgroup of which the tyrosine kinase receptor ERBB3 was most prominent (fold change: 132--240). By gene set enrichment analysis (GSEA) the constructed gene network of ERBB3 ($n = 38$ network partners) was significantly enriched in the r4 subgroup in all four independent data sets. ERBB3 was also positively correlated to the ErbB family members EGFR and ERBB2 in all data sets, and a concurrent overexpression was seen in the r4 subgroup. Further studies of histopathology categories using a fifth data set of 110 neuroblastic tumours, showed a striking similarity between the expression profile of r4 to ganglioneuroblastoma (GNB) and ganglioneuroma (GN) tumours. In contrast, the NB histopathological subtype was dominated by mitotic regulating genes, characterizing unfavourable NB subgroups in particular. The high ErbB3

expression in GN tumour types was verified at the protein level, and showed mainly expression in the mature ganglion cells. CONCLUSIONS: Conclusively, this study demonstrates the importance of performing unsupervised clustering and subtype discovery of data sets prior to analyses to avoid a mixture of tumour subtypes, which may otherwise give distorted results and lead to incorrect conclusions. The current study identifies ERBB3 as a clear-cut marker of a GNB/GN-like expression profile, and we suggest a 7-gene expression signature (including ERBB3) as a complement to histopathology analysis of neuroblastic tumours. Further studies of ErbB3 and other ErbB family members and their role in neuroblastic differentiation and pathogenesis are warranted.

[504]

TÍTULO / TITLE: - High-mobility group box 2 is associated with prognosis of glioblastoma by promoting cell viability, invasion, and chemotherapeutic resistance.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 4.

●● [Enlace al texto completo \(gratis o de pago\) 1093/neuonc/not078](#)

AUTORES / AUTHORS: - Wu ZB; Cai L; Lin SJ; Xiong ZK; Lu JL; Mao Y; Yao Y; Zhou LF

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai, China (Z.B.W., Y.M., Y.Y., L.F.Z.); Department of Neurosurgery, First Affiliated Hospital of Wenzhou Medical College, Wenzhou, China (Z.B.W., L.C., S.J.L., Z.K.X., J.L.L.).

RESUMEN / SUMMARY: - BackgroundThe expression profile of high-mobility group box 2 (HMGB2) in patients with glioblastoma multiforme (GBM) and its clinical signature with underlying mechanisms were not fully explored.MethodsHMGB2 protein levels were measured in 51 GBM patients by immunohistochemical studies. To clarify the precise role of HMGB2 on cell invasion and viability of 3 GBM cell lines, we did in vitro and in vivo analyses with lentivirus vectors and small interfering RNA. Transwell invasion assays and wound-healing assays were used to analyze the invasion of GBM cells. Expression of p53 and matrix metalloproteinase 2/tissue inhibitors of metalloproteinase 2 (MMP2/TIMP2) protein was analyzed by Western blot.ResultsHMGB2 protein expression was significantly higher in GBM than in controlled brain tissues ($P < .0001$). HMGB2 overexpression was significantly correlated with shorter overall survival time, which was the only independent prognostic factor for overall survival in a multivariate analysis ($P = .017$). HMGB2 knockdown by small interfering RNA decreased cell viability and invasion in vitro and significantly decreased tumor volume in vivo, which might be involved in the change of p53 expression and the balance of MMP2/TIMP2. Moreover, silencing of HMGB2 could significantly increase the sensitivity of GBM cells to temozolomide chemotherapy.ConclusionsOur present data

suggest that HMGB2 expression is a significant prognostic factor and might play an important role in cell invasion and temozolomide-induced chemotherapeutic sensitivity of GBM. This study highlights the importance of HMGB2 as a novel prognostic marker and an attractive therapeutic target of GBM.

[505]

TÍTULO / TITLE: - Feasibility of dasatinib in children and adolescents with new or recurrent central nervous system germinoma.

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

REVISTA / JOURNAL: - *Pediatr Blood Cancer*. 2013 Sep;60(9):E100-2. doi: 10.1002/pbc.24567. Epub 2013 Jun 10.

●● [Enlace al texto completo \(gratis o de pago\) 1002/pbc.24567](#)

AUTORES / AUTHORS: - Osorio DS; Finlay JL; Dhall G; Goldman S; Eisenstat D; Brown RJ

INSTITUCIÓN / INSTITUTION: - The Neuro-Oncology Program, the Children's Center for Cancer and Blood Diseases, Children's Hospital Los Angeles, Los Angeles, California; Division of Pediatric Hematology/Oncology/Stem Cell Transplantation, The Steven and Alexandra Cohen Children's Medical Center, New Hyde Park, New York.

RESUMEN / SUMMARY: - Germinomas and embryonal carcinomas are central nervous system (CNS) germ cell tumors (GCT) that may overexpress the proto-oncogene c-KIT, a receptor tyrosine kinase, of which dasatinib is a potent inhibitor. This retrospective review presents the feasibility and tolerability of dasatinib administration in select patients with CNS germinoma. Between November 2008 and April 2010, six patients with newly diagnosed (n = 3) or recurrent (n = 3) CNS GCT were treated in an effort to avoid irradiation and/or delay recurrence. The daily doses administered were 100-170 mg/m² with mostly grade 1-2 toxicities. Dasatinib may play a role in future treatment strategies for CNS GCT. *Pediatr Blood Cancer* 2013;60:E100-E102. © 2013 Wiley Periodicals, Inc.

[506]

TÍTULO / TITLE: - Neuroimaging of primary central nervous system lymphoma in immunocompetent patients: comparison of recent and previous findings.

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

REVISTA / JOURNAL: - *J Nippon Med Sch*. 2013;80(3):174-83.

AUTORES / AUTHORS: - Adachi K; Yamaguchi F; Node Y; Kobayashi S; Takagi R; Teramoto A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Nippon Medical School Musashi Kosugi Hospital.

RESUMEN / SUMMARY: - The typical neuroimaging features of primary central nervous system lymphoma (PCNSL) have been described as single or multiple

intra-axial, homogenous, contrast-enhancing lesions with marked perilesional edema and restricted diffusion, usually contacting the cerebrospinal fluid surface. Necrosis, peripheral enhancement, hemorrhages, and calcifications are unusual. Recently, some of our patients with PCNSL have had atypical neuroimaging features even before treatment. In this article, we review the neuroimaging characteristics of PCNSL in immunocompetent patients and analyzed how imaging findings over the last 10 years differ from those from more than 10 years ago. Neuroimaging findings suggest that PCNSL is a disease that affects the entire brain. Although some imaging findings are characteristic of PCNSL, the frequency of atypical findings on conventional neuroimaging is increasing. Atypical neuroimaging findings do not rule out PCNSL, even in immunocompetent patients.

[507]

TÍTULO / TITLE: - Comprehensive high-resolution genomic profiling and cytogenetics of two pediatric and one adult medulloblastoma.

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

REVISTA / JOURNAL: - Pathol Res Pract. 2013 Jul 4. pii: S0344-0338(13)00136-2. doi: 10.1016/j.prp.2013.06.001.

●● Enlace al texto completo (gratis o de pago) 1016/j.prp.2013.06.001

AUTORES / AUTHORS: - Holland H; Xu LX; Ahnert P; Kirsten H; Koschny R; Bauer M; Schober R; Meixensberger J; Krupp W

INSTITUCIÓN / INSTITUTION: - Translational Centre for Regenerative Medicine (TRM), University of Leipzig, Leipzig, Germany.

RESUMEN / SUMMARY: - Medulloblastoma (WHO grade IV) is a rare, malignant, invasive, embryonal tumor which mainly occurs in children and represents less than 1% of all adult brain tumors. Systematic comprehensive genetic analyses on medulloblastomas are rare but necessary to provide more detailed information. Therefore, we performed comprehensive cytogenetic analyses (blood and tissue) of two pediatric and one adult medulloblastoma, using trypsin-Giemsa staining, spectral karyotyping (tissues only), SNP-arrays, and gene expression analyses. We confirmed frequently detected chromosomal aberrations in medulloblastoma, such as +7q, -8p/q, -9q, -11q, -12q, and +17q and identified novel genetic events. Applying SNP-array, we identified constitutional de novo losses 5q21.1, 15q11.2, 17q21.31, 19p12 (pediatric medulloblastoma), 9p21.1, 19p12, 19q13.3, 21q11.2 (adult medulloblastoma) and gains 16p11.1-16p11.2, 18p11.32, Yq11.223-Yq11.23 (pediatric medulloblastoma), Xp22.31 (adult medulloblastoma) possibly representing inherited causal events for medulloblastoma formation. We show evidence for somatic segmental uniparental disomy in regions 1p36, 6q16.3, 6q24.1, 14q21.2, 17p13.3, and 17q22 not previously described for primary medulloblastoma. Gene expression analysis supported classification of the adult medulloblastoma to the WNT-subgroup and classification of pediatric

medulloblastomas to group 3 tumors. Analyses of tumors and matched normal tissues (blood) with a combination of complementary techniques will help to further elucidate potentially causal genetic events for medulloblastomas.

[508]

TÍTULO / TITLE: - Role of visual evoked potentials in the assessment and management of optic pathway gliomas in children.

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

REVISTA / JOURNAL: - Doc Ophthalmol. 2013 Jul 25.

●● Enlace al texto completo (gratis o de pago) [1007/s10633-013-9399-](http://1007/s10633-013-9399-5)

[5](#)

AUTORES / AUTHORS: - Van Mierlo C; Spileers W; Legius E; Casteels I; Cassiman C

INSTITUCIÓN / INSTITUTION: - Department of Ophthalmology, University Hospitals of Leuven, Kapucijnenvoer 33, 3000, Leuven, Belgium, camille.vanmierlo@uzleuven.be.

RESUMEN / SUMMARY: - **OBJECTIVE:** The aim of this study is to investigate the role of pattern reversal visual evoked potentials (pVEPs) in the screening and monitoring of optic pathway gliomas (OPGs) in children with and without neurofibromatosis type 1. **METHODS:** A review of the English literature published between 1980 and 2012 was performed, with comparison of results of retro- and prospective studies. **RESULTS:** Pattern reversal VEPs have a high sensitivity (85.7-100 %) for the diagnosis of OPGs, moreover they are safe and cost-effective. Conversely, they have a low specificity (43-83 %) and are not widely available. Besides, pattern reversal VEP results can be unreliable in young children, because of the need for a good cooperation. The studies that were analyzed have drawbacks, including the small sample size, the retrospective design, the differences in gold standard for diagnosis, the different interpretation of small changes in VEP results and the lack of control groups. **CONCLUSION:** There is still debate about the gold standard for the screening and follow-up of OPGs. The added value of pVEPs to the ophthalmic examination is controversial. Randomized controlled trials or prospective multicentre studies are necessary to assess with sufficient accuracy the sensitivity and specificity of pattern reversal VEPs in the screening for OPGs and its follow-up.

[509]

TÍTULO / TITLE: - Vaccinia virus expressing bone morphogenetic protein-4 in novel glioblastoma orthotopic models facilitates enhanced tumor regression and long-term survival.

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

REVISTA / JOURNAL: - J Transl Med. 2013 Jun 24;11(1):155.

●● Enlace al texto completo (gratis o de pago) [1186/1479-5876-11-155](https://doi.org/10.1186/1479-5876-11-155)

AUTORES / AUTHORS: - Duggal R; Geissinger U; Zhang Q; Aguilar J; Chen NG; Binda E; Vescovi AL; Szalay AA

RESUMEN / SUMMARY: - BACKGROUND: Glioblastoma multiforme (GBM) is one of the most aggressive forms of cancer with a high rate of recurrence. We propose a novel oncolytic vaccinia virus (VACV)-based therapy using expression of the bone morphogenetic protein (BMP)-4 for treating GBM and preventing recurrence. METHODS: We have utilized clinically relevant, orthotopic xenograft models of GBM based on tumor-biopsy derived, primary cancer stem cell (CSC) lines. One of the cell lines, after being transduced with a cDNA encoding firefly luciferase, could be used for real time tumor imaging. A VACV that expresses BMP-4 was constructed and utilized for infecting several primary glioma cultures besides conventional serum-grown glioma cell lines. This virus was also delivered intracranially upon implantation of the GBM CSCs in mice to determine effects on tumor growth. RESULTS: We found that the VACV that overexpresses BMP-4 demonstrated heightened replication and cytotoxic activity in GBM CSC cultures with a broad spectrum of activity across several different patient-biopsy cultures. Intracranial inoculation of mice with this virus resulted in a tumor size equal to or below that at the time of injection. This resulted in survival of 100% of the treated mice up to 84 days post inoculation, significantly superior to that of a VACV lacking BMP-4 expression. When mice with a higher tumor burden were injected with the VACV lacking BMP-4, 80% of the mice showed tumor recurrence. In contrast, no recurrence was seen when mice were injected with the VACV expressing BMP-4, possibly due to induction of differentiation in the CSC population and subsequently serving as a better host for VACV infection and oncolysis. This lack of recurrence resulted in superior survival in the BMP-4 VACV treated group. CONCLUSIONS: Based on these findings we propose a novel VACV therapy for treating GBM, which would allow tumor specific production of drugs in the future in combination with BMPs which would simultaneously control tumor maintenance and facilitate CSC differentiation, respectively, thereby causing sustained tumor regression without recurrence.

[510]

TÍTULO / TITLE: - Erratum for “miR-92b controls glioma proliferation and invasion through regulating Wnt/beta-catenin signaling via Nemo-like kinase”.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul;15(7):970. doi: 10.1093/neuonc/not098.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not098](https://doi.org/10.1093/neuonc/not098)

[511]

TÍTULO / TITLE: - Transformation of adult cerebellar pilocytic astrocytoma to glioblastoma.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Jul 25.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0154-](#)

[0](#)

AUTORES / AUTHORS: - Sasaki T; Saito R; Kumabe T; Kanamori M; Sonoda Y; Watanabe M; Tominaga T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tohoku University Graduate School of Medicine, 1-1 Seiryomachi, Aoba-ku, Sendai, Miyagi, 980-8574, Japan.

RESUMEN / SUMMARY: - A 54-year-old woman with a past history of uterine cancer developed a tumor in her right cerebellum. Magnetic resonance imaging with contrast enhancement revealed a mass composed of two components, inside and outside, although both components resided in the same high-intensity area on T2-weighted imaging. Surgical resection removed the bulk of the tumor. Pathological examination revealed two distinct pathological features of the tumor-the inner major component had the features of glioblastoma whereas outer minor component had those of pilocytic astrocytoma (PA). These two components occurred with intercalating transitional areas. No genetic differences, including BRAF alteration or IDH mutations, were detected in either component. Activation of Akt, which is reported to be associated with clinically aggressive and anaplastic PA was found in the PA component of this tumor. The transitional area also stained positive, suggesting the continuity of both components. Consequently, the glioblastoma in this case was likely to have developed as a result of malignant transformation of PA. This case provides additional support for the concept of anaplastic transformation of PA.

[512]

TÍTULO / TITLE: - Surgical resection of large and giant petroclival meningiomas via a modified anterior transpetrous approach.

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

REVISTA / JOURNAL: - Neurosurg Rev. 2013 Jun 18.

●● Enlace al texto completo (gratis o de pago) [1007/s10143-013-0484-](#)

[8](#)

AUTORES / AUTHORS: - Xiao X; Zhang L; Wu Z; Zhang J; Jia G; Tang J; Meng G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery of Beijing Tiantan Hospital, Capital Medical University, No.6, Tiantan Xili, Dongcheng District, Beijing, 100050, China, xrtty2013@163.com.

RESUMEN / SUMMARY: - The authors describe a modified anterior transpetrous approach (ATPA) for the surgical resection of 21 cases of petroclival meningiomas (PCMs). Briefly, a curved periauricular skin incision was used. The cerebellar tentorium and the dura on the petrous apex were coagulated and

incised to expose the petrous apex bone fully. The drilling of the petrous apex bone was performed subdurally and began internally from the trigeminal impression, not exceeding 1.5 cm laterally, not exceeding 6 mm from the posterior edge of the petrous ridge, and not exceeding 8 mm in depth from the surface of the petrous bone. The tumors were removed totally in 12 (57.1 %) cases, subtotally in 8 (38.1 %) cases, and partially in 1 (4.8 %) case. The transient neurological deficit includes mild oculomotor nerve palsy in three cases, abducens nerve palsy in six cases, language disorder in three cases, and mild hemiplegia in two cases. Facial numbness became worse postoperatively in six patients, and only two patients improved at 6 months after surgery. No death occurred in this series. The modified ATPA is an efficient treatment alternative for large or giant PCMs located at the medial and superior internal acoustic meatus with relatively low risk of complications.

[513]

TÍTULO / TITLE: - Hypothalamic hamartomas. Part 2. Surgical considerations and outcome.

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

REVISTA / JOURNAL: - Neurosurg Focus. 2013 Jun;34(6):E7. doi: 10.3171/2013.3.FOCUS1356.

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

[3171/2013.3.FOCUS1356](#)

AUTORES / AUTHORS: - Mittal S; Mittal M; Montes JL; Farmer JP; Andermann F

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Comprehensive Epilepsy Center, Wayne State University, Detroit Medical Center, Detroit, MI 48201, USA. smittal@med.wayne.edu

RESUMEN / SUMMARY: - Hypothalamic hamartomas are uncommon developmental heterotopic masses composed of an intermixed array of neurons, glia, and myelinated fibers closely associated with the mammillary bodies. Gelastic seizures, the hallmark feature of hypothalamic hamartomas, commonly present in early childhood. However, patients usually also display a disabling clinical syndrome, which may include various other types of refractory seizures with secondary generalization together with progressive cognitive, behavioral, and psychiatric dysfunction. The hamartoma itself has been unequivocally shown to be intrinsically epileptogenic. Over the past 2 decades there has been considerable effort to develop neurosurgical techniques to treat the epileptic syndrome effectively as well as to improve the neurocognitive and behavioral outcome.

[514]

TÍTULO / TITLE: - Ankle Neurothekeoma: A Case Report.

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

REVISTA / JOURNAL: - J Foot Ankle Surg. 2013 Jun 18. pii: S1067-2516(13)00198-1. doi: 10.1053/j.jfas.2013.05.005.

●● Enlace al texto completo (gratis o de pago) 1053/j.jfas.2013.05.005

AUTORES / AUTHORS: - Seo BF; Kang HW; Lee JY; Kwon H; Jung SN

INSTITUCIÓN / INSTITUTION: - Department of Plastic and Reconstructive Surgery, Seoul St. Mary's Hospital, Catholic University of Korea, College of Medicine, Seoul, Korea.

RESUMEN / SUMMARY: - Neurothekeoma is a rare, benign, cutaneous tumor of nerve sheath origin that is also termed benign nerve sheath myxoma. This tumor is usually asymptomatic and grows slowly. Neurothekeoma is typically found in young adults and seldom occurs in children. It is most commonly located in the head, neck, and upper extremity and extremely rarely found in the lower leg. We report a rare case of ankle neurothekeoma in a child, with a review of the related published data.

[515]

TÍTULO / TITLE: - Analysis of progression and recurrence of meningioma using C-methionine PET.

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

REVISTA / JOURNAL: - Ann Nucl Med. 2013 Jun 26.

●● Enlace al texto completo (gratis o de pago) 1007/s12149-013-0747-

[Z](#)

AUTORES / AUTHORS: - Ikeda H; Tsuyuguchi N; Kunihiro N; Ishibashi K; Goto T; Ohata K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Osaka City University Graduate School of Medicine, 1-4-3 Asahi-machi, Abeno-ku, Osaka, 545-8585, Japan, hide-i@med.osaka-cu.ac.jp.

RESUMEN / SUMMARY: - **OBJECTIVE:** The recurrence rate of meningioma after surgery is high, and progression is often observed. The risk factors for recurrence and progression are not clear. We evaluated the risk factors for recurrence and progression in meningioma using ¹¹C-methionine (MET) positron emission tomography (PET). **METHODS:** Thirty-seven patients (mean follow-up, 80 months) with an intracranial meningioma were enrolled. MET PET was performed before treatment between 1995 and 2010, and patients were followed up in an out-patient clinic. Surgery was performed in 33 patients, and a wait-and-see approach was taken in four patients. We evaluated the extent of tumor resection, location, WHO grade, Ki-67 labeling index, and lesion to normal ratio (LN ratio) of MET uptake. **RESULTS:** Six of the surgical cases had a recurrence, and two of the observation-only patients had tumor progression. A high LN ratio of MET uptake was a significant risk factor for recurrence and progression with univariate analysis. The area under the curve of receiver operating characteristic curve for the LN ratio of MET uptake was 0.754, and the optimal cutoff value was 3.18 (sensitivity 63 %, specificity 79 %). With

multivariate analysis, a high LN ratio of MET uptake, non-gross total resection, and a high WHO grade were significant risk factors for progression and recurrence. CONCLUSION: A high LN ratio of MET uptake was a risk factor for tumor progression and recurrence. The advantage of MET PET is that it is not invasive and can easily be used to evaluate the whole tumor.

[516]

TÍTULO / TITLE: - Detection of tumor progression by signal intensity increase on fluid-attenuated inversion recovery magnetic resonance images in the resection cavity of high-grade gliomas.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(7):496-500.

AUTORES / AUTHORS: - Ito-Yamashita T; Nakasu Y; Mitsuya K; Mizokami Y; Namba H

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Shizuoka Cancer Center.

RESUMEN / SUMMARY: - Increased signal intensity (SI) on fluid-attenuated inversion recovery (FLAIR) magnetic resonance (MR) images in the resection cavity is sometimes observed after partial resection of gliomas. SI in the resection cavity of 44 high-grade gliomas was retrospectively investigated. Twelve of 35 patients with progressive disease (PD) showed SI increase in the resection cavity, and SI increase preceded PD in 6 of these 12 patients. None of nine patients without PD showed SI increase during the follow-up period. The analysis of SI on FLAIR images in the resection cavity had a specificity of 100% and a sensitivity of 34%. Higher sensitivity was found in grade IV tumors than in grade III tumors. SI increase is thus considered as a potent highly specific hallmark for subsequent or coincident tumor progression, which is clinically useful since MR imaging is easily performed during routine clinical examinations.

[517]

TÍTULO / TITLE: - IDH1/2 mutations target a key hallmark of cancer by deregulating cellular metabolism in glioma.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul 21.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not087](#)

AUTORES / AUTHORS: - Zhang C; Moore LM; Li X; Yung WK; Zhang W

INSTITUCIÓN / INSTITUTION: - Department of Pathology (C.Z., L.M.M., X.L., W.Z.); Department of Neuro-Oncology, The University of Texas MD Anderson Cancer Center, Houston, Texas (W.K.A.Y.); Department of Radiation Oncology, Tianjin Huan Hu Hospital, Tianjin, China (C.Z.); Department of Biochemistry and Molecular Biology, State Key Laboratory of Cancer Biology, The Fourth Military Medical University, Xi'an, China (X.L.).

RESUMEN / SUMMARY: - Isocitrate dehydrogenase (IDH) enzymes have recently become a focal point for research aimed at understanding the biology of glioma. IDH1 and IDH2 are mutated in 50%-80% of astrocytomas, oligodendrogliomas, oligoastrocytomas, and secondary glioblastomas but are seldom mutated in primary glioblastomas. Gliomas with IDH1/2 mutations always harbor other molecular aberrations, such as TP53 mutation or 1p/19q loss. IDH1 and IDH2 mutations may serve as prognostic factors because patients with an IDH-mutated glioma survive significantly longer than those with an IDH-wild-type tumor. However, the molecular pathogenic role of IDH1/2 mutations in the development of gliomas is unclear. The production of 2-hydroxyglutarate and enhanced NADP⁺ levels in tumor cells with mutant IDH1/2 suggest mechanisms through which these mutations contribute to tumorigenesis. Elucidating the pathogenesis of IDH mutations will improve understanding of the molecular mechanisms of gliomagenesis and may lead to development of a new molecular classification system and novel therapies.

[518]

TÍTULO / TITLE: - Transforming growth factor beta1 is not a reliable biomarker for valvular fibrosis but could be a potential serum marker for invasiveness of prolactinomas (pilot study).

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

REVISTA / JOURNAL: - Eur J Endocrinol. 2013 Jul 29;169(3):299-306. doi: 10.1530/EJE-13-0081. Print 2013.

●● [Enlace al texto completo \(gratis o de pago\) 1530/EJE-13-0081](#)

AUTORES / AUTHORS: - Elenkova A; Atanassova I; Kirilov G; Vasilev V; Kalinov K; Zacharieva S

INSTITUCIÓN / INSTITUTION: - Clinical Centre of Endocrinology, USHATE 'Acad. Ivan Pentchev', Medical University, 2 Zdrave Street, Sofia, Bulgaria.

RESUMEN / SUMMARY: - BACKGROUND: Transforming growth factor beta1 (TGFbeta1) signaling pathway is crucial for both human fibrogenesis and tumorigenesis. OBJECTIVE: This study aimed to investigate the usefulness of TGFbeta1 and matrix metalloproteinase 2 (MMP2) as potential circulating markers for fibrotic valvular heart disease (FVHD) and invasiveness as well as of Fetuin A as a marker for calcification in patients with prolactinomas. DESIGN: THE STUDY POPULATION CONSISTED OF 147 SUBJECTS DIVIDED INTO FOUR GROUPS: 30 dopamine agonist (DA)-treated prolactinoma patients with proven FVHD and three control groups with normal echocardiograms: 43 DA-treated patients, 26 naive patients, and 48 healthy subjects. RESULTS: We observed significantly higher serum TGFbeta1 levels in all three patient groups than in the healthy subjects (21.4+/-8.86 vs 19.1+/-9.03 vs 20.7+/-11.5 vs 15.8+/-7.2 ng/ml; P=0.032). Moreover, TGFbeta1 levels were significantly higher in patients with macroprolactinomas and invasive prolactinomas than in those with microprolactinomas and noninvasive tumors respectively. In addition,

a strong positive linear relationship between TGFbeta1 levels and invasiveness score ($\rho=0.924$; $P<0.001$) and a moderate correlation between TGFbeta1 levels and tumor volume ($r=0.546$; $P<0.002$) were observed in patients with invasive prolactinomas. By contrast, prolactin (PRL) levels exhibited a better correlation with tumor volume ($r=0.721$; $P<0.001$) than with invasiveness score ($\rho=0.436$; $P<0.020$). No significant difference was observed in Fetuin A levels between patients with FVHD and healthy controls. Results concerning MMP2 were unclear. CONCLUSIONS: TGFbeta1, MMP2, and Fetuin A are not reliable biomarkers for valvular fibrosis and calcification in DA-treated patients with prolactinomas, but TGFbeta1 may represent a useful serum marker for tumor invasiveness. The simultaneous determination of TGFbeta1 and PRL levels could improve the noninvasive assessment of prolactinoma behavior.

[519]

TÍTULO / TITLE: - Multitracer PET imaging of bone metastases from paraganglioma: peripheral halo of uptake on F-FLT PET mismatching with central uptake of F-FDOPA, F-fluorodopamine, and F-FDG.

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

REVISTA / JOURNAL: - Eur J Nucl Med Mol Imaging. 2013 Jul 24.

●● Enlace al texto completo (gratis o de pago) [1007/s00259-013-2507-](#)

[7](#)

AUTORES / AUTHORS: - Blanchet EM; Martucci V; Millo C; Chen CC; Herscovitch P; Pacak K

INSTITUCIÓN / INSTITUTION: - Program in Reproductive and Adult Endocrinology, Eunice Kennedy Shriver National Institute of Child Health & Human Development (NICHD), National Institutes of Health, Building 10, CRC, 1-East, 10 Center Drive, MSC-1109, Bethesda, MD, 20892-1109, USA.

[520]

TÍTULO / TITLE: - Quantitative characterization of the imaging limits of diffuse low-grade oligodendrogliomas.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 24.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not072](#)

AUTORES / AUTHORS: - Gerin C; Pallud J; Deroulers C; Varlet P; Oppenheim C; Roux FX; Chretien F; Thomas SR; Grammaticos B; Badoual M

INSTITUCIÓN / INSTITUTION: - IMNC Laboratory, UMR 8165, CNRS, Paris Sud and Paris Diderot Universities, Orsay, France (C.G., C.D., B.G., M.B.); Department of Neurosurgery, Sainte-Anne Hospital (J.P., F.X.R.); Department of Neuropathology, Sainte-Anne Hospital (P.V., F.C.); Department of Neuroradiology, Sainte-Anne Hospital, Paris, France (C.O.); Paris Descartes University, Paris, France (J.P., P.V., C.O., F.-X.R., F.C.); Paris Diderot

University, Paris, France (C.D., M.B.); Centre National de la Recherche Scientifique (CNRS), Paris, France (C.G., B.G.); Réseau d'Etude des gliomes, REG, Groland France (J.P.); and IR4M Laboratory, UMR8081, CNRS, Paris Sud University, Orsay, France (S.R.T.).

RESUMEN / SUMMARY: - BackgroundSupratentorial diffuse low-grade gliomas in adults extend beyond maximal visible MRI-defined abnormalities, and a gap exists between the imaging signal changes and the actual tumor margins. Direct quantitative comparisons between imaging and histological analyses are lacking to date. However, they are of the utmost importance if one wishes to develop realistic models for diffuse glioma growth.MethodsIn this study, we quantitatively compared the cell concentration and the edema fraction from human histological biopsy samples (BSs) performed inside and outside imaging abnormalities during serial imaging-based stereotactic biopsy of diffuse low-grade gliomas.ResultsThe cell concentration was significantly higher in BSs located inside (1189 +/- 378 cell/mm²) than outside (740 +/- 124 cell/mm²) MRI-defined abnormalities (P = .0003). The edema fraction was significantly higher in BSs located inside (mean, 45% +/- 23%) than outside (mean, 5% +/- 9%) MRI-defined abnormalities (P < .0001). At borders of the MRI-defined abnormalities, 20% of the tissue surface area was occupied by edema and only 3% by tumor cells. The cycling cell concentration was significantly higher in BSs located inside (10 +/- 12 cell/mm²), compared with outside (0.5 +/- 0.9 cell/mm²), MRI-defined abnormalities (P = .0001).ConclusionsWe showed that the margins of T2-weighted signal changes are mainly correlated with the edema fraction. In 62.5% of patients, the cycling tumor cell fraction (defined as the ratio of the cycling tumor cell concentration to the total number of tumor cells) was higher at the limits of the MRI-defined abnormalities than closer to the center of the tumor. In the remaining patients, the cycling tumor cell fraction increased towards the center of the tumor.

[521]

TÍTULO / TITLE: - Investigating the rapid diagnosis of gliomas from serum samples using infrared spectroscopy and cytokine and angiogenesis factors.

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

REVISTA / JOURNAL: - Anal Bioanal Chem. 2013 Jul 7.

●● Enlace al texto completo (gratis o de pago) [1007/s00216-013-7163-](#)

[Z](#)

AUTORES / AUTHORS: - Hands JR; Abel P; Ashton K; Dawson T; Davis C; Lea RW; McIntosh AJ; Baker MJ

INSTITUCIÓN / INSTITUTION: - Centre for Materials Science, Division of Chemistry, University of Central Lancashire, JB Firth Building, Preston, PR1 2HE, UK.

RESUMEN / SUMMARY: - The ability to diagnose brain cancer rapidly from serum samples is of great interest; such a diagnosis would allow for rapid testing and

time to results providing a responsive diagnostic environment, ability to monitor treatment efficacy, early detection of recurrent tumours and screening techniques. Current methods rely upon subjective, time-consuming tests such as histological grading and are particularly invasive with the diagnostic test requiring hospitalisation of 2-3 days. A rapid diagnostic method based upon serum samples would allow for a relatively non-invasive test and open up the possibility of screening for brain cancer. We report for the first time the use of a Bioplex immunoassay to provide cytokine and angiogenesis factor levels that differ between serum from glioma and non-cancer patients specifically angiopoietin, follistatin, HGF, IL-8, leptin, PDGF-BB and PECAM-1 providing sensitivities and specificities as high as 88 % and 81 %, respectively. We also report, for the first time, the use of serum ATR-FTIR combined with a RBF SVM for the diagnosis of gliomas from non-cancer patients with sensitivities and specificities as high as 87.5 % and 100 %, respectively. We describe the combination of these techniques in an orthogonal diagnostic regime, providing strength to the diagnosis through data combinations, in a rapid diagnostic test within 5 h from serum collection (10 min for ATR-FTIR and 4 h for the Bioplex Immunoassay). This regime has the ability to revolutionise the clinical environment by providing objective measures for diagnosis allowing for increased efficiency with corresponding decreases in mortality, morbidity and economic impact upon the health services.

[522]

TÍTULO / TITLE: - Response to “Reply to [18F]-fluoro-ethyl-L-tyrosine PET: a valuable diagnostic tool in neuro-oncology, but not all that glitters is glioma” by Hutterer et al.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul;15(7):814-5. doi: 10.1093/neuonc/not081. Epub 2013 Jun 19.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not081](#)

AUTORES / AUTHORS: - Hutterer M; Nowosielski M; Putzer D; Fougere CI; Virgolini IJ; Jacobs AH; Stockhammer G

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Markus Hutterer, MD, Department of Neurology, Wilhelm-Sander Neurooncology Therapy Unity, University Hospital and Medical School Regensburg, Universitätsstrasse 84, D-93053 Regensburg. markus.hutterer@medbo.de.

[523]

TÍTULO / TITLE: - Reply to “[18F]-fluoro-ethyl-L-tyrosine PET: a valuable diagnostic tool in neuro-oncology, but not all that glitters is glioma” by Hutterer et al.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul;15(7):816-7. doi: 10.1093/neuonc/not059. Epub 2013 Jun 7.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not059](https://doi.org/10.1093/neuonc/not059)

AUTORES / AUTHORS: - Langen KJ; Galldiks N

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Karl-Josef Langen, MD, Institute of Neuroscience and Medicine, Forschungszentrum Julich, Leo-Brandt-Str. 5, 52425 Julich, Germany. k.j.langen@fz-juelich.de.

[524]

TÍTULO / TITLE: - Bedside Diagnosis of Mitochondrial Dysfunction After Malignant Middle Cerebral Artery Infarction.

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

REVISTA / JOURNAL: - Neurocrit Care. 2013 Jul 17.

●● Enlace al texto completo (gratis o de pago) [1007/s12028-013-9875-](https://doi.org/10.1007/s12028-013-9875-5)

[5](#)

AUTORES / AUTHORS: - Nielsen TH; Schalen W; Stahl N; Toft P; Reinstrup P; Nordstrom CH

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Odense University Hospital, Sdr. Boulevard 29, 5000, Odense C, Denmark, troels.nielsen@ouh.regionyddanmark.dk.

RESUMEN / SUMMARY: - BACKGROUND: The study explores whether the cerebral biochemical pattern in patients treated with hemicraniectomy after large middle cerebral artery infarcts reflects ongoing ischemia or non-ischemic mitochondrial dysfunction. METHODS: The study includes 44 patients treated with decompressive hemicraniectomy (DCH) due to malignant middle cerebral artery infarctions. Chemical variables related to energy metabolism obtained by microdialysis were analyzed in the infarcted tissue and in the contralateral hemisphere from the time of DCH until 96 h after DCH. RESULTS: Reperfusion of the infarcted tissue was documented in a previous report. Cerebral lactate/pyruvate ratio (L/P) and lactate were significantly elevated in the infarcted tissue compared to the non-infarcted hemisphere ($p < 0.05$). From 12 to 96 h after DCH the pyruvate level was significantly higher in the infarcted tissue than in the non-infarcted hemisphere ($p < 0.05$). CONCLUSION: After a prolonged period of ischemia and subsequent reperfusion, cerebral tissue shows signs of protracted mitochondrial dysfunction, characterized by a marked increase in cerebral lactate level with a normal or increased cerebral pyruvate level resulting in an increased LP-ratio. This biochemical pattern contrasts to cerebral ischemia, which is characterized by a marked decrease in cerebral pyruvate. The study supports the hypothesis that it is possible to diagnose cerebral mitochondrial dysfunction and to separate it from cerebral ischemia by microdialysis and bed-side biochemical analysis.

[525]

TÍTULO / TITLE: - Re-evaluation of nondiagnostic biopsies of suspected low-grade glioma using isocitrate dehydrogenase 1 mutation immunohistochemistry.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jul;15(7):811-3. doi: 10.1093/neuonc/not063. Epub 2013 Jun 4.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not063](#)

AUTORES / AUTHORS: - Anderson MD; Abel TW; Moots PL

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Mark D. Anderson, The University of Texas MD Anderson Cancer Center, 1515 Holcombe Blvd., Unit 431, Houston, TX 77030. mdanderson2@mdanderson.org.

[526]

TÍTULO / TITLE: - Potential role of ventricular tumor markers in CNS germ cell tumors.

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

REVISTA / JOURNAL: - Pediatr Blood Cancer. 2013 Oct;60(10):1647-50. doi: 10.1002/pbc.24620. Epub 2013 Jun 20.

●● Enlace al texto completo (gratis o de pago) [1002/pbc.24620](#)

AUTORES / AUTHORS: - Legault G; Allen JC

INSTITUCIÓN / INSTITUTION: - Department of Neurology, NYU Langone Medical Center, New York, New York; Department of Pediatrics, NYU Langone Medical Center, New York, New York.

RESUMEN / SUMMARY: - BACKGROUND: There is increasing reliance on oncoprotein assays such as the beta-subunit of human chorionic gonadotropin (beta-hCG) and alpha-fetoprotein (AFP) for diagnosis or confirmation of histology of central nervous system (CNS) germ cell tumors (GCT), but the relative diagnostic sensitivity and reliability of assays from serum (S), lumbar (L), and ventricular (V) cerebrospinal fluid (CSF) are uncertain. PROCEDURE: A total of 86 patients with CNS GCT were identified from our database. Fourteen patients had contemporaneous beta-hCG and/or AFP measurements from serum, ventricular, and lumbar CSF at diagnosis (n = 13) or relapse (n = 1), constituting the subjects for this report. Their primary tumor sites were: pineal (n = 8), suprasellar (n = 1), or both (n = 5). Their mean age at diagnosis was 16.0 years (range 9.1-25.9). The male:female sex ratio was 13:1. RESULTS: For the germinoma-treated patients (n = 8), the median (range) beta-hCG values (S, V, L) were 0 (0-6.9), 7.0 (0-57.4), 8.3 (0-34.0) mIU/ml. For patients managed as mixed malignant GCT (MMGCT) (n = 6), the median (range) beta-hCG values (S, V, L) were 3.9 (0-58.0), 3.6 (0-147.0), 61.8 (0-358.0) mIU/ml. The median (range) AFP values were 7.5 (0-27,400.0), 2.0 (0-2,981.0), 3.0 (0-14,015.0) ng/ml. Lumbar CSF beta-hCG values were equal or greater than those in ventricular CSF or serum in 12 of 13 cases (92.3%). All patients with MMGCT had lumbar AFP equal or greater than the ventricular

CSF values, while serum AFP values remained highest. CONCLUSIONS: Ventricular CSF values cannot be considered a replacement for lumbar CSF. Lumbar CSF is the most reliable source of tumor markers to establish baseline and follow-up diagnostic endpoints. *Pediatr Blood Cancer* 2013;60:1647-1650. © 2013 Wiley Periodicals, Inc.

[527]

- CASTELLANO -

TÍTULO / TITLE: Erneute Bestrahlung mit ublicher Strahlen- oder Protonentherapie bei rezidivierendem bosartigem Hirntumor : Technische Aspekte basierend auf an einer Einrichtung gesammelten Erfahrungen.

TÍTULO / TITLE: - Reirradiation for recurrent malignant brain tumor with radiotherapy or proton beam therapy : Technical considerations based on experience at a single institution.

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

REVISTA / JOURNAL: - *Strahlenther Onkol.* 2013 Aug;189(8):656-663. Epub 2013 Jul 5.

●● Enlace al texto completo (gratis o de pago) [1007/s00066-013-0390-](http://1007/s00066-013-0390-6)

[6](#)

AUTORES / AUTHORS: - Mizumoto M; Okumura T; Ishikawa E; Yamamoto T; Takano S; Matsumura A; Oshiro Y; Ishikawa H; Sakurai H; Tsuboi K

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, University of Tsukuba, Tsukuba, Ibaraki, Japan.

RESUMEN / SUMMARY: - **BACKGROUND AND PURPOSE:** Radiotherapy for recurrent malignant brain tumors is usually limited because of the dose tolerance of the normal brain tissue. The goal of the study was to evaluate the efficacy and feasibility of reirradiation for patients with recurrent malignant brain tumors. **PATIENTS AND METHODS:** The subjects comprised 26 patients with recurrent malignant brain tumors treated with conventional radiotherapy (RT, n = 8), stereotactic radiotherapy (SRT, n = 10), and proton beam therapy (PBT, n = 8) at our institute. Fifteen patients had glioblastoma, 6 had WHO grade 3 glioma, and 5 had other tumors. The dose of initial radiotherapy was 34.5-94.4 Gy. Different radiation schedules were compared using the equivalent dose in 2-Gy fractions. **RESULTS:** Reirradiation was completed in all patients without a severe acute reaction. The reirradiation doses were 30-60 Gy (median, 42.3 Gy) and the total doses for the initial and second treatments were 64.5-150.4 Gy (median, 100.0 Gy). Currently, 11 patients are alive (median follow-up period, 19.4 months) and 15 are dead. The median survival and local control periods after reirradiation of the 26 patients were 18.3 and 9.3 months, respectively. For the 15 patients with glioblastoma, these periods were 13.1 and 11.0 months, respectively. Two patients showed radiation necrosis that was treated by surgery or conservative therapy. **CONCLUSION:** Reirradiation for

recurrent malignant brain tumor using conventional RT, SRT, or PBT was feasible and effective in selected cases. Further investigation is needed for treatment optimization for a given patient and tumor condition.

[528]

TÍTULO / TITLE: - Inhibition of glioma growth by minocycline is mediated through endoplasmic reticulum stress-induced apoptosis and autophagic cell death.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 20.

●● Enlace al texto completo (gratis o de pago) 1093/neuonc/not073

AUTORES / AUTHORS: - Liu WT; Huang CY; Lu IC; Gean PW

INSTITUCIÓN / INSTITUTION: - Institute of Basic Medical Sciences (W.-T.L., P.-W.G.); Department of Pharmacology, (W.-T.L., I.-C.L., P.-W.G.); Division of Neurosurgery, Department of Surgery, National Cheng-Kung University Hospital, Tainan, Taiwan (C.-Y.H.).

RESUMEN / SUMMARY: - Background We have reported that minocycline (Mino) induced autophagic death in glioma cells. In the present study, we characterize the upstream regulators that control autophagy and switch cell death from autophagic to apoptotic. Methods Western blotting and immunofluorescence were used to detect the expressions of eukaryotic translation initiation factor 2alpha (eIF2alpha), transcription factor GADD153 (CHOP), and glucose-regulated protein 78 (GRP78). Short hairpin (sh)RNA was used to knock down eIF2alpha or CHOP expression. Autophagy was assessed by the conversion of light chain (LC)3-I to LC3-II and green fluorescent protein puncta formation. An intracranial mouse model and bioluminescent imaging were used to assess the effect of Mino on tumor growth and survival time of mice. Results The expression of GRP78 in glioma was high, whereas in normal glia it was low. Mino treatment increased GRP78 expression and reduced binding of GRP78 with protein kinase-like endoplasmic reticulum kinase. Subsequently, Mino increased eIF2alpha phosphorylation and CHOP expression. Knockdown of eIF2alpha or CHOP reduced Mino-induced LC3-II conversion and glioma cell death. When autophagy was inhibited, Mino induced cell death in a caspase-dependent manner. Rapamycin in combination with Mino produced synergistic effects on LC3 conversion, reduction of the Akt/mTOR/p70S6K pathway, and glioma cell death. Bioluminescent imaging showed that Mino inhibited the growth of glioma and prolonged survival time and that these effects were blocked by shCHOP. Conclusions Mino induced autophagy by eliciting endoplasmic reticulum stress response and switched cell death from autophagy to apoptosis when autophagy was blocked. These results coupled with clinical availability and a safe track record make Mino a promising agent for the treatment of malignant gliomas.

[529]

TÍTULO / TITLE: - Cooperativity between MAPK and PI3K signaling activation is required for glioblastoma pathogenesis.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 27.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not084](#)

AUTORES / AUTHORS: - Vitucci M; Karpinich NO; Bash RE; Werneke AM; Schmid RS; White KK; McNeill RS; Huff B; Wang S; Van Dyke T; Miller CR

INSTITUCIÓN / INSTITUTION: - Curriculum in Genetics and Molecular Biology (M.V.), Department of Cellular and Molecular Physiology (N.O.K.), Division of Neuropathology, Department of Pathology and Laboratory Medicine (R.E.B., A.M.W., R.S.M., B.H., C.R.M.), Program in Molecular Biology and Biotechnology (R.S.S., C.R.M.), Lineberger Comprehensive Cancer Center (R.S.S., K.K.W., C.R.M.), Department of Neurology and Neurosciences Center, University of North Carolina School of Medicine, Chapel Hill, North Carolina (C.R.M.); and Mouse Cancer Genetics Program (S.W., T.V.D.) and Center for Advanced Preclinical Research (T.V.D.), NCI-Frederick, Frederick, Maryland.

RESUMEN / SUMMARY: - BackgroundGlioblastoma (GBM) genomes feature recurrent genetic alterations that dysregulate core intracellular signaling pathways, including the G1/S cell cycle checkpoint and the MAPK and PI3K effector arms of receptor tyrosine kinase (RTK) signaling. Elucidation of the phenotypic consequences of activated RTK effectors is required for the design of effective therapeutic and diagnostic strategies. MethodsGenetically defined, G1/S checkpoint-defective cortical murine astrocytes with constitutively active Kras and/or Pten deletion mutations were used to systematically investigate the individual and combined roles of these 2 RTK signaling effectors in phenotypic hallmarks of glioblastoma pathogenesis, including growth, migration, and invasion in vitro. A novel syngeneic orthotopic allograft model system was used to examine in vivo tumorigenesis. ResultsConstitutively active Kras and/or Pten deletion mutations activated both MAPK and PI3K signaling. Their combination led to maximal growth, migration, and invasion of G1/S-defective astrocytes in vitro and produced progenitor-like transcriptomal profiles that mimic human proneural GBM. Activation of both RTK effector arms was required for in vivo tumorigenesis and produced highly invasive, proneural-like GBM. ConclusionsThese results suggest that cortical astrocytes can be transformed into GBM and that combined dysregulation of MAPK and PI3K signaling revert G1/S-defective astrocytes to a primitive gene expression state. This genetically-defined, immunocompetent model of proneural GBM will be useful for preclinical development of MAPK/PI3K-targeted, subtype-specific therapies.

[530]

TÍTULO / TITLE: - Molecular and functional properties of densely and sparsely granulated GH-producing pituitary adenomas.

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

REVISTA / JOURNAL: - Eur J Endocrinol. 2013 Jul 11.

●● Enlace al texto completo (gratis o de pago) [1530/EJE-13-0134](#)

AUTORES / AUTHORS: - Mayr BM; Buslei R; Theodoropoulou M; Stalla GK; Buchfelder M; Schoefl C

INSTITUCIÓN / INSTITUTION: - B Mayr, Division of Endocrinology and Diabetes, Department of Medicine I, Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany.

RESUMEN / SUMMARY: - GH-producing pituitary adenomas display two distinct morphological patterns of cytoplasmic GH containing secretory granules namely the densely and sparsely granulated somatotroph adenoma subtype. It is unknown whether these morphological variants reflect distinct pathophysiological entities at the molecular level. In 28 GH-producing adenoma tissues from a consecutive set of patients undergoing pituitary surgery for acromegaly we studied the GH granulation pattern, the expression of somatostatin receptor subtypes (SSTR) as well as the calcium, cAMP and ZAC1 pathways in primary adenoma cell cultures. The expression of gsp oncogene was similar between densely and sparsely granulated somatotroph adenoma cells. There were no differences in the calcium, cAMP and ZAC1 pathways as well as in their regulation by somatostatin receptor (SSTR) agonists. SSTR2 was exclusively expressed in densely but not in sparsely granulated tumours (membrane expression 86% vs. 0%; cytoplasmic expression 67% vs. 0%). By contrast, expression of SSTR5 was only found in sparsely but not in densely granulated somatotroph adenomas (membrane expression 29% vs. 0%; cytoplasmic expression 57% vs. 0%). Our results indicate that different granulation patterns in growth hormone producing adenomas do not reflect differences in pathways and factors pivotal for somatotroph differentiation and function. In vitro the vast majority of both densely and sparsely granulated tumour cells were responsive to somatostatin receptor activation at the molecular level. Sparsely granulated adenomas lacking SSTR2, but expressing SSTR5 might be responsive to novel somatostatin receptor agonists with increased affinity to SSTR5.

[531]

TÍTULO / TITLE: - Implications of Dll4-Notch signaling activation in primary glioblastoma multiforme.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 20.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not071](#)

AUTORES / AUTHORS: - El Hindy N; Keyvani K; Pagenstecher A; Dammann P; Sandalcioglu IE; Sure U; Zhu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery (N.E.H., P.D., I.E.S., U.S., Y.Z.), Institute of Pathology & Neuropathology, University Hospital Essen, Essen, Germany (K.K.); and Department of Neuropathology, Medical Faculty, University of Marburg, Marburg, Germany (A.P.).

RESUMEN / SUMMARY: - Background Glioblastoma multiforme (GBM) is a highly aggressive brain tumor characterized by massive neovascularization, necrosis, and intense resistance to therapy. Deregulated Notch signaling has been implicated in the formation and progression of different malignancies. The present study attempted to investigate the activation status of Dll4-Notch signaling in primary human GBM and its association with vascular and clinical parameters in patients. Methods Major components of Dll4-Notch signaling were examined by real-time reverse-transcription polymerase chain reaction (PCR), Western blotting, and immunohistochemistry in GBM (n = 26) and control (n = 11) brain tissue. The vascular pattern (VP) and microvascular density (MVD) were analyzed after laminin immunostaining. O6-Methylguanine-methyltransferase (MGMT) promoter methylation in GBM samples was detected by methylation-specific PCR. Results The mRNA levels of Dll4, Jagged1, Notch1, Notch4, Hey1, Hey2, Hes1, and VEGF were 3.12-, 3.58-, 3.37-, 5.77-, 4.89-, 3.13-, 6.62-, and 32.57-fold elevated, respectively, in GBM samples, compared with the controls. Western blotting revealed a 4-, 3.7-, and 45.6-fold upregulation of Dll4, Notch1, and Hey1, respectively, accompanied by a downregulation of PTEN expression and an increase in the expression of p-Akt and VEGF. Immunostaining located the immunoreactivity of Dll4 and Notch1 in endothelial cells, microglia/macrophages, tumor cells, and astrocytes. Furthermore, the upregulation of Dll4-Notch signaling components was correlated to a low MVD and was potentially related to a classic VP, tumor edema, and MGMT promoter methylation. Conclusions The upregulation of Dll4-Notch signaling components was found in a subset of GBM samples and was associated with some angiogenic and clinical parameters. These findings highlight this signaling pathway as a potential therapeutic target for patients with GBM who show an activation of Dll4-Notch signaling.

[532]

TÍTULO / TITLE: - Male prolactinomas presenting with normal testosterone levels.

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

REVISTA / JOURNAL: - Pituitary. 2013 Jun 12.

●● Enlace al texto completo (gratis o de pago) [1007/s11102-013-0497-](#)

[X](#)

AUTORES / AUTHORS: - Shimon I; Benbassat C

INSTITUCIÓN / INSTITUTION: - Institute of Endocrinology, Rabin Medical Center, Beilinson Hospital, 49100, Petah Tikva, Israel, ilanshi@clalit.org.il.

RESUMEN / SUMMARY: - In men harboring prolactinoma the most common symptoms are related to hypogonadism, including decreased libido, erectile

dysfunction, and gynecomastia. These men characteristically present with elevated serum prolactin (PRL) levels, suppressed gonadotropins, and low testosterone levels. We studied a group of 11 unique men with prolactinomas presenting with testosterone levels within the normal range (≥ 2.6 ng/ml; cohort A), and compared them to 11 prolactinoma men with borderline baseline testosterone (2.1-2.5 ng/ml; cohort B) and to a cohort of 34 prolactinoma patients with low testosterone levels (≤ 2 ng/ml; cohort C). Mean testosterone levels at presentation were 3.91 ± 0.9 ng/ml in cohort A (range, 2.6-5.2 ng/ml), 2.44 ± 0.16 ng/ml in cohort B and 0.96 ± 0.6 in cohort C ($p < 0.001$). Mean baseline PRL levels were >20 times above normal in cohort A compared to >100 times above normal in cohorts B and C. Symptoms of hypogonadism were present in 55, 64 and 76 % of men in groups A, B and C, respectively. There was a trend towards a larger tumor size in the low testosterone group ($p = 0.06$). Visual fields defects at presentation were more prevalent in this cohort. With cabergoline, testosterone level increased from 3.91 to 6.42 ng/ml ($\Delta = 2.51$ ng/ml) in cohort A, from 2.44 to 5.63 ng/ml ($\Delta = 3.19$ ng/ml) in cohort B, and from 0.96 to 3.30 ng/ml ($\Delta = 2.34$ ng/ml) in cohort C ($p < 0.05$ for each group). Symptoms of hypogonadism improved following treatment in 83 % of symptomatic men in cohort A. Normal testosterone does not exclude the likelihood of prolactinoma in men. When treated with cabergoline, testosterone levels in these men can increase higher within the normal range together with clinical improvement.

[533]

TÍTULO / TITLE: - Deleted in malignant brain tumor 1 is secreted in the oviduct and involved in the mechanism of fertilization in equine and porcine species.

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

REVISTA / JOURNAL: - Reproduction. 2013 Jul 1;146(2):119-33. doi: 10.1530/REP-13-0007. Print 2013 Aug 1.

●● Enlace al texto completo (gratis o de pago) [1530/REP-13-0007](#)

AUTORES / AUTHORS: - Ambruosi B; Accogli G; Douet C; Canepa S; Pascal G; Monget P; Nicolas CM; Holmskov U; Mollenhauer J; Robbe-Masselot C; Vidal O; Desantis S; Goudet G

INSTITUCIÓN / INSTITUTION: - INRA, UMR 85, Physiologie de la Reproduction et des Comportements, 37380 Nouzilly, France.

RESUMEN / SUMMARY: - Oviductal environment affects preparation of gametes for fertilization, fertilization itself, and subsequent embryonic development. The aim of this study was to evaluate the effect of oviductal fluid and the possible involvement of deleted in malignant brain tumor 1 (DMBT1) on IVF in porcine and equine species that represent divergent IVF models. We first performed IVF after pre-incubation of oocytes with or without oviductal fluid supplemented or not with antibodies directed against DMBT1. We showed that oviductal fluid induces an increase in the monospermic fertilization rate and that this effect is

canceled by the addition of antibodies, in both porcine and equine species. Moreover, pre-incubation of oocytes with recombinant DMBT1 induces an increase in the monospermic fertilization rate in the pig, confirming an involvement of DMBT1 in the fertilization process. The presence of DMBT1 in the oviduct at different stages of the estrus cycle was shown by western blot and confirmed by immunohistochemical analysis of ampulla and isthmus regions. The presence of DMBT1 in cumulus-oocyte complexes was shown by western blot analysis, and the localization of DMBT1 in the zona pellucida and cytoplasm of equine and porcine oocytes was observed using immunofluorescence analysis and confocal microscopy. Moreover, we showed an interaction between DMBT1 and porcine spermatozoa using surface plasmon resonance studies. Finally, a bioinformatic and phylogenetic analysis allowed us to identify the DMBT1 protein as well as a DMBT1-like protein in several mammals. Our results strongly suggest an important role of DMBT1 in the process of fertilization.

[534]

TÍTULO / TITLE: - A practical scoring system to determine whether to proceed with surgical resection in recurrent glioblastoma.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Aug;15(8):1096-101. doi: 10.1093/neuonc/not069. Epub 2013 Jun 25.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not069](#)

AUTORES / AUTHORS: - Park CK; Kim JH; Nam DH; Kim CY; Chung SB; Kim YH; Seol HJ; Kim TM; Choi SH; Lee SH; Heo DS; Kim IH; Kim DG; Jung HW

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Chul-Kee Park, MD, PhD, Department of Neurosurgery, Biomedical Research Institute, Seoul National University Hospital, 101 Daehak-ro Jongno-gu, Seoul 110-744, South Korea. nsckpark@snu.ac.kr.

RESUMEN / SUMMARY: - Background To determine the benefit of surgical management in recurrent glioblastoma, we analyzed a series of patients with recurrent glioblastoma who had undergone surgery, and we devised a new scale to predict their survival. Methods Clinical data from 55 consecutive patients with recurrent glioblastoma were evaluated after surgical management. Kaplan-Meier survival analysis and Cox proportional hazards regression modeling were used to identify prognostic variables for the development of a predictive scale. After the multivariate analysis, performance status ($P = .078$) and ependymal involvement ($P = .025$) were selected for inclusion in the new prognostic scale. The devised scale was validated with a separate set of 96 patients from 3 different institutes. Results A 3-tier scale (scoring range, 0-2 points) composed of additive scores for the Karnofsky performance status (KPS) (0 for KPS ≥ 70 and 1 for KPS < 70) and ependymal involvement (0 for no enhancement and 1 for enhancement of the ventricle wall in the magnetic

resonance imaging) significantly distinguished groups with good (0 points; median survival, 18.0 months), intermediate (1 point; median survival, 10.0 months), and poor prognoses (2 points; median survival, 4.0 months). The new scale was successfully applied to the validation cohort of patients showing distinct prognosis among the groups (median survivals of 11.0, 9.0, and 4.0 months for the 0-, 1-, and 2-point groups, respectively). Conclusions We developed a practical scale to facilitate deciding whether to proceed with surgical management in patients with recurrent glioblastoma. This scale was useful for the diagnosis of prognostic groups and can be used to develop guidelines for patient treatment.

[535]

TÍTULO / TITLE: - Surgical strategies for nonenhancing slow-growing gliomas with special reference to functional reorganization: review with own experience.

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

REVISTA / JOURNAL: - Neurol Med Chir (Tokyo). 2013;53(7):438-46.

AUTORES / AUTHORS: - Hayashi Y; Nakada M; Kinoshita M; Hamada J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Kanazawa University.

RESUMEN / SUMMARY: - Nonenhancing intrinsic brain tumors have been empirically treated with a strategy that has been adopted for World Health Organization (WHO) grade II gliomas (low-grade gliomas: LGGs), even though small parts of the tumors might have been diagnosed as WHO grade III gliomas after surgery. However, the best surgical strategy for nonenhancing gliomas, including LGGs, is still debatable. LGGs have the following features: slow growth, high possibility of histologically malignant transformation, and no clear border between the tumor and adjacent normal brain. We retrospectively examined 26 consecutive patients with nonenhancing gliomas who were surgically treated at Kanazawa University Hospital between January 2006 and May 2012, with special reference to functional reorganization, extent of resection (EOR), and functional mapping during awake surgery. These categories are closely related with the features of LGG, i.e. functional reorganization due to slow-growing nature, EOR with related malignant transformation, and functional mapping for delineating the unclear tumor border. Finally, we discuss surgical strategies for slow-growing gliomas that are represented by LGGs and nonenhancing gliomas. In conclusion, slow-growing gliomas tend to undergo functional reorganization, and the functional reorganization affects the presurgical evaluation for resectability based on tumor location related to eloquence. In the clinical setting, to definitely identify the reorganized functional regions, awake surgery is recommended. Therefore, awake surgery could increase the extent of the resection of the tumor without deficits, resulting in the delay of malignant transformation and increase in overall survival.

[536]

TÍTULO / TITLE: - XVI. CNS prophylaxis in aggressive lymphomas: for whom and how.

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

REVISTA / JOURNAL: - Hematol Oncol. 2013 Jun;31 Suppl 1:89-91. doi: 10.1002/hon.2074.

●● Enlace al texto completo (gratis o de pago) [1002/hon.2074](#)

AUTORES / AUTHORS: - Benevolo G; Chiappella A; Vitolo U

INSTITUCIÓN / INSTITUTION: - Hematology 2, Citta della Salute e della Scienza Hospital, Turin, Italy.

[537]

TÍTULO / TITLE: - Huge sciatic neuroma presented 40 years after traumatic above knee amputation.

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

REVISTA / JOURNAL: - Technol Health Care. 2013 Jan 1;21(3):261-4. doi: 10.3233/THC-130719.

●● Enlace al texto completo (gratis o de pago) [3233/THC-130719](#)

AUTORES / AUTHORS: - Daniilidis K; Stukenborg-Colsman CM; Ettinger M; Windhagen H

INSTITUCIÓN / INSTITUTION: - Department of Orthopaedic Surgery, Annastift Hannover (Medical School Hannover; MHH), Hannover, Germany.

RESUMEN / SUMMARY: - BACKGROUND: An amount of 70,000 minor/major amputees are annually performed for different reasons such as tumor, trauma, perivascular diseases or diabetic ulcers yearly in Germany. Over the course of time a lot of patients get problems with their stump, which leads to an incompatible prosthetic treatment and immobilisation. OBJECTIVE: Handicapped patients are often characterized by a long history of pain. The fact that they often had comorbidities as diabetes, vascular diseases or other metabolic affection, leads to the situation that no other differential diagnoses are taken into account. PATIENTS AND METHODS: We present a case of a 62 year old patient with a history of burning pain with punctum maximum at the dorso-medial part of the distal femur stump 40 years after a traumatic above-knee amputation. He had sought different medical consultations and had a lot of modifications on his prosthesis shaft with partial benefit. The clinical examination confirmed the suspected diagnosis of a stump neuroma from the sciatic nerve, which has been verified in the MRI. Concerning the symptoms and the increasing immobilisation caused by the burning pain, we indicated a surgical revision which includes a resection from the neuroma and a local flap graft correction. RESULTS: Postoperatively he described a complete pain relief. After 6 weeks under weight bearing mobilisation he was 100% free of pain in his

new custom-made shaft prosthesis and could mobilised under full bearing.
CONCLUSION: We conclude that neurinoma needs to be considered in handicapped patients with such symptomatology and has to be surgically revised, even if that decision especially for handicapped patients is often difficult for the surgeon.

[538]

TÍTULO / TITLE: - Level of Notch activation determines the effect on growth and stem cell-like features in glioblastoma multiforme neurosphere cultures.

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

REVISTA / JOURNAL: - Cancer Biol Ther. 2013 Jul 1;14(7):625-37. doi: 10.4161/cbt.24595. Epub 2013 May 10.

●● Enlace al texto completo (gratis o de pago) [4161/cbt.24595](#)

AUTORES / AUTHORS: - Kristoffersen K; Villingshoj M; Poulsen HS; Stockhausen MT

INSTITUCIÓN / INSTITUTION: - Department of Radiation Biology; The Finsen Center, Section 6321; Copenhagen University Hospital; Copenhagen, Denmark.

RESUMEN / SUMMARY: - Background: Brain cancer stem-like cells (bCSC) are cancer cells with neural stem cell (NSC)-like properties found in glioblastoma multiforme (GBM) and they are assigned a central role in tumor initiation, progression and relapse. The Notch pathway is important for maintenance and cell fate decisions in the normal NSC population. Notch signaling is often deregulated in GBM and recent results suggest that this pathway plays a significant role in bCSC as well. We therefore wished to further elucidate the role of Notch activation in GBM-derived bCSC. Methods: Human-derived GBM xenograft cells were cultured as NSC-like neurosphere cultures. Notch modulation was accomplished either by blocking the pathway using the gamma-secretase inhibitor DAPT or by activating it by transfecting the cells with the constitutive active Notch-1 receptor. Results: GBM neurosphere cultures with high endogenous Notch activation displayed sensitivity toward Notch inhibition with regard to tumorigenic features as demonstrated by increased G₀/G₁ population and reduced colony formation capacity. Of the NSC-like characteristics, only the primary sphere forming potential was affected, while no effect was observed on self-renewal or differentiation. In contrast, when Notch signaling was activated a decrease in the G₀/G₁ population and an enhanced capability of colony formation was observed, along with increased self-renewal and de-differentiation. Conclusion: Based on the presented results we propose that active Notch signaling plays a role for cell growth and stem cell-like features in GBM neurosphere cultures and that Notch-targeted anti-bCSC treatment could be feasible for GBM patients with high endogenous Notch pathway activation.

[539]

TÍTULO / TITLE: - Leucine-rich glioma inactivated 3 promotes HaCaT keratinocyte migration.

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

REVISTA / JOURNAL: - Wound Repair Regen. 2013 Jul;21(4):634-40. doi: 10.1111/wrr.12066.

●● Enlace al texto completo (gratis o de pago) [1111/wrr.12066](#)

AUTORES / AUTHORS: - Jeong YM; Park WJ; Kim MK; Baek KJ; Kwon NS; Yun HY; Kim DS

INSTITUCIÓN / INSTITUTION: - Department of Biochemistry, Chung-Ang University College of Medicine, Seoul, Korea.

RESUMEN / SUMMARY: - Our finding that human skin expresses leucine-rich glioma inactivated 3 (LGI3) raises the question of the function of this cytokine in keratinocytes. We have shown that LGI3 stimulates human HaCaT keratinocyte migration without affecting viability or proliferation. Western blot analysis showed that LGI3 induced focal adhesion kinase activation, Akt phosphorylation, and glycogen synthase kinase 3beta (GSK3beta) phosphorylation in these cells. Using the scratch wound assay and a modified Boyden chamber, we found that LY294002, a selective phosphatidylinositol 3-kinase inhibitor, and LiCl, a selective GSK3beta inhibitor, abolished LGI3-induced cell migration. We tested beta-catenin levels after LGI3 treatment because the Akt-GSK3beta pathway regulates beta-catenin accumulation, and beta-catenin promotes cell migration. LGI3 treatment increased beta-catenin protein and nuclear localization, whereas LY294002 prevented LGI3-induced focal adhesion kinase and Akt activation as well as beta-catenin accumulation. Overall, these data suggest that LGI3 stimulates HaCaT cell migration following beta-catenin accumulation through the Akt pathway.

[540]

TÍTULO / TITLE: - Cicatricial external auditory canal stenosis caused by ectodermal dysplasia: Rapp-Hodgkin syndrome.

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

REVISTA / JOURNAL: - Ear Nose Throat J. 2013 Jun;92(6):E24-6.

AUTORES / AUTHORS: - Sosulski AB; Hayes JD

INSTITUCIÓN / INSTITUTION: - Department of Surgery, Winthrop-University Hospital, Mineola, NY, USA.

RESUMEN / SUMMARY: - We present a case of recurrent cicatricial stenosis of the external ear canals caused by ectodermal dysplasia, specifically Rapp-Hodgkin syndrome, in a 45-year-old woman. No form of medical or surgical management has produced durable patency of the patient's ear canals, and her hearing loss is being managed with hearing aids. Topical management of the recurring external otitis slows the process but has been unsuccessful in preventing restenosis of both external auditory canals.

[541]

TÍTULO / TITLE: - Role of moesin in hyaluronan induced cell migration in glioblastoma multiforme.

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

REVISTA / JOURNAL: - Mol Cancer. 2013 Jul 15;12:74. doi: 10.1186/1476-4598-12-74.

●● Enlace al texto completo (gratis o de pago) [1186/1476-4598-12-74](#)

AUTORES / AUTHORS: - DeSouza LV; Matta A; Karim Z; Mukherjee J; Wang XS; Krakovska O; Zadeh G; Guha A; Siu KM

INSTITUCIÓN / INSTITUTION: - Department of Chemistry and Centre for Research in Mass Spectrometry, York University, 4700 Keele Street, M3J 1P3 Toronto, Ontario, Canada.

RESUMEN / SUMMARY: - BACKGROUND: A major barrier to effective treatment of glioblastoma multiforme (GBM) is the invasion of glioma cells into the brain parenchyma rendering local therapies such as surgery and radiation therapy ineffective. GBM patients with such highly invasive and infiltrative tumors have poor prognosis with a median survival time of only about a year. However, the mechanisms leading to increased cell migration, invasion and diffused behavior of glioma cells are still poorly understood. METHODS: In the current study, we applied quantitative proteomics for the identification of differentially expressed proteins in GBMs as compared to non-malignant brain tissues. RESULTS: Our study led to the identification of 23 proteins showing overexpression in GBM; these include membrane proteins, moesin and CD44. The results were verified using Western blotting and immunohistochemistry in independent set of GBM and non-malignant brain tissues. Both GBM tissues and glioma cell lines (U87 / U373) demonstrated membranous expression of moesin and CD44, as revealed by immunohistochemistry and immunofluorescence, respectively. Notably, glioma cells transfected with moesin siRNA displayed reduced migration and invasion on treatment with hyaluronan (HA), an important component of the extracellular matrix in GBM. CD44, a transmembrane glycoprotein, acts as a major receptor for hyaluronan (HA). Using co-immunoprecipitation assays, we further demonstrated that moesin interacts with CD44 in glioma cells only after treatment with HA; this implicates a novel role of moesin in HA-CD44 signaling in gliomas. CONCLUSIONS: Our results suggest that development of inhibitors which interfere with CD44-moesin interactions may open a new avenue in the future to mitigate cellular migration in gliomas.

[542]

TÍTULO / TITLE: - Gefitinib selectively inhibits tumor cell migration in EGFR-amplified human glioblastoma.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Aug;15(8):1048-57. doi: 10.1093/neuonc/not053. Epub 2013 Jun 7.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not053](https://doi.org/10.1093/neuonc/not053)

AUTORES / AUTHORS: - Parker JJ; Dionne KR; Massarwa R; Klaassen M; Foreman NK; Niswander L; Canoll P; Kleinschmidt-Demasters BK; Waziri A

INSTITUCIÓN / INSTITUTION: - Corresponding Author: Allen Waziri, MD, Department of Neurosurgery, Academic Office Building One, Rm. 5001, 12631 E 17th Ave., Aurora, CO 80045. allen.waziri@ucdenver.edu.

RESUMEN / SUMMARY: - Background Tissue invasion is a hallmark of most human cancers and remains a major source of treatment failure in patients with glioblastoma (GBM). Although EGFR amplification has been previously associated with more invasive tumor behavior, existing experimental models have not supported quantitative evaluation of interpatient differences in tumor cell migration or testing of patient-specific responses to therapies targeting invasion. To explore these questions, we optimized an ex vivo organotypic slice culture system allowing for labeling and tracking of tumor cells in human GBM slice cultures. Methods With use of time-lapse confocal microscopy of retrovirally labeled tumor cells in slices, baseline differences in migration speed and efficiency were determined and correlated with EGFR amplification in a cohort of patients with GBM. Slices were treated with gefitinib to evaluate anti-invasive effects associated with targeting EGFR. Results Migration analysis identified significant patient-to-patient variation at baseline. EGFR amplification was correlated with increased migration speed and efficiency compared with nonamplified tumors. Critically, gefitinib resulted in a selective and significant reduction of tumor cell migration in EGFR-amplified tumors. Conclusions These data provide the first identification of patient-to-patient variation in tumor cell migration in living human tumor tissue. We found that EGFR-amplified GBM are inherently more efficient in their migration and can be effectively targeted by gefitinib treatment. These data suggest that stratified clinical trials are needed to evaluate gefitinib as an anti-invasive adjuvant for patients with EGFR-amplified GBM. In addition, these results provide proof of principle that primary slice cultures may be useful for patient-specific screening of agents designed to inhibit tumor invasion.

[543]

TÍTULO / TITLE: - miR-19^a and miR-19b Overexpression in Gliomas.

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

REVISTA / JOURNAL: - Pathol Oncol Res. 2013 Jul 4.

●● Enlace al texto completo (gratis o de pago) [1007/s12253-013-9653-](https://doi.org/10.1007/s12253-013-9653-x)

[x](#)

AUTORES / AUTHORS: - Jia Z; Wang K; Zhang A; Wang G; Kang C; Han L; Pu P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tianjin Neurological Institute, Laboratory of Neuro-Oncology, Key Laboratory of Post-trauma Neuro-

repair and Regeneration in Central Nervous System, Ministry of Education, Tianjin Key Laboratory of Injuries, Variations and Regeneration of Nervous System, Tianjin Medical University General Hospital, 152 An-Shan Road, Tianjin, 300052, People's Republic of China.

RESUMEN / SUMMARY: - Astrocytic gliomas are the most common type of human primary brain tumors with poor prognosis. MicroRNAs(miRs) are frequently deregulated in gliomas and play an oncogenic or tumor suppressor role. In our previous study we found that miR-19^a and miR-19b were up-regulated in malignant glioma cell lines by microRNA array. For further validation of this finding, the expression of miR-19^a and miR-19b was detected by qRT-PCR and in situ hybridization(ISH) in 8 malignant glioma cell lines, 43 freshly resected glioma samples and 75 archival paraffin embedded glioma specimens with different grades of malignancy in the present study. The results demonstrate that miR-19^a and miR-19b are overexpressed in glioma cell lines and astrocytic glioma tissues, and their expression level is positively correlated with tumor grades. Additionally, the tumor suppressor gene PTEN is identified as the target of miR-19^a and miR-19b by Luciferase assay. It is speculated that miR-19^a and miR-19b may have an oncogenic role in gliomagenesis at least partially via the negative regulation of PTEN and the molecular mechanism of gliomagenesis in which miR 19^a and miR-19b involved should be investigated further.

[544]

TÍTULO / TITLE: - Angiogenesis inhibition for glioblastoma at the edge: beyond AVAGlio and RTOG 0825.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Aug;15(8):971. doi: 10.1093/neuonc/not106.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not106](#)

AUTORES / AUTHORS: - Weller M; Yung WK

[545]

TÍTULO / TITLE: - Increased carotid intima media thickness is associated with prolactin levels in subjects with untreated prolactinoma: a pilot study.

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

REVISTA / JOURNAL: - Pituitary. 2013 Jun 12.

●● Enlace al texto completo (gratis o de pago) [1007/s11102-013-0495-](#)

[Z](#)

AUTORES / AUTHORS: - Jiang XB; Li CL; He DS; Mao ZG; Liu DH; Fan X; Hu B; Zhu YH; Wang HJ

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Pituitary Adenoma in Guangdong Province, Department of Neurosurgery, First Affiliated Hospital of Sun Yat-sen University, Guangzhou, China, su35qq@sina.com.

RESUMEN / SUMMARY: - Hyperprolactinemia is associated with endothelial dysfunction and atherogenic risk factors, but carotid intima media thickness (IMT) has not been studied in hyperprolactinemic patients. To determine whether untreated hyperprolactinemia contributes to increased carotid IMT. Thirty-one prolactinoma patients and 60 healthy controls were respectively studied. Participants underwent hormone evaluation. Anthropometric parameters (body mass index and blood pressure), inflammatory markers (high-sensitivity C-reactive protein and fibrinogen), serum glucose, insulin, lipid and apolipoprotein profiles were also determined. Endothelial function measured as the flow-mediated dilation (FMD) of a brachial artery and carotid IMT were evaluated using high-resolution ultrasonography. Multivariate linear regression analysis was applied to identify independent determinants of FMD and carotid IMT. Triglycerides, homeostasis model assessment of insulin resistance, apolipoprotein (apo)B/apoA-I ratio, high-sensitivity C-reactive protein (hsCRP) and fibrinogen were significantly higher, while apoA-I was significantly lower in patients with prolactinomas than in the controls. Meanwhile, decreased FMD and increased carotid IMT were observed in hyperprolactinemic group. Serum prolactin was positively correlated with triglycerides, apoB/apoA-I ratio, hypogonadal, hsCRP and fibrinogen ($P < 0.05$), but inversely associated with apoA-I and HDL-C ($P \leq 0.001$). Moreover, prolactin was found negatively correlated with FMD ($r = -0.576$, $P < 0.0001$), and positively correlated with mean carotid IMT ($r = 0.652$, $P < 0.0001$). Multivariate regression analysis revealed that prolactin determined, independent of traditional risk factors, FMD ($B = -0.589$, 95 % confidence interval (CI) -2.525 to -0.804 , $P = 0.001$) and mean carotid IMT ($B = 0.527$, 95 % CI 0.027 - 0.069 , $P < 0.0001$). Hyperprolactinemia may be involved in the preclinical increase in carotid IMT, directly or by promoting atherogenic factors, including insulin resistance, low-grade inflammation and endothelial dysfunction. Additional studies are warranted to confirm our findings and explore the mechanisms underlying prolactin-associated early atherosclerosis.

[546]

TÍTULO / TITLE: - Synergy between the ectoenzymes CD39 and CD73 contributes to adenosinergic immunosuppression in human malignant gliomas.

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

REVISTA / JOURNAL: - Neuro Oncol. 2013 Jun 4.

●● Enlace al texto completo (gratis o de pago) [1093/neuonc/not067](http://1093.neuonc/not067)

AUTORES / AUTHORS: - Xu S; Shao QQ; Sun JT; Yang N; Xie Q; Wang DH; Huang QB; Huang B; Wang XY; Li XG; Qu X

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery (S.X., N.Y., D.-H.W., B.H., X.-Y.W., X.-G.L.); Institute of Basic Medical Sciences and Key Laboratory of Cardiovascular Proteomics of Shandong Province (Q.-Q.S., J.-T.S., Q.X., X.Q.); and Department of Emergency Surgery, Qilu Hospital of Shandong

University, Jinan, China (Q.-B.H.); Brain Science Research Institute, Shandong University, Jinan, China (S.X., N.Y., D.-H.W., B.H., X.-Y.W., X.-G.L.).

RESUMEN / SUMMARY: - BackgroundThe importance of ectoenzymes CD39 and CD73 in mediating adenosinergic immunosuppression has been recognized, but their roles in human malignant glioma-associated immunosuppression remain largely unknown.MethodsIn this study, the ectoenzyme characteristics of malignant glioma cells and infiltrating CD4+ T lymphocytes isolated from newly diagnosed malignant glioma patients were investigated. The ectoenzyme activities of both cell populations were determined by nucleotide hydrolysis assay. The immunosuppressive property of the CD39-CD73 synergic effect was evaluated via responder T-cell proliferation assay.ResultsWe observed that CD39-CD73+ glioma cells and infiltrating CD4+CD39highCD73low T lymphocytes exhibited 2 distinct but complementary ectoenzyme phenotypes, which were further verified by enzyme activity assay. The nucleotide hydrolysis cascade was incomplete unless CD39 derived from T lymphocytes and CD73 collaborated synergistically. We demonstrated that increased suppression of responder CD4+ T-cell proliferation was induced by CD4+CD39+ T cells in the presence of CD73+ glioma cells, which could be alleviated by the CD39 inhibitor ARL67156, the CD73 inhibitor APCP, or the adenosine receptor A2aR antagonist SCH58261. In addition, survival analysis suggested that CD73 downregulation was a positive prognostic factor related to the extended disease-free survival of glioblastoma patients.ConclusionsOur data indicate that glioma-derived CD73 contributes to local adenosine-mediated immunosuppression in synergy with CD39 from infiltrating CD4+CD39+ T lymphocytes, which could become a potential therapeutic target for treatment of malignant glioma and other immunosuppressive diseases.

[547]

TÍTULO / TITLE: - Hyponatremia associated with primary central nervous system lymphoma.

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

REVISTA / JOURNAL: - Clin Exp Nephrol. 2013 Jul 18.

●● Enlace al texto completo (gratis o de pago) [1007/s10157-013-0839-](#)

[Z](#)

AUTORES / AUTHORS: - Ma SK; Lee KH; Kim SW

INSTITUCIÓN / INSTITUTION: - Department of Internal Medicine, Chonnam National University Medical School, 42 Jebong-ro, Dongku, Gwangju, 501-757, Korea.

[548]

TÍTULO / TITLE: - Dysembryoplastic neuroepithelial tumor with rapid recurrence of pilocytic astrocytoma component.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Jul 24.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s10014-013-0155-](#)

[Z](#)

AUTORES / AUTHORS: - Takeuchi Y; Arakawa Y; Mikami Y; Matsumoto R; Miyamoto S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Kyoto University Graduate of Medicine, 54 Shogoin Kawahara-cho, Sakyo-ku, Kyoto, 606-8507, Japan.

RESUMEN / SUMMARY: - Dysembryoplastic neuroepithelial tumor (DNT) rarely has aggressive behavior with recurrence. The authors describe a case of DNT with rapid re-growth and features of pilocytic astrocytoma. A 19-year-old girl presented with a 3-year history of complex partial seizure, which was presumably because of DNT located in the left parietal lobe. The tumor was resected, although a tiny residual lesion with cystic space enlarged with ring enhancement identified on MRI 14 days after surgery resulted in re-excision. The recurrent tumor was eventually proved to be predominantly composed of pilocytic astrocytoma. DNT is known to recur only rarely as a tumor with morphologically different components, and no cases of recurrent DNT with rapidly-growing pilocytic astrocytoma have hitherto been reported in the literature. This phenomenon may be histological “replacement” at recurrence.

[549]

TÍTULO / TITLE: - The evaluation of malignant astrocytoma score (MAS).

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

REVISTA / JOURNAL: - Vojnosanit Pregl. 2013 May;70(5):452-6.

AUTORES / AUTHORS: - Kojadinovic Z; Vulekovic P; Jajic D; Cigic T; Papic V; Djilvesi D; Horvat I; Karan M

INSTITUCIÓN / INSTITUTION: - Clinic for Neurosurgery, Clinical Center of Vojvodina, Novi Sad, Serbia. zkoja@yahoo.com

RESUMEN / SUMMARY: - BACKGROUND/AIM: At the moment there are few scoring systems for malignant astrocytoma but they are not widely accepted. The aim of this study was to evaluate malignant astrocytoma score (MAS) on a new group of patients with malignant astrocytoma, to compare MAS with other prognostic tools and to describe the use of MAS in everyday practice in neurooncology. METHODS: The study was performed on 124 patients with supratentorial malignant astrocytoma grade III or IV. They were operated on and subsequently irradiated with 50-60 Gy. RESULTS: The mean age of the patients was 57.3 years. The mean Karnofski performance status (KPS) of the functional impairment was 54. The removal of the tumor > 90% was done in 59.7% of patients. The mean survival was 9.1 months, and 27.4% of patients had a 12-month survival. The area under receiver operating characteristic (ROC) curve (AUC) of the MAS for predicting 6-, 12- and 18-month survival was

0.754, 0.783 and 0.882, respectively. We compared the MAS with the two mostly cited scoring systems. The AUC for the same prediction for medical research council (MRC) was 0.601, 0.693, 0.772 respectively. For the Radiation Therapy Oncology Group (RTOG) the AUC was 0.732, 0.765, 0.827, respectively. CONCLUSION: MAS represents a useful scoring system for determining illness severity and prognosis in patients with malignant supratentorial astrocytoma. It can be helpful in comparing single patients or groups of patients, as well as results of different treatments and in controlling the quality of hospital treatment and so on.

[550]

TÍTULO / TITLE: - Immunoreactivity of Wnt5a, Fzd2, Fzd6, and Ryk in glioblastoma: evaluative methodology for DAB chromogenic immunostaining.

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

REVISTA / JOURNAL: - Brain Tumor Pathol. 2013 Jun 9.

●● Enlace al texto completo (gratis o de pago) [1007/s10014-013-0153-](#)

[1](#)

AUTORES / AUTHORS: - Hirano H; Yonezawa H; Yunoue S; Habu M; Uchida H; Yoshioka T; Kishida S; Kishida M; Oyoshi T; Fujio S; Sugata S; Yamahata H; Hanaya R; Arita K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Graduate School of Medical and Dental Sciences, Kagoshima University, 8-35-1 Sakuragaoka, Kagoshima, Kagoshima, 890-8520, Japan, hirahira@m2.kufm.kagoshima-u.ac.jp.

RESUMEN / SUMMARY: - The aim of this study was to determine the influence of Wnt5a and its receptors on the survival of glioblastoma patients and to determine reliable evaluation methods for immunohistochemistry. Diagnostic specimens from 41 histopathologically confirmed primary glioblastoma patients whose Gd-enhanced tumors had been totally removed were immunohistochemically stained for Wnt5a, Fzd2, Fzd6, and Ryk. The immunoreactivity was evaluated using the following methods: (A) grayscale optical density after color deconvolution, (B) percentage of stained cells, (C) density of stained cells, (D) staining amount (multiplication product of B and C), and (E) staining rank. The data sets of A to E were statistically evaluated by correlation matrix analysis and regression analysis. The influence of the expression of the markers on survival was analyzed using a proportional hazard model. The results of color deconvolution (A) were well correlated with the results of the staining rank (E). In the semiquantitative results (B, C, and D), the staining amount (D) tended to show a better correlation with results of color deconvolution (A). Among all data sets, color deconvolution (A) demonstrated the most preferable fit in a proportional hazard model, and the expression of Fzd2 and Fzd6 was associated with poor prognosis in glioblastoma patients.

[551]

TÍTULO / TITLE: - Pituitary incidentaloma.

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

REVISTA / JOURNAL: - Clin Med. 2013 Jun;13(3):296-8. doi: 10.7861/clinmedicine.13-3-296.

●● Enlace al texto completo (gratis o de pago) [7861/clinmedicine.13-3-](#)

[296](#)

AUTORES / AUTHORS: - Bevan JS

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[552]

TÍTULO / TITLE: - Profiling and sequence analysis of gangliosides in human astrocytoma by high-resolution mass spectrometry.

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

REVISTA / JOURNAL: - Anal Bioanal Chem. 2013 Jul 23.

●● Enlace al texto completo (gratis o de pago) [1007/s00216-013-7173-](#)

[X](#)

AUTORES / AUTHORS: - Zamfir AD; Fabris D; Capitan F; Munteanu C; Vukelic Z; Flangea C

INSTITUCIÓN / INSTITUTION: - Department of Chemical and Biological Sciences, "Aurel Vlaicu" University of Arad, Revolutiei Blvd. 77, 310130, Arad, Romania, alina.zamfir@uav.ro.

RESUMEN / SUMMARY: - In this preliminary investigation, a low-grade astrocytoma (AcT) is investigated by high-resolution (HR) mass spectrometry (MS) aiming at characterization of gangliosides with potential biomarker value. The research was conducted towards a comparative mapping of ganglioside expression in AcT, its surrounding tissue (ST) and a normal control brain tissue (NT). HR MS was conducted in the negative ion mode nanoelectrospray ionization (nanoESI). Fragmentation analysis was carried out by collision-induced dissociation (CID) MS2-MS4. Due to the high resolving power and mass accuracy, by comparative mapping of the ganglioside extracts from AcT, ST and NT, under identical conditions, 37 different species in AcT, 40 in ST and 56 in NT were identified. AcT and ST were found to contain 18 identical ganglioside components. Among all three specimens, ST extract presented the highest levels of sialylation, fucosylation and acetylation, a feature which might be correlated to the tumor expansion in the adjacent brain area. MS mapping indicated also that AcT, ST and NT share one doubly deprotonated molecule at m/z 1063.31, attributable to GT1(d18:1/18:0) or GT1(d18:0/18:1). CID MS2-MS4 on these particular ions detected in AcT and ST provided data supporting GT1c isomer in the investigated astrocytoma tissue. Our results show that HR

MS has a remarkable potential in brain cancer research for the determination of tumor-associated markers and for their structural determination.

[553]

TÍTULO / TITLE: - Effect of intensity-modulated radiotherapy versus three-dimensional conformal radiotherapy on clinical outcomes in patients with glioblastoma multiforme.

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

REVISTA / JOURNAL: - Chin Med J (Engl). 2013 Jun;126(12):2320-4.

AUTORES / AUTHORS: - Chen YD; Feng J; Fang T; Yang M; Qiu XG; Jiang T

INSTITUCIÓN / INSTITUTION: - Department of Oncology, Beijing Shijitan Hospital, Capital Medical University, Beijing 100038, China.

RESUMEN / SUMMARY: - BACKGROUND: Few studies were reported on the comparison of clinical outcomes between intensity-modulated radiotherapy (IMRT) and three-dimensional conformal radiotherapy (3D-CRT) in the treatment of glioblastoma multiforme (GBM). This study aimed to determine whether IMRT improves clinical outcomes compared with 3D-CRT in patients with GBM. METHODS: The records of 54 patients with newly-diagnosed GBM from July 2009 to December 2010 were reviewed. The patients underwent postoperative IMRT or 3D-CRT with concurrent and adjuvant temozolomide. Kaplan-Meier method and log rank test were used to estimate differences of patients' survival. RESULTS: The median follow-up was 13 months. Of the 54 patients, fifty (92.6%) completed the combined modality treatment. The 1-year overall survival rate (OS) was 79.6%. The pattern of failure was predominantly local. A comparative analysis revealed that no statistical difference was observed between the IMRT group (n = 21) and the 3D-CRT group (n = 33) for 1-year OS (89.6% vs. 75.8%, P = 0.795), or 1-year progression-free survival (PFS) (61.0% vs. 45.5%, P = 0.867). In dosimetric comparison, IMRT seemed to allow better sparing of organs at risk than 3D-CRT did (P = 0.050, P = 0.055). However, there was no significant difference for toxicities of irradiation between the IMRT group and the 3D-CRT group. CONCLUSIONS: Our preliminary results suggested that delivering standard radiation doses by IMRT is unlikely to improve local control or overall survival for GBM compared with 3D-CRT. Given this lack of survival benefit and increased costs of IMRT, the utilization of IMRT treatment for GBM needs to be carefully rationalized.

[554]

TÍTULO / TITLE: - Hypermethylation of testis derived transcript gene promoter significantly correlates with worse outcomes in glioblastoma patients.

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

REVISTA / JOURNAL: - Chin Med J (Engl). 2013 Jun;126(11):2062-6.

AUTORES / AUTHORS: - Wang LJ; Bai Y; Bao ZS; Chen Y; Yan ZH; Zhang W; Zhang QG

INSTITUCIÓN / INSTITUTION: - Department of Immunology, Capital Medical University, Beijing 100069, China.

RESUMEN / SUMMARY: - BACKGROUND: Glioblastoma is the most common and lethal cancer of the central nervous system. Global genomic hypomethylation and some CpG island hypermethylation are common hallmarks of these malignancies, but the effects of these methylation abnormalities on glioblastomas are still largely unclear. Methylation of the O6-methylguanine-DNA methyltransferase promoter is currently an only confirmed molecular predictor of better outcome in temozolomide treatment. To better understand the relationship between CpG island methylation status and patient outcome, this study launched DNA methylation profiles for thirty-three primary glioblastomas (pGBMs) and nine secondary glioblastomas (sGBMs) with the expectation to identify valuable prognostic and therapeutic targets. METHODS: We evaluated the methylation status of testis derived transcript (TES) gene promoter by microarray analysis of glioblastomas and the prognostic value for TES methylation in the clinical outcome of pGBM patients. Significance analysis of microarrays was used for genes significantly differently methylated between 33 pGBM and nine sGBM. Survival curves were calculated according to the Kaplan-Meier method, and differences between curves were assessed using the log-rank test. Then, we treated glioblastoma cell lines (U87 and U251) with 5-aza-2-deoxycytidines (5-aza-dC) and detected cell biological behaviors. RESULTS: Microarray data analysis identified TES promoter was hypermethylated in pGBMs compared with sGBMs ($P < 0.05$). Survival curves from the Kaplan-Meier method analysis revealed that the patients with TES hypermethylation had a short overall survival ($P < 0.05$). This abnormality is also confirmed in glioblastoma cell lines (U87 and U251). Treating these cells with 5-aza-dC released TES protein expression resulted in significant inhibition of cell growth ($P = 0.013$). CONCLUSIONS: Hypermethylation of TES gene promoter highly correlated with worse outcome in pGBM patients. TES might represent a valuable prognostic marker for glioblastoma.

[555]

TÍTULO / TITLE: - Solitary intracranial tuberculoma mimicking a malignant tumor in a patient without tubercular lesions or a history of disease: a case report.

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

REVISTA / JOURNAL: - Bosn J Basic Med Sci. 2013 May;13(2):129-33.

AUTORES / AUTHORS: - Bustamante-Rengifo JA; Sua LF; Astudillo M; Bravo LE

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RESUMEN / SUMMARY: - Cerebral tuberculoma is a rare cause of intracranial mass. In Latin America and Colombia where tuberculosis is endemic, it represents between 5 and 30% of brain tumours. A 53-year-old Colombian woman was admitted to a third-level hospital in Cali, Colombia, after reporting loss of consciousness, headache, paresthesia, and flight of ideas for a two-week period. Imaging studies showed a left frontal mass of malignant appearance whose first possible diagnosis was metastatic neoplasia or glioma. With the initial results, absence of history of chronic infectious diseases and a history of thyroidectomy, a surgical procedure was carried out and a histopathological and molecular evaluation was conducted. The pathology report noted necrotizing granulomatous inflammation and tissue staining and molecular tests for detection of M. tuberculosis were positive and the patient was managed with anti-tubercular treatment. Intracranial masses are frequently targeted as a malignant neoplastic disease for surgical treatment. Considering an infectious etiology must be a diagnostic option.

[556]

TÍTULO / TITLE: - MiRNA-329 targeting E2F1 inhibits cell proliferation in glioma cells.

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

REVISTA / JOURNAL: - J Transl Med. 2013 Jul 17;11(1):172. doi: 10.1186/1479-5876-11-172.

●● Enlace al texto completo (gratis o de pago) [1186/1479-5876-11-172](#)

AUTORES / AUTHORS: - Xiao B; Tan L; He B; Liu Z; Xu R

INSTITUCIÓN / INSTITUTION: - The neurosurgery Department, General Hospital of Beijing Military Command of People's Liberation Army (PLA), Bei jing 100700, P, R, China. zjxuruxiang@163.com.

RESUMEN / SUMMARY: - BACKGROUND: MicroRNAs have recently emerged as key regulators of cancers, miR-329 located on 14q32.31 is one of down-regulated miRNAs in glioma, but the function and molecular mechanisms of miR-329 in determining the malignant phenotype of human glioma are elusive. This study therefore was conducted to investigate the role of miR-329 in biological behaviors of human glioma LN18 and T98G cell lines and its molecular mechanisms. METHODS: Nine patients with GBM were analyzed for the expression of miR-329 by quantitative RT-PCR. MiR-329 overexpression was established by transfecting miR-329 precursor into LN18 and T98G cells, and its effects on cell proliferation were studied using MTT assay, anchorage-independent growth ability assay, colony formation assays, Bromodeoxyuridine labeling and immunofluorescence. The effects of miR-329 on cell cycle were studied by flow cytometry. The target of miR-329 was determined by luciferase assays. The regulation of miR-329 on Akt pathway was determined by western blot. RESULTS: The E2F1 was identified as the target of miR-329. Overexpression of miR-329 blocked G1/S transition in LN18 and T98G cell lines, dramatically suppressed cell proliferation and the ability of colony

formation. MiR-329 significantly decreased the phosphorylation levels of intracellular kinases Akt and expression of cyclin D1, but the expression of p21 was upregulated, cell growth was suppressed by inhibiting E2F1-mediated Akt pathway. CONCLUSIONS: MiR-329 may inhibit cell proliferation in human glioma cells through regulating E2F1-mediated suppression of Akt pathway.

[557]

TÍTULO / TITLE: - Influence of GSTM1 and GSTT1 polymorphisms on the survival rate of patients with malignant glioma under perillyl alcohol-based therapy.

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

REVISTA / JOURNAL: - Genet Mol Res. 2013 May 14;12(2):1621-30. doi: 10.4238/2013.May.14.2.

●● Enlace al texto completo (gratis o de pago) [4238/2013.May.14.2](#)

AUTORES / AUTHORS: - Silva MM; Da Fonseca CO; Moura-Neto R; Carvalho JF; Quirico-Santos T; Carvalho MG

INSTITUCIÓN / INSTITUTION: - Laboratorio de Controle da Expressao Genica, Instituto de Biofisica, Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, Brasil.

RESUMEN / SUMMARY: - GSTM1 (glutathione S-transferase mu 1) and GSTT1 (glutathione S-transferase theta 1) are critical enzymes for detoxification of endogenous and environmental carcinogens. Constitutive GST gene polymorphisms may be associated with increased risk for cancer development. We made an explorative study of a Brazilian population with malignant glioma to determine whether GSTM1 and GSTT1 genetic polymorphisms influence the response to intranasal administration of perillyl alcohol and the survival rate. Patients were stratified into groups according to clinical presentation, tumor classification, and tumor location. Circulating DNA was extracted from blood plasma or serum, and genotypes were detected by multiplex PCR. The cohort included 95 patients with recurrent malignant glioma included in a Phase I/II clinical trial with perillyl alcohol and 100 matched healthy control subjects. GSTM1 frequency was similar in patients with glioma (44%) and healthy controls (54%), but GSTT1 deletion was found in 11.5% patients, contrasting with 36% in controls. A longer survival rate was associated with a lack of GSTM1 deletion (31 weeks) and a deletion for GSTT1 (28 weeks). A poor survival rate was associated with GSTM1 deletion (23 weeks) and with a lack of a GSTT1 deletion (19 weeks). A significantly lower frequency of GSTT1 deletion in glioma patients compared to healthy controls indicates that GSTT1 deletion may exert a protective role against gliomagenesis, influence therapeutic response to intranasal perillyl alcohol treatment, and increase overall survival, especially considering tumor topography.

[558]

TÍTULO / TITLE: - Acute promyelocytic leukemia presenting with central nervous system involvement at initial diagnosis.

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

REVISTA / JOURNAL: - Rinsho Ketsueki. 2013 Jun;54(6):574-8.

AUTORES / AUTHORS: - Sakurai T; Kuroda H; Yamada M; Arihara Y; Jyomen W; Hirako T; Abe T; Fujii S; Maeda M; Fujita M; Kato J

INSTITUCIÓN / INSTITUTION: - Department of Gastroenterology and Hematology/Clinical Oncology, Internal Medicine, Steel Memorial Muroran General Hospital.

RESUMEN / SUMMARY: - We describe a rare case of acute promyelocytic leukemia (APL) presenting with central nervous system (CNS) involvement at the time of initial diagnosis. A 58-year-old male was hospitalized with palpitations, dyspnea, high grade fever, photophobia, and disturbance of consciousness in March 2010. APL was diagnosed by bone marrow (BM) examination. The cytogenetic analysis of BM cells demonstrated t(15;17)(q22;q11), and PML-RARA chimeric gene was detected by reverse transcriptase-polymerase chain reaction assay. Magnetic resonance imaging of the brain revealed several high intensity regions in the cerebrum and cerebellum. CNS involvement was diagnosed based on the appearance of APL blasts in cerebrospinal fluid (CSF). The patient was treated with all-trans retinoic acid (ATRA), and systemic chemotherapy consisting of idarubicin and cytarabine according to the Japan Adult Leukemia Study Group (JALSG) APL 204 protocol. He was then treated with continuous intrathecal administration of cytotoxic drugs (methotrexate, cytarabine, prednisolone) after systemic chemotherapy, achieving complete remission (CR) in both BM and the CNS. To date, he has been maintained in complete molecular remission in both BM and the CSF for 28 months, to date.

[559]

TÍTULO / TITLE: - Marker-independent Method for Isolating Slow-Dividing Cancer Stem Cells in Human Glioblastoma.

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

REVISTA / JOURNAL: - Neoplasia. 2013 Jul;15(7):840-7.

AUTORES / AUTHORS: - Richichi C; Brescia P; Alberizzi V; Fornasari L; Pelicci G

INSTITUCIÓN / INSTITUTION: - Department of Experimental Oncology, European Institute of Oncology, Milan, Italy.

RESUMEN / SUMMARY: - Glioblastoma (GBM) is a devastating brain tumor with a poor survival outcome. It is generated and propagated by a small subpopulation of rare and hierarchically organized cells that share stem-like features with normal stem cells but, however, appear dysregulated in terms of self-renewal and proliferation and aberrantly differentiate into cells forming the bulk of the disorganized cancer tissues. The complexity and heterogeneity of human GBMs underlie the lack of standardized and effective treatments. This

study is based on the assumption that available markers defining cancer stem cells (CSCs) in all GBMs are not conclusive and further work is required to identify the CSC. We implemented a method to isolate CSCs independently from cell surface markers: four patient-derived GBM neurospheres containing stem, progenitors, and differentiated cells were labeled with PKH-26 fluorescent dye that reliably selects for cells that divide at low rate. Through in vitro and in vivo assays, we investigated the growth and self-renewal properties of the two different compartments of high- and slow-dividing cells. Our data demonstrate that only slow-dividing cells retain the ability of a long-lasting self-renewal capacity after serial in vitro passaging, while high-dividing cells eventually exhaust. Moreover, orthotopic transplantation assay revealed that the incidence of tumors generated by the slow-dividing compartment is significantly higher in the four patient-derived GBM neurospheres analyzed. Importantly, slow-dividing cells feature a population made up of homogeneous stem cells that sustain tumor growth and therefore represent a viable target for GBM therapy development.

[560]

TÍTULO / TITLE: - Hypertensive crisis in a young man during micturition: contrast-enhanced ultrasound for diagnosis of paravesical paraganglioma.

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

REVISTA / JOURNAL: - Ultraschall Med. 2013 Jun;34(3):207-9.

AUTORES / AUTHORS: - Meyer G

INSTITUCIÓN / INSTITUTION: - Gesine.Meyer@kgu.de

[561]

TÍTULO / TITLE: - The natural killer cell response and tumor debulking are associated with prolonged survival in recurrent glioblastoma patients receiving dendritic cells loaded with autologous tumor lysates.

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

REVISTA / JOURNAL: - Oncoimmunology. 2013 Mar 1;2(3):e23401.

●● [Enlace al texto completo \(gratis o de pago\) 4161/onci.23401](#)

AUTORES / AUTHORS: - Pellegatta S; Eoli M; Frigerio S; Antozzi C; Bruzzone MG; Cantini G; Nava S; Anghileri E; Cuppini L; Cuccarini V; Ciusani E; Dossena M; Pollo B; Mantegazza R; Parati EA; Finocchiaro G

INSTITUCIÓN / INSTITUTION: - Unit of Molecular Neuro-Oncology; Fondazione I.R.C.C.S. Istituto Neurologico C. Besta; Milan, Italy ; Department of Experimental Oncology; European Institute of Oncology - Campus IFOM-IEO; Milan, Italy.

RESUMEN / SUMMARY: - Recurrent glioblastomas (GBs) are highly aggressive tumors associated with a 6-8 mo survival rate. In this study, we evaluated the possible benefits of an immunotherapeutic strategy based on mature dendritic

cells (DCs) loaded with autologous tumor-cell lysates in 15 patients affected by recurrent GB. The median progression-free survival (PFS) of this patient cohort was 4.4 mo, and the median overall survival (OS) was 8.0 mo. Patients with small tumors at the time of the first vaccination (< 20 cm³; n = 8) had significantly longer PFS and OS than the other patients (6.0 vs. 3.0 mo, p = 0.01; and 16.5 vs. 7.0 mo, p = 0.003, respectively). CD8⁺ T cells, CD56⁺ natural killer (NK) cells and other immune parameters, such as the levels of transforming growth factor beta, vascular endothelial growth factor, interleukin-12 and interferon gamma (IFN γ), were measured in the peripheral blood and serum of patients before and after immunization, which enabled us to obtain a vaccination/baseline ratio (V/B ratio). An increased V/B ratio for NK cells, but not CD8⁺ T cells, was significantly associated with prolonged PFS and OS. Patients exhibiting NK-cell responses were characterized by high levels of circulating IFN γ and E4BP4, an NK-cell transcription factor. Furthermore, the NK cell V/B ratio was inversely correlated with the TGF β 2 and VEGF V/B ratios. These results suggest that tumor-loaded DCs may increase the survival rate of patients with recurrent GB after effective tumor debulking, and emphasize the role of the NK-cell response in this therapeutic setting.

[562]

TÍTULO / TITLE: - MRI T2 hypointensity of metastatic brain tumors from gastric and colonic cancers.

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

REVISTA / JOURNAL: - Int J Clin Oncol. 2013 Jul 17.

●● Enlace al texto completo (gratis o de pago) [1007/s10147-013-0596-](#)

[8](#)

AUTORES / AUTHORS: - Hirano H; Yokoyama S; Yunoue S; Yonezawa H; Yatsushiro K; Yoshioka T; Hanaya R; Tokimura H; Arita K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Graduate School of Medical and Dental Sciences, Kagoshima University, 8-35-1 Sakuragaoka, Kagoshima, 890-8520, Japan, hirahira@m2.kufm.kagoshima-u.ac.jp.

RESUMEN / SUMMARY: - BACKGROUND: Metastatic brain tumors from gastric and colon cancers are frequently revealed by hypointensity on T2-weighted magnetic resonance images (MRIs). However, the reason for this T2 hypointensity has yet to be clarified. We hypothesize that it is due to collagen deposition within the tissues. METHODS: Seven metastatic brain tumors, from 3 gastric cancers and 4 colon cancers were investigated. The degree of hypointensity of these tumors in T2-weighted images was quantitatively assessed as the ratio of gray-scale densities of tumor to brain using ImageJ. The result was compared with the amount of collagen in the resected specimens, which was quantified by ImageJ analysis software, utilizing the colour deconvolution method following Azan-Mallory staining. The degree of hypointensity was also compared with the ratio of viable epithelial component

area/whole tissue area. Additionally, collagen distribution was studied by immunohistochemical staining. RESULTS: There was a clear negative correlation between intensity in T2-weighted images of these metastatic tumors and the amount of collagen they contained ($R^2 = 0.766$). However, there was no significant correlation between the T2 intensity and the ratio of viable epithelial component. Immunohistochemical analysis revealed that collagen types I, III, VII, X, and XI were expressed in the epithelial components and types IV, V, and VI were expressed in the stromal areas of the metastatic tumors. Collagen deposition was observed not only in stromal fibrous areas, but also in cytoplasmic areas in these metastatic tumors. CONCLUSIONS: Hypointensity of metastatic brain tumors arising from gastric and colonic cancers may be due to the accumulation of collagen in the tissues.

[563]

TÍTULO / TITLE: - Neurosurgical treatment of oligodendroglial tumors in children and adolescents: a single-institution series of 35 consecutive patients.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Jul 19.

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

[3171/2013.6.PEDS12586](#)

AUTORES / AUTHORS: - Lundar T; Due-Tonnessen BJ; Egge A; Scheie D; Stensvold E; Brandal P

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery.

RESUMEN / SUMMARY: - Object The object of this study was to delineate long-term results of the surgical treatment of pediatric CNS tumors classified as oligodendroglioma (OD) or oligoastrocytoma (OA) WHO Grade II or III. Methods A cohort of 45 consecutive patients 19 years or younger who had undergone primary resection of CNS tumors originally described as oligodendroglial during the years 1970-2009 at a single institution were reviewed in this retrospective study of surgical morbidity, mortality, and academic achievement and/or work participation. Gross motor function and activities of daily living were scored using the Barthel Index (BI). Results Patient records for 35 consecutive children and adolescents who had undergone resection for an OA (17 patients) or OD (18 patients) were included in this study. Of the 35 patients, 12 were in the 1st decade of life at the first surgery, whereas 23 were in the 2nd decade. The male/female ratio was 1.19 (19/16). No patient was lost to follow-up. The tumor was localized to the supratentorial compartment in 33 patients, the posterior fossa in 1 patient, and the cervical medulla in 1 patient. Twenty-four tumors were considered to be WHO Grade II, and 11 were classified as WHO Grade III. Among these latter lesions were 2 tumors initially classified as WHO Grade II and later reclassified as WHO Grade III following repeat surgery. Fifty-four tumor resections were performed. Two patients underwent repeat tumor resection within 5 days of the initial procedure, after MRI confirmed residual

tumor. Another 10 patients underwent a second resection because of clinical deterioration and progressive disease at time points ranging from 1 month to 10 years after the initial operation. Six patients underwent a third resection, and 1 patient underwent a fourth excision following tumor dissemination to the spinal canal. Sixteen (46%) of the 35 children received adjuvant therapy: 7, fractionated radiotherapy; 4, chemotherapy; and 5, both fractionated radiotherapy and chemotherapy. One patient with primary supratentorial disease experienced clinically malignant development with widespread intraspinal dissemination 9 years after initial treatment. Only 2 patients needed treatment for persistent hydrocephalus. In this series there was no surgical mortality, which was defined as death within 30 days of resection. However, 12 patients in the study, with follow-up times from 1 month to 33 years, died. Twenty-three patients, with follow-up times from 4 to 31 years, remained alive. Among these survivors, the BI was 100 (normal) in 22 patients and 80 in 1 patient. Nineteen patients had full- or part-time work or were in normal school programs. Conclusions Pediatric oligodendroglial tumors are mainly localized to the supratentorial compartment and more often occur in the 2nd decade of life rather than the 1st. Two-thirds of the patients remained alive after follow-ups from 4 to 31 years. Twelve children succumbed to their disease, 9 of them within 3 years of resection despite combined treatment with radio- and chemotherapy. Three of them remained alive from 9 to 33 years after primary resection. Among the 23 survivors, a stable, very long-term result was attainable in at least 20. Five-, 10-, 20-, and 30-year overall survival in patients with Grade II tumors was 92%, 92%, 92%, and 88%, respectively.

[564]

TÍTULO / TITLE: - Next-generation sequencing in the clinical genetic screening of patients with pheochromocytoma and paraganglioma.

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

REVISTA / JOURNAL: - Endocr Connect. 2013 May 28;2(2):104-11. doi: 10.1530/EC-13-0009. Print 2013 Jun 1.

●● Enlace al texto completo (gratis o de pago) [1530/EC-13-0009](#)

AUTORES / AUTHORS: - Crona J; Verdugo AD; Granberg D; Welin S; Stalberg P; Hellman P; Bjorklund P

INSTITUCIÓN / INSTITUTION: - Department of Surgical Sciences Uppsala University S-751 85, Uppsala Sweden.

RESUMEN / SUMMARY: - BACKGROUND: Recent findings have shown that up to 60% of pheochromocytomas (PCCs) and paragangliomas (PGLs) are caused by germline or somatic mutations in one of the 11 hitherto known susceptibility genes: SDHA, SDHB, SDHC, SDHD, SDHAF2, VHL, HIF2A (EPAS1), RET, NF1, TMEM127 and MAX. This list of genes is constantly growing and the 11 genes together consist of 144 exons. A genetic screening test is extensively time consuming and expensive. Hence, we introduce next-generation sequencing (NGS) as a time-efficient and cost-effective alternative. METHODS:

Tumour lesions from three patients with apparently sporadic PCC were subjected to whole exome sequencing utilizing Agilent Sureselect target enrichment system and Illumina Hi seq platform. Bioinformatics analysis was performed in-house using commercially available software. Variants in PCC and PGL susceptibility genes were identified. RESULTS: We have identified 16 unique genetic variants in PCC susceptibility loci in three different PCC, spending less than a 30-min hands-on, in-house time. Two patients had one unique variant each that was classified as probably and possibly pathogenic: NF1 Arg304Ter and RET Tyr791Phe. The RET variant was verified by Sanger sequencing. CONCLUSIONS: NGS can serve as a fast and cost-effective method in the clinical genetic screening of PCC. The bioinformatics analysis may be performed without expert skills. We identified process optimization, characterization of unknown variants and determination of additive effects of multiple variants as key issues to be addressed by future studies.

[565]

TÍTULO / TITLE: - Diagnostic value of brain biopsy in a pediatric multiple sclerosis mimicking brain stem glioma.

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

REVISTA / JOURNAL: - Nihon Rinsho Meneki Gakkai Kaishi. 2013;36(3):175-9.

AUTORES / AUTHORS: - Nakazawa Y; Maekawa T; Oana S; Ishiguro A; Ohta S; Terashima H; Kashii H; Kubota M; Tsutsumi Y; Nakazawa A; Morota N; Sakai H

INSTITUCIÓN / INSTITUTION: - Department of General Pediatrics and Interdisciplinary Medicine, National Center for Child Health and Development.

RESUMEN / SUMMARY: - Diagnosis of multiple sclerosis (MS) is difficult when the lesion mimics glioma or cerebral encephalitis. We report a case of pediatric MS initially suspected as brain stem glioma. An 11-year-old boy developed left foot joint pain followed by progressive symptoms such as left arm and leg weakness, dysarthria, paraplegia, and decreased level of consciousness. He subsequently developed respiratory distress requiring endotracheal intubation and mechanical ventilation. Magnetic resonance imaging showed a mass measuring 2 cm in the medulla oblongata. Although this mass was initially suspected as a glioma, the patient's acutely progressive disease course was not consistent with this diagnosis. Open biopsy revealed inflammation and demyelination, but no malignant cells were detected. He was treated with steroid pulse therapy, which showed dramatic effects. Nine months later, he developed another episode characterized by several neurological symptoms, and the diagnosis of MS was clinically confirmed. Open brain stem biopsy is technically demanding, but this case demonstrates that appropriate neurosurgical evaluation can play an important role in diagnosis by ruling out glioma and confirming MS.

[566]

TÍTULO / TITLE: - Severity, etiology and possible consequences of treatment-related lymphopenia in patients with newly diagnosed high-grade gliomas.

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

REVISTA / JOURNAL: - CNS Oncol. 2012 Nov 1;1(2):149-154.

●● Enlace al texto completo (gratis o de pago) [2217/cns.12.14](#)

AUTORES / AUTHORS: - Yovino S; Grossman SA

INSTITUCIÓN / INSTITUTION: - The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine, 1550 Orleans Street, Suite 1M-16, Baltimore, MD 21231, USA.

RESUMEN / SUMMARY: - Lymphopenia is a common consequence of therapy for malignant glioma. Current standard therapy includes corticosteroids, temozolomide and radiation therapy, all of which are toxic to lymphocytes. The resulting immunosuppression has serious clinical consequences. Decreased lymphocyte counts can result in opportunistic infections, decreased efficacy of immunotherapy and reduced overall survival. The exact mechanisms underlying the association between decreased survival and lymphopenia in malignant glioma patients are unclear. However, as lymphocytes are key effector cells in the immune response to cancer, it is likely that depleting their numbers renders the immune system less effective at eliminating malignant cells. Currently, no strategies exist for the prevention or reversal of treatment-related immunosuppression in malignant glioma patients, although there are several promising theoretical approaches. This article reviews the current state of knowledge regarding the severity, etiology and possible consequences of treatment-related lymphopenia in patients with malignant glioma.

[567]

TÍTULO / TITLE: - Suprasellar lymphoma masquerading as tuberculosis of the central nervous system.

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

REVISTA / JOURNAL: - Acta Neurol Belg. 2013 Jun 12.

●● Enlace al texto completo (gratis o de pago) [1007/s13760-013-0217-](#)

[3](#)

AUTORES / AUTHORS: - Dang YL; Hor JY; Chia YK; Lim TT; Eow GB

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Penang General Hospital, Penang, Malaysia.

[568]

TÍTULO / TITLE: - Reirradiation in progressive high-grade gliomas: outcome, role of concurrent chemotherapy, prognostic factors and validation of a new prognostic score with an independent patient cohort.

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

REVISTA / JOURNAL: - Radiat Oncol. 2013 Jul 3;8(1):161.

●● Enlace al texto completo (gratis o de pago) [1186/1748-717X-8-161](#)

AUTORES / AUTHORS: - Scholtyssek F; Zwiener I; Schlamann A; Seidel C; Meixensberger J; Bauer M; Hoffmann KT; Combs SE; von Bueren AO; Kortmann RD; Muller K

RESUMEN / SUMMARY: - Purposes: First, to evaluate outcome, the benefit of concurrent chemotherapy and prognostic factors in a cohort of sixty-four high-grade glioma patients who underwent a second course of radiation therapy at progression. Second, to validate a new prognostic score for overall survival after reirradiation of progressive gliomas with an independent patient cohort. Patients and methods: All patients underwent fractionated reirradiation with a median physical dose of 36 Gy. Median planned target volume was 110.4 ml. Thirty-six patients received concurrent chemotherapy consisting in 24/36 cases (67%) of carboplatin and etoposide and in 12/36 cases (33%) of temozolomide. We used the Kaplan Meier method, log rank test and proportional hazards regression analysis for statistical assessment. RESULTS: Median overall survival from the start of reirradiation was 7.7 +/- 0.7 months. Overall survival rates at 6 and 12 months were 60 +/- 6% and 24 +/- 6%, respectively. Despite relatively large target volumes we did not observe any major acute toxicity. Concurrent chemotherapy did not appear to improve outcome. In contrast, female gender, young age, WHO grade III histology, favorable Karnofsky performance score and complete resection of the tumor prior to reirradiation were identified as positive prognostic factors for overall survival. We finally validated a recent suggestion for a prognostic score with our independent but small patient cohort. Our preliminary findings suggest that its ability to discriminate between different prognostic groups is limited. CONCLUSIONS: Outcome of our patients was comparable to previous studies. Even in case of large target volumes reirradiation seems to be feasible without observing major toxicity. The benefit of concurrent chemotherapy is still elusive. A reassessment of the prognostic score, tested in this study, using a larger patient cohort is needed.

[569]

TÍTULO / TITLE: - Neuronavigation-guided intubated wake-up craniotomy for a patient with a brain astrocytoma.

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

REVISTA / JOURNAL: - J Chin Med Assoc. 2013 Aug;76(8):470-3. doi: 10.1016/j.jcma.2013.05.009. Epub 2013 Jul 1.

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

1016/j.jcma.2013.05.009

AUTORES / AUTHORS: - Fang WK; Lu PK; Leung JH; Jing H; Chen SH; Huang DW; Huang KC

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Ditmanson Medical Foundation, Chia-Yi Christian Hospital, Chiayi, Taiwan, ROC. Electronic address: 01204@cych.org.tw.

RESUMEN / SUMMARY: - Computer-assisted neuronavigation (an image-guided technique that facilitates brain tumor surgery) reduces the risk of neurological morbidity. Postoperative neurological dysfunction is also minimized by performing intraoperative neurological testing during awake craniotomy with proper surgical resection of a brain tumor. However, when the patient's airway is not secured, an awake craniotomy can be hazardous if emergent intubation is necessary. The present report describes a young man with a brain tumor who underwent neuronavigation-guided wake-up craniotomy and surgical resection of an astrocytoma. The patient was intubated throughout the course of the procedure, during which modified intraoperative neurological tests were performed for cortical mapping. The patient recovered well after the operation and without any neurological deficits.

[570]

TÍTULO / TITLE: - Treatment of pituitary prolactinoma reverses unresponsiveness to PDE5 inhibitor therapy in men with ED and SHPRL.

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

REVISTA / JOURNAL: - Asian J Androl. 2013 Jul 29. doi: 10.1038/aja.2013.90.

●● Enlace al texto completo (gratis o de pago) 1038/aja.2013.90

AUTORES / AUTHORS: - Jiang T; Zheng L; Su XM; Peng JQ; Sun DC; Li QL; Zhang ZW; Wang FP; Jiang H

[571]

TÍTULO / TITLE: - Changes of visual functions in patients with pituitary adenoma.

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

REVISTA / JOURNAL: - Medicina (Kaunas). 2013;49(3):132-7.

AUTORES / AUTHORS: - Kasputyte R; Slatkeviciene G; Liutkeviciene R; Glebauskiene B; Bernotas G; Tamasauskas A

INSTITUCIÓN / INSTITUTION: - Department of Oncology, Medical Academy, Lithuanian University of Health Sciences, Eiveniu 2, 50028 Kaunas, Lithuania. robertamedica@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND AND OBJECTIVE. The aim of this study was to evaluate associations between visual functions (visual acuity, perimetry, optic nerve disc condition, and color contrast sensitivity) and pituitary adenoma (PA) diameter. MATERIAL AND METHODS. In the study, 20 patients with PA, which was confirmed by computed tomography or magnetic resonance imaging scans, were examined. The patients were divided into 2 groups: those with a PA diameter of ≤ 1 cm (14 eyes) and with a PA diameter of > 1 cm (26 eyes). The control group comprised 40 healthy age- and gender-matched persons (80 eyes). The diameter of PA, visual acuity, and perimetry were analyzed; the F-M 100 hue test for color discrimination was used in patients with PA. RESULTS. Visual acuity was better in the control group as compared

with both groups of patients (1.0 vs. 0.90 [SD, 0.50] and 0.64 [SD, 0.21]; P=0.01; respectively). The results of the Farnsworth-Munsell 100 hue test were also better in the control group compared with the patients with PA of ≤ 1 cm and >1 cm (error score of 80.1 [SD, 53.0] vs. 131.8 [SD, 30.6] and 244.68 [SD, 51.6], respectively; P=0.011). There was a very strong positive correlation between the error score of the F-M 100 hue test and PA diameter ($r=0.905$), but the correlation between the error score and visual acuity ($r=-0.32$), perimetry ($r=0.21$), and eye fundus changes ($r=0.36$) and PA diameter was weak.

CONCLUSIONS. Our results showed that PA can cause the impairments of visual acuity, perimetry, and color contrast sensitivity. The computerized F-M 100 hue test can be one of the methods for an early diagnosis of chiasm damage in patients with PA.

[572]

TÍTULO / TITLE: - Reoperations of patients with low-grade gliomas in eloquent or near eloquent brain areas.

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

REVISTA / JOURNAL: - Neurol Neurochir Pol. 2013 May-Jun;47(3):214-22.

AUTORES / AUTHORS: - Nadaj-Pakleza AA; Dorobek M; Nestorowicz K; Ryniewicz B; Szmidt-Salkowska E; Kaminska AM

INSTITUCIÓN / INSTITUTION: - Centre de Reference des Maladies Neuromusculaires Nantes/Angers, Service de Neurologie, CHU d'Angers 4, rue Larrey, France. anadpak@gmail.com

RESUMEN / SUMMARY: - **BACKGROUND AND PURPOSE:** At present, more than 20 different forms of limb-girdle muscular dystrophies (LGMDs) are known (at least 7 autosomal dominant and 14 autosomal recessive). Although these different forms show some typical phenotypic characteristics, the existing clinical overlap makes their differential diagnosis difficult. Limb-girdle muscular dystrophy type 2 (LGMD2A) is the most prevalent LGMD in many European as well as Brazilian communities and is caused by mutations in the gene CAPN3. Laboratory testing, such as calpain immunohistochemistry and Western-blot analysis, is not totally reliable, since up to 20% of molecularly confirmed LGMD2A show normal content of calpain 3 and a third of LGMD2A biopsies have normal calpain 3 proteolytic activity in the muscle. Thus, genetic testing is considered as the only reliable diagnostic criterion in LGMD2A. **MATERIAL AND METHODS:** In an attempt to find a correlation between genotype and muscle pathology in limb-girdle muscular dystrophy 2^a we performed histopathological investigation of a group of 31 patients subdivided according to the type of pathologic CAPN3 gene mutation. **RESULTS:** In all biopsies typical features of muscular dystrophy such as fiber necrosis and regeneration, variation in fiber size and fibrosis were noted. Lobulated fibers were often encountered in the muscle biopsies of LGMD2A patients. Such fibers were

more frequent in patients with 550delA mutation. CONCLUSIONS: These findings may be helpful in establishing diagnostic strategies in LGMD.

[573]

TÍTULO / TITLE: - The immunohistochemical expression of c-Met is an independent predictor of survival in patients with glioblastoma multiforme.

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

REVISTA / JOURNAL: - Clin Transl Oncol. 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago) [1007/s12094-013-1059-](#)

[4](#)

AUTORES / AUTHORS: - Olmez OF; Cubukcu E; Evrensel T; Kurt M; Avci N; Tolunay S; Bekar A; Deligonul A; Hartavi M; Alkis N; Manavoglu O

INSTITUCIÓN / INSTITUTION: - Department of Medical Oncology, Uludag University Medical School, Bursa, Turkey, olmezof@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND AND AIMS: Because the outcome of glioblastoma multiforme (GBM) remains dismal, there is an urgent need for a better molecular characterization of this malignancy. The aim of this prospective study was to investigate the prognostic impact of the expression of c-mesenchymal-epithelial transition (c-Met) a receptor tyrosine kinase implicated in expression growth, survival, motility/migration, and invasion in GBM patients managed according to the established diagnostic and therapeutic protocols. METHODS: Between May 2003 and March 2011, a total of 69 patients (33 males and 36 females; mean age: 52.2 +/- 12.9 years, age range: 23-81 years) referred to our Department for the surgical removal of GBM were evaluated immunohistochemically for c-Met expression. Progression-free survival (PFS) and overall survival (OS) served as the main outcome measures. RESULTS: Compared with c-Met- subjects (n = 38), c-Met+ subjects (n = 31) had both a significantly lower OS (15.3 +/- 2.3 vs. 22.6 +/- 2.5 months, respectively, p < 0.01) and PFS (12.3 +/- 2.1 vs. 19.1 +/- 2.6 months, respectively, p < 0.05). After allowance for potential confounders, multivariate Cox regression analysis identified c-Met+ as an independent predictor of both OS (hazard ratio = 1.7; 95 % confidence interval = 1.2-1.9, p < 0.01) and PFS (hazard ratio = 1.6; 95 % confidence interval = 1.1-2.3, p < 0.05). CONCLUSIONS: Our findings suggest that c-Met immunohistochemical expression is an independent predictor of outcomes in patients with GBM treated by standard of care.

[574]

TÍTULO / TITLE: - Meningioma patients diagnosed 2007--2009 and the association with use of mobile and cordless phones: a case—control study.

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

REVISTA / JOURNAL: - Environ Health. 2013 Jul 19;12(1):60.

●● Enlace al texto completo (gratis o de pago) [1186/1476-069X-12-60](#)

AUTORES / AUTHORS: - Carlberg M; Soderqvist F; Hansson Mild K; Hardell L

RESUMEN / SUMMARY: - BACKGROUND: To study the association between use of wireless phones and meningioma. METHODS: We performed a case—control study on brain tumour cases of both genders aged 18--75 years and diagnosed during 2007--2009. One population-based control matched on gender and age was used to each case. Here we report on meningioma cases including all available controls. Exposures were assessed by a questionnaire. Unconditional logistic regression analysis was performed. RESULTS: In total 709 meningioma cases and 1,368 control subjects answered the questionnaire. Mobile phone use in total produced odds ratio (OR) = 1.0, 95% confidence interval (CI) = 0.7-1.4 and cordless phone use gave OR = 1.1, 95% CI = 0.8-1.5. The risk increased statistically significant per 100 h of cumulative use and highest OR was found in the fourth quartile (>2,376 hours) of cumulative use for all studied phone types. There was no statistically significant increased risk for ipsilateral mobile or cordless phone use, for meningioma in the temporal lobe or per year of latency. Tumour volume was not related to latency or cumulative use in hours of wireless phones. CONCLUSIONS: No conclusive evidence of an association between use of mobile and cordless phones and meningioma was found. An indication of increased risk was seen in the group with highest cumulative use but was not supported by statistically significant increasing risk with latency. Results for even longer latency periods of wireless phone use than in this study are desirable.

[575]

TÍTULO / TITLE: - Central nervous system relapse in a patient with acute promyelocytic leukaemia: does the risk stratification matter?

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

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+J3s

<http://bmj.com/search.dtl> ●● British Medical J. (BMJ): <> Case Rep. 2013 Jun 6;2013. pii: bcr2013009456. doi: 10.1136/bcr-2013-009456.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-009456

AUTORES / AUTHORS: - Sahin DG; Gunduz E; Akay OM; Gulbas Z

INSTITUCIÓN / INSTITUTION: - Department of Hematology, Eskisehir Osmangazi University, Eskisehir, Turkey. drdenizgoren@gmail.com

RESUMEN / SUMMARY: - Extramedullary relapse is an uncommon complication of acute promyelocytic leukaemia (APL). The most common site of extramedullary relapse is the central nervous system (CNS), and the majority of CNS relapses occur in patients with high-risk disease in which white blood cell count at presentation is greater than $10 \times 10^3 / \mu\text{L}$. The best management of such patients is still controversial. We describe a 47-year-old man with APL who developed two CNS relapses which were diagnosed through the presence of t(15;17)(q22;q21) on PCR of the cerebrospinal fluid (CSF), despite presenting initially with intermediate-risk disease. We conclude that the intermediate risk group is very heterogeneous and these patients sometimes may behave like high-risk patients. Also, clinicians should take into account symptoms that can

be related to CNS relapse in patients with APL and consider lumbar puncture even if radiological imaging does not reveal anything.

[576]

TÍTULO / TITLE: - Combination of oncolytic herpes simplex viruses armed with angiostatin and IL-12 enhances antitumor efficacy in human glioblastoma models.

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

REVISTA / JOURNAL: - Neoplasia. 2013 Jun;15(6):591-9.

AUTORES / AUTHORS: - Zhang W; Fulci G; Wakimoto H; Cheema TA; Buhrman JS; Jeyaretna DS; Stemmer Rachamimov AO; Rabkin SD; Martuza RL

INSTITUCIÓN / INSTITUTION: - Brain Tumor Research Center, Molecular Neurosurgery Laboratory, Department of Neurosurgery, Massachusetts General Hospital, Boston, MA, USA.

RESUMEN / SUMMARY: - Oncolytic herpes simplex virus (oHSV) can potentially spread throughout the tumor, reach isolated infiltrating cells, kill them, and deliver anticancer agents. However, the host responds to oHSV by inducing intratumoral infiltration of macrophages that can engulf the virus, limiting the potential of this therapeutic strategy. Hypervascularity is a pathognomonic feature of glioblastoma (GBM) and is a promising therapeutic target. Antiangiogenic treatments have multiple benefits, including the capacity to increase oHSV efficacy by suppressing macrophage extravasation and infiltration into the tumor. Angiostatin is an antiangiogenic polypeptide, and interleukin-12 (IL-12) is an immunostimulatory cytokine with strong antiangiogenic effects. Clinical use of each has been limited by delivery issues and systemic toxicity. We tested a combination treatment strategy using oHSVs expressing angiostatin (G47Delta-mAngio) and IL-12 (G47Delta-mIL12) in two orthotopic human GBM models. Intratumoral injection of G47Delta-mAngio and G47Delta-mIL12 in mice bearing intracranial U87 or tumors derived from glioblastoma stem cells significantly prolonged survival compared to each armed oHSV alone. This was associated with increased antiangiogenesis and virus spread and decreased macrophages. These data support the paradigm of using oHSV expressing different antiangiogenic agents and show for the first time that oHSVs expressing angiostatin and IL-12 can improve efficacy in human GBM models.

[577]

TÍTULO / TITLE: - A case of the cauda equina syndrome associated with the intrathecal chemotherapy in a patient with primary central nervous system lymphoma.

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

REVISTA / JOURNAL: - Ann Rehabil Med. 2013 Jun;37(3):420-5. doi: 10.5535/arm.2013.37.3.420. Epub 2013 Jun 30.

- Enlace al texto completo (gratis o de pago)

[5535/arm.2013.37.3.420](#)

AUTORES / AUTHORS: - Park S; Kang JI; Bang H; Kim BR; Lee J

INSTITUCIÓN / INSTITUTION: - Department of Rehabilitation Medicine, Konkuk University Medical Center, Konkuk University School of Medicine, Seoul, Korea.

RESUMEN / SUMMARY: - The intrathecal chemotherapy with methotrexate and cytarabine arabinoside is used for the treatment and prophylaxis of the primary central nervous system lymphoma. The therapy may induce neurotoxicity including the cauda equina syndrome. We report a case of a 58-year-old man with the diffuse large B-cell lymphoma, who developed the cauda equina syndrome after the administration of intrathecal methotrexate and cytarabine arabinoside, as diagnosed by the electrodiagnostic, urodynamic, and radiologic approaches.

[578]

TÍTULO / TITLE: - IDH1/IDH2 Mutations Define the Prognosis and Molecular Profiles of Patients with Gliomas: A Meta-Analysis.

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

REVISTA / JOURNAL: - PLoS One. 2013 Jul 22;8(7):e68782. doi: 10.1371/journal.pone.0068782. Print 2013.

- Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0068782](#)

AUTORES / AUTHORS: - Zou P; Xu H; Chen P; Yan Q; Zhao L; Zhao P; Gu A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital, Nanjing Medical University, Nanjing, China.

RESUMEN / SUMMARY: - BACKGROUND: Isocitrate dehydrogenase isoforms 1 and 2 (IDH1 and IDH2) mutations have received considerable attention since the discovery of their relation with human gliomas. The predictive value of IDH1 and IDH2 mutations in gliomas remains controversial. Here, we present the results of a meta-analysis of the associations between IDH mutations and both progression-free survival (PFS) and overall survival (OS) in gliomas. The interrelationship between the IDH mutations and MGMT promoter hypermethylation, EGFR amplification, codeletion of chromosomes 1p/19q and TP53 gene mutation were also revealed. METHODOLOGY AND PRINCIPAL FINDINGS: An electronic literature search of public databases (PubMed, Embase databases) was performed. In total, 10 articles, including 12 studies in English, with 2,190 total cases were included in the meta-analysis. The IDH mutations were frequent in WHO grade II and III glioma (59.5%) and secondary glioblastomas (63.4%) and were less frequent in primary glioblastomas (7.13%). Our study provides evidence that IDH mutations are tightly associated with MGMT promoter hypermethylation ($P < 0.001$), 1p/19q codeletion ($P < 0.001$) and TP53 gene mutation ($P < 0.001$) but are mutually exclusive with EGFR amplification ($P < 0.001$). This meta-analysis showed that the combined hazard ratio (HR) estimate for overall survival and progression-free survival in patients

with IDH mutations was 0.33 (95% CI: 0.25-0.42) and 0.38 (95% CI: 0.21-0.68), compared with glioma patients whose tumours harboured the wild-type IDH. Subgroup analyses based on tumour grade also revealed that the presence of IDH mutations was associated with a better outcome. CONCLUSION: Our study suggests that IDH mutations, which are closely linked to the genomic profile of gliomas, are potential prognostic biomarkers for gliomas.

[579]

TÍTULO / TITLE: - Three-dimensional conformal radiation therapy alone or in combination with surgery for treatment of canine intracranial meningiomas.

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

REVISTA / JOURNAL: - Vet Comp Oncol. 2013 Jul 19. doi: 10.1111/vco.12054.

●● Enlace al texto completo (gratis o de pago) [1111/vco.12054](#)

AUTORES / AUTHORS: - Keyerleber MA; McEntee MC; Farrelly J; Thompson MS; Scrivani PV; Dewey CW

INSTITUCIÓN / INSTITUTION: - Department of Clinical Sciences, College of Veterinary Medicine, Cornell University, Ithaca, NY, USA.

RESUMEN / SUMMARY: - Treatment protocols, treatment planning methods and tumour types in studies evaluating radiotherapy for canine brain tumours have been varied. This case series retrospectively evaluated the outcome of definitive, three-dimensional conformal radiation therapy (3D-CRT) as either a sole modality or as an adjuvant to surgery in 31 dogs diagnosed with meningioma by histopathology (n = 10) or cross-sectional imaging of the head (n = 21, assessed independently by two board certified radiologists). Prescribed dose ranged from 45 to 54 Gy in 2.5 to 3 Gy fractions. Median overall survival was 577 days (interquartile range = 272-829 days; range = 30-1942 days) when all deaths were considered and 906 days (interquartile range = 336-912 days; range = 101-1942 days) when only dogs dying due to meningioma were considered. No significant difference in survival time was detected for the defined clinical or imaging findings or between treatment with radiotherapy alone versus adjuvant radiotherapy, suggesting that 3D-CRT may be a viable alternative to surgery.

[580]

TÍTULO / TITLE: - Decompressive Hemicraniectomy in Pediatric Patients with Malignant Middle Cerebral Artery Infarction: Case Series and Review of the Literature.

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

REVISTA / JOURNAL: - World Neurosurg. 2013 Jun 19. pii: S1878-8750(13)00743-2. doi: 10.1016/j.wneu.2013.06.001.

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

[1016/j.wneu.2013.06.001](#)

AUTORES / AUTHORS: - Shah S; Murthy SB; Whitehead WE; Jea A; Nassif LM

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Baylor College of Medicine, Houston, Texas, USA. Electronic address: sdshah@bcm.edu.

RESUMEN / SUMMARY: - **OBJECTIVE:** Malignant middle cerebral artery infarction (mMCAI) is a life-threatening condition in pediatric patients. Despite strong evidence showing decreased morbidity and mortality in adult mMCAI patients with decompressive hemicraniectomy (DCH), there is a paucity of data on the use of DCH in children with similar conditions. Here we report experience from our center and perform a systematic review of published literature on outcomes after use of DCH in pediatric mMCAI patients. **METHODS:** By retrospective chart review, we identified 3 children with large ischemic stroke who underwent DCH for life-threatening cerebral edema. Information was obtained about patient characteristics on admission, radiological features of the stroke, surgical procedures, complications of the DCH and cranioplasty, and functional outcomes during follow-up visits. We also reviewed the current literature on DCH in pediatric stroke. **RESULTS:** DCH was performed in all 3 cases after development of pupillary dilatation. All 3 children survived and were ambulatory at the time of follow-up. Review of literature identified 12 other published case series describing 26 cases of DCH in pediatric patients with ischemic stroke. Descriptive statistical analysis of these cases is presented. Published reports suggest that a good outcome is possible even in the presence of signs of herniation, low preoperative Glasgow Coma Scale score, involvement of multiple vascular territories, or longer time to surgery in pediatric ischemic stroke patients. **CONCLUSIONS:** The current data suggest a role for DCH in the management of cerebral edema in pediatric patients with mMCAI. Factors that help in prognostication for adult stroke patients undergoing DCH do not appear to convey similar information about the pediatric population. This highlights the urgent need for collaboration across institutes to further investigate this potentially life-saving procedure in pediatric stroke.

[581]

TÍTULO / TITLE: - Neuro-oncology: In search of molecular markers of glioma in elderly patients.

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

REVISTA / JOURNAL: - Nat Rev Neurol. 2013 Aug;9(8):424-5. doi: 10.1038/nrneurol.2013.127. Epub 2013 Jul 2.

●● [Enlace al texto completo \(gratis o de pago\) 1038/nrneurol.2013.127](#)

AUTORES / AUTHORS: - Hegi ME; Stupp R

INSTITUCIÓN / INSTITUTION: - Department of Clinical Neurosciences, University Hospital Lausanne, Rue du Bugnon 46, 1011 Lausanne, Switzerland.

[582]

TÍTULO / TITLE: - Collaborative overexpression of matrix metalloproteinase-1 and vascular endothelial growth factor-C predicts adverse prognosis in patients with gliomas.

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

REVISTA / JOURNAL: - Cancer Epidemiol. 2013 Jul 16. pii: S1877-7821(13)00105-7. doi: 10.1016/j.canep.2013.06.006.

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

[1016/j.canep.2013.06.006](#)

AUTORES / AUTHORS: - Xu Y; Zhong Z; Yuan J; Zhang Z; Wei Q; Song W; Chen H

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, First Affiliated Hospital of Medical College, Shantou University, Shantou City, Guangdong Province 515041, China. Electronic address: xuym777@163.com.

RESUMEN / SUMMARY: - Background and aim: Matrix metalloproteinase-1 (MMP-1), a member of the MMP family of zinc-dependent endopeptidases, has been detected to be strongly expressed in gliomas with high tumor grade and to be correlated with increased tumor invasiveness. Vascular endothelial growth factor-C (VEGF-C), which is able to induce MMP-1 transcription, has been found to be upregulated in glioblastoma compared to low grade gliomas and non-neoplastic brain. The aim of the present study was to investigate the clinical significance of the co-expression of MMP-1 and VEGF-C in glioma patients on determining the prognosis. Methods: One hundred and sixteen glioma patients (26 World Health Organization (WHO) grade I, 30 WHO grade II, 30 WHO grade III, and 30 WHO grade IV) and 15 non-neoplastic brain specimens acquired from 15 patients undergoing surgery for epilepsy as control were collected. Immunohistochemistry was used to evaluate the expression of MMP-1 and VEGF-C in glioma and non-neoplastic brain tissues. The correlations of collaborative MMP-1 and VEGF-C expression with selected clinicopathologic parameters and clinical outcome of glioma patients were also assessed. Results: Both MMP-1 and VEGF-C expression were significantly higher in glioma tissues compared to non-neoplastic brain tissues (both $P < 0.001$). Of 116 glioma patients, 68 (58.62%) overexpressed MMP-1 and VEGF-C simultaneously. In addition, combined MMP-1 and VEGF-C expression was significantly associated with WHO grade ($P < 0.001$) and Karnofsky performance status (KPS) score ($P = 0.01$). Moreover, glioma patients expressing both MMP-1 and VEGF-C exhibited markedly poorer overall survival ($P < 0.001$). According to the multivariate analyses, collaborative overexpression of MMP-1 and VEGF-C was found to be an independent prognostic factor for overall survival ($P = 0.009$). Conclusions: Our data demonstrated for the first time that overexpression of both MMP-1 and VEGF-C may be an independent poor prognostic factor in gliomas, suggesting the interaction between MMP-1 and VEGF-C collaboratively stimulated advanced tumor progression and adverse outcome. Inhibiting both MMP-1 and VEGF-C could be a novel therapeutic approach for gliomas.

[583]

TÍTULO / TITLE: - Screening for EGFR amplifications with a novel method and their significance for the outcome of glioblastoma patients.

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

REVISTA / JOURNAL: - PLoS One. 2013 Jun 6;8(6):e65444. doi: 10.1371/journal.pone.0065444. Print 2013.

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

[1371/journal.pone.0065444](#)

AUTORES / AUTHORS: - Bienkowski M; Piaskowski S; Stoczynska-Fidelus E; Szybka M; Banaszczyk M; Witusik-Perkowska M; Jesien-Lewandowicz E; Jaskolski DJ; Radomiak-Zaluska A; Jesionek-Kupnicka D; Sikorska B; Papierz W; Rieseke P; Liberski PP

INSTITUCIÓN / INSTITUTION: - Department of Molecular Pathology and Neuropathology, Chair of Oncology, Medical University of Lodz, Lodz, Poland. michal.bienkowski@gmail.com

RESUMEN / SUMMARY: - Glioblastoma is a highly aggressive tumour of the central nervous system, characterised by poor prognosis irrespective of the applied treatment. The aim of our study was to analyse whether the molecular markers of glioblastoma (i.e. TP53 and IDH1 mutations, CDKN2A deletion, EGFR amplification, chromosome 7 polysomy and EGFRvIII expression) could be associated with distinct prognosis and/or response to the therapy. Moreover, we describe a method which allows for a reliable, as well as time- and cost-effective, screening for EGFR amplification and chromosome 7 polysomy with quantitative Real-Time PCR at DNA level. In the clinical data, only the patient's age had prognostic significance (continuous: HR = 1.04; p<0.01). At the molecular level, EGFRvIII expression was associated with a better prognosis (HR = 0.37; p = 0.04). Intriguingly, EGFR amplification was associated with a worse outcome in younger patients (HR = 3.75; p<0.01) and in patients treated with radiotherapy (HR = 2.71; p = 0.03). We did not observe any difference between the patients with the amplification treated with radiotherapy and the patients without such a treatment. Next, EGFR amplification was related to a better prognosis in combination with the homozygous CDKN2A deletion (HR = 0.12; p = 0.01), but to a poorer prognosis in combination with chromosome 7 polysomy (HR = 14.88; p = 0.01). Importantly, the results emphasise the necessity to distinguish both mechanisms of the increased EGFR gene copy number (amplification and polysomy). To conclude, although the data presented here require validation in different groups of patients, they strongly advocate the consideration of the patient's tumour molecular characteristics in the selection of the therapy.

[584]

TÍTULO / TITLE: - Foramen magnum meningiomas: To drill or not to drill the occipital condyle? A series of 12 patients.

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

REVISTA / JOURNAL: - Surg Neurol Int. 2013 Jun 1;4:73. doi: 10.4103/2152-7806.112823. Print 2013.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.112823](https://doi.org/10.4103/2152-7806.112823)

AUTORES / AUTHORS: - Lynch JC; Temponi V; Emmerich JC; Pereira CE; Goncalves MB

INSTITUCIÓN / INSTITUTION: - Head of the Neurosurgical Department, Servidores do Estado Hospital, Rio de Janeiro, RJ, Brazil.

RESUMEN / SUMMARY: - BACKGROUND: Despite the development of microsurgery and cranial base techniques, the surgical management of Foramen Magnum Meningiomas (FMM) continues to be a technical challenge to neurosurgeons. Controversy concerning the utility of systematic condyle drilling for approaching FMM has been raised. Our aim was to describe the surgical technique, analyze its safety, and the postoperative outcome in 12 consecutive FMM patients. METHODS: From 1986 to 2011, 12 patients with FMM underwent operations in the Department of Neurosurgery at Servidores do Estado Hospital and in a private clinic. All patients were operated using a standard suboccipital craniectomy, preserving the occipital condyle, opening of the Foramen Magnum, and ipsilateral removal of the posterior arch of C1. RESULTS: There was no operative mortality, nine patients achieved Glasgow Outcome Scale 4 or 5. Condylar resection was not deemed necessary in any case. Gross total resection was achieved in nine patients. After surgery, four patients developed lower cranial nerve weakness. There was no significant postoperative complication in the remaining patients. The average follow-up is 8.2 years. CONCLUSION: The vast majority of FMM can be safely removed with a retrocondylar lateral suboccipital approach without condylar resection, using meticulous microsurgical techniques.

[585]

TÍTULO / TITLE: - A longitudinal, qualitative and quantitative exploration of daily life and need for rehabilitation among patients with high-grade gliomas and their caregivers.

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

REVISTA / JOURNAL: - British Medical J (BMJ). 2013 Jul 11;3(7)

<http://bmj.com/search.dtl> ●● British Medical J. (BMJ): <> Open. 2013 Jul 11;3(7). pii: e003183. doi: 10.1136/bmjopen-2013-003183. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1136/bmjopen-2013-003183](https://doi.org/10.1136/bmjopen-2013-003183)

AUTORES / AUTHORS: - Piil K; Jarden M; Jakobsen J; Christensen KB; Juhler M
INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The University Hospital of Copenhagen, Rigshospitalet, Copenhagen, Denmark.

RESUMEN / SUMMARY: - INTRODUCTION: High-grade gliomas (HGGs) are the most malignant type of brain tumours. The 5-year survival is 10% and a significant part of the ongoing research aims to increase survival through

surgical and oncological treatments. Accordingly, there is an increasing need for investigating the HGG trajectory in order to recommend specific guidelines for rehabilitative and supportive interventions. **METHOD AND ANALYSIS:** This study protocol (phase I) describes a longitudinal, qualitative, explorative and descriptive interview study of the life situation and need for rehabilitation among patients and their caregivers and a quantitative evaluation of health-related quality of life. Qualitative and quantitative data are collected in parallel, analysed separately and then merged. The finding of this study will, together with the existing literature, form the background for phase II, which is a feasibility study with a pre-experimental one-group design testing a rehabilitative and supportive intervention programme. The aim of this paper was to describe the design of an upcoming study. Interviews with 30 patients and 30 caregivers will provide information about how the life situation is experienced during the first year after being diagnosed with HGG. Quantitative measurements of quality of life, well-being and physical activity will provide additional information. More precisely, both qualitative and quantitative data will support the planning of the programme regarding the type of intervention(s), with or without supervision, the appropriate time along the trajectory, frequency, localisation, endpoint measurements and eligible patients and/or caregivers. **ETHICS AND DISSEMINATION:** According to the Research Ethics Committee, approval is not needed for phase I as it is a non-intervention part of the study. Ethical approval of phase II will be sought at the time where the content of the intervention programme has been developed. Dissemination will occur through presentation and findings will be published in peer-reviewed journals.

[586]

TÍTULO / TITLE: - Enhanced induction of cell cycle arrest and apoptosis via the mitochondrial membrane potential disruption in human U87 malignant glioma cells by aloe emodin.

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

REVISTA / JOURNAL: - J Asian Nat Prod Res. 2013 Jul 22.

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

[1080/10286020.2013.818982](#)

AUTORES / AUTHORS: - Ismail S; Haris K; Abdul Ghani AR; Abdullah JM; Johan MF; Mohamed Yusoff AA

INSTITUCIÓN / INSTITUTION: - a Department of Neurosciences , Universiti Sains Malaysia , Kubang Kerian , Kelantan , 16150 , Malaysia.

RESUMEN / SUMMARY: - Aloe emodin, one of the active compounds found in Aloe vera leaves, plays an important role in the regulation of cell growth and death. It has been reported to promote the anti-cancer effects in various cancer cells by inducing apoptosis. However, the mechanism of inducing apoptosis by this agent is poorly understood in glioma cells. This research is to investigate the apoptosis and cell cycle arrest inducing by aloe emodin on U87 human malignant glioma cells. Aloe emodin showed a time- and dose-dependent

inhibition of U87 cells proliferation and decreased the percentage of viable U87 cells via the induction of apoptosis. Characteristic morphological changes, such as the formation of apoptotic bodies, were observed with confocal microscope by Annexin V-FITC/PI staining, supporting our viability study and flow cytometry analysis results. Our data also demonstrated that aloe emodin arrested the cell cycle in the S phase and promoted the loss of mitochondrial membrane potential in U87 cells that indicated the early event of the mitochondria-induced apoptotic pathway.

[587]

TÍTULO / TITLE: - Convection enhanced delivery and in vivo imaging of polymeric nanoparticles for the treatment of malignant glioma.

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

REVISTA / JOURNAL: - Nanomedicine. 2013 Jul 23. pii: S1549-9634(13)00343-2. doi: 10.1016/j.nano.2013.07.003.

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

[1016/j.nano.2013.07.003](#)

AUTORES / AUTHORS: - Bernal GM; Lariviere MJ; Mansour N; Pytel P; Cahill KE; Voce DJ; Kang S; Spretz R; Welp U; Noriega SE; Nunez L; Larsen GF; Weichselbaum RR; Yamini B

INSTITUCIÓN / INSTITUTION: - Section of Neurosurgery, Department of Surgery, Pritzker School of Medicine, The University of Chicago, Chicago, IL, USA.

RESUMEN / SUMMARY: - A major obstacle to the management of malignant glioma is the inability to effectively deliver therapeutic agent to the tumor. In this study, we describe a polymeric nanoparticle vector that not only delivers viable therapeutic, but can also be tracked in vivo using MRI. Nanoparticles, produced by a non-emulsion technique, were fabricated to carry iron oxide within the shell and the chemotherapeutic agent, temozolomide (TMZ), as the payload. Nanoparticle properties were characterized and subsequently their endocytosis-mediated uptake by glioma cells demonstrated. Convection enhanced delivery (CED) can disperse nanoparticles through the rodent brain and their distribution is accurately visualized by MRI. Infusion of nanoparticles does not result in observable animal toxicity relative to control. CED of TMZ bearing nanoparticles prolongs the survival of animals with intracranial xenografts compared to control. In conclusion, the described nanoparticle vector represents a unique multifunctional platform that can be used for image-guided treatment of malignant glioma.

[588]

TÍTULO / TITLE: - Extensive hypermetabolic pattern of brown adipose tissue activation on F-FDG PET/CT in a patient diagnosed of catecholamine-secreting para-vesical paraganglioma.

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

REVISTA / JOURNAL: - Rev Esp Med Nucl. Acceso gratuito al texto completo a partir de los 2 años de la fecha de publicación.

●● Enlace a la Editora de la Revista <http://db.doyma.es/>

●● Cita: Revista Española de Medicina Nuclear: <> Imagen Mol. 2013 Jul 15. pii: S2253-654X(13)00083-8. doi: 10.1016/j.remn.2013.05.005.

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

1016/j.remn.2013.05.005

AUTORES / AUTHORS: - Banzo J; Ubieto MA; Berisa MF; Andres A; Mateo ML; Tardin L; Parra A; Razola P; Prats E

INSTITUCIÓN / INSTITUTION: - Unidad de Medicina Nuclear, Grupo Hospitalario Quiron, La Floresta, Zaragoza, España. Electronic address:

alejandro_a_gracia@hotmail.es.

RESUMEN / SUMMARY: - The widespread use of 18F-FDG PET-CT scanning in oncological patients has allowed to demonstrate the existence of metabolically active brown fat, also called brown adipose tissue (BAT), in adult humans, and specifying its anatomical distribution in vivo. As physiological determinants to BAT 18F-FDG uptake has been identified gender, age, temperature, and body mass index. We have observed extensive activation of the BAT, including the mesenteric region, in a patient with a catecholamine-secreting para-vesical paraganglioma. The extensive BAT activation could be secondary to adrenergic stimulation due to excess of circulating norepinephrine concentration.

[589]

TÍTULO / TITLE: - MAX mutations status in Swedish patients with pheochromocytoma and paraganglioma tumours.

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

REVISTA / JOURNAL: - Fam Cancer. 2013 Jun 7.

●● Enlace al texto completo (gratuito o de pago) [1007/s10689-013-9666-](http://1007/s10689-013-9666-3)

[3](#)

AUTORES / AUTHORS: - Crona J; Maharjan R; Delgado Verdugo A; Stalberg P; Granberg D; Hellman P; Bjorklund P

INSTITUCIÓN / INSTITUTION: - Department of Surgical, Uppsala University, Akademiska sjukhuset, ing 70, 3tr, FOA2, 75185, Uppsala, Sweden, joakim.crona@surgsci.uu.se.

RESUMEN / SUMMARY: - Pheochromocytoma (PCC) and Paraganglioma are rare tumours originating from neuroendocrine cells. Up to 60 % of cases have either germline or somatic mutation in one of eleven described susceptibility loci, SDHA, SDHB, SDHC, SDHD, SDHAF2, VHL, EPAS1, RET, NF1, TMEM127 and MYC associated factor-X (MAX). Recently, germline mutations in MAX were found to confer susceptibility to PCC and paraganglioma (PGL). A subsequent multicentre study found about 1 % of PCCs and PGLs to have germline or somatic mutations in MAX. However, there has been no study investigating the frequency of MAX mutations in a Scandinavian cohort. We

analysed tumour specimens from 63 patients with PCC and PGL treated at Uppsala University hospital, Sweden, for re-sequencing of MAX using automated Sanger sequencing. Our results show that 0 % (0/63) of tumours had mutations in MAX. Allele frequencies of known single nucleotide polymorphisms rs4902359, rs45440292, rs1957948 and rs1957949 corresponded to those available in the Single Nucleotide Polymorphism Database. We conclude that MAX mutations remain unusual events and targeted genetic screening should be considered after more common genetic events have been excluded.

[590]

TÍTULO / TITLE: - High frequency of the X-chromosome inactivation in young female patients with high-grade glioma.

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

REVISTA / JOURNAL: - Diagn Pathol. 2013 Jun 19;8(1):101. doi: 10.1186/1746-1596-8-101.

●● Enlace al texto completo (gratis o de pago) [1186/1746-1596-8-101](#)

AUTORES / AUTHORS: - Li G; Zhang Z; Jin T; Liang H; Tu Y; Gong L; Chen Z; Gao G

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tangdu hospital, the Fourth Military Medical University, 710038 Xi'an, China.

chenzp57@mail.sysu.edu.cn.

RESUMEN / SUMMARY: - BACKGROUND: Gliomas are common tumors and high-grade ones account for 62% of primary malignant brain tumors. Though current evidence have suggested that inherited risks play a role in glioma susceptibility, it was conveyed that glioma was such a complex disease, and the direct genetic contribution to glioma risk factors and its relation to other factors should be discussed more deeply. X-chromosome inactivation (XCI) is the mechanism by which gene dosage equivalence is achieved between female mammals with two X chromosomes and male mammals with a single X chromosome. As skewed XCI has been linked to development of some solid tumors, including ovarian, breast, and pulmonary and esophageal carcinomas, it is challenging to elucidate the relation of skewed XCI to high-grade gliomas development. OBJECTIVE: The present study aimed to determine the general concordance between XCI pattern in blood cells and brain tissues, and SXCI frequencies in female patients with high-grade glioma compared to healthy controls. METHODS: 1,103 Chinese females without a detectable tumor and 173 female high-grade glioma patients, were detected in the study. Normal brain tissues surrounding the lesions in gliomas were obtained from 49 patients among the 173 ones, with the microdissection using a laser microdissection microscope Genomic DNA was extracted from the peripheral blood cells and the normal brain tissues from the subjects. Exon 1 of androgen receptor (AR) gene was amplified, and its products of different alleles were resolved on denaturing polyacrylamide gels and visualized after silver staining. The

corrected ratios (CR) of the products before and after HpaII digestion were calculated. RESULTS: Occurrence of SXCI was detected in both the patients and controls at similar frequencies. However, the phenomenon, as defined as CR ≥ 3 , was more frequent in the patients aging ≤ 40 (23.6%) compared to the corresponding reference group (5.1%, $P < 0.0001$). When CR ≥ 10 was adopted, the frequencies were 5.5% and 1.6%, respectively. Their difference did not attain statistical significance ($P = 0.10$). When detected, both blood cells and brain tissue were compared after determination of a high concordance of XCI between blood cells and brain tissue collected from the same individuals ($n = 48$, $r = 0.57$, $P < 0.01$). CONCLUSIONS: The data from the current study demonstrated that SXCI may be a predisposing factor for development of high-grade glioma in young female patients and further study will verify its suitability as a biomarker to assess susceptibility of young female patients to high-grade glioma. VIRTUAL SLIDES: The virtual slide(s) for this article can be found here: <http://www.diagnosticpathology.diagnomx.eu/vs/1935066233982578>.

[591]

TÍTULO / TITLE: - Predicting difficult laryngoscopy in acromegalic patients undergoing surgery for excision of pituitary tumors: A comparison of extended Mallampati score with modified Mallampati classification.

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

REVISTA / JOURNAL: - J Anaesthesiol Clin Pharmacol. 2013 Apr;29(2):187-90. doi: 10.4103/0970-9185.111694.

●● Enlace al texto completo (gratis o de pago) [4103/0970-9185.111694](#)

AUTORES / AUTHORS: - Bindra A; Prabhakar H; Bithal PK; Singh GP; Chowdhury T

INSTITUCIÓN / INSTITUTION: - Department of Neuroanaesthesiology, Neurosciences Center, All India Institute of Medical Sciences, New Delhi, India.

RESUMEN / SUMMARY: - BACKGROUND: There are numerous reports of difficult laryngoscopy and intubation in patients with acromegaly. To date, no study has assessed the application of extended Mallampati score (EMS) for predicting difficult intubation in acromegalics. The primary aim of this study was to compare EMS with modified Mallampati classification (MMP) in predicting difficult laryngoscopy in acromegalic patients. We hypothesized that since EMS has been reported to be more specific and better predictor than MMP, it may be superior to the MMP to predict difficult laryngoscopy in acromegalic patients. MATERIALS AND METHODS: For this prospective cohort study with matched controls, acromegalic patients scheduled to undergo pituitary surgery over a period of 3 years (January 2008-December 2010) were enrolled. Preoperative airway assessment was performed by experienced anesthesiologists and involved a MMP and the EMS. Under anesthesia, laryngoscopic view was assessed using Cormack-Lehane (CL) grading. MMP and CL grades of I and II were defined "easy" and III and IV as "difficult". EMS grade of I and II were

defined “easy” and III as “difficult”. Data were used to determine the sensitivity, specificity, positive predictive value, negative predictive value, and accuracy of MMP and EMS in predicting difficult laryngoscopy. RESULTS: Seventy eight patients participated in the study (39 patients in each group). Both MMP and EMS failed to detect difficult laryngoscopy in seven patients. Only one laryngoscopy was predicted to be difficult by both tests which was in fact, difficult. CONCLUSION: We found that addition of neck extension did not improve the predictive value of MMP.

[592]

TÍTULO / TITLE: - Glioma microvesicles carry selectively packaged coding and noncoding RNAs which alter gene expression in recipient cells.

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

REVISTA / JOURNAL: - RNA Biol. 2013 Jun 17;10(8).

AUTORES / AUTHORS: - Li CC; Eaton SA; Young PE; Lee M; Shuttleworth R; Humphreys DT; Grau GE; Combes V; Bebawy M; Gong J; Brammah S; Buckland ME; Suter CM

INSTITUCIÓN / INSTITUTION: - Victor Chang Cardiac Research Institute; Sydney, Australia; These authors should be regarded as joint First Authors.

RESUMEN / SUMMARY: - Interactions between glioma cells and their local environment are critical determinants of brain tumor growth, infiltration and neovascularisation. Communication with host cells and stroma via microvesicles represents one pathway by which tumors can modify their surroundings to achieve a tumor-permissive environment. Here we have taken an unbiased approach to identifying RNAs in glioma-derived microvesicles, and explored their potential to regulate gene expression in recipient cells. We find that glioma microvesicles are predominantly of exosomal origin and contain complex populations of coding and noncoding RNAs in proportions that are distinct from those in the cells from which they are derived. Microvesicles show a relative depletion in microRNA compared with their cells of origin, and are enriched in unusual or novel noncoding RNAs, most of which have no known function. Short-term exposure of brain microvascular endothelial cells to glioma microvesicles results in many gene expression changes in the endothelial cells, most of which cannot be explained by direct delivery of transcripts. Our data suggest that the scope of potential actions of tumor-derived microvesicles is much broader and more complex than previously supposed, and highlight a number of new classes of small RNA that remain to be characterized.

[593]

TÍTULO / TITLE: - Inhibitory effect of benzyl isothiocyanate on proliferation in vitro of human glioma cells.

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

REVISTA / JOURNAL: - Asian Pac J Cancer Prev. 2013;14(4):2607-10.

AUTORES / AUTHORS: - Zhu Y; Zhuang JX; Wang Q; Zhang HY; Yang P

INSTITUCIÓN / INSTITUTION: - Department of Clinical Laboratory, Tianjin Huan Hu Hospital, Tianjin, China. zhuyutj@126.com

RESUMEN / SUMMARY: - Malignant glioma, also known as brain cancer, is the most common intracranial tumor, having an extremely high mortality and recurrence rate. The survival rate of the affected patients is very low and treatment is difficult. Hence, growth inhibition of glioma has become a hot topic in the study of brain cancer treatment. Among the various isothiocyanate compounds, it has been confirmed that benzyl isothiocyanate (BITC) can inhibit the growth of a variety of tumors, including leukemia, glioma and lung cancer, both inside and outside the body. This study explored inhibitory effects of BITC on human glioma U87MG cells, as well as potential mechanisms. It was found that BITC could inhibit proliferation, induce apoptosis and arrest cell cycling of U87MG cells. In addition, it inhibited the expression of SOD and GSH, and caused oxidative stress to tumor cells. Therefore, it is believed that BITC can inhibit the growth of U87MG cells outside the body. Its mechanism may be related to the fact that BITC can cause oxidative stress to tumor cells.

[594]

TÍTULO / TITLE: - Synergism between Hedgehog-GLI and EGFR signaling in Hedgehog-responsive human medulloblastoma cells induces downregulation of canonical Hedgehog-target genes and stabilized expression of GLI1.

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

REVISTA / JOURNAL: - PLoS One. 2013 Jun 10;8(6):e65403. doi: 10.1371/journal.pone.0065403. Print 2013.

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

1371/journal.pone.0065403

AUTORES / AUTHORS: - Gotschel F; Berg D; Gruber W; Bender C; Eberl M; Friedel M; Sonntag J; Rungeler E; Hache H; Wierling C; Nietfeld W; Lehrach H; Frischauf A; Schwartz-Albiez R; Aberger F; Korf U

INSTITUCIÓN / INSTITUTION: - Division of Molecular Genome Analysis, German Cancer Research Center-DKFZ, Heidelberg, Germany.

RESUMEN / SUMMARY: - Aberrant activation of Hedgehog (HH) signaling has been identified as a key etiologic factor in many human malignancies. Signal strength, target gene specificity, and oncogenic activity of HH signaling depend profoundly on interactions with other pathways, such as epidermal growth factor receptor-mediated signaling, which has been shown to cooperate with HH/GLI in basal cell carcinoma and pancreatic cancer. Our experimental data demonstrated that the Daoy human medulloblastoma cell line possesses a fully inducible endogenous HH pathway. Treatment of Daoy cells with Sonic HH or Smoothed agonist induced expression of GLI1 protein and simultaneously prevented the processing of GLI3 to its repressor form. To study interactions between HH- and EGF-induced signaling in greater detail, time-resolved measurements were carried out and analyzed at the transcriptomic and

proteomic levels. The Daoy cells responded to the HH/EGF co-treatment by downregulating GLI1, PTCH, and HHIP at the transcript level; this was also observed when Amphiregulin (AREG) was used instead of EGF. We identified a novel crosstalk mechanism whereby EGFR signaling silences proteins acting as negative regulators of HH signaling, as AKT- and ERK-signaling independent process. EGFR/HH signaling maintained high GLI1 protein levels which contrasted the GLI1 downregulation on the transcript level. Conversely, a high-level synergism was also observed, due to a strong and significant upregulation of numerous canonical EGF-targets with putative tumor-promoting properties such as MMP7, VEGFA, and IL-8. In conclusion, synergistic effects between EGFR and HH signaling can selectively induce a switch from a canonical HH/GLI profile to a modulated specific target gene profile. This suggests that there are more wide-spread, yet context-dependent interactions, between HH/GLI and growth factor receptor signaling in human malignancies.

[595]

TÍTULO / TITLE: - Acquired segmental neuromas.

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

REVISTA / JOURNAL: - P R Health Sci J. 2013 Jun;32(2):101-3.

AUTORES / AUTHORS: - Brau-Javier CN; Sanchez JE; Sanchez JL

INSTITUCIÓN / INSTITUTION: - Department of Dermatology, School of Medicine, University of Puerto Rico Medical Sciences Campus, San Juan, Puerto Rico.
braucristina@hotmail.com

RESUMEN / SUMMARY: - Neuromas are benign hyperplastic proliferations of normal peripheral nerve components. These can be associated with some genodermatoses, namely Cowden syndrome and multiple endocrine neoplasia (MEN) 2B, especially when numerous lesions are present. Given the potential for malignancy (such as breast cancer, pheochromocytoma, and thyroid cancer) associated with these syndromes, other features indicative of either syndrome should be evaluated in patients presenting with multiple cutaneous neuromas. The evaluation should include a thorough family history and complete physical, dermatologic, and ophthalmologic exams as well as thyroid studies. We report, herein, the case of an 8-year-old female with cutaneous neuromas distributed segmentally with no other associated finding suggestive of an underlying syndrome.

[596]

TÍTULO / TITLE: - BEAMing and Droplet Digital PCR Analysis of Mutant IDH1 mRNA in Glioma Patient Serum and Cerebrospinal Fluid Extracellular Vesicles.

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

REVISTA / JOURNAL: - Mol Ther Nucleic Acids. 2013 Jul 23;2:e109. doi: 10.1038/mtna.2013.28.

●● Enlace al texto completo (gratis o de pago) [1038/mtna.2013.28](https://doi.org/10.1038/mtna.2013.28)

AUTORES / AUTHORS: - Chen WW; Balaj L; Liao LM; Samuels ML; Kotsopoulos SK; Maguire CA; Loguidice L; Soto H; Garrett M; Zhu LD; Sivaraman S; Chen C; Wong ET; Carter BS; Hochberg FH; Breakefield XO; Skog J

INSTITUCIÓN / INSTITUTION: - 1] Department of Neurology, Massachusetts General Hospital, and Neuroscience Program, Harvard Medical School, Boston, Massachusetts, USA [2] Department of Radiology, Massachusetts General Hospital, and Neuroscience Program, Harvard Medical School, Boston, Massachusetts, USA [3] Program, Harvard-MIT Division of Health, Science, and Technology, Harvard Medical School, Boston, Massachusetts, USA.

RESUMEN / SUMMARY: - Development of biofluid-based molecular diagnostic tests for cancer is an important step towards tumor characterization and real-time monitoring in a minimally invasive fashion. Extracellular vesicles (EVs) are released from tumor cells into body fluids and can provide a powerful platform for tumor biomarkers because they carry tumor proteins and nucleic acids. Detecting rare point mutations in the background of wild-type sequences in biofluids such as blood and cerebrospinal fluid (CSF) remains a major challenge. Techniques such as BEAMing (beads, emulsion, amplification, magnetics) PCR and droplet digital PCR (ddPCR) are substantially more sensitive than many other assays for mutant sequence detection. Here, we describe a novel approach that combines biofluid EV RNA and BEAMing RT-PCR (EV-BEAMing), as well droplet digital PCR to interrogate mutations from glioma tumors. EVs from CSF of patients with glioma were shown to contain mutant IDH1 transcripts, and we were able to reliably detect and quantify mutant and wild-type IDH1 RNA transcripts in CSF of patients with gliomas. EV-BEAMing and EV-ddPCR represent a valuable new strategy for cancer diagnostics, which can be applied to a variety of biofluids and neoplasms. *Molecular Therapy-Nucleic Acids* (2013) 2, e109; doi:10.1038/mtna.2013.28; published online 23 July 2013.

[597]

TÍTULO / TITLE: - Validation and modification of a predictive model of postresection hydrocephalus in pediatric patients with posterior fossa tumors.

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

REVISTA / JOURNAL: - *J Neurosurg Pediatr.* 2013 Jun 28.

●● [Enlace al texto completo \(gratis o de pago\) 3171/2013.5.PEDS1371](#)

AUTORES / AUTHORS: - Foreman P; McCluggage S 3rd; Naftel R; Griessenauer CJ; Ditty BJ; Agee BS; Riva-Cambrin J; Wellons J 3rd

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Alabama at Birmingham, Birmingham, Alabama;

RESUMEN / SUMMARY: - Object Postresection hydrocephalus is observed in approximately 30% of pediatric patients with posterior fossa tumors. However, which patients will develop postresection hydrocephalus is not known. The Canadian Preoperative Prediction Rule for Hydrocephalus (CPPRH) was developed in an attempt to identify this subset of patients, allowing for the

optimization of their care. The authors sought to validate and critically appraise the CPPRH. Methods The authors conducted a retrospective chart review of 99 consecutive pediatric patients who presented between 2002 and 2010 with posterior fossa tumors and who subsequently underwent resection. The data were then analyzed using bivariate and multivariate analyses, and a modified CPPRH (mCPPRH) was applied. Results Seventy-six patients were evaluated. Four variables were found to be significant in predicting postresection hydrocephalus: age younger than 2 years, moderate/severe hydrocephalus, preoperative tumor diagnosis, and transependymal edema. The mCPPRH produced observed likelihood ratios of 0.737 (95% CI 0.526-1.032) and 4.688 (95% CI 1.421-15.463) for low- and high-risk groups, respectively. Conclusions The mCPPRH utilizes readily obtainable and reliable preoperative variables that together stratify children with posterior fossa tumors into high- and low-risk categories for the development of postresection hydrocephalus. This new predictive model will aid patient counseling and tailor the intensity of postoperative clinical and radiographic monitoring for hydrocephalus, as well as provide evidence-based guidance for the use of prophylactic CSF diversion.

[598]

TÍTULO / TITLE: - Dying endothelial cells stimulate proliferation of malignant glioma cells via a caspase 3-mediated pathway.

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

REVISTA / JOURNAL: - Oncol Lett. 2013 May;5(5):1615-1620. Epub 2013 Mar 1.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1223](#)

AUTORES / AUTHORS: - Mao P; Smith L; Xie W; Wang M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital, School of Medicine, Xi'an Jiaotong University, Xi'an, Shaanxi 710061, P.R. China ; ; Department of Neurological Surgery, The Ohio State University Medical Center, Columbus, OH 43210, USA.

RESUMEN / SUMMARY: - Emerging evidence has indicated that apoptotic cells have a compensatory effect on the proliferation of neighboring cells. However, the potential role of dying vascular endothelial cells (ECs) in glioma tumor proliferation remains unclear. In the present study, three glioma cell lines were cocultured with dying ECs under various conditions to evaluate the effect of dying ECs on tumor proliferation using alamarBlue and trypan blue assays to assess cell proliferation and viability, respectively. The results suggested that dying ECs had a marked ability to facilitate glioma cell growth via a caspase 3-mediated pathway. Furthermore, calcium-independent phospholipase A2 (iPLA2), a downstream gene regulated by caspase 3, is highly involved in this process. Prostaglandin E2 (PGE2) was the final effector of the caspase 3-iPLA2 signaling pathway in glioma cell proliferation. Knockdown of caspase 3 or iPLA2 using shRNA negated the growth stimulating effect of dying ECs. By contrast, the overexpression of iPLA2 in ECs via the pLEX lentiviral vector system or addition of PGE2 into culture medium had a growth promoting effect

on glioma cells. Overall, the present data revealed a paracrine signal released from dying ECs which promotes the proliferation of surrounding glioma cells, demonstrating the importance of blocking compensatory proliferation during tumor therapy. Additionally, targeting caspase 3-mediated pathways combined with current therapeutic strategies may be a promising approach for improving the dismal prognosis associated with these malignant tumors.

[599]

TÍTULO / TITLE: - Tumor-targeted Chlorotoxin-coupled Nanoparticles for Nucleic Acid Delivery to Glioblastoma Cells: A Promising System for Glioblastoma Treatment.

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

REVISTA / JOURNAL: - Mol Ther Nucleic Acids. 2013 Jun 18;2:e100. doi: 10.1038/mtna.2013.30.

●● Enlace al texto completo (gratis o de pago) [1038/mtna.2013.30](#)

AUTORES / AUTHORS: - Costa PM; Cardoso AL; Mendonca LS; Serani A; Custodia C; Conceicao M; Simoes S; Moreira JN; Pereira de Almeida L; Pedroso de Lima MC

INSTITUCIÓN / INSTITUTION: - 1] CNC - Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal [2] Department of Life Sciences, Faculty of Science and Technology, University of Coimbra, Coimbra, Portugal.

RESUMEN / SUMMARY: - The present work aimed at the development and application of a lipid-based nanocarrier for targeted delivery of nucleic acids to glioblastoma (GBM). For this purpose, chlorotoxin (CTX), a peptide reported to bind selectively to glioma cells while showing no affinity for non-neoplastic cells, was covalently coupled to liposomes encapsulating antisense oligonucleotides (asOs) or small interfering RNAs (siRNAs). The resulting targeted nanoparticles, designated CTX-coupled stable nucleic acid lipid particles (SNALPs), exhibited excellent features for in vivo application, namely small size (<180 nm) and neutral surface charge. Cellular association and internalization studies revealed that attachment of CTX onto the liposomal surface enhanced particle internalization into glioma cells, whereas no significant internalization was observed in noncancer cells. Moreover, nanoparticle-mediated miR-21 silencing in U87 human GBM and GL261 mouse glioma cells resulted in increased levels of the tumor suppressors PTEN and PDCD4, caspase 3/7 activation and decreased tumor cell proliferation. Preliminary in vivo studies revealed that CTX enhances particle internalization into established intracranial tumors. Overall, our results indicate that the developed targeted nanoparticles represent a valuable tool for targeted nucleic acid delivery to cancer cells. Combined with a drug-based therapy, nanoparticle-mediated miR-21 silencing constitutes a promising multimodal therapeutic approach towards GBM. Molecular Therapy-Nucleic Acids (2013) 2, e100; doi:10.1038/mtna.2013.30; published online 18 June 2013.

[600]

TÍTULO / TITLE: - A Novel High-resolution In vivo Imaging Technique to Study the Dynamic Response of Intracranial Structures to Tumor Growth and Therapeutics.

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

REVISTA / JOURNAL: - J Vis Exp. 2013 Jun 16;(76). doi: 10.3791/50363.

●● Enlace al texto completo (gratis o de pago) [3791/50363](#)

AUTORES / AUTHORS: - Burrell K; Agnihotri S; Leung M; Dacosta R; Hill R; Zadeh G

INSTITUCIÓN / INSTITUTION: - Brain Tumor Research Centre, Hospital for Sick Children, Toronto Medical Discovery Tower.

RESUMEN / SUMMARY: - We have successfully integrated previously established Intracranial window (ICW) technology (1-4) with intravital 2-photon confocal microscopy to develop a novel platform that allows for direct long-term visualization of tissue structure changes intracranially. Imaging at a single cell resolution in a real-time fashion provides supplementary dynamic information beyond that provided by standard end-point histological analysis, which looks solely at 'snap-shot' cross sections of tissue. Establishing this intravital imaging technique in fluorescent chimeric mice, we are able to image four fluorescent channels simultaneously. By incorporating fluorescently labeled cells, such as GFP+ bone marrow, it is possible to track the fate of these cells studying their long-term migration, integration and differentiation within tissue. Further integration of a secondary reporter cell, such as an mCherry glioma tumor line, allows for characterization of cell:cell interactions. Structural changes in the tissue microenvironment can be highlighted through the addition of intra-vital dyes and antibodies, for example CD31 tagged antibodies and Dextran molecules. Moreover, we describe the combination of our ICW imaging model with a small animal micro-irradiator that provides stereotactic irradiation, creating a platform through which the dynamic tissue changes that occur following the administration of ionizing irradiation can be assessed. Current limitations of our model include penetrance of the microscope, which is limited to a depth of up to 900 µm from the sub cortical surface, limiting imaging to the dorsal axis of the brain. The presence of the skull bone makes the ICW a more challenging technical procedure, compared to the more established and utilized chamber models currently used to study mammary tissue and fat pads (5-7). In addition, the ICW provides many challenges when optimizing the imaging.

[601]

TÍTULO / TITLE: - BCL2A1 is a Potential Biomarker for Postoperative Seizure Control in Patients with Low-grade Gliomas.

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

REVISTA / JOURNAL: - CNS Neurosci Ther. 2013 Jul 10. doi: 10.1111/cns.12148.

●● Enlace al texto completo (gratis o de pago) 1111/cns.12148

AUTORES / AUTHORS: - You G; Feng L; Yan W; Zhang W; Wang YZ; Li SW; Li SW; Li GL; Song YJ; Kang CS; You YP; Jiang T

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

RESUMEN / SUMMARY: - AIMS: To identify molecular genetic factors that influence preoperative seizure occurrence and postoperative seizure control in patients with low-grade gliomas (LGGs). METHODS: Fifty-four WHO grade II astrocytomas were used for microarray analysis under strict inclusion criteria. The primary endpoint was seizure control at 12 months after surgery. Biological processes were investigated by gene ontology (GO) analysis. Quantitative RT-PCR and immunohistochemistry were used to validate key genes. RESULTS: Differentially expressed genes correlated with seizure occurrence failed to significantly distinguish patients with and without a history of seizures. With respect to postoperative seizure control, a transcript profile of 92 genes was identified, which successfully separated patients with good and poor seizure prognosis. GO analysis revealed that the most striking overrepresentation of genes was found in a category of anti-apoptotic genes and their regulation. Increased expression was also observed for genes involved in immune and inflammatory responses. BCL2A1 was proven to be a novel marker associated with seizure prognosis. CONCLUSION: Increased anti-apoptotic activity of tumor cells appears to contribute to seizure recurrence after surgery in patients with LGGs. These findings provide insights that may lead to the development of effective treatment strategies for prolonging the survival of patients with LGG in the future.

[602]

TÍTULO / TITLE: - Melatonin attenuates hippocampal neuron apoptosis and oxidative stress during chronic intermittent hypoxia via up-regulating B-cell lymphoma-2 and down-regulating B-cell lymphoma-2-associated X protein.

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

REVISTA / JOURNAL: - Saudi Med J. 2013 Jul;34(7):701-8.

AUTORES / AUTHORS: - Tan X; Guo X; Liu H

INSTITUCIÓN / INSTITUTION: - Wuhan Brain Hospital, General Hospital of the Yangtze River Shipping, Wuhan, China.

RESUMEN / SUMMARY: - OBJECTIVE: To investigate the neuroprotective effect of melatonin against chronic intermittent hypoxia (CIH), the major pathophysiologic features of obstructive sleep apnea syndrome. METHODS: This study was conducted between January 2011 and September 2012 in Tongji Hospital, Huazhong University of Science and Technology, Wuhan, China. Thirty 8-week Wistar rats were randomly divided into 3 groups (10 each): a control group, a vehicle-treated CIH group; and a melatonin-treated (10 mg/kg) CIH group. Rats were exposed to either intermittent hypoxia (IH) (oxygen concentration changing periodically from 21.78±0.65 to 6.57±/-

0.57%), or air-air cycling at a rate of 30 cycles/hour, 8 hour/day for 4 weeks. RESULTS: The CIH exposure led to a significant decrease in superoxide dismutase (SOD) activity and anti-apoptotic protein B-cell lymphoma-2 (BCL-2) expression in the hippocampus of CIH group rats compared with that of the control group and melatonin-treated CIH group. In contrast, hippocampal neuronal apoptosis increased significantly in parallel to an augment in 3,4-methylenedioxyamphetamine (MDA) content and pro-apoptotic protein Bcl-2-associated X protein (BAX) expression in CIH group than the other 2 groups. Melatonin administration abrogated the increase in MDA activity, as well as BAX expression, and restored SOD activity and BCL-2 expression to nearly their normal levels. CONCLUSION: These results indicate melatonin can inhibit hippocampal neuron apoptosis following CIH by scavenging reactive oxygen species, up-regulating anti-apoptotic protein BCL-2 and down-regulating pro-apoptotic protein BAX, and thus, alleviate CIH-induced oxidative stress injury and produce neuroprotection effects.

[603]

TÍTULO / TITLE: - Disappearance of breach rhythm heralding recurrent tumor progression in a patient with astrocytoma.

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

REVISTA / JOURNAL: - Clin EEG Neurosci. 2013 Jul;44(3):237-43. doi: 10.1177/1550059412458263.

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

[1177/1550059412458263](#)

AUTORES / AUTHORS: - Kampf C; Grossmann A; Benecke R; Rosche J

INSTITUCIÓN / INSTITUTION: - Klinik und Poliklinik für Neurologie Universität Rostock, Rostock, Germany.

RESUMEN / SUMMARY: - The breach rhythm is sometimes considered the consequence of reduced resistance between the cortex and the scalp electrode in the region of a skull defect. On the other hand, the electroencephalographic (EEG) changes after craniotomy were attributed to an activation of EEG activity by meningocortical adhesions with admixed gliosis. We report changes of the breach rhythm in a patient with astrocytoma, which give further evidence that the breach rhythm is not merely the result of physical changes in the area of a skull defect. In our patient, the breach rhythm was no longer detectable before a new tumor progression took place, showed up again, and at the end changed into localized slowing before the deterioration of the patient's general medical condition. This case suggests that in patients with brain tumors, the loss or attenuation in frequency of an established breach rhythm might be considered as an indication of a new tumor progression.

[604]

TÍTULO / TITLE: - Suprasellar mass mimicking a hypothalamic glioma in a patient with a complete PROP1 deletion.

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

REVISTA / JOURNAL: - Eur J Med Genet. 2013 Jul 3. pii: S1769-7212(13)00135-3. doi: 10.1016/j.ejmg.2013.06.006.

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

[1016/j.ejmg.2013.06.006](#)

AUTORES / AUTHORS: - Akcay A; Ulucan K; Taskin N; Boyraz M; Akcay T; Zurita O; Gomez A; Heath KE; Campos-Barros A

INSTITUCIÓN / INSTITUTION: - Department of Pediatric Hematology, Kanuni Sultan Suleyman Education and Research Hospital, Istanbul, Turkey.

RESUMEN / SUMMARY: - Mutations in PROP1 are the most frequent defect detected in patients with combined pituitary hormone deficiency (MIM #262600), characterized by a clinical phenotype of proportionate growth deficit due to impaired production of growth hormone in combination with deficiency of one or more of the additional anterior pituitary hormones. Approximately one third of patients with PROP1 inactivating mutations present with abnormal development of the anterior lobe of the pituitary gland as revealed by MRI. We report on the clinical and molecular characterization of the fourth complete PROP1 deletion in a girl with proportional short stature, combined pituitary hormone deficiency and a suprasellar mass mimicking a hypothalamic glioma. The proband, born to consanguineous parents, presented with proportional growth failure (height 108.8 cm, -3.48 SDS), combined pituitary hormone deficiency (GH, TSH, PRL and gonadotropins) and a suprasellar mass with optic chiasm invasion, compatible with a diagnosis of chiasmatic hypothalamic glioma, as revealed by MRI. PROP1 mutation screening by PCR and MLPA detected a homozygous deletion of the entire PROP1. The deletion was delimited to at least 7.7 kb upstream of PROP1 and more finely to approximately 541-74 bp downstream from PROP1 by aCGH and PCR mapping. We describe the fourth case with a complete PROP1 deletion in homozygosis. The apparent location of the respective 5' (within a highly repetitive region, rich in Alu sequences) and 3' (within an Alu sequence) breakpoints, suggests that the deletion may have arisen through homologous recombination. The differentiation between PROP1 mutation associated pituitary enlargements from craniopharyngioma, pituitary adenoma, dys-germinoma, or Rathke's pouch cyst, is critical for the correct patient management. It is important to recognize that PROP1 mutations can present associated with evolving pituitary masses and/or other MRI alterations of the pituitary during early childhood and that surgery is not indicated in these patients. Therefore, in the presence of combined pituitary hormone deficiency and a pituitary or hypothalamic mass, PROP1 analysis should be considered before referring the patient to a neurosurgeon.

[605]

TÍTULO / TITLE: - Repeated cyst formation in a patient with leukoencephalopathy, cerebral calcifications, and cysts: effectiveness of stereotactic aspiration with Ommaya reservoir placement.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Aug;12(2):155-9. doi: 10.3171/2013.5.PEDS1328. Epub 2013 Jun 21.

●● Enlace al texto completo (gratis o de pago) [3171/2013.5.PEDS1328](#)

AUTORES / AUTHORS: - Ooba H; Abe T; Hisamitsu Y; Fujiki M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Oita University Faculty of Medicine, Oita, Japan.

RESUMEN / SUMMARY: - The combination of leukoencephalopathy, cerebral calcifications, and cysts (LCC) constitutes a rare cerebral disorder characterized by distinctive neuroradiological and clinical findings. Twenty-eight cases of LCC have been reported. Surgery is usually required to treat progressively expanding cysts, but surgical strategies have been varied. The authors present the case of a patient who underwent 4 surgical procedures for repeated cyst formation. The first operation was performed for the removal of a cyst and to make a histopathological diagnosis. The second and third operations were performed to treat de novo cysts. The fourth operation was performed to treat a recurrence. This is the first reported case of LCC in which it was necessary to perform surgery 4 times, in large part due to de novo cyst formation. It provides evidence that multiple cysts may develop in these patients and that several surgical operations may be needed to treat LCC. Stereotactic aspiration with Ommaya reservoir placement is an appropriate procedure for this condition because it is less invasive and more repeatable than open surgery.

[606]

TÍTULO / TITLE: - Cancer and the endogenous “pineal clock”: a means of early diagnosis and successful treatment as well as prevention of cancers.

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

REVISTA / JOURNAL: - Curr Aging Sci. 2013 Feb;6(1):108-14.

AUTORES / AUTHORS: - Pierpaoli W

INSTITUCIÓN / INSTITUTION: - INTERBION Foundation for Basic Biomedical Research, 6595 Riazzino, Switzerland.

RESUMEN / SUMMARY: - The majority of chronic diseases, most notably those accompanying aging, result from progressive deterioration of central neuroimmunoendocrine control, often referred to as immunological surveillance. This is as true of cancer as it is of the development of cardiovascular, autoimmune, and neurodegenerative disease, in all of these immunological surveillance break downs, leading to an unraveling of the neuroimmunoendocrine process that inhibits proliferation of preneoplastic and neoplastic cells already existing in the body. The onset of cancer is anticipated by changes in the hormonal-immune coordination resulting in chronic

quantitative alterations in the synthesis and release of hormones and the loss of the natural synchronicity of that release, which occurs according to circadian rhythms in the healthy organism, principally under the control of the pineal network. Periodic circadian hormonal release is the source of immune system regulation, thus altering hormone rhythms impairs the immune system's ability to maintain control over emerging tumor cells, not necessarily to eliminate them, but to inhibit proliferation. Malignancy, then, is the result of suppression of or interference with the regular release of hormones that maintain strict regulation of the thymo-lymphatic immune system's maturation and activity. This understanding means that we can act to prevent cancer by means of efficiently monitoring and maintenance of physiological hormonal values. For the cyclic synthesis of malignancies that are metastasized, a means of xenogeneic bone marrow transplantation is proposed as an alternative therapeutic approach.

[607]

TÍTULO / TITLE: - Review of an 11-year Experience in Retrosigmoid Approach for Treatment of Acoustic Neuromas.

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

REVISTA / JOURNAL: - Med J Malaysia. 2013 Jun;68(3):253-8.

AUTORES / AUTHORS: - Lim SL; Wong SH

INSTITUCIÓN / INSTITUTION: - Sarawak General Hospital, Department of Neurosurgery, Jalan Tun Ahmad Zaidi Aduce, Kuching, Sarawak 93586, Malaysia. wonghm96@yahoo.com.

RESUMEN / SUMMARY: - This study reviews surgery on acoustic neuromas by the second author using retrosigmoid approach from January 2000 to June 2010 in the state of Sarawak. There was a total of 32 patients in this study. The commonest presenting symptom was hearing loss (81.3%), followed by headache and tinnitus (each 37.5%), ataxia (34.4%) and facial numbness (21.9%). Twenty-seven patients (84.4%) had large tumor (≥ 3 cm) while 5 patients (15.6%) had medium size tumor (1.5-2.9cm). The mean tumor size was 3.6 cm. Facial nerve outcome was good to moderate in 93.7% (House and Brackmann Grade I-IV). The most common complications were CSF leak with 3 patients(9.4%) and facial numbness with 2 patients(6.3%). All either resolved with treatment or improved. There was no mortality. Excision of acoustic neuromas using retrosigmoid approach could achieve acceptable facial nerve outcome with a low incidence of morbidity without mortality.

[608]

TÍTULO / TITLE: - Glioma stem cells and immunotherapy for the treatment of malignant gliomas.

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

REVISTA / JOURNAL: - ISRN Oncol. 2013 May 15;2013:673793. doi: 10.1155/2013/673793. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1155/2013/673793](https://doi.org/10.1155/2013/673793)

AUTORES / AUTHORS: - Toda M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Keio University School of Medicine, 35 Shinanomachi, Shinjuku-ku, Tokyo 160-8582, Japan.

RESUMEN / SUMMARY: - Stem cell research has led to the discovery of glioma stem cells (GSCs), and because these cells are resistant to chemotherapy and radiotherapy, analysis of their properties has been rapidly pursued for targeted treatment of malignant glioma. Recent studies have also revealed complex crosstalk between GSCs and their specialized environment (niche). Therefore, targeting not only GSCs but also their niche may be a principle for novel therapies of malignant glioma. One possible novel strategy for targeting GSCs and their niches is immunotherapy with different antitumor mechanism(s) from those of conventional therapy. Recent clinical studies of immunotherapy using peptide vaccines and antibodies have shown promising results. This review describes the recent findings related to GSCs and their niches, as well as immunotherapies for glioma, followed by discussion of immunotherapies that target GSCs for the treatment of malignant glioma.

[609]

TÍTULO / TITLE: - Nanoparticle-Programmed Self-Destructive Neural Stem Cells for Glioblastoma Targeting and Therapy.

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

REVISTA / JOURNAL: - Small. 2013 Jul 21. doi: 10.1002/sml.201301111.

●● Enlace al texto completo (gratis o de pago) [1002/sml.201301111](https://doi.org/10.1002/sml.201301111)

AUTORES / AUTHORS: - Cheng Y; Morshed R; Cheng SH; Tobias A; Auffinger B; Wainwright DA; Zhang L; Yunis C; Han Y; Chen CT; Lo LW; Aboody KS; Ahmed AU; Lesniak MS

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

RESUMEN / SUMMARY: - A 3-step glioblastoma-tropic delivery and therapy method using nanoparticle programmed self-destructive neural stem cells (NSCs) is demonstrated in vivo: 1) FDA-approved NSCs for clinical trials are loaded with pH-sensitive MSN-Dox; 2) the nanoparticle conjugates provide a delayed drug-releasing mechanism and allow for NSC migration towards a distant tumor site; 3) NSCs eventually undergo cell death and release impregnated MSN-Dox, which subsequently induces toxicity towards surrounding glioma cells.

[610]

TÍTULO / TITLE: - Should we continue temozolomide beyond six cycles in the adjuvant treatment of glioblastoma without an evidence of clinical benefit? A cost analysis based on prescribing patterns in España.

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

REVISTA / JOURNAL: - Clin Transl Oncol. 2013 Jun 21.

●● Enlace al texto completo (gratis o de pago) [1007/s12094-013-1068-](#)

[3](#)

AUTORES / AUTHORS: - Balana C; Vaz MA; Lopez D; de la Penas R; Garcia-Bueno JM; Molina-Garrido MJ; Sepulveda JM; Cano JM; Buges C; Sanz SM; Arranz JL; Perez-Segura P; Rodriguez A; Martin JM; Benavides M; Gil M

INSTITUCIÓN / INSTITUTION: - Medical Oncology Service, Catalan Institute of Oncology, Hospital Germans Trias i Pujol, Carretera Canyet, s/n, 08916, Badalona, España, cbalana@iconcologia.net.

RESUMEN / SUMMARY: - PURPOSE: The standard adjuvant treatment for glioblastoma is temozolomide concomitant with radiotherapy, followed by a further six cycles of temozolomide. However, due to the lack of empirical evidence and international consensus regarding the optimal duration of temozolomide treatment, it is often extended to 12 or more cycles, even in the absence of residual disease. No clinical trial has shown clear evidence of clinical benefit of this extended treatment. We have explored the economic impact of this practice in España. MATERIALS AND METHODS: Spanish neuro-oncologists completed a questionnaire on the clinical management of glioblastomas in their centers. Based on their responses and on available clinical and demographic data, we estimated the number of patients who receive more than six cycles of temozolomide and calculated the cost of this extended treatment. RESULTS: Temozolomide treatment is continued for more than six cycles by 80.5 % of neuro-oncologists: 44.4 % only if there is residual disease; 27.8 % for 12 cycles even in the absence of residual disease; and 8.3 % until progression. Thus, 292 patients annually will continue treatment beyond six cycles in spite of a lack of clear evidence of clinical benefit. Temozolomide is covered by the National Health Insurance System, and the additional economic burden to society of this extended treatment is nearly 1.5 million euros a year. CONCLUSIONS: The optimal duration of adjuvant temozolomide treatment merits investigation in a clinical trial due to the economic consequences of prolonged treatment without evidence of greater patient benefit.

[611]

TÍTULO / TITLE: - Valosin-containing protein regulates the proteasome-mediated degradation of DNA-PKcs in glioma cells.

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

REVISTA / JOURNAL: - Cell Death Dis. 2013 May 30;4:e647. doi: 10.1038/cddis.2013.171.

●● Enlace al texto completo (gratis o de pago) [1038/cddis.2013.171](#)

AUTORES / AUTHORS: - Jiang N; Shen Y; Fei X; Sheng K; Sun P; Qiu Y; Larner J; Cao L; Kong X; Mi J

INSTITUCIÓN / INSTITUTION: - Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China.

RESUMEN / SUMMARY: - DNA-dependent protein kinase (DNA-PK) has an important role in the repair of DNA damage and regulates the radiation sensitivity of glioblastoma cells. The VCP (valosine-containing protein), a chaperone protein that regulates ubiquitin-dependent protein degradation, is phosphorylated by DNA-PK and recruited to DNA double-strand break sites to regulate DNA damage repair. However, it is not clear whether VCP is involved in DNA-PKcs (DNA-PK catalytic subunit) degradation or whether it regulates the radiosensitivity of glioblastoma. Our data demonstrated that DNA-PKcs was ubiquitinated and bound to VCP. VCP knockdown resulted in the accumulation of the DNA-PKcs protein in glioblastoma cells, and the proteasome inhibitor MG132 synergised this increase. As expected, this increase promoted the efficiency of DNA repair in several glioblastoma cell lines; in turn, this enhanced activity decreased the radiation sensitivity and prolonged the survival fraction of glioblastoma cells in vitro. Moreover, the VCP knockdown in glioblastoma cells reduced the survival time of the xenografted mice with radiation treatment relative to the control xenografted glioblastoma mice. In addition, the VCP protein was also downregulated in ~25% of GBM tissues from patients (WHO, grade IV astrocytoma), and the VCP protein level was correlated with patient survival ($R(2)=0.5222$, $P<0.05$). These findings demonstrated that VCP regulates DNA-PKcs degradation and increases the sensitivity of GBM cells to radiation.

[612]

TÍTULO / TITLE: - Long-term quality of life in children treated for posterior fossa brain tumors.

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

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Jul 5.

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

[3171/2013.6.PEDS12535](#)

AUTORES / AUTHORS: - Kulkarni AV; Piscione J; Shams I; Bouffet E

INSTITUCIÓN / INSTITUTION: - Divisions of Neurosurgery.

RESUMEN / SUMMARY: - Object In the face of increasing survival, quality of life (QOL) has become an important indicator of treatment success in children with posterior fossa brain tumors (PFBTs). The authors' objective was to assess the long-term QOL in survivors of PFBT. Methods The authors conducted a cross-sectional study of children who, between birth and age 18 years at diagnosis, had previously been treated at their institution for a PFBT. At the time of assessment for this study, children were between 5 and 19 years old and had received standard treatment for PFBT ending at least 6 months before the assessment. The QOL was measured with the Pediatric Quality of Life Inventory (PedsQL) generic score scales and the Health Utilities Index Mark 3 (HUI3). Multivariate analyses were used to assess several variables (patient related, treatment related, and socioeconomic) for association with QOL. Results A total of 62 children participated in the study (median age at

assessment 11.9 years, interquartile range [IQR] 7.8-14.8, and median age at tumor diagnosis of 4.9 years, IQR 2.5-6.9). Median time since active treatment for their PFBT was 5.2 years (IQR 2.4-10.1). Tumor types included cerebellar pilocytic astrocytoma (45.2%), medulloblastoma (30.6%), ependymoma (11.3%), and brainstem astrocytoma (11.3%). Adjuvant therapy included chemotherapy (40.3%) or radiotherapy (14.5% focal and 21.0% craniospinal radiotherapy). Permanent treatment for hydrocephalus was required in 38.7% of the patients. Tumors recurred in 11.3%, requiring repeat treatment in these patients. The median HUI3 utility score was 0.91 (IQR 0.71-1.00) and the median PedsQL total score was 78.3 (IQR 64.1-92.4). Only the following variables were significantly associated with decreased QOL in multivariable model testing (all $p < 0.05$): need for permanent hydrocephalus treatment, large ventricle size, decreased family functioning, and lower family income. Conclusions As a group, long-term survivors of pediatric PFBT appear to have QOL indicators that are similar to those of the general population, although a reasonable minority of patients experience poor outcomes. Although several confounding variables likely remain in this retrospective study, important associations with QOL include the presence of hydrocephalus and socioeconomic factors. The study sample size, however, was limited and the presence of other important factors cannot be excluded.

[613]

TÍTULO / TITLE: - Lymphoma and cerebral vasculitis in association with X-linked lymphoproliferative disease.

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

REVISTA / JOURNAL: - Chin J Cancer. 2013 Jul 2. doi: 10.5732/cjc.012.10238.

●● Enlace al texto completo (gratis o de pago) [5732/cjc.012.10238](#)

AUTORES / AUTHORS: - Zhu J; Zhang Y; Zhen ZJ; Chen Y; Wang J; Cai RQ; Sun XF

INSTITUCIÓN / INSTITUTION: - State Key Laboratory of Oncology in South China; Department of Pediatric Oncology, Sun Yat-sen University Cancer Center, Guangzhou, Guangdong 510060, P. R. China. sunxf@sysucc.org.cn.

RESUMEN / SUMMARY: - Lymphoma is seen in up to 30% of patients with X-linked lymphoproliferative disease (XLP), but cerebral vasculitis related with XLP after cure of Burkitt lymphoma is rarely reported. We describe a case of a 5-year-old boy with XLP who developed cerebral vasculitis two years after cure of Burkitt lymphoma. He had Burkitt lymphoma at the age of 3 years and received chemotherapy (non-Hodgkin's lymphoma-Berlin-Frankfurt-Milan-90 protocol plus rituximab), which induced complete remission over the following two years. At the age of 5 years, the patient first developed headache, vomiting, and then intellectual and motorial retrogression. His condition was not improved after anti-infection, dehydration, or dexamethasone therapy. No tumor cells were found in his cerebrospinal fluid. Magnetic resonance imaging showed multiple non-homogeneous, hypodense masses along the bilateral cortex.

Pathology after biopsy revealed hyperplasia of neurogliocyte and vessel, accompanied by lymphocyte infiltration but no tumor cell infiltration. Despite aggressive treatment, his cognition and motor functions deteriorated in response to progressive cerebral changes. The patient is presently in a vegetative state. We present this case to inform clinicians of correlation between lymphoma and immunodeficiency and explore an optimal treatment for lymphoma patients with compromised immune system.

[614]

TÍTULO / TITLE: - Transcriptional Differences between Normal and Glioma-Derived Glial Progenitor Cells Identify a Core Set of Dysregulated Genes.

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

REVISTA / JOURNAL: - Cell Rep. 2013 Jun 27;3(6):2127-41. doi: 10.1016/j.celrep.2013.04.035. Epub 2013 May 30.

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

1016/j.celrep.2013.04.035

AUTORES / AUTHORS: - Auvergne RM; Sim FJ; Wang S; Chandler-Militello D; Burch J; Al Fanek Y; Davis D; Benraiss A; Walter K; Achanta P; Johnson M; Quinones-Hinojosa A; Natesan S; Ford HL; Goldman SA

INSTITUCIÓN / INSTITUTION: - Center for Translational Neuromedicine, University of Rochester Medical Center, Rochester, NY 14642, USA; Department of Neurology, University of Rochester Medical Center, Rochester, NY 14642, USA. Electronic address: romane_auvergne@urmc.rochester.edu.

RESUMEN / SUMMARY: - Glial progenitor cells (GPCs) are a potential source of malignant gliomas. We used A2B5-based sorting to extract tumorigenic GPCs from human gliomas spanning World Health Organization grades II-IV. Messenger RNA profiling identified a cohort of genes that distinguished A2B5(+) glioma tumor progenitor cells (TPCs) from A2B5(+) GPCs isolated from normal white matter. A core set of genes and pathways was substantially dysregulated in A2B5(+) TPCs, which included the transcription factor SIX1 and its principal cofactors, EYA1 and DACH2. Small hairpin RNAi silencing of SIX1 inhibited the expansion of glioma TPCs in vitro and in vivo, suggesting a critical and unrecognized role of the SIX1-EYA1-DACH2 system in glioma genesis or progression. By comparing the expression patterns of glioma TPCs with those of normal GPCs, we have identified a discrete set of pathways by which glial tumorigenesis may be better understood and more specifically targeted.

[615]

TÍTULO / TITLE: - Targeted delivery of antibody-based therapeutic and imaging agents to CNS tumors: crossing the blood-brain barrier divide.

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

REVISTA / JOURNAL: - Expert Opin Drug Deliv. 2013 Jul;10(7):907-26. doi: 10.1517/17425247.2013.808184. Epub 2013 Jun 11.

- Enlace al texto completo (gratis o de pago)

[1517/17425247.2013.808184](https://doi.org/10.3389/fphar.2013.00062)

AUTORES / AUTHORS: - Chacko AM; Li C; Pryma DA; Brem S; Coukos G; Muzykantov V

INSTITUCIÓN / INSTITUTION: - University of Pennsylvania, Perelman School of Medicine, Nuclear Medicine & Clinical Molecular Imaging, Department of Radiology, 231 S. 34 Street, Room 288, Philadelphia, PA 19104, USA
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RESUMEN / SUMMARY: - Introduction: Brain tumors are inherently difficult to treat in large part due to the cellular blood-brain barriers (BBBs) that limit the delivery of therapeutics to the tumor tissue from the systemic circulation. Virtually no large molecules, including antibody-based proteins, can penetrate the BBB. With antibodies fast becoming attractive ligands for highly specific molecular targeting to tumor antigens, a variety of methods are being investigated to enhance the access of these agents to intracranial tumors for imaging or therapeutic applications. Areas covered: This review describes the characteristics of the BBB and the vasculature in brain tumors, described as the blood-brain tumor barrier (BBTB). Antibodies targeted to molecular markers of central nervous system (CNS) tumors will be highlighted, and current strategies for enhancing the delivery of antibodies across these cellular barriers into the brain parenchyma to the tumor will be discussed. Noninvasive imaging approaches to assess BBB/BBTB permeability and/or antibody targeting will be presented as a means of guiding the optimal delivery of targeted agents to brain tumors. Expert opinion: Preclinical and clinical studies highlight the potential of several approaches in increasing brain tumor delivery across the BBB divide. However, each carries its own risks and challenges. There is tremendous potential in using neuroimaging strategies to assist in understanding and defining the challenges to translating and optimizing molecularly targeted antibody delivery to CNS tumors to improve clinical outcomes.

[616]

TÍTULO / TITLE: - Targeting potassium channels for increasing delivery of imaging agents and therapeutics to brain tumors.

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

REVISTA / JOURNAL: - Front Pharmacol. 2013 May 29;4:62. doi: 10.3389/fphar.2013.00062. Print 2013.

- Enlace al texto completo (gratis o de pago) [3389/fphar.2013.00062](https://doi.org/10.3389/fphar.2013.00062)

AUTORES / AUTHORS: - Khaitan D; Ningaraj NS

INSTITUCIÓN / INSTITUTION: - Department of Molecular Oncology Research, Scintilla Academy for Applied Sciences' Research and Education Bangalore, Karnataka, India.

RESUMEN / SUMMARY: - Every year in the US, 20,000 new primary and nearly 200,000 metastatic brain tumor cases are reported. The cerebral microvessels/capillaries that form the blood-brain barrier not only protect the

brain from toxic agents in the blood but also pose a significant hindrance to the delivery of small and large therapeutic molecules. Different strategies have been employed to circumvent the physiological barrier posed by blood-brain tumor barrier (BTB). Studies in our laboratory have identified significant differences in the expression levels of certain genes and proteins between normal and brain tumor capillary endothelial cells (ECs). In this study, we validated the non-invasive and clinically relevant dynamic contrast enhancing-magnetic resonance imaging (DCE-MRI) method with invasive, clinically irrelevant but highly accurate quantitative autoradiography method using rat glioma model. We also showed that DCE-MRI metric of tissue vessel perfusion-permeability is sensitive to changes in blood vessel permeability following administration of calcium-activated potassium (BKCa) channel activator NS-1619. Our results show that human gliomas and brain tumor ECs that overexpress BKCa channels can be targeted for increased BTB permeability for MRI enhancing agents to brain tumors. We conclude that monitoring the outcome of increased MRI enhancing agents' delivery to microsatellites and leading tumor edges in glioma patients would lead to beneficial clinical outcome.

[617]

TÍTULO / TITLE: - Differential diagnosis of intracranial meningiomas based on magnetic resonance spectroscopy.

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

REVISTA / JOURNAL: - Neurol Neurochir Pol. 2013 May-Jun;47(3):247-55.

AUTORES / AUTHORS: - Jaskolski DJ; Fortuniak J; Stefanczyk L; Majos A; Gajewicz W; Papierz W; Liberski PP; Sikorska B

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery and Oncology of the Central Nervous System, Medical University of Lodz, Lodz.

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RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: To determine in vivo magnetic resonance spectroscopy (MRS) characteristics of intracranial meningiomas and to assess MRS reliability in meningioma grading and discrimination from tumours of similar radiological appearance, such as lymphomas, schwannomas and haemangiopericytomas. MATERIAL AND METHODS: Analysis of spectra of 14 patients with meningiomas, 6 with schwannomas, 2 with lymphomas, 2 with haemangiopericytomas and 17 control spectra taken from healthy hemispheres. RESULTS: All the patients with meningiomas had a high Cho signal (long TE). There were very low signals of Naa and Cr in the spectra of 10 patients. A reversed Ala doublet was seen only in 2 cases. Four patients had a negative Lac signal, whereas 3 had high Lac-Lip spectra. Twelve spectra showed high Cho signals (short TE). In one case the Cho signal was extremely low. All spectra displayed a very low Cr signal, but high Glx and Lac-Lip signals. Ala presence was found only in 3 patients. The mean Cho/Cr ratio (PRESS) was 5.97 (1.12 in normal brain, $p < 0.05$). Lac-Lip

was present in all the meningiomas (STEAM). The Ala signal was seen only in 2 spectra with long TE and in 3 sequences of the short TE sequences. There were both beta/gamma-Glx and alpha-Glx/glutathione signals in all 14 meningiomas. CONCLUSIONS: MRS is unable to discriminate low and high grade meningiomas. The method seems to be helpful in discriminating lymphomas (absent Glx signal), schwannomas (ml signal in the short TE sequences) and haemangiopericytomas (presence of ml band) from meningiomas.

[618]

TÍTULO / TITLE: - HIV-1 viral protein R downregulates Ebp1 and stabilizes p53 in glioblastoma U87MG cells.

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

REVISTA / JOURNAL: - Clin Transl Oncol. 2013 Jul 5.

●● Enlace al texto completo (gratis o de pago) [1007/s12094-013-1072-](#)

[7](#)

AUTORES / AUTHORS: - Zhang S; Zhang B; Xu X; Wang L; Feng X; Wang Q; Huang H; Wu J; Li P; Wang J

INSTITUCIÓN / INSTITUTION: - Tianjin Neurosurgical Institute, Tianjin Huanhu Hospital, Tianjin, 300060, People's Republic of China.

RESUMEN / SUMMARY: - PURPOSE: HIV-1 viral protein R (Vpr) inhibits cell growth and induces apoptosis in a wide range of cancers. However, the mechanism by which Vpr induces cell cycle arrest and apoptosis in GBM cell lines is unclear. The present work was taken to detect the proteins interacted with Vpr in U87MG cells. METHODS: We analyzed the differential expression of proteins between glioblastoma cell U87MG treated with Ad-Vpr and untreated by 2-DE. We used antibody array analysis to analyze the common molecules in the apoptosis of U87MG induced by Vpr. RESULTS: We analyzed the differential expression of proteins between U87MG cell treated with Ad-Vpr and untreated, and found that proteins related to DNA damage repair or different apoptosis pathways were involved in the G2 arrest and apoptosis mediated by Vpr. In addition, proliferation-associated protein 2G4 (PA2G4), also known as Ebp1, was down-regulated and p53 was up-regulated in U87MG cells treated with Ad-Vpr. CONCLUSIONS: Our data suggest that Vpr may inhibit Ebp1 to stabilize p53, which in turn leads to G2 arrest and apoptosis in U87MG cells.

[619]

TÍTULO / TITLE: - LIN28A facilitates the transformation of human neural stem cells and promotes glioblastoma tumorigenesis through a pro-invasive genetic program.

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

REVISTA / JOURNAL: - Oncotarget. 2013 Jul;4(7):1050-64.

AUTORES / AUTHORS: - Mao XG; Hutt-Cabezas M; Orr BA; Weingart M; Taylor I; Rajan AK; Oda Y; Kahlert U; Maciaczyk J; Nikkhah G; Eberhart CG; Raabe EH

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

RESUMEN / SUMMARY: - The cellular reprogramming factor LIN28A promotes tumorigenicity in cancers arising outside the central nervous system, but its role in brain tumors is unknown. We detected LIN28A protein in a subset of human gliomas observed higher expression in glioblastoma (GBM) than in lower grade tumors. Knockdown of LIN28A using lentiviral shRNA in GBM cell lines inhibited their invasion, growth and clonogenicity. Expression of LIN28A in GBM cell lines increased the number and size of orthotopic xenograft tumors. LIN28A expression also enhanced the invasiveness of GBM cells in vitro and in vivo. Increasing LIN28A was associated with down-regulation of tumor suppressing microRNAs let-7b and let-7g and up-regulation of the chromatin modifying protein HMGA2. The increase in tumor cell aggressiveness in vivo and in vitro was accompanied by an upregulation of pro-invasive gene expression, including SNAI1. To further investigate the oncogenic potential of LIN28A, we infected hNSC with lentiviruses encoding LIN28A together with dominant negative R248W-TP53, constitutively active KRAS and hTERT. Resulting subclones proliferated at an increased rate and formed invasive GBM-like tumors in orthotopic xenografts in immunodeficient mice. Similar to LIN28A-transduced GBM neurosphere lines, hNSC-derived tumor cells showed increased expression of HMGA2. Taken together, these data suggest a role for LIN28A in high grade gliomas and illustrate an HMGA2-associated, pro-invasive program that can be activated in GBM by LIN28A-mediated suppression of let-7 microRNAs.

[620]

TÍTULO / TITLE: - Synergistic inhibition of survival, proliferation, and migration of U87 cells with a combination of LY341495 and Iressa.

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

REVISTA / JOURNAL: - PLoS One. 2013 May 27;8(5):e64588. doi: 10.1371/journal.pone.0064588. Print 2013.

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

1371/journal.pone.0064588

AUTORES / AUTHORS: - Yelskaya Z; Carrillo V; Dubisz E; Gulzar H; Morgan D; Mahajan SS

INSTITUCIÓN / INSTITUTION: - Department of Health Sciences, Hunter College, City University of New York, New York, New York, United States of America.

RESUMEN / SUMMARY: - Glioblastomas exploit various molecular pathways to promote glutamate-dependent growth by activating the AMPA (2-amino-3-(3-hydroxy-5-methyl-isoxazol-4-yl) propanoic acid) receptor, the group II metabotropic glutamate receptor, mGluR, and the epidermal growth factor receptor, EGFR. We hypothesized that targeting more than one of these

pathways would be more effective in inhibiting glutamate-dependent growth. Using a model of U87 cell line, we show that blocking glutamate release by Riluzole inhibits cell proliferation. Glutamate-dependent growth is effectively inhibited by a combination of Iressa, an inhibitor of EGFR activation and LY341495, a group II mGluR inhibitor. Treatment of U87 cells with a combination of Iressa and LY341495 inhibits proliferation as indicated by Ki-67 staining, induces apoptosis and inhibits migration of U87 cells more effectively than the treatment by Iressa or LY341495 alone. These results demonstrate that a combinatorial therapy with Iressa and LY341495 is more effective due to synergistic effects of these drugs in inhibiting the growth of glioblastoma.

[621]

TÍTULO / TITLE: - Surgical Treatment of Recurrent Torcular Meningiomas: Case Report and Review of the Literature.

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

REVISTA / JOURNAL: - J Neurol Surg A Cent Eur Neurosurg. 2013 Jul 29.

●● Enlace al texto completo (gratis o de pago) [1055/s-0033-1348352](#)

AUTORES / AUTHORS: - Feng R; Che X; Hu J; Pan L; Cui D; Yang L

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

RESUMEN / SUMMARY: - Torcular meningiomas intimately involving major dural sinuses such as superior sagittal sinuses, transverse sinuses, and straight sinuses and the confluence are a great challenge for neurosurgeons. Simpson grade I total resection, which can bring complete cure, is the ultimate goal, but under many circumstances, it is difficult to achieve. The patency of the sinuses around these tumors is the key factor for successful tumor resection, and decides the surgical strategy. We report the experience of complete resection of a huge recurrent torcular meningioma. Related literature is reviewed.

[622]

TÍTULO / TITLE: - Brain and whole-body FDG-PET in diagnosis, treatment monitoring and long-term follow-up of primary CNS lymphoma.

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

REVISTA / JOURNAL: - Radiol Oncol. 2013 May 21;47(2):103-10. doi: 10.2478/raon-2013-0016. Print 2013 Jun.

●● Enlace al texto completo (gratis o de pago) [2478/raon-2013-0016](#)

AUTORES / AUTHORS: - Maza S; Buchert R; Brenner W; Munz DL; Thiel E; Korfel A; Kiewe P

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine, Vivantes MVZ Spandau, Berlin, Germany.

RESUMEN / SUMMARY: - BACKGROUND: Positron emission tomography (PET) with F-18-labeled fluorodeoxyglucose (FDG) provides remarkable accuracy in detection, treatment monitoring and follow-up of systemic malignant lymphoma. Its value in the management of patients with primary central nervous system

lymphoma (PCNSL) is less clear. PATIENTS AND METHODS: In a prospective trial, 42 FDG-PET examinations were performed in ten immunocompetent patients with newly diagnosed or recurrent PCNSL before and repeatedly during and after the treatment. Brain and whole body FDG-PET were compared to brain MRI and extra-cerebral CT, respectively. RESULTS: Before the treatment, 6 of 10 patients had congruent findings on FDG-PET and MRI of the brain. Three patients had lesions on brain MRI, not detected by FDG-PET. One patient had additional FDG-PET positive lesions inconspicuous in MRI. The follow-up suggested FDG-PET to be false positive in these lesions. After the treatment, brain PET was in agreement with MRI in 6 of 8 patients. In the remaining 2 patients there were persistent lesions in brain MRI whereas FDG-uptake was reduced to normal values. In the long-term follow-up of 5 patients (63-169 weeks), 3 patients retained normal in both PET and MRI. In 2 patients a new focal pathologic FDG-uptake was detected 69 and 52 weeks after the end of the treatment. In one of these patients, recurrence was confirmed by MRI not until 9 weeks after PET. CONCLUSIONS: Brain FDG-PET may contribute valuable information for the management of PCNSL, particularly in the assessment of the treatment response. Integration of FDG-PET into prospective interventional trials is warranted to investigate prognostic and therapeutic implications.

[623]

TÍTULO / TITLE: - Magnetic resonance diffusion tensor imaging with fluorescein sodium dyeing for surgery of gliomas in brain motor functional areas.

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

REVISTA / JOURNAL: - Chin Med J (Engl). 2013 Jul;126(13):2418-23.

AUTORES / AUTHORS: - Liu JG; Yang SF; Liu YH; Wang X; Mao Q

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, West China Hospital, Sichuan University, Chengdu 610041, China.

RESUMEN / SUMMARY: - BACKGROUND: Tumor surgery in brain motor functional areas remains challenging. Novel techniques are being developed to gain maximal and safe resection for brain tumor surgery. Herein, we assessed the magnetic resonance diffusion tensor imaging (MR-DTI) and fluorescein sodium dyeing (FLS) guiding technique for surgery of glioma located in brain motor functional areas. METHODS: Totally 83 patients were enrolled according to our inclusion and exclusion criteria (56 patients in experimental group, 27 patients in control group). In the experimental group, the surgical approach was designed by DTI imaging, which showed the relationship between the tumor and motor tract. The range of resection in the operation was determined using the FLS-stained area, which recognized the tumor and its infiltrated tissue. The traditional routine method was used in the control group. Postoperatively, all patients underwent enhanced brain MRI within 72 hours to ascertain the extent of resection. Patients were followed in our outpatient clinic over 6 - 24 months. Neurological deficits and Karnofsky scoring (KPS) were evaluated. RESULTS:

There were no significant differences in balance test indexes of preoperative data (sex, age, lesion location and volume, and neurological deficits before operation) and diagnosis of histopathology between the two groups. There was a trend in the experimental group for greater rates of gross total resection (80.4% vs. 40.7%), and the paralysis rate caused by surgery was lower in experimental (25.0%) vs. control (66.7%) groups ($P < 0.05$). The 6-month KPS in the low-grade and high-grade gliomas was 91 ± 11 and 73 ± 26 , respectively, in the experimental group vs. 82 ± 9 and 43 ± 27 , respectively, in the control group ($P < 0.05$ for both). CONCLUSIONS: MR-DTI and FLS dye guiding for surgery of glioma located in brain motor functional areas can increase the gross total resection rate, decrease the paralysis rate caused by surgery, and improve patient quality of life compared with traditional glioma surgery.

[624]

TÍTULO / TITLE: - Combining magnetic resonance imaging within six-hours of symptom onset with clinical follow-up at 24 h improves prediction of 'malignant' middle cerebral artery infarction.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Int J Stroke. 2013 Jul 9. doi: 10.1111/ijis.12060.

●● [Enlace al texto completo \(gratis o de pago\) 1111/ijis.12060](#)

AUTORES / AUTHORS: - Kruetzelmann A; Hartmann F; Beck C; Juettler E; Singer OC; Kohrmann M; Kersten JF; Sobesky J; Gerloff C; Villringer A; Fiehler J; Neumann-Haefelin T; Schellinger PD; Rother J; Thomalla G

INSTITUCIÓN / INSTITUTION: - Department of Neurology, University Hospital Hamburg-Eppendorf, Hamburg, Germany.

RESUMEN / SUMMARY: - BACKGROUND: A large diffusion-weighted imaging lesion \leq six-hours of symptom onset was found to predict the development of 'malignant' middle cerebral artery infarction with high specificity, positive predictive value, and negative predictive value, but sensitivity was low. HYPOTHESIS: We tested the hypothesis that sensitivity can be improved by adding information from clinical follow-up examination after 24 h. METHODS: We analyzed data from a prospective, multicenter, observational cohort study of patients with acute ischemic stroke and middle cerebral artery occlusion studied by stroke magnetic resonance imaging \leq six-hours of symptom onset. We used the National Institutes of Health Stroke Scale to assess severity of symptoms after 24 h. We used the Classification and Regression Trees analysis to define the optimal thresholds of diffusion-weighted imaging lesion volume and the National Institutes of Health Stroke Scale after 24 h in patients developing 'malignant' middle cerebral artery infarction. We calculated sensitivity, specificity, positive predictive value, and negative predictive value for two simple predictive models based on acute diffusion-weighted imaging lesion volume alone and acute diffusion-weighted imaging lesion volume together with

the National Institutes of Health Stroke Scale after 24 h. RESULTS: Of 135 patients, 27 (20%) developed a 'malignant' middle cerebral artery infarction. The Classification and Regression Trees analysis identified acute diffusion-weighted imaging lesion ≥ 78 ml and the National Institutes of Health Stroke Scale score after 24 h ≥ 22 as optimal cut-offs. Inclusion of the National Institutes of Health Stroke Scale score after 24 h in a simple two-step decision tree increased sensitivity from 0.59 to 0.79, while specificity, positive predictive value, and negative predictive value remained largely unchanged. CONCLUSION: Clinical follow-up examination after 24 h helps identify patients at risk of 'malignant' middle cerebral artery infarction that are missed by predictive algorithms based on early diffusion-weighted imaging lesion volume alone.

[625]

TÍTULO / TITLE: - MicroRNA-125b inhibitor sensitizes human primary glioblastoma cells to chemotherapeutic drug temozolomide on invasion.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - In Vitro Cell Dev Biol Anim. 2013 Jul 9.

- Enlace al texto completo (gratis o de pago) [1007/s11626-013-9644-](http://1007/s11626-013-9644-y)

[y](#)

AUTORES / AUTHORS: - Wan Y; Sun G; Zhang S; Wang Z; Shi L

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Suzhou Kowloon Hospital affiliated with Shanghai Jiao Tong University School of Medicine, Suzhou, 215021, People's Republic of China.

RESUMEN / SUMMARY: - Malignant gliomas are treated with a combination of surgery, radiation, and temozolomide (TMZ), but these therapies ultimately fail due to tumor recurrence. In this study, we aimed to identify the combined effects of miR-125b and TMZ involved in the invasive pathogenesis of glioblastoma cells. The effects of miR-125b and TMZ on cell invasion were analyzed by Transwell assays. Unexpectedly, either overexpression or downregulation of miR-125b has no function on glioblastoma cell invasion. However, knockdown of miR-125b could enhance the effects of TMZ on glioblastoma cell invasion. Conversely, overexpression of miR-125b could decrease such effects of TMZ. Further research on the mechanism demonstrated that such function of miR-125b knockdown on enhancing the effects of TMZ was involved in downregulation of Notch1. Notch1 was overexpressed in glioblastoma cells, and found by us that downregulation of Notch1 expression decreased the cell invasion of glioblastoma cells. Knockdown of miR-125b combined with TMZ enhanced downregulation of Notch1 and inhibited cell invasion of malignant glioblastoma. These findings indicate that the combination of miR-125b inhibitor and TMZ treatment could effectively inhibit the glioblastoma cell invasion by inhibiting Notch1 expression.

[626]

TÍTULO / TITLE: - Leveraging Metabolomics to Assess the Next Generation of Temozolomide-based Therapeutic Approaches for Glioblastomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Genomics Proteomics Bioinformatics. 2013 Jun 1. pii: S1672-0229(13)00050-8. doi: 10.1016/j.gpb.2013.04.003.

●● Enlace al texto completo (gratis o de pago) 1016/j.gpb.2013.04.003

AUTORES / AUTHORS: - St-Coeur PD; Touaibia M; Cuperlovic-Culf M; Morin PJ

INSTITUCIÓN / INSTITUTION: - Department of Chemistry and Biochemistry, Universite de Moncton, Moncton, NB E1A 3E9, Canada.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common adult primary tumor of the central nervous system. The current standard of care for glioblastoma patients involves a combination of surgery, radiotherapy and chemotherapy with the alkylating agent temozolomide. Several mechanisms underlying the inherent and acquired temozolomide resistance have been identified and contribute to treatment failure. Early identification of temozolomide-resistant GBM patients and improvement of the therapeutic strategies available to treat this malignancy are of utmost importance. This review initially looks at the molecular pathways underlying GBM formation and development with a particular emphasis placed on recent therapeutic advances made in the field. Our focus will next be directed toward the molecular mechanisms modulating temozolomide resistance in GBM patients and the strategies envisioned to circumvent this resistance. Finally, we highlight the diagnostic and prognostic value of metabolomics in cancers and assess its potential usefulness in improving the current standard of care for GBM patients.

[627]

TÍTULO / TITLE: - Microchannel acoustophoresis does not impact survival or function of microglia, leukocytes or tumor cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 May 27;8(5):e64233. doi: 10.1371/journal.pone.0064233. Print 2013.

●● Enlace al texto completo (gratis o de pago)

1371/journal.pone.0064233

AUTORES / AUTHORS: - Burguillos MA; Magnusson C; Nordin M; Lenshof A; Augustsson P; Hansson MJ; Elmer E; Lilja H; Brundin P; Laurell T; Deierborg T

INSTITUCIÓN / INSTITUTION: - Neuronal Survival Unit, Department of Experimental Medical Science, Wallenberg Neuroscience Center, Lund University, Lund, Sweden.

RESUMEN / SUMMARY: - BACKGROUND: The use of acoustic forces to manipulate particles or cells at the microfluidic scale (i.e. acoustophoresis), enables non-contact, label-free separation based on intrinsic cell properties such as size, density and compressibility. Acoustophoresis holds great promise as a cell separation technique in several research and clinical areas. However,

it has been suggested that the force acting upon cells undergoing acoustophoresis may impact cell viability, proliferation or cell function via subtle phenotypic changes. If this were the case, it would suggest that the acoustophoresis method would be a less useful tool for many cell analysis applications as well as for cell therapy. **METHODS:** We investigate, for the first time, several key aspects of cellular changes following acoustophoretic processing. We used two settings of ultrasonic actuation, one that is used for cell sorting (10 Vpp operating voltage) and one that is close to the maximum of what the system can generate (20 Vpp). We used microglial cells and assessed cell viability and proliferation, as well as the inflammatory response that is indicative of more subtle changes in cellular phenotype. Furthermore, we adapted a similar methodology to monitor the response of human prostate cancer cells to acoustophoretic processing. Lastly, we analyzed the respiratory properties of human leukocytes and thrombocytes to explore if acoustophoretic processing has adverse effects. **RESULTS:** BV2 microglia were unaltered after acoustophoretic processing as measured by apoptosis and cell turnover assays as well as inflammatory cytokine response up to 48 h following acoustophoresis. Similarly, we found that acoustophoretic processing neither affected the cell viability of prostate cancer cells nor altered their prostate-specific antigen secretion following androgen receptor activation. Finally, human thrombocytes and leukocytes displayed unaltered mitochondrial respiratory function and integrity after acoustophoretic processing. **CONCLUSION:** We conclude that microchannel acoustophoresis can be used for effective continuous flow-based cell separation without affecting cell viability, proliferation, mitochondrial respiration or inflammatory status.

[628]

TÍTULO / TITLE: - A Case of Primary T-Cell Central Nervous System Lymphoma: MR Imaging and MR Spectroscopy Assessment.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Radiol. 2013;2013:916348. doi: 10.1155/2013/916348. Epub 2013 May 23.

●● Enlace al texto completo (gratis o de pago) [1155/2013/916348](#)

AUTORES / AUTHORS: - Manenti G; Di Giuliano F; Bindi A; Liberto V; Funel V; Garaci FG; Floris R; Simonetti G

INSTITUCIÓN / INSTITUTION: - Department of Diagnostic and Interventional Radiology, Molecular Imaging and Radiation Therapy, Policlinico Tor Vergata, Viale Oxford 81, 00133 Rome, Italy.

RESUMEN / SUMMARY: - Primary central nervous system lymphomas (PCNSLs) are mainly B-cells lymphomas. A risk factor for the development of PCNSL is immunodeficiency, which includes congenital disorders, iatrogenic immunosuppression, and HIV. The clinical course is rapidly fatal; these patients usually present signs of increased intracranial pressure, nausea, papilledema, vomiting, and neurological and neuropsychiatric symptoms. PCNSL may have a

characteristic appearance on CT and MR imaging. DWI sequences and MR spectroscopy may help to differentiate CNS lymphomas from other brain lesions. In this paper, we report a case of a 23-year-old man with T-primary central nervous system lymphoma presenting with a mass in the right frontotemporal lobe. We describe clinical, CT, and MRI findings. Diagnosis was confirmed by stereotactic biopsy of the lesion.

[629]

TÍTULO / TITLE: - Antitumor Activity of (2E,5Z)-5-(2-Hydroxybenzylidene)-2-((4-phenoxyphenyl)imino) thiazolidin-4-one, a Novel Microtubule-Depolymerizing Agent, in U87MG Human Glioblastoma Cells and Corresponding Mouse Xenograft Model.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Pharmacol Sci. 2013;122(3):223-31.

AUTORES / AUTHORS: - Zhang Q; Liu X; Li X; Li C; Zhou H; Yan B

INSTITUCIÓN / INSTITUTION: - School of Chemistry and Chemical Engineering, Shandong University, China.

RESUMEN / SUMMARY: - Glioblastoma is the most lethal brain cancer. In spite of intensive therapy, the prognosis of patients with glioblastoma is very poor. To discover novel therapeutic agents, we screened a combinatorial compound library containing 372 thiazolidinone compounds using U87MG human glioblastoma cells. (2E,5Z)-5-(2-hydroxybenzylidene)-2-((4-phenoxyphenyl)imino) thiazolidin-4-one (HBPT) was identified as the most potent anti-glioblastoma compound. HBPT inhibits U87MG human glioblastoma cell proliferation with an IC₅₀ of 20 μM, which is almost 5-fold more potent than temozolomide (a widely used drug for treating malignant glioma in the clinic). Mechanistic investigation demonstrated that HBPT is a novel microtubule-depolymerizing agent, which arrests cancer cells at the G₂/M phase of the cell cycle and induces cell apoptosis. In the mouse U87MG xenograft model, HBPT elicits a robust tumor inhibitory effect. More importantly, no obvious toxicity was observed for HBPT therapy in animal experiments. These findings indicate that HBPT has the potential to be developed as a novel agent for the treatment of glioblastoma.[Supplementary Tables: available only at [1254/jphs.13064FP](#)].

[630]

TÍTULO / TITLE: - Clinical and molecular models of glioblastoma multiforme survival.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Int J Data Min Bioinform. 2013;7(3):245-65.

AUTORES / AUTHORS: - Piccolo SR; Frey LJ

INSTITUCIÓN / INSTITUTION: - Department of Pharmacology and Toxicology, University of Utah, 201 Presidents Circle, Salt Lake City, 84112 UT, USA. stephen.piccolo@hsc.utah.edu

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM), a highly aggressive form of brain cancer, results in a median survival of 12-15 months. For decades, researchers have explored the effects of clinical and molecular factors on this disease and have identified several candidate prognostic markers. In this study, we evaluated the use of multivariate classification models for differentiating between subsets of patients who survive a relatively long or short time. Data for this study came from The Cancer Genome Atlas (TCGA), a public repository containing clinical, treatment, histological and biomolecular variables for hundreds of patients. We applied variable-selection and classification algorithms in a cross-validated design and observed that predictive performance of the resulting models varied substantially across the algorithms and categories of data. The best-performing models were based on age, treatments and global DNA methylation. In this paper, we summarise our findings, discuss lessons learned in analysing TCGA data and offer recommendations for performing such analyses.

[631]

TÍTULO / TITLE: - Endoscopic treatment of in utero diagnosed multiloculated interhemispheric cyst in a newborn: case report.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Acta Clin Croat. 2013 Mar;52(1):119-24.

AUTORES / AUTHORS: - Korsic M; Jugovic D; Porcnik A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Medical Center Ljubljana, Ljubljana, Slovenia.

RESUMEN / SUMMARY: - Interhemispheric cysts, often associated with agenesis of corpus callosum, are rare lesions. The optimal treatment is still controversial. Placement of cystoperitoneal shunt and open microsurgery are traditional treatments. Neuroendoscopy in children is due to its minimal invasiveness a new emerging option. There have been a few published cases on neuroendoscopic treatment of interhemispheric cyst in children. The authors document the youngest reported child with multiloculated interhemispheric cyst that was treated with neuroendoscopy. The cyst was detected in a male fetus in 35th week of gestation and in utero magnetic resonance imaging was performed in 37th week of gestation. After delivery, progressive macrocrania with signs of raised intracranial pressure developed. Endoscopic cystoventriculocisternostomy was performed 28 days after the birth. There was a marked symptom relief. One month after the surgery, magnetic resonance showed shrinkage of the cyst and expansion of the brain parenchyma. After a 2-month follow up period, the child showed normal neurologic development and head circumference increased by only 0.5 cm. The created fenestrations enabled the brain to expand. Neuroendoscopic treatment, of interhemispheric cysts should be considered the operative technique of choice in newborns. Although the intracranial pressure and the size of the cyst have decreased, long-term follow up is necessary and future studies on more cases are needed.

[632]

TÍTULO / TITLE: - Myxoma virus infection promotes NK lysis of malignant gliomas in vitro and in vivo.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 10;8(6):e66825. doi: 10.1371/journal.pone.0066825. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0066825](https://doi.org/10.1371/journal.pone.0066825)

AUTORES / AUTHORS: - Ogbomo H; Zemp FJ; Lun X; Zhang J; Stack D; Rahman MM; McFadden G; Mody CH; Forsyth PA

INSTITUCIÓN / INSTITUTION: - Departments of Oncology, Biochemistry and Molecular Biology, University of Calgary, Calgary, Alberta, Canada.

RESUMEN / SUMMARY: - Myxoma virus (MYXV) is a well-established oncolytic agent against different types of tumors. MYXV is also known for its immunomodulatory properties in down-regulating major histocompatibility complex (MHC) I surface expression (via the M153R gene product, a viral E3-ubiquitin ligase) and suppressing T cell killing of infected target cells. MHC I down-regulation, however, favors NK cell activation. Brain tumors including gliomas are characterized by high MHC I expression with impaired NK activity. We thus hypothesized that MYXV infection of glioma cells will promote NK cell-mediated recognition and killing of gliomas. We infected human gliomas with MYXV and evaluated their susceptibility to NK cell-mediated cytotoxicity. MYXV enhanced NK cell-mediated killing of glioma cells (U87 cells, MYXV vs. Mock: 51.73% vs. 28.63%, $P = .0001$, t test; U251 cells, MYXV vs. Mock: 40.4% vs. 20.03%, $P = .0007$, t test). Using MYXV M153R targeted knockout (designated vMyx-M153KO) to infect gliomas, we demonstrate that M153R was responsible for reduced expression of MHC I on gliomas and enhanced NK cell-mediated antiglioma activity (U87 cells, MYXV vs. vMyx-M153KO: 51.73% vs. 25.17%, $P = .0002$, t test; U251 cells, MYXV vs. vMyx-M153KO: 40.4% vs. 19.27, $P = .0013$, t test). Consequently, NK cell-mediated lysis of established human glioma tumors in CB-17 SCID mice was accelerated with improved mouse survival (log-rank $P = .0072$). These results demonstrate the potential for combining MYXV with NK cells to effectively kill malignant gliomas.

[633]

TÍTULO / TITLE: - Screening for Pain in Pediatric Brain Tumor Survivors Using the Pain Thermometer.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Pediatr Oncol Nurs. 2013 Jul 18.

●● Enlace al texto completo (gratis o de pago)

[1177/1043454213493507](https://doi.org/10.1177/1043454213493507)

AUTORES / AUTHORS: - Chordas C; Manley P; Merport Modest A; Chen B; Liptak C; Recklitis CJ

INSTITUCIÓN / INSTITUTION: - 1Dana-Farber Cancer Institute, Boston, MA, USA.

RESUMEN / SUMMARY: - Numerous instruments have been developed to measure pain within various populations; however, there remains limited understanding of how these tools are applicable to childhood cancer survivors. This study compared a single-item screening measure, the Pain Thermometer (PT), with a more in-depth measure, the Brief Pain Survey (BPS), in a cohort of childhood brain tumor survivors. Ninety-nine survivors (aged 13-32 years) with a median time from diagnosis of 9.9 years (range = 2-18 years) completed the 2 instruments. Thirty-seven survivors (37.4%) were identified on the BPS as having clinically significant pain, but the PT was not found to be an accurate tool for identifying these pain cases. Application of receiver operating characteristic curve analysis of PT ratings against BPS criterion indicated overall concordance between measures. No cutoff score on the PT were identified that resulted in acceptable sensitivity, meaning pain cases identified on the BPS would be missed on the PT. Findings suggest that a multi-item screening measure may better identify clinically significant pain in childhood brain tumor survivors compared with a 1-item screening measure alone.

[634]

TÍTULO / TITLE: - Iodine-131 metaiodobenzylguanidine (I-131 MIBG) diagnosis and therapy of pheochromocytoma and paraganglioma: current problems, critical issues and presentation of a sample case.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Q J Nucl Med Mol Imaging. 2013 Jun;57(2):146-52.

AUTORES / AUTHORS: - Castellani MR; Aktolun C; Buzzoni R; Seregni E; Chiesa C; Maccauro M; Aliberti GL; Vellani C; Lorenzoni A; Bombardieri E

INSTITUCIÓN / INSTITUTION: - Nuclear Medicine Division, Istituto Nazionale Tumori IRCCS Foundation, Milan, Italy - rita.castellani@istitutotumori.mi.it.

RESUMEN / SUMMARY: - Iodine-131 metaiodobenzylguanidine (I-131 MIBG) has been used for the diagnosis and treatment of malignant pheochromocytomas (PHEO) and paragangliomas (PGL) since 1980's. Despite increasing amount of experience with iodine-131 (I-131) MIBG therapy, many important questions still exist. In this article, we will discuss the current problems learned from clinical experience in diagnosis and therapy of PHEO/PGL with I-131 MIBG, and present a sample case to emphasize the critical aspects for an optimal treatment strategy.

[635]

TÍTULO / TITLE: - Unusual case of cerebral aspergillosis with clinical and imaging findings mimicking lymphoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neuroradiol J. 2013 Jul 16;26(3):290-6. Epub 2013 Jul 16.

AUTORES / AUTHORS: - Sidani C; Freiser ME; Saigal G; Sklar E

INSTITUCIÓN / INSTITUTION: - Department of Radiology, University of Miami, Miller School of Medicine; Miami, FL, USA - sharifsidani@hotmail.com.

RESUMEN / SUMMARY: - A 14-year-old female post-transplant patient with a history of post-transplant lymphoproliferative disease/lymphoma presented with fever and lethargy. Computed tomography of the brain demonstrated a hypodense lesion with surrounding edema in the right periventricular region not seen on a routine study performed two weeks earlier. On magnetic resonance imaging (MRI) this lesion was mainly iso-intense to gray matter on T2-weighted (T2W) images and demonstrated peripheral contrast enhancement. Diffusion restriction was seen within most of the lesion including, but not limited to, its periphery. Lesion location and MRI characteristics, particularly on T2W and diffusion sequences, were suggestive of lymphoma. The patient's history of post-transplant lymphoproliferative disorder also supported this diagnosis. However, in view of the patient's immunocompromised state, rapid onset of symptoms, and recent normal CT scan of the brain, infection was also entertained. Biopsy revealed short branching hyphae consistent with aspergillosis. This case is interesting as the MRI restriction pattern and the patient's history were more suggestive of lymphoma, but in reality the lesion represented an evolving aspergillosis abscess. Biopsy was necessary to further proceed with appropriate medical management, which is significantly different for the two entities.

[636]

TÍTULO / TITLE: - Surgical treatment of hypothalamic hamartoma causing central precocious puberty: long-term follow-up.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Aug;12(2):151-4. doi: 10.3171/2013.4.PEDS12617. Epub 2013 Jun 7.

●● Enlace al texto completo (gratis o de pago)

[3171/2013.4.PEDS12617](#)

AUTORES / AUTHORS: - Li CD; Luo SQ; Gong J; Ma ZY; Jia G; Zhang YQ; Li JF
INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tiantan Hospital, Capital University of Medical Sciences, Beijing, People's Republic of China.

RESUMEN / SUMMARY: - Hypothalamic hamartoma (HH) is a rare condition that often manifests as central precocious puberty (CPP). There is a lack of information available concerning the long-term effectiveness of surgery for the treatment of CPP due to HH. Here the authors describe 3 cases of CPP due to HH, with a follow-up ranging from 9 to 11 years after surgery. Three girls experienced breast growth and menses at 5-18 months of age and 5-36 months of age, respectively. Serum concentrations of luteinizing hormone, follicle-stimulating hormone, and estradiol concentrations ranged from 2.5 to 6.5 mIU/ml, 4.8-5.9 mIU/ml, and 47.9-133.0 pg/ml, respectively. Magnetic

resonance imaging confirmed that CPP was caused by HH. Lesions were resected using a right pterional approach. After surgery, endocrine hormone concentrations were normalized, breasts shrunk, and menses ceased in each patient. Moreover, all of them subsequently developed normally and experienced age-appropriate onset of puberty. Each patient's height and weight were normal at the most recent follow-up (9-11 years after surgery), and none had experienced learning difficulties. Central precocious puberty due to HH can be successfully treated with resection. In the 3 cases presented, this approach was associated with both short- and long-term efficacy.

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----- [637]

TÍTULO / TITLE: - Ketolytic and glycolytic enzymatic expression profiles in malignant gliomas: implication for ketogenic diet therapy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Nutr Metab (Lond). 2013 Jul 5;10(1):47. doi: 10.1186/1743-7075-10-47.

●● Enlace al texto completo (gratis o de pago) [1186/1743-7075-10-47](#)

AUTORES / AUTHORS: - Chang HT; Olson LK; Schwartz KA

INSTITUCIÓN / INSTITUTION: - Department of Neurology and Ophthalmology, Michigan State University, East Lansing, MI, 48824, USA.

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RESUMEN / SUMMARY: - BACKGROUND: Recent studies in animal models, based on the hypothesis that malignant glioma cells are more dependent on glycolysis for energy generation, have shown promising results using ketogenic diet (KD) therapy as an alternative treatment strategy for malignant glioma, effectively starving glioma cells while providing ketone bodies as an energy source for normal neurons and glial cells. In order to test this treatment strategy in humans, we investigated the relative expression of several key enzymes involved in ketolytic and glycolytic metabolism in human anaplastic glioma (WHO grade III) and glioblastoma (GBM, WHO grade IV). METHODS: Immunohistochemistry was performed on formalin fixed paraffin embedded sections from 22 brain biopsies (17 GBM, 3 anaplastic astrocytoma and 2 anaplastic oligoastrocytoma) using antibodies raised against glycolytic and ketolytic enzymes. The glycolytic enzymes included hexokinase-II (HK2) and pyruvate kinase M2 isoform (PKM2). The ketone body metabolic enzymes included: succinyl CoA: 3-oxoacid CoA transferase (OXCT1), 3-hydroxybutyrate dehydrogenase 1 and 2 (BDH1 and BDH2), and acetyl-CoA acetyltransferase 1 (ACAT1). The immunoreactivities were graded using a semi-quantitative scale based on the percentage of positive cells: POS (>20%), LOW (5-20%), and very low (VLOW) (<5%). Focal non-neoplastic "normal" brain tissue within the biopsy specimens served as internal controls. RESULTS: The rate limiting mitochondrial ketolytic enzymes (OXCT1 and BDH1) were either LOW or VLOW, concordantly in 14 of the 17 GBMs and in 1 of 5 anaplastic gliomas, whereas at least one of the glycolytic enzymes was POS in 13 of these 17

GBMs and all 5 anaplastic gliomas. Cytosolic BDH2 and mitochondrial ACTAT1 were, surprisingly, POS in most of these tumors. CONCLUSION: Our results showing that malignant gliomas have differential expression of ketolytic and glycolytic enzymes are consistent with previous studies that have shown that these are genetically heterogeneous tumors. It seems reasonable to hypothesize that patients with low or very low expression of key ketolytic enzymes in their malignant gliomas may respond better to the KD therapy than those patients with positive expression of these enzymes. Further studies in animal models and/or a large-scale clinical trial would be needed to test this hypothesis.

[638]

TÍTULO / TITLE: - Gamma Knife Radiosurgery Inhibits Angiogenesis of Meningiomas: In Vivo Rat Corneal Assay.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jul 11. pii: S1878-8750(13)00768-7. doi: 10.1016/j.wneu.2013.06.021.

- Enlace al texto completo (gratis o de pago)

1016/j.wneu.2013.06.021

AUTORES / AUTHORS: - Kilic K; Avsar T; Akgun E; Ozkan A; Toktas ZO; Seker A; Kilic T

INSTITUCIÓN / INSTITUTION: - Istanbul Training and Research Hospital, Department of Neurosurgery, Samatya, Turkey.

RESUMEN / SUMMARY: - OBJECTIVE: The aim of this study is to reveal inhibitory effect of gamma knife irradiation on angiogenesis of meningiomas using rat corneal angiogenesis assay. METHODS: A total of 72 rats were divided into three preliminary groups. Each group, consisting of 24 rats, was implanted by World Health Organization (WHO) grade I (typical), grade II (atypical), and grade III (malignant) meningioma. Each of these three preliminary groups of 24 rats, were then divided into four subgroups, each consisting of 6 rats and subsequently irradiated by gamma knife with dose prescriptions of 0, 14, 18, and 22 Gy. The numbers of vessels that developed around the micropockets of the corneas were counted and photographed on days 5, 10, 15, and 20. RESULTS: For WHO grade I meningiomas, 18 and 22 Gy doses ($P < 0.001$), and for grade II meningiomas, the 22-Gy ($P = 0.021$) dose were found to inhibit tumor-induced angiogenesis compared with the radiation-free control group. For grade III meningiomas, there was no statistical difference with the control group in any of the doses applied. Our findings demonstrate that gamma knife irradiation may suppress the angiogenic activity of WHO grades I and II meningiomas but not of the grade III meningiomas. CONCLUSIONS: For the first time, this study provides an experimental data to show the antiangiogenic effect of gamma knife irradiation on meningiomas.

[639]

TÍTULO / TITLE: - Phenethyl isothiocyanate inhibits hypoxia-induced accumulation of HIF-1alpha and VEGF expression in human glioma cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Food Chem. 2013 Dec 1;141(3):1841-6. doi: 10.1016/j.foodchem.2013.05.006. Epub 2013 May 11.

●● Enlace al texto completo (gratis o de pago)

[1016/j.foodchem.2013.05.006](#)

AUTORES / AUTHORS: - Gupta B; Chiang L; Chae K; Lee DH

INSTITUCIÓN / INSTITUTION: - Department of Chemistry, University of Virginia, USA.

RESUMEN / SUMMARY: - Phenethyl isothiocyanate (PEITC), a natural dietary isothiocyanate, inhibits angiogenesis but the molecular mechanisms that underlie this effect are not known. In this study, under hypoxic conditions (1% O₂), we examined the effect of PEITC on the intracellular level of the hypoxia inducible factor (HIF-1alpha) and extracellular level of the vascular endothelial growth factor (VEGF) in a variety of human cancer cell lines. Surprisingly, we observed that PEITC suppressed the HIF-1alpha accumulation during hypoxia in human glioma U87, human prostate cancer DU145, colon cancer HCT116, liver cancer HepG2, and breast cancer SkBr3 cells. PEITC treatment also significantly reduced the hypoxia-induced secretion of VEGF. Suppression of HIF-1alpha accumulation during treatment with PEITC in hypoxia was related to PI3K and MAPK pathways. Taken together, these results suggest that PEITC inhibits the HIF-1alpha expression through inhibiting the PI3K and MAPK signalling pathway and provide a new insight into a potential mechanism of the anticancer properties of PEITC.

[640]

TÍTULO / TITLE: - NFAT1 is highly expressed in, and regulates the invasion of, glioblastoma multiforme cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 6;8(6):e66008. doi: 10.1371/journal.pone.0066008. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0066008](#)

AUTORES / AUTHORS: - Tie X; Han S; Meng L; Wang Y; Wu A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Hospital of China Medical University, Shenyang, China.

RESUMEN / SUMMARY: - Members of the nuclear factor of activated T cells (NFAT) family have been identified as regulators of oncogenic transformation in several human malignancies. A prominent member of this family, NFAT1, is associated with tumor cell survival, apoptosis, migration and invasion. Here, we investigated the role of NFAT1 in glioma cells. In 111 clinical samples, microarray analysis demonstrated that NFAT1 was over-expressed in glioblastoma multiforme (GBM), compared with low-grade gliomas, a result

confirmed by RT-PCR in 24 clinical samples and in the U87 and U251 cell lines. Immunohistochemistry and immunofluorescence stain indicated that over-expressed NFAT1 was mainly located in the nucleus, where it acted as a transcription factor. After treatment with the NFAT antagonist cyclosporin A (CsA) and FK506, levels of NFAT1 in the nuclei of U87 GBM cells were dramatically reduced. The invasive potential of U87 cells was reduced by the same treatment, as well as by inhibition of NFAT1 expression using small hairpin RNA. Proliferation of U87 cells was unaffected by CsA, FK506 and NFAT1 shRNA transfection. Clustering analysis and Pearson correlation analysis of microarray data showed that the expression of NFAT1 correlated with the expression of the invasion-related genes cyclooxygenase-2 (COX-2), matrix metalloproteinase-7 (MMP-7) and MMP-9, a result confirmed by in vitro analysis. These findings demonstrate that NFAT1 contributes to the invasive potential but not the proliferation of GBM cells, and suggest that CsA may find application as an adjuvant in combined treatment strategies for GBM.

[641]

TÍTULO / TITLE: - Gene expression profiles of metabolic aggressiveness and tumor recurrence in benign meningioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 28;8(6):e67291. doi: 10.1371/journal.pone.0067291. Print 2013.

- Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0067291](#)

AUTORES / AUTHORS: - Serna E; Morales JM; Mata M; Gonzalez-Darder J; San Miguel T; Gil-Benso R; Lopez-Gines C; Cerda-Nicolas M; Monleon D

INSTITUCIÓN / INSTITUTION: - Unidad Central de Investigación en Medicina, Universitat de Valencia, Valencia, España.

RESUMEN / SUMMARY: - Around 20% of meningiomas histologically benign may be clinically aggressive and recur. This strongly affects management of meningioma patients. There is a need to evaluate the potential aggressiveness of an individual meningioma. Additional criteria for better classification of meningiomas will improve clinical decisions as well as patient follow up strategy after surgery. The aim of this study was to determine the relationship between gene expression profiles and new metabolic subgroups of benign meningioma with potential clinical relevance. Forty benign and fourteen atypical meningioma tissue samples were included in the study. We obtained metabolic profiles by NMR and recurrence after surgery information for all of them. We measured gene expression by oligonucleotide microarray measurements on 19 of them. To our knowledge, this is the first time that distinct gene expression profiles are reported for benign meningioma molecular subgroups with clinical correlation. Our results show that metabolic aggressiveness in otherwise histological benign meningioma proceeds mostly through alterations in the expression of genes involved in the regulation of transcription, mainly the LMO3 gene. Genes

involved in tumor metabolism, like IGF1R, are also differentially expressed in those meningioma subgroups with higher rates of membrane turnover, higher energy demand and increased resistance to apoptosis. These new subgroups of benign meningiomas exhibit different rates of recurrence. This work shows that benign meningioma with metabolic aggressiveness constitute a subgroup of potentially recurrent tumors in which alterations in genes regulating critical features of aggressiveness, like increased angiogenesis or cell invasion, are still no predominant. The determination of these gene expression biosignatures may allow the early detection of clinically aggressive tumors.

[642]

TÍTULO / TITLE: - Photodynamic therapy with talaporfin sodium induces dose-dependent apoptotic cell death in human glioma cell lines.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Photodiagnosis Photodyn Ther. 2013 May;10(2):103-10. doi: 10.1016/j.pdpdt.2012.08.002. Epub 2012 Sep 25.

●● Enlace al texto completo (gratis o de pago)

[1016/j.pdpdt.2012.08.002](#)

AUTORES / AUTHORS: - Tsutsumi M; Miki Y; Akimoto J; Haraoka J; Aizawa K; Hirano K; Beppu M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tokyo Medical University, Japan.

RESUMEN / SUMMARY: - **OBJECTIVE:** To investigate the kinetics of cell death in human glioma cell lines induced by photodynamic therapy (PDT) with the second-generation photosensitizer talaporfin sodium (TS) and a 664-nm diode laser. **MATERIALS AND METHODS:** Three human glioma cell lines (T98G, A172, U251) were studied. After incubation of the cell lines with various concentrations of TS for 4 h, PDT using diode laser irradiation at 33 mW/cm² and 10 J/cm² was performed. Cell viability and changes in cell morphology were examined by the Cell Counting Kit-8 assay and phase-contrast microscopy, respectively. In addition, to evaluate the pathology of cell death, changes in cell viability after treatment with a caspase activation inhibitor and an autophagy inhibitor were also examined. **RESULTS:** In all 3 human glioma cell lines, TS induced dose-dependent cell death. However, the 50% lethal dose of TS varied among these cell lines. The main morphological feature of cell death was shrinkage of the cell body, and the number of cells with this morphological change increased in a time-dependent manner, resulting in cell death. In addition, a dose-dependent improvement in cell viability by the caspase inhibitor Z-VAD-fmk was observed. **CONCLUSION:** PDT with TS induces dose-dependent apoptosis in human glioma cell lines. However, the sensitivity to PDT varied among the cell lines, indicating a possible difference in the intracellular content of TS, or a difference in the susceptibility to the intracellular oxidative stress caused by PDT.

[643]

TÍTULO / TITLE: - Transcriptional expression of glioma chemotherapy drugs associated marker molecules in gliomas and normal brain tissues.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cancer Biomark. 2013;13(1):59-66. doi: 10.3233/CBM-130320.

●● Enlace al texto completo (gratis o de pago) [3233/CBM-130320](#)

AUTORES / AUTHORS: - Zhao Y; Xue Y; Zhang Q; Wang K; Yin J; Lou M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Shanghai 10th People's Hospital, Tongji University School of Medicine, Shanghai, China.

RESUMEN / SUMMARY: - Currently, the transcript abundance of key enzymes for chemotherapy drug metabolism, which may help in predicting the efficacy of a drug, can easily be detected in tumor tissues. However, there has been little research on the enzymes involved in the chemotherapy of gliomas. This study aimed to detect and compare the abundance of glioma chemotherapy drug-associated marker molecules in both gliomas and normal brain tissues and among gliomas of different grades. We examined the transcript abundance of four such marker molecules, MGMT, ERCC1, Topo IIalpha and Stathmin, in 46 glioma and 6 normal brain tissues. We also compared the abundance of these molecules in normal brain tissues and glioma tissues with different malignancy grades. Furthermore, we described the variation of these molecules in different grades of gliomas by calculating the ratio of their maximum to their minimum. The transcript abundance of MGMT and ERCC1 was significantly higher in normal brain tissues than in glioma tissues. However, the opposite result was observed for Topo IIalpha. For Stathmin, no significant differences between normal brain tissues and gliomas tissues were found. For all 4 marker molecules, no significant differences were detected between grades of glioma. All four molecules exhibited wide variation in abundance, fluctuating significantly between gliomas. These results suggest that individualized detection and medication may be beneficial for treatment.

[644]

TÍTULO / TITLE: - Pattern and determinants of central nervous system relapse in childhood acute lymphoblastic leukemia in a resource-limited setting.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Indian J Med Paediatr Oncol. 2013 Jan;34(1):48-9. doi: 10.4103/0971-5851.113434.

●● Enlace al texto completo (gratis o de pago) [4103/0971-5851.113434](#)

AUTORES / AUTHORS: - Kulkarni K; Marwaha RK

INSTITUCIÓN / INSTITUTION: - Department of Pediatric Hematology Oncology, Stollery Children Hospital, Edmonton, Canada.

[645]

TÍTULO / TITLE: - MR Signal Amplification for Imaging of the Mutant EGF Receptor in Orthotopic Human Glioma Model.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Mol Imaging Biol. 2013 Jun 4.

●● Enlace al texto completo (gratis o de pago) [1007/s11307-013-0653-](#)

[8](#)

AUTORES / AUTHORS: - Shazeeb MS; Gupta S; Bogdanov A Jr

INSTITUCIÓN / INSTITUTION: - Department of Radiology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA, 01655, USA.

RESUMEN / SUMMARY: - PURPOSE: To investigate the potential of targeted MR signal amplification strategy for imaging of EGF receptor variant III (EGFRvIII) overexpression associated with the infiltrating margin of aggressive orthotopic brain tumors. PROCEDURES: F(ab')₂ fragments of humanized anti-EGFRvIII monoclonal antibody (EMD72000) were linked to deglycosylated horseradish peroxidase (HRP) and glucose oxidase (GOX). Detection of the F(ab')₂ conjugate pair colocalization in vivo was enabled by a subsequent IV injection of a low molecular weight paramagnetic substrate of HRP, diTyr-GdDTPA. RESULTS: The delivery of the targeted fragments to the tumor was validated using SPECT/CT imaging of radiolabeled anti-EGFRvIII F(ab')₂ conjugates. Further, by using 3 T MRI, we observed time-dependent differences in tumor signal intensity and signal retention at the endpoint depending on whether or not the animals were pre-injected with the anti-EGFRvIII F(ab')₂ conjugates. CONCLUSIONS: Imaging of EGFRvIII expression in vivo was enabled by consecutive administration of targeted F(ab')₂ conjugates and a paramagnetic substrate resulting in a tumor-specific receptor detection with high specificity and resolution.

[646]

TÍTULO / TITLE: - RhoA regulates invasion of glioma cells via the c-Jun NH₂-terminal kinase pathway under hypoxia.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncol Lett. 2012 Sep;4(3):495-500. Epub 2012 Jun 27.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2012.777](#)

AUTORES / AUTHORS: - Tong JJ; Yan Z; Jian R; Tao H; Hui OT; Jian C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei 430030, P.R. China.

RESUMEN / SUMMARY: - The purpose of this study was to investigate the mechanism of glioma cell invasion in hypoxic conditions. We demonstrated that hypoxia increased cell invasion, matrix metalloproteinase-2 (MMP2) activity and time-dependent expression of hypoxia inducible factor-1alpha (HIF-1alpha) in human glioma cells. These data suggest that MMP2 may play a significant role in tumor invasion in hypoxic conditions. We investigated the mechanisms

involved in the increased MMP2 activity and cell invasion in hypoxic conditions. Increased expression of phospho-Jun NH2-terminal kinase (p-JNK) and phospho-c-Jun (p-c-Jun) in glioma cells induced by hypoxia was detected. Furthermore, this effect may be reduced by inhibiting the JNK signaling pathway. We found that inhibition of RhoA geranylgeranylation by geranylgeranyltransferase inhibitor-2147 (GGTI-2147) or knockdown of RhoA by siRNA against RhoA reduced the expression of p-JNK and p-c-Jun, and decreased MMP2 activity and glioma cell invasion in hypoxic conditions. These data suggest a link among RhoA, JNK, c-Jun and MMP2 activity that is functionally involved in the increased glioma cell invasion induced by hypoxia.

[647]

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 Jun 11.

- 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 atpresentation 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.

[648]

TÍTULO / TITLE: - Glioma grade is associated with the accumulation and activity of cells bearing m2 monocyte markers.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Clin Cancer Res. 2013 Jul 15;19(14):3776-86. doi: 10.1158/1078-0432.CCR-12-1940. Epub 2013 Jun 5.

●● Enlace al texto completo (gratis o de pago) [1158/1078-0432.CCR-12-1940](#)

AUTORES / AUTHORS: - Prosnia M; Harshyne LA; Andrews DW; Kenyon LC; Bedelbaeva K; Apanasovich TV; Heber-Katz E; Curtis MT; Cotzia P; Hooper DC

INSTITUCIÓN / INSTITUTION: - Authors' Affiliations: Departments of Cancer Biology, Neurological Surgery, Pathology, and Pharmacology and Experimental Therapeutics, Thomas Jefferson University; and Cellular and Molecular Oncogenesis Program, The Wistar Institute, Philadelphia, Pennsylvania.

RESUMEN / SUMMARY: - PURPOSE: This study is directed at identifying the cell source(s) of immunomodulatory cytokines in high-grade gliomas and establishing whether the analysis of associated markers has implications for tumor grading. EXPERIMENTAL DESIGN: Glioma specimens classified as WHO grade II-IV by histopathology were assessed by gene expression analysis and immunohistochemistry to identify the cells producing interleukin (IL)-10, which was confirmed by flow cytometry and factor secretion in culture. Finally, principal component analysis (PCA) and mixture discriminant analysis (MDA) were used to investigate associations between expressed genes and glioma grade. RESULTS: The principle source of glioma-associated IL-10 is a cell type that bears phenotype markers consistent with M2 monocytes but does not express all M2-associated genes. Measures of expression of the M2 cell markers CD14, CD68, CD163, and CD204, which are elevated in high-grade gliomas, and the neutrophil/myeloid-derived suppressor cell (MDSC) subset marker CD15, which is reduced, provide the best index of glioma grade. CONCLUSIONS: Grade II and IV astrocytomas can be clearly differentiated on the basis of the expression of certain M2 markers in tumor tissues, whereas grade III astrocytomas exhibit a range of expression between the lower and higher grade specimens. The content of CD163(+) cells distinguishes grade III astrocytoma subsets with different prognosis. Clin Cancer Res; 19(14); 3776-86. ©2013 AACR.

!1096.95! TATATAT - Clin Cancer Res

[649]

TÍTULO / TITLE: - Mutant Ubiquitin Attenuates Interleukin-1beta- and Tumor Necrosis Factor-alpha-Induced Pro-Inflammatory Signaling in Human Astrocytic Cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 3;8(7):e67891. doi: 10.1371/journal.pone.0067891. Print 2013.

- Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0067891](#)

AUTORES / AUTHORS: - Choi K; Park J; Lee J; Han EC; Choi C

INSTITUCIÓN / INSTITUTION: - Cell Signaling and Biomedicine Laboratory, Department of Bio and Brain Engineering, KAIST, Daejeon, Korea.

RESUMEN / SUMMARY: - A frameshift mutation of ubiquitin called ubiquitin(+1) (UBB(+1)) was found in the aging and Alzheimer's disease brains and thought to be associated with neuronal dysfunction and degeneration. Even though ubiquitylation has been known to regulate vital cellular functions mainly through proteasome-dependent degradation of polyubiquitinated substrates, proteolysis-independent roles of ubiquitylation have emerged as key mechanisms in various signaling cascades. In this study, we have investigated the effect of UBB(+1) on proinflammatory signaling such as interleukin-1beta (IL-1beta) and tumor necrosis factor-alpha (TNF-alpha) in human astrocytes. Treatment with TNF-alpha and IL-1beta induced expression of CCL2 and CXCL8 by human astrocytic cells; while ectopic expression of UBB(+1) significantly abrogated the proinflammatory cytokine-induced expression of chemokines. Ectopic expression of UBB(+1) suppressed TNF-alpha- and IL-1beta-induced activation of NF-kappaB and JNK signaling pathway. Furthermore, we have demonstrated that polyubiquitylation of TRAFs and subsequent phosphorylation of TAK1 were significantly inhibited by stable expression of UBB(+1). Collectively, these results suggest that UBB(+1) may affect proinflammatory signaling in the central nervous system via inhibitory mechanisms of ubiquitin-dependent signaling in human astrocytes.

[650]

TÍTULO / TITLE: - Update on molecular and genetic alterations in adult medulloblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Memo. 2012 Sep;5(3):228-232. Epub 2012 Jul 20.

- Enlace al texto completo (gratis o de pago) [1007/s12254-012-0037-](#)

[9](#)

AUTORES / AUTHORS: - Kool M; Korshunov A; Pfister SM

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Neurooncology, German Cancer Research Center DKFZ, Im Neuenheimer Feld 580, 69120 Heidelberg, Germany.

RESUMEN / SUMMARY: - Medulloblastoma encompasses a group of aggressively growing cancers that arise either in the cerebellum or brain stem. They present primarily in children, with 80-85 % of medulloblastomas being diagnosed in patients of 16 years and younger. In adults, medulloblastomas are rare and account for less than 1 % of intracranial malignancies. Due to the low incidence

of medulloblastoma in adults, the biology and genetics of adult medulloblastomas have long been poorly understood. Many centers therefore still treat adults either by radiotherapy only or by using glioblastoma protocols (both often noncurative), or with standard pediatric medulloblastoma regimes (often associated with dose-limiting toxicity). Current clinical staging systems discriminate between standard-risk or high-risk patients based on clinical and histological parameters. However, clinico-pathological features often fail to accurately predict treatment response. In children, molecularly defined risk assessment has become important to improve survival of high-risk patients and to decrease treatment-related toxicity and long-term sequelae in standard-risk patients. However, several recent studies have shown that adult and pediatric medulloblastomas are genetically distinct and may require different algorithms for molecular risk stratification. Moreover, four subtypes of medulloblastoma have been identified that appear at different frequencies in children and adults and that have a different prognostic impact depending on age. Molecular markers such as chromosome 10q and chromosome 17 statuses can be used for molecular risk stratification of adult medulloblastoma, but only in a subgroup-specific context. Here we present an overview of the current knowledge of the genomics of adult medulloblastoma and how these tumors differ from their pediatric counterparts.

[651]

TÍTULO / TITLE: - Silver Nanoparticles Impregnated Alginate-Chitosan-Blended Nanocarrier Induces Apoptosis in Human Glioblastoma Cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Adv Healthc Mater. 2013 Jul 15. doi: 10.1002/adhm.201300090.

●● Enlace al texto completo (gratis o de pago) [1002/adhm.201300090](#)

AUTORES / AUTHORS: - Sharma S; Chockalingam S; Sanpui P; Chattopadhyay A; Ghosh SS

INSTITUCIÓN / INSTITUTION: - Centre for Nanotechnology, Indian Institute of Technology Guwahati, Guwahati, Assam 781039, India.

RESUMEN / SUMMARY: - Herein, a green method for the development of a novel biodegradable silver nanoparticles (NPs) impregnated alginate-chitosan-blended nanocarrier (Ag NPs-Alg-Chi NC) is reported. The synthesis of Ag NPs-Alg-Chi NC is based on the polyelectrolyte complex formation between alginate and chitosan. The composite NC is characterized by ultraviolet-visible spectroscopy, transmission electron microscopy, scanning electron microscopy (SEM), Fourier transform infrared spectroscopy, and X-ray diffraction. The Ag NPs in the NC are found to elicit anticell proliferative effect on refractory U87MG (human glioblastoma) cells at IC₅₀ of 2.4 μg mL⁻¹ for Ag NPs. The cell cycle analysis shows extensive DNA damage. Elevation in reactive oxygen species level indicates induction of oxidative stress in treated cells. Mitochondrial dysfunction in cell death is evident from the depolarization of mitochondrial

membrane potential (DeltaPsim). Fluorescence and SEM images of the treated cells reveal nuclear and morphological changes characteristic of apoptosis, which is further confirmed by TUNEL assay. The induction of apoptosis at low concentration of Ag NPs present in Ag NPs-Alg-Chi NC in comparison with free Ag NPs makes it a promising tool for cancer therapy.

[652]

TÍTULO / TITLE: - Postmortem Evaluation of 435 Cases of Intracranial Neoplasia in Dogs and Relationship of Neoplasm with Breed, Age, and Body Weight.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Vet Intern Med. 2013 Jul 19. doi: 10.1111/jvim.12136.

●● [Enlace al texto completo \(gratis o de pago\) 1111/jvim.12136](#)

AUTORES / AUTHORS: - Song RB; Vite CH; Bradley CW; Cross JR

INSTITUCIÓN / INSTITUTION: - Department of Clinical Studies, School of Veterinary Medicine , University of Pennsylvania, Philadelphia, PA.

RESUMEN / SUMMARY: - BACKGROUND: Intracranial neoplasia of dogs is frequently encountered in veterinary medicine, but large-scale studies on prevalence are lacking. OBJECTIVES: To determine the prevalence of intracranial neoplasia in a large population of dogs examined postmortem and the relationship between breed, age, and weight with the presence of primary intracranial neoplasms. ANIMALS: All dogs that underwent postmortem examination from 1986 through 2010 (n = 9,574), including dogs with a histopathologic diagnosis of primary (n = 227) and secondary (n = 208) intracranial neoplasia. METHODS: Retrospective evaluation of medical records from 1986 through 2010. RESULTS: Overall prevalence of intracranial neoplasia in this study's population of dogs was 4.5%. A statistically significant higher prevalence of primary intracranial neoplasms was found in dogs with increasing age and body weights. Dogs ≥ 15 kg had an increased risk of meningioma (odds ratio 2.3) when compared to dogs < 15 kg. The Boxer, Boston Terrier, Golden Retriever, French Bulldog, and Rat Terrier had a significantly increased risk of primary intracranial neoplasms while the Cocker Spaniel and Doberman Pinscher showed a significantly decreased risk of primary intracranial neoplasms. CONCLUSIONS AND CLINICAL IMPORTANCE: Intracranial neoplasia in dogs might be more common than previous estimates. The study suggests that primary intracranial neoplasia should be a strong differential in older and larger breed dogs presenting with signs of nontraumatic intracranial disease. Specific breeds have been identified with an increased risk, and others with a decreased risk of primary intracranial neoplasms. The results warrant future investigations into the role of age, size, genetics, and breed on the development of intracranial neoplasms.

[653]

TÍTULO / TITLE: - Choroid plexus tumors: A clinico-pathological and neuro-radiological study of 23 cases.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Asian J Neurosurg. 2013 Jan;8(1):29-35. doi: 10.4103/1793-5482.110277.

●● Enlace al texto completo (gratis o de pago) [4103/1793-5482.110277](#)

AUTORES / AUTHORS: - Jaiswal S; Vij M; Mehrotra A; Kumar B; Nair A; Jaiswal AK; Behari S; Jain VK

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Raebareli Road, Lucknow, Uttar Pradesh, India.

RESUMEN / SUMMARY: - BACKGROUND: Choroid plexus tumors are intraventricular tumors derived from choroid plexus epithelium. AIM: To study the choroid plexus tumors with reference to their clinical, radiological, and pathological features. MATERIALS AND METHODS: The study was performed by the retrospectively reviewing the clinical, radiological, and pathological records of patients of choroid plexus tumors. RESULTS: A total of 23 cases (11 males, 13 females) of choroid plexus tumor were diagnosed from 1997 to 2009. Fourteen patients were below 15 years of age. Raised intracranial pressure was the main presenting feature in all the cases. Tumor was located in lateral ventricle (n = 14; in 3 cases tumor was going into third ventricle), fourth ventricle (n = 7), and cerebellopontine angle (n = 2). Total tumor excision was achieved in 21 cases. The histopathology was suggestive of choroid plexus papilloma (n = 19), atypical choroid plexus papilloma (n = 1), and choroid plexus carcinoma (n = 2). Clear cell areas were noted in three cases. Other histopathological features observed were foci of calcification (n = 5), Psammoma bodies (n = 2), hemorrhage (n = 5), hyalinization (n = 2), and oncocyctic changes (n = 1). CONCLUSIONS: Choroid plexus tumors are intraventricular tumors arising from choroid plexus epithelium. The predominant clinical presentation is raised intracranial pressure. Surgery is the mainstay of treatment; histopathologically, they include choroid plexus papilloma, atypical choroid plexus papilloma, and choroid plexus carcinoma.

[654]

TÍTULO / TITLE: - A unique case of Turner syndrome accompanying prolactinoma and unexpected elongated styloid process: Clinical and cone-beam computed tomographic features.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Imaging Sci Dent. 2013 Jun;43(2):129-34. doi: 10.5624/isd.2013.43.2.129. Epub 2013 Jun 14.

●● Enlace al texto completo (gratis o de pago) [5624/isd.2013.43.2.129](#)

AUTORES / AUTHORS: - Evlice B; Tatli U; Yazicioglu I; Evlice A; Oztunc H

INSTITUCIÓN / INSTITUTION: - Department of Oral and Maxillofacial Radiology, Faculty of Dentistry, Cukurova University, Adana, Turkey.

RESUMEN / SUMMARY: - Turner syndrome (TS) is one of the most common chromosomal abnormalities, with an estimated frequency among female live births of 1/2,000-3,000. The syndrome is characterized by the partial or complete absence of one X chromosome (45,X karyotype). We reported a unique case of a 40-year-old woman with TS accompanying unexpected elongated styloid process specific to Eagle syndrome (ES) and followed up-prolactinoma. The present article is the first report to define the cone-beam computed tomographic (CBCT) features of TS accompanying ES. Patients with TS carry various risks that make treatment more complicated; thus advanced imaging techniques for proper treatment and follow-up are extremely important. In the light of CBCT examination, craniofacial abnormalities specific to TS and accompanying syndromes such as the crowding of teeth especially in the maxillary anterior region caused by maxillary narrowness, micrognathic maxilla and mandible, relative mandibular retrusion, malocclusion, open-bite, and an elongated styloid process (length of 32.7 mm) on the right side were illustrated in detail.

[655]

TÍTULO / TITLE: - Resistance to oncolytic myxoma virus therapy in nf1(-/-)/trp53(-/-) syngeneic mouse glioma models is independent of anti-viral type-I interferon.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 6;8(6):e65801. doi: 10.1371/journal.pone.0065801. Print 2013.

- Enlace al texto completo (gratis o de pago)

1371/journal.pone.0065801

AUTORES / AUTHORS: - Zemp FJ; McKenzie BA; Lun X; Maxwell L; Reilly KM; McFadden G; Yong VW; Forsyth PA

INSTITUCIÓN / INSTITUTION: - Department of Oncology, Clark H. Smith Brain Tumor Center, University of Calgary, Tom Baker Cancer Centre, Southern Alberta Cancer Research Institute, Calgary, Alberta, Canada.

RESUMEN / SUMMARY: - Despite promising preclinical studies, oncolytic viral therapy for malignant gliomas has resulted in variable, but underwhelming results in clinical evaluations. Of concern are the low levels of tumour infection and viral replication within the tumour. This discrepancy between the laboratory and the clinic could result from the disparity of xenograft versus syngeneic models in determining in vivo viral infection, replication and treatment efficacy. Here we describe a panel of primary mouse glioma lines derived from Nf1 (+/-) Trp53 (+/-) mice in the C57Bl/6J background for use in the preclinical testing of the oncolytic virus Myxoma (MYXV). These lines show a range of susceptibility to MYXV replication in vitro, but all succumb to viral-mediated cell death. Two of these lines orthotopically grafted produced aggressive gliomas. Intracranial injection of MYXV failed to result in sustained viral replication or treatment

efficacy, with minimal tumour infection that was completely resolved by 7 days post-infection. We hypothesized that the stromal production of Type-I interferons (IFNalpha/beta) could explain the resistance seen in these models; however, we found that neither the cell lines in vitro nor the tumours in vivo produce any IFNalpha/beta in response to MYXV infection. To confirm IFNalpha/beta did not play a role in this resistance, we ablated the ability of tumours to respond to IFNalpha/beta via IRF9 knockdown, and generated identical results. Our studies demonstrate that these syngeneic cell lines are relevant preclinical models for testing experimental glioma treatments, and show that IFNalpha/beta is not responsible for the MYXV treatment resistance seen in syngeneic glioma models.

[656]

TÍTULO / TITLE: - Progressive growth of arachnoid cysts with cauda equina syndrome after lumbar spine surgery.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Chin Med Assoc. 2013 Jun 24. pii: S1726-4901(13)00121-4. doi: 10.1016/j.jcma.2013.05.011.

●● Enlace al texto completo (gratis o de pago)

[1016/j.jcma.2013.05.011](#)

AUTORES / AUTHORS: - Hung-Kai Weng R; Chang MC; Feng SW; Wang ST; Liu CL; Chen TH

INSTITUCIÓN / INSTITUTION: - Department of Orthopaedics and Traumatology, Taipei Veterans General Hospital, Taipei, Taiwan, ROC.

RESUMEN / SUMMARY: - Intradural arachnoid cysts are a rare cause of spinal cord compression. In symptomatic cases neuropathic pain, gait disturbance, and paraparesis or quadriparesis are often present. Postoperative arachnoid cysts have rarely been reported. We describe a 56-year-old male who developed progressively enlarging arachnoid cysts with cauda equina syndrome and vertebral body erosion after lumbar surgery. The clinical presentation of the patient, the possible mechanisms of cyst formation, and the management of the disease are discussed with regard to previous literature.

[657]

TÍTULO / TITLE: - ApoE enhances nanodisk-mediated curcumin delivery to glioblastoma multiforme cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Nanomedicine (Lond). 2013 Jul 24.

●● Enlace al texto completo (gratis o de pago) [2217/nnm.13.35](#)

AUTORES / AUTHORS: - Ghosh M; Ryan RO

INSTITUCIÓN / INSTITUTION: - Children's Hospital Oakland Research Institute, 5700 Martin Luther King Jr Way, Oakland, CA 94609, USA.

RESUMEN / SUMMARY: - Aim: To evaluate the effect of incorporating the polyphenol, curcumin, into nanodisk (ND) particles on its biological activity. Materials & methods: Curcumin-NDs formulated with different scaffold proteins were incubated with cultured glioblastoma multiforme cells. Results: When ApoE was employed as the ND scaffold protein, enhanced curcumin uptake was observed. Furthermore, ApoE curcumin-NDs induced greater cell death than either free curcumin or ApoAI curcumin-NDs. A total of 1 h after exposure of glioblastoma multiforme cells to ApoE curcumin-NDs, significant curcumin uptake was detected while ApoE was localized at the cell surface. After 2 h, a portion of the curcumin had migrated to the nucleus, giving rise to enhanced fluorescence intensity in discrete intranuclear sites. Conclusion: ApoE-mediated interaction of curcumin-NDs with glioblastoma multiforme cells leads to enhanced curcumin uptake and increased biological activity. Original submitted 20 August 2012; Revised submitted 4 February 2013.

[658]

TÍTULO / TITLE: - (18)F-FDG PET in the Diagnosis and Treatment of Primary Central Nervous System Lymphoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Biomed Res Int. 2013;2013:247152. doi: 10.1155/2013/247152. Epub 2013 Jun 17.

●● Enlace al texto completo (gratis o de pago) [1155/2013/247152](#)

AUTORES / AUTHORS: - Kawai N; Miyake K; Yamamoto Y; Nishiyama Y; Tamiya T

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, Faculty of Medicine, Kagawa University, 1750-1 Miki-cho, Kita-gun, Kagawa 761-0793, Japan.

RESUMEN / SUMMARY: - This paper summarizes the usefulness and limitation of positron emission tomography (PET) with (18)F-fluorodeoxyglucose ((18)F-FDG) in the diagnosis and treatment of primary central nervous system lymphoma (PCNSL). The (18)F-FDG uptake in typical PCNSL is about 2.5 times higher than that in the normal gray matter, and the tumor can usually be identified visually. The (18)F-FDG uptake pattern and value provide useful information for differentiating PCNSL from other enhancing malignant brain tumors especially glioblastoma (GB). The (18)F-FDG uptake in typical PCNSL is usually homogenous, and the uptake value is significantly higher than that in GB. However, (18)F-FDG PET often fails to show the presence of tumor in the brain as (18)F-FDG uptake is faint in atypical PCNSL such as disseminated or nonenhancing lesions. (18)F-FDG PET is also useful for evaluating the treatment response at a very early stage after the initial treatment. Pretreatment and posttreatment (18)F-FDG uptake values may have a prognostic value in patients with PCNSL. In conclusion, (18)F-FDG PET is very useful in the diagnosis of typical PCNSL and can differentiate PCNSL from other malignant

brain tumors. However, the usefulness of (18)F-FDG PET is limited in the diagnosis of atypical PCNSL.

[659]

TÍTULO / TITLE: - Cytomegalovirus pp71 Protein Is Expressed in Human Glioblastoma and Promotes Pro-Angiogenic Signaling by Activation of Stem Cell Factor.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 5;8(7):e68176. doi: 10.1371/journal.pone.0068176. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0068176](https://doi.org/10.1371/journal.pone.0068176)

AUTORES / AUTHORS: - Matlaf LA; Harkins LE; Bezrookove V; Cobbs CS; Soroceanu L

INSTITUCIÓN / INSTITUTION: - California Pacific Medical Center Research Institute, San Francisco, California, United States of America.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is a highly malignant primary central nervous system neoplasm characterized by tumor cell invasion, robust angiogenesis, and a mean survival of 15 months. Human cytomegalovirus (HCMV) infection is present in >90% of GBMs, although the role the virus plays in GBM pathogenesis is unclear. We report here that HCMV pp71, a viral protein previously shown to promote cell cycle progression, is present in a majority of human GBMs and is preferentially expressed in the CD133+, cancer stem-like cell population. Overexpression of pp71 in adult neural precursor cells resulted in potent induction of stem cell factor (SCF), an important pro-angiogenic factor in GBM. Using double immunofluorescence, we demonstrate in situ co-localization of pp71 and SCF in clinical GBM specimens. pp71 overexpression in both normal and transformed glial cells increased SCF secretion and this effect was specific, since siRNA mediated knockdown of pp71 or treatment with the antiviral drug cidofovir resulted in decreased expression and secretion of SCF by HCMV-infected cells. pp71-induced upregulation of SCF resulted in downstream activation of its putative endothelial cell receptor, c-kit, and angiogenesis as measured by increased capillary tube formation in vitro. We demonstrate that pp71 induces a pro-inflammatory response via activation of NFκB signaling which drives SCF expression. Furthermore, we show that pp71 levels and NFκB activation are selectively augmented in the mesenchymal subtype of human GBMs, characterized by worst patient outcome, suggesting that HCMV pp71-induced paracrine signaling may contribute to the aggressive phenotype of this human malignancy.

[660]

TÍTULO / TITLE: - U1 adaptors for the therapeutic knockdown of the oncogene pim-1 kinase in glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Nucleic Acid Ther. 2013 Aug;23(4):264-72. doi: 10.1089/nat.2012.0407. Epub 2013 Jun 1.

●● Enlace al texto completo (gratis o de pago) [1089/nat.2012.0407](https://doi.org/10.1089/nat.2012.0407)

AUTORES / AUTHORS: - Weirauch U; Grunweller A; Cuellar L; Hartmann RK; Aigner A

INSTITUCIÓN / INSTITUTION: - 1 Rudolf-Boehm-Institute for Pharmacology and Toxicology, Clinical Pharmacology, University of Leipzig, Leipzig, Germany.

RESUMEN / SUMMARY: - U1 small nuclear interference (U1i) has recently been described as a novel gene silencing mechanism. U1i employs short oligonucleotides, so-called U1 adaptors, for specific gene knockdown, expanding the field of current silencing strategies that are primarily based on RNA interference (RNAi) or antisense. Despite the potential of U1 adaptors as therapeutic agents, their in vivo application has not yet been studied. Here we explore U1i by analyzing U1 adaptor-mediated silencing of the oncogene Pim-1 in glioblastoma cells. We have generated Pim-1-specific U1 adaptors comprising DNA, locked nucleic acids (LNA), and 2'-O-Methyl RNA and demonstrate their ability to induce a Pim-1 knockdown, leading to antiproliferative and pro-apoptotic effects. For the therapeutic in vivo application of U1 adaptors, we establish their complexation with branched low molecular weight polyethylenimine (PEI). Upon injection of nanoscale PEI/adaptor complexes into subcutaneous glioblastoma xenografts in mice, we observed the knockdown of Pim-1 that resulted in the suppression of tumor growth. The absence of hepatotoxicity and immune stimulation also demonstrates the biocompatibility of PEI/adaptor complexes. We conclude that U1i represents an alternative to RNAi for the therapeutic silencing of pathologically upregulated genes and demonstrate the functional relevance of Pim-1 oncogene knockdown in glioblastoma. We furthermore introduce nanoscale PEI/adaptor complexes as efficient and safe for in vivo application, thus offering novel therapeutic approaches based on U1i-mediated gene knockdown.

[661]

TÍTULO / TITLE: - AURKA maintains self-renewal in glioma-initiating cells through the stabilization of beta-catenin and activation of Wnt signaling.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Mol Cancer Res. 2013 Jun 12.

●● Enlace al texto completo (gratis o de pago) [1158/1541-7786.MCR-13-0044](https://doi.org/10.1007/s12031-013-0044-1)

AUTORES / AUTHORS: - Xia Z; Wei P; Zhang H; Ding Z; Yang L; Huang Z; Zhang N

INSTITUCIÓN / INSTITUTION: - The 1st Affiliated Hospital of Sun Yat-sen University.

RESUMEN / SUMMARY: - Glioma-initiating cells (GICs), which are characterized by their self-renewal capacity and tumorigenicity, are a recently identified highly tumorigenic subpopulation of glioblastoma multiform (GBM) and are considered

responsible for GBM recurrence and chemo/radiation resistance. In a previous study, we determined that Wnt signaling activation is critical to the self-renewal of GICs. However, the molecular mechanism underlying the high expression of beta-catenin, the key transcription factor of the wnt signaling pathway, remains elusive. In this investigation, we reveal that AURKA regulates the self-renewal and tumorigenicity of GICs by stabilizing beta-catenin. In GICs, AURKA directly interacts with AXIN and disrupts the AXIN/GSK3beta/p-beta-catenin destruction complex and stabilizes beta-catenin, thereby activating Wnt signaling, which induces self-renewal. Stable knockdown of AURKA destabilizes beta-catenin by increasing phosphorylated beta-catenin bound to AXIN and suppresses Wnt signaling, which inhibits the ability of GICs to self-renew. This effect is rescued by expression of an AURKA kinase dead mutant, D274A, which lacks the ability to phosphorylate GSK3beta, indicating that stabilization of beta-catenin by AURKA in GICs is independent from phosphorylation of GSK3beta. Functional experiments confirm that inhibition of AUKRA in GICs could suppress their "stemness", self-renewal ability and tumorigenicity both in vitro and in vivo, and these effects could be rescued by stabilized beta-catenin mutant. Our findings indicate that AURKA competes away the binding of AXIN from beta-catenin, induces beta-catenin stablization and activates Wnt signaling in GICs. AURKA inhibition could effectively attenuate Wnt signaling, thereby inhibiting the self-renewal and tumorigenicity of GICs, and may be a novel target for GBM treatment strategies.

[662]

TÍTULO / TITLE: - Uncovering a novel mechanism whereby NK cells interfere with glioblastoma virotherapy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncoimmunology. 2013 Apr 1;2(4):e23658.

●● Enlace al texto completo (gratis o de pago) [4161/onci.23658](#)

AUTORES / AUTHORS: - Alvarez-Breckenridge CA; Yu J; Caligiuri MA; Chiocca EA

INSTITUCIÓN / INSTITUTION: - Medical Scientist Training Program; The Ohio State University Medical Center; Columbus, OH USA ; Dardinger Laboratory for Neuro-Oncology and Neurosciences; Department of Neurological Surgery; The Ohio State University Medical Center; Columbus, OH USA.

RESUMEN / SUMMARY: - Despite initial promising results, the success of clinical trials testing oncolytic viruses in glioblastoma patients has been limited. Innate immunity appears to be one among several barriers against successful viral oncolysis. Recent findings suggest a mechanism by which natural killer cells limit the efficacy of oncolytic viruses via natural cytotoxicity receptors.

[663]

TÍTULO / TITLE: - Dosimetry in brain tumor phantom at 15 MV 3D conformal radiation therapy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Radiat Oncol. 2013 Jul 6;8:168. doi: 10.1186/1748-717X-8-168.

●● Enlace al texto completo (gratis o de pago) [1186/1748-717X-8-168](#)

AUTORES / AUTHORS: - Thompson L; Dias HG; Ribeiro Campos TP

INSTITUCIÓN / INSTITUTION: - Nuclear Engineering Department, Federal University of Minas Gerais, Belo Horizonte, Brazil.

larissathompson@hotmail.com.

RESUMEN / SUMMARY: - : Glioblastoma multiforme (GBM) is the most common, aggressive, highly malignant and infiltrative of all brain tumors with low rate of control. The main goal of this work was to evaluate the spatial dose distribution into a GBM simulator inside a head phantom exposed to a 15 MV 3D conformal radiation therapy in order to validate internal doses. A head and neck phantom developed by the Ionizing Radiation Research Group (NRI) was used on the experiments. Such phantom holds the following synthetic structures: brain and spinal cord, skull, cervical and thoracic vertebrae, jaw, hyoid bone, laryngeal cartilages, head and neck muscles and skin. Computer tomography (CT) of the simulator was taken, capturing a set of contrasted references. Therapy Radiation planning (TPS) was performed based on those CT images, satisfying a 200 cGy prescribed dose split in three irradiation fields. The TPS assumed 97% of prescribed dose cover the prescribed treatment volume (PTV). Radiochromic films in a solid water phantom provided dose response as a function of optical density. Spatial dosimetric distribution was generated by radiochromic film samples at coronal, sagittal-anterior and sagittal-posterior positions, inserted into tumor simulator and brain. The spatial dose profiles held 70 to 120% of the prescribed dose. In spite of the stratified profile, as opposed to the smooth dose profile from TPS, the tumor internal doses were within a 5% deviation from 214.4 cGy evaluated by TPS. 83.2% of the points with a gamma value of less than 1 (3%/3mm) for TPS and experimental values, respectively. At the tumor, measured at coronal section, a few dark spots in the film caused the appearance of outlier points in 13-15% of dose deviation percentage. And, as final conclusion, such dosimeter choice and the physical anthropomorphic and anthropometric phantom provided an efficient method for validating radiotherapy protocols.

[664]

TÍTULO / TITLE: - Transferrin Modified Graphene Oxide for Glioma-Targeted Drug Delivery: In Vitro and in Vivo Evaluations.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - ACS Appl Mater Interfaces. 2013 Jul 24.

●● Enlace al texto completo (gratis o de pago) [1021/am402128s](#)

AUTORES / AUTHORS: - Liu G; Shen H; Mao J; Zhang L; Jiang Z; Sun T; Lan Q; Zhang Z

INSTITUCIÓN / INSTITUTION: - Neurosurgery Department, The Second Affiliated Hospital of Soochow University , 1055 Sanxiang Road, Suzhou, 215004, China.

RESUMEN / SUMMARY: - Transferrin (Tf), an iron-transporting serum glycoprotein that binds to receptors overexpressed at the surface of glioma cells, was chosen as the ligand to develop Tf-conjugated PEGylated nanoscaled graphene oxide (GO) for loading and glioma targeting delivery of anticancer drug doxorubicin (Dox) (Tf-PEG-GO-Dox). Tf-GO with lateral dimensions of 100-400 nm exhibited a Dox loading ratio up to 115.4%. Compared with Dox-loaded PEGylated GO (PEG-GO-Dox) and free Dox, Tf-PEG-GO-Dox displayed greater intracellular delivery efficiency and stronger cytotoxicity against C6 glioma cells. A competition test showed that Tf was essential to glioma targeting in vitro. The HPLC assay for Dox concentration in tumor tissue and contrapart tissue of the brain demonstrated that Tf-PEG-GO-Dox could deliver more Dox into tumor in vivo. The life span of tumor bearing rats after the administration of Tf-PEG-GO-Dox was extended significantly compared to the rats treated with saline, Dox, and PEG-GO-Dox. In conclusion, we developed Tf-PEG-GO-Dox which exhibited significantly improved therapeutic efficacy for glioma both in vitro and in vivo.

[665]

TÍTULO / TITLE: - Isolated tumorous Langerhans cell histiocytosis of the brainstem: a diagnostic and therapeutic challenge.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Jul 12.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[3171/2013.6.PEDS13132](#)

AUTORES / AUTHORS: - Savardekar A; Tripathi M; Bansal D; Vaiphei K; Gupta SK

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery.

RESUMEN / SUMMARY: - Langerhans cell histiocytosis (LCH) of the CNS is a rare entity, known to involve primarily the hypothalamic-pituitary region, with the clinical hallmark of diabetes insipidus. There have been a few reports of CNS LCH involving the brainstem as intraparenchymal enhancing lesions, but this has never been the presenting complaint of LCH. The authors report on a 7-year-old boy who presented with right cerebellopontine syndrome, in whom a well-defined, solid, enhancing lesion in the brainstem was diagnosed. Clinicoradiological differential diagnosis included glioma and tuberculosis. Biopsy revealed atypical histiocytes positive for CD68, CD1a, and S100 protein; these are the diagnostic features of LCH on histopathological examination. The rapid growth of the lesion was controlled with a chemotherapeutic regimen of cladribine.

[666]

TÍTULO / TITLE: - Morphology of plantar interdigital neuroma: a comparative cadaveric study of elderly Finnish and Japanese individuals.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Okajimas Folia Anat Jpn. 2013;90(1):1-5.

AUTORES / AUTHORS: - Abe S; Nakao T; Yamane S; Fukuda M; Yamamoto M; Santti R; Murakami G

INSTITUCIÓN / INSTITUTION: - Department of Anatomy, Tokyo Dental College.

RESUMEN / SUMMARY: - To examine morphological differences in Morton's interdigital neuroma between two elderly human populations, we conducted comparative study using 40 Japanese (27 males, 13 females; mean age, 81.2 years) and 21 Finnish (6 males, 15 females; mean age, 80.5 years) cadavers. We defined the neuroma as a thickening of the nerve of at least two-fold relative to the non-pathological proximal part. The incidence of this neuroma was 25% (10/40) in the Japanese and 33.3% (7/21) in the Finnish cadavers. Moderate or severe hallux valgus (with an angle of more than 20 degrees) was seen in half of the 40 Japanese cadavers (7 males, 13 females), but was absent in the Finnish cadavers. Such hallux valgus was present in 7 (5 males, 2 females) of the 10 Japanese cadavers with neuroma. Moreover, in 2 Japanese cadavers, a paper-like, specialized type of neuroma was associated with the deformity. Pathogenesis of Morton's neuroma might be different between human populations with or without hallux valgus.

[667]

TÍTULO / TITLE: - Genetic grouping of medulloblastomas by representative markers in pathologic diagnosis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Transl Oncol. 2013 Jun 1;6(3):265-72. Print 2013 Jun.

AUTORES / AUTHORS: - Min HS; Lee JY; Kim SK; Park SH

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Seoul National University Children's Hospital, Seoul, South Korea.

RESUMEN / SUMMARY: - A recent analysis of the genetic features of medulloblastoma (MB) suggested classification into distinct subgroups according to gene expression profiles, including the Wingless signaling pathway-activated group (WNT group), the Sonic Hedgehog signaling pathway-activated group (SHH group), group 3, and group 4. To classify MB according to genetic features in practice, we analyzed 74 MBs using representative markers of each group. Based on immunohistochemistries (IHC), cytogenetic alterations, and a CTNNB1 mutation study, the patients were divided into the following three groups: cases showing nuclear beta-catenin and/or CTNNB1 mutation and/or monosomy 6 were included in the WNT group (14/74, 18.9%); cases expressing GAB1 were included in the SHH group (15/74, 20.2%); cases that did not show positivity for markers of the WNT or SHH group were included in the non-WNT/SHH group (45/74, 60.6%). Immunoexpression of NPR3

seemed to lack sensitivity for classifying group 3, showing diffuse positivity in only two cases. KCNA1 was not specific to group 4 because it was expressed in all groups. Cases in the WNT group showed a slightly better survival than those in the SHH or non-WNT/SHH group, although additional cases are required for statistical significance. Isochromosome 17q (P = .002) and the large cell/anaplastic variant (P = .002) were demonstrated to be poor prognostic indicators in multivariate analysis. The representative IHC and cytogenetic data facilitated the division of MBs into the WNT and SHH groups; however, more specific markers should be added for the identification of group 3 and group 4 in practice.

[668]

TÍTULO / TITLE: - Pharmacoeconomic aspects of the treatment of pituitary gland tumours.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Contemp Oncol (Pozn). 2013;17(2):137-43. doi: 10.5114/wo.2013.34616. Epub 2013 Apr 29.

●● Enlace al texto completo (gratis o de pago) [5114/wo.2013.34616](#)

AUTORES / AUTHORS: - Sowinski J; Sawicka N; Piatek K; Zybek A; Ruchala M

INSTITUCIÓN / INSTITUTION: - Department of Endocrinology, Metabolism and Internal Medicine, Poznan University of Medical Sciences, Poland.

RESUMEN / SUMMARY: - Nowadays physicians are under economic pressure; therefore therapeutic decisions based on safety, efficacy, and the effectiveness of the medication also require economic analysis. The aim of this review is to discuss data concerning the cost-effectiveness of drug therapy in patients with hormonally active pituitary adenomas, namely growth hormone, adrenocorticotrophic hormone, thyroid-stimulating hormone-secreting pituitary adenomas, prolactinoma and pituitary incidentaloma. In acromegalic patients using lanreotide is cheaper for health care payers and more convenient for physicians and patients because of the opportunity for self/partner injections, lower clogging risk and possibility of longer intervals between injections, while the efficacy is comparable with octreotide. Patients with prolactinomas should be treated with novel dopamine agonists, such as cabergoline or quinagolide, however, bromocriptine still remains a cheaper and almost as effective alternative. There are no easy methods or algorithms, but in general, extracting the maximum value from the investment in treatment is essential.

[669]

TÍTULO / TITLE: - The Tachykinin Peptide Neurokinin B Binds Copper Forming an Unusual [Cu(NKB)] Complex and Inhibits Copper Uptake into 1321N1 Astrocytoma Cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - ACS Chem Neurosci. 2013 Aug 7.

●● Enlace al texto completo (gratis o de pago) [1021/cn4000988](#)

AUTORES / AUTHORS: - Russino D; McDonald E; Hejazi L; Hanson GR; Jones CE

INSTITUCIÓN / INSTITUTION: - The School of Science and Health, The University of Western Sydney , Locked bag 1797, Penrith, New South Wales 2759, Australia.

RESUMEN / SUMMARY: - Neurokinin B (NKB) is a member of the tachykinin family of neuropeptides that have neuroinflammatory, neuroimmunological, and neuroprotective functions. In a neuroprotective role, tachykinins can help protect cells against the neurotoxic processes observed in Alzheimer's disease. A change in copper homeostasis is a clear feature of Alzheimer's disease, and the dysregulation may be a contributory factor in toxicity. Copper has recently been shown to interact with neurokinin A and neuropeptide gamma and can lead to generation of reactive oxygen species and peptide degradation, which suggests that copper may have a place in tachykinin function and potentially misfunction. To explore this, we have utilized a range of spectroscopic techniques to show that NKB, but not substance P, can bind Cull in an unusual [Cull(NKB)₂] neutral complex that utilizes two N-terminal amine and two imidazole nitrogen ligands (from each molecule of NKB) and the binding substantially alters the structure of the peptide. Using 1321N1 astrocytoma cells, we show that copper can enter the cells and subsequently open plasma membrane calcium channels but when bound to neurokinin B copper ion uptake is inhibited. This data suggests a novel role for neurokinin B in protecting cells against copper-induced calcium changes and implicates the peptide in synaptic copper homeostasis.

[670]

TÍTULO / TITLE: - A novel bispecific antibody recruits T cells to eradicate tumors in the "immunologically privileged" central nervous system.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncoimmunology. 2013 Apr 1;2(4):e23639.

●● [Enlace al texto completo \(gratis o de pago\) 4161/onci.23639](#)

AUTORES / AUTHORS: - Choi BD; Pastan I; Bigner DD; Sampson JH

INSTITUCIÓN / INSTITUTION: - Duke Brain Tumor Immunotherapy Program; Division of Neurosurgery; Department of Surgery; Duke University Medical Center; Durham, NC USA ; Department of Pathology; Duke University Medical Center; Durham, NC USA ; The Preston Robert Tisch Brain Tumor Center at Duke; Duke University Medical Center; Durham, NC USA.

RESUMEN / SUMMARY: - Bispecific T-cell engagers (BiTEs) may break multiple barriers that currently limit the use of immunotherapy in glioblastoma patients. We have recently described a novel BiTE specific for a mutated form of the epidermal growth factor receptor, EGFRvIII, that exerts potent antineoplastic effects against established invasive tumors of the brain.

[671]

TÍTULO / TITLE: - Finding new small molecule anti-invasive compounds for glioma treatment.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cell Cycle. 2013 Jun 21;12(14).

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 molecules affecting all of these pathways 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.

[672]

TÍTULO / TITLE: - Adjuvant chemotherapy after reduced craniospinal irradiation dose in children with average-risk medulloblastoma: A 5-year follow-up study.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J BUON. 2013 Apr-Jun;18(2):425-9.

AUTORES / AUTHORS: - Wahba HA; Abu-Hegazy M; Wasel Y; Ismail EI; Zidan AS

INSTITUCIÓN / INSTITUTION: - Department of Clinical Oncology and Nuclear Medicine, Faculty of Medicine, Mansoura University, Mansoura, Egypt.

RESUMEN / SUMMARY: - Purpose: This study was undertaken to determine the effect of adjuvant chemotherapy combined with reduced-dose craniospinal irradiation (CSI) on survival and neurocognitive sequelae of radiotherapy (RT) in patients with average-risk medulloblastoma above the age of 3 years. Methods: Thirty-three children between 3 and 10 years of age with average-risk medulloblastoma were treated with postoperative reduced-dose CSI (24.0 Gy) and 30.6 Gy of local RT (total of 54.6 Gy) and then with adjuvant chemotherapy consisting of cisplatin, vincristine, and cyclophosphamide every 4 weeks for 8

cycles. Results: At 5 years, event-free survival (EFS) was 79%, while overall survival (OS) was 85%. Sites of relapse were local in 3%, neuraxis in 9% and both local and neuraxis in 9% of the patients. Chemotherapy was well tolerated. Hematopoietic toxicity was the most predominant side effect followed by vomiting and ototoxicity. No grade III or IV nephrotoxicity or neurotoxicity and no treatment-related deaths were encountered. Insignificant decline of intelligence quotient (IQ) was reported in 28.6% of the patients. Conclusion: The preliminary results of adjuvant chemotherapy after reduced-dose CSI in average-risk medulloblastoma patients are encouraging and effective, and can be applied safely with acceptable toxicity.

[673]

TÍTULO / TITLE: - Local recurrence of primary central nervous system lymphoma due to tumor seeding.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Ann Saudi Med. 2013 May-Jun;33(3):310-1. doi: 10.5144/0256-4947.2013.310.

●● Enlace al texto completo (gratis o de pago) [5144/0256-4947.2013.310](#)

AUTORES / AUTHORS: - Madkhali I; Bakshi N; Akhtar S; Maghfoor I

INSTITUCIÓN / INSTITUTION: - Ibrahim Madkhali MD, MBC 64 Oncology Center,, King Faisal Specialist Hospital and Research Centre,, Riyadh, Saudi Arabia, dr.ibrahim2020@hotmail.com.

[674]

TÍTULO / TITLE: - Intra-extradural dumbbell-shaped hemangioblastoma of the cauda equina mimicking schwannoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neurol India. 2013 May-Jun;61(3):338-9. doi: 10.4103/0028-3886.115103.

●● Enlace al texto completo (gratis o de pago) [4103/0028-3886.115103](#)

AUTORES / AUTHORS: - Wu L; Yang T; Deng X; Xu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, China.

[675]

TÍTULO / TITLE: - Cervical extradural and extraspinal ependymoma mimicking dumb-bell schwannoma: An unusual tumor.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neurol India. 2013 May-Jun;61(3):303-5. doi: 10.4103/0028-3886.115073.

●● Enlace al texto completo (gratis o de pago) [4103/0028-3886.115073](#)

AUTORES / AUTHORS: - Ramesh VG; Karthikeyan KV; Rao KR; Balasubramanian C

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Chettinad Superspeciality Hospital, Chettinad Health City, Kelambakkam, Chennai, Tamil Nadu, India.

RESUMEN / SUMMARY: - Ependymomas are common in intramedullary location and extradural location of the spinal cord is very rare. A few cases in the lumbosacral region have been reported. This report presents a cervical dumb-bell ependymoma with a small intraspinal extradural component and a large extraspinal component in the posterior triangle of the neck. The tumor was excised in two stages. This is probably the first such case report in the cervical region in the world literature. Possible histogenesis of ependymoma in this location is also discussed.

[676]

TÍTULO / TITLE: - Support of a child after brain tumour diagnosis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Nurs Child Young People. 2013 May;25(4):14-8.

AUTORES / AUTHORS: - Perrow R

INSTITUCIÓN / INSTITUTION: - Bristol Royal Hospital for Children, University Hospital Bristol NHS Foundation Trust. rachel.perrow@uhbristol.nhs.uk

RESUMEN / SUMMARY: - 'Sam' was a six-year-old boy with medulloblastoma causing obstructive hydrocephalus and ataxia. Surgery, rehabilitation and possible long-term disability or neurological deficit were prepared for thoroughly by Sam and his family with the help of a multidisciplinary team. Full resection was successful but was followed by posterior fossa syndrome. His parents, who were under great stress throughout, were encouraged to communicate their concerns in a designated environment and to assist in their child's rehabilitation. A care plan ensured that they were involved with, but not overwhelmed by, his needs and the long-term prognosis.

[677]

TÍTULO / TITLE: - Mechanisms of evasive resistance to anti-VEGF therapy in glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - CNS Oncol. 2013 Jan;2(1):49-65.

●● Enlace al texto completo (gratis o de pago) [2217/cns.12.36](#)

AUTORES / AUTHORS: - Lu KV; Bergers G

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of California, CA, USA ; Brain Tumor Research Center, University of California, CA, USA.

RESUMEN / SUMMARY: - Angiogenesis inhibitors targeting the VEGF signaling pathway have been US FDA approved for various cancers including glioblastoma (GBM), one of the most lethal and angiogenic tumors. This has led to the routine use of the anti-VEGF antibody bevacizumab in recurrent GBM, conveying substantial improvements in radiographic response, progression-free survival and quality of life. Despite these encouraging beneficial effects, patients inevitably develop resistance and frequently fail to demonstrate significantly better overall survival. Unlike chemotherapies, to which tumors exhibit resistance due to genetic mutation of drug targets, emerging evidence suggests that tumors bypass antiangiogenic therapy while VEGF signaling remains inhibited through a variety of mechanisms that are just beginning to be recognized. Because of the indirect nature of resistance to VEGF inhibitors there is promise that strategies combining angiogenesis inhibitors with drugs targeting such evasive resistance pathways will lead to more durable antiangiogenic efficacy and improved patient outcomes. Further identifying and understanding of evasive resistance mechanisms and their clinical importance in GBM relapse is therefore a timely and critical issue.

[678]

TÍTULO / TITLE: - Expression of the lysosomal-associated membrane protein-1 (LAMP-1) in astrocytomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Int J Clin Exp Pathol. 2013 Jun 15;6(7):1294-305. Print 2013.

AUTORES / AUTHORS: - Jensen SS; Aaberg-Jessen C; Christensen KG; Kristensen B

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Odense University Hospital, Institute of Clinical Research, University of Southern Denmark Denmark.

RESUMEN / SUMMARY: - Targeting of lysosomes is a novel therapeutic anti-cancer strategy for killing the otherwise apoptosis-resistant cancer cells. Such strategies are urgently needed for treatment of brain tumors, especially the glioblastoma, which is the most frequent and most malignant type. The aim of the present study was to investigate the presence of lysosomes in astrocytic brain tumors focussing also on the therapy resistant tumor stem cells. Expression of the lysosomal marker LAMP-1 (lysosomal-associated membrane protein-1) was investigated by immunohistochemistry in 112 formalin fixed paraffin embedded astrocytomas and compared with tumor grade and overall patient survival. Moreover, double immunofluorescence stainings were performed with LAMP-1 and the astrocytic marker GFAP and the putative stem cell marker CD133 on ten glioblastomas. Most tumors expressed the LAMP-1 protein in the cytoplasm of the tumor cells, while the blood vessels were positive in all tumors. The percentage of LAMP-1 positive tumor cells and staining intensities increased with tumor grade but variations in tumors of the same

grade were also found. No association was found between LAMP-1 expression and patient overall survival in the individual tumor grades. LAMP-1/GFAP showed pronounced co-expression and LAMP-1/CD133 was co-expressed as well suggesting that tumor cells including the proposed tumor stem cells contain lysosomes. The results suggest that high amounts of lysosomes are present in glioblastomas and in the proposed tumor stem cells. Targeting of lysosomes may be a promising novel therapeutic strategy against this highly malignant neoplasm.

[679]

TÍTULO / TITLE: - Aligned Chitosan-Polycaprolactone Polyblend Nanofibers Promote the Migration of Glioblastoma Cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Adv Healthc Mater. 2013 Jun 17. doi: 10.1002/adhm.201300092.

●● Enlace al texto completo (gratis o de pago) [1002/adhm.201300092](https://doi.org/10.1002/adhm.201300092)

AUTORES / AUTHORS: - Kievit FM; Cooper A; Jana S; Leung MC; Wang K; Edmondson D; Wood D; Lee JS; Ellenbogen RG; Zhang M

INSTITUCIÓN / INSTITUTION: - Department of Materials Science and Engineering, University of Washington, Seattle, WA 98195, USA; Department of Neurological Surgery, University of Washington, Seattle, WA 98195, USA.

RESUMEN / SUMMARY: - In vitro models that accurately mimic the microenvironment of invading glioblastoma multiform (GBM) cells will provide a high-throughput system for testing potential anti-invasion therapies. Here, we investigate the ability of chitosan-polycaprolactone polyblend nanofibers to promote a migratory phenotype in human GBM cells by altering the nanotopography of the nanofiber membranes. Fibers are prepared with diameters of 200 nm, 400 nm, and 1.1 μm , and are either randomly oriented or aligned to produce six distinct nanotopographies. Human U-87 MG GBM cells, a model cell line commonly used for invasion assays, are cultured on the various nanofibrous substrates. Cells show elongation and alignment along the orientation of aligned fibers as early as 24 h and up to 120 h of culture. After 24 h of culture, human GBM cells cultured on aligned 200 nm and 400 nm fibers show marked upregulation of invasion-related genes including beta-catenin, Snail, STAT3, TGF-beta, and Twist, suggesting a mesenchymal change in these migrating cells. Additionally, cells cultured on 400 nm aligned fibers show similar migration profiles as those reported in vivo, and thus these nanofibers should provide a unique high-throughput in vitro culture substrate for developing anti-migration therapies for the treatment of GBM.

[680]

TÍTULO / TITLE: - The mechanistic influence of aligned nanofibers on cell shape, migration and blebbing dynamics of glioma cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Integr Biol (Camb). 2013 Aug 22;5(8):1036-44. doi: 10.1039/c3ib40073e.

●● Enlace al texto completo (gratis o de pago) [1039/c3ib40073e](https://doi.org/10.1039/c3ib40073e)

AUTORES / AUTHORS: - Sharma P; Sheets K; Elankumaran S; Nain AS

INSTITUCIÓN / INSTITUTION: - School of Biomedical Engineering and Sciences, ICTAS, 325 Stanger Street, Virginia Tech, Blacksburg, Virginia 24061, USA. nain@vt.edu.

RESUMEN / SUMMARY: - Investigating the mechanistic influence of the tumor microenvironment on cancer cell migration and membrane blebbing is crucial in the understanding and eventual arrest of cancer metastasis. In this study, we investigate the effect of suspended and aligned nanofibers on the glioma cytoskeleton, cell shape, migration and plasma membrane blebbing dynamics using a non-electrospinning fiber-manufacturing platform. Cells attached in repeatable shapes of spindle on single fibers, rectangular on two parallel fibers and polygonal on intersecting fibers. Structural stiffness ($N\ m^{-1}$) of aligned and suspended nanofibers (average diameter: 400 nm, length: 4, 6, and 10 μm) was found to significantly alter the migration speed with higher migration on lower stiffness fibers. For cells attached to fibers and exhibiting blebbing, an increase in cellular spread area resulted in both reduced bleb count and bleb size with an overall increase in cell migration speed. Blebs no longer appeared past a critical cellular spread area of approximately 1400 μm^2 . Our results highlighting the influence of the mechanistic environment on the invasion dynamics of glioma cells add to the understanding of how biophysical components influence glioma cell migration and blebbing dynamics.

[681]

TÍTULO / TITLE: - Acetaldehyde-ethanol interactions on calcium-activated potassium (BK) channels in pituitary tumor (GH3) cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Front Behav Neurosci. 2013 Jun 14;7:58. doi: 10.3389/fnbeh.2013.00058. Print 2013.

●● Enlace al texto completo (gratis o de pago) [3389/fnbeh.2013.00058](https://doi.org/10.3389/fnbeh.2013.00058)

AUTORES / AUTHORS: - Handlechner AG; Hermann A; Fuchs R; Weiger TM

INSTITUCIÓN / INSTITUTION: - Division of Cellular and Molecular Neurobiology, Department of Cell Biology, University of Salzburg Salzburg, Austria.

RESUMEN / SUMMARY: - Background: In the central nervous system ethanol (EtOH) is metabolized to acetaldehyde (ACA) primarily by the oxidative enzyme catalase. Evidence suggests that ACA is responsible for at least some of the effects on the brain that have been attributed to EtOH. Various types of ion channels which are involved in electrical signaling are targets of EtOH like maxi calcium-activated potassium (BK) channels. BK channels exhibit various functions like action potential repolarization, blood pressure regulation, hormone secretion, or transmitter release. In most neuronal and neuroendocrine preparations at physiological intracellular calcium levels, EtOH increases BK

channel activity. The simultaneous presence of ACA and EtOH reflects the physiological situation after drinking and may result in synergistic as well as antagonistic actions compared to a single application of either drug. The action of ACA on electrical activity has yet not been fully established. Methods: GH3 pituitary tumor cells were used for outside-out and inside-out patch-clamp recordings of BK activity in excised patches. Unitary current amplitude, open probability and channel mean open time of BK channels were measured. Results: Extracellular EtOH raised BK channel activity. In the presence of intracellular ACA this increment of BK activity was suppressed in a dose- as well as calcium-dependent manner. Mean channel open time was significantly reduced by internal ACA, whereas BK channel amplitudes were not affected. The EtOH counteracting effect of ACA was found to depend on succession of application. EtOH was prevented from activating BK channels by pre-exposure of membrane patches to ACA. In contrast BK activation by a hypotonic solution was not affected by internal ACA. Conclusions: Our data suggest an inhibitory impact of ACA on BK activation by EtOH. ACA appears to interact specifically with EtOH at BK channels since intracellular ACA had no effect when BK channels were activated by hypotonicity.

[682]

TÍTULO / TITLE: - Bcl-w Enhances Mesenchymal Changes and Invasiveness of Glioblastoma Cells by Inducing Nuclear Accumulation of beta-Catenin.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 27;8(6):e68030. Print 2013.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1371/journal.pone.0068030](https://doi.org/10.1371/journal.pone.0068030)

AUTORES / AUTHORS: - Lee WS; Woo EY; Kwon J; Park MJ; Lee JS; Han YH; Bae IH

INSTITUCIÓN / INSTITUTION: - Division of Radiation Cancer Research, Korea Institute of Radiological & Medical Sciences, Seoul, Korea.

RESUMEN / SUMMARY: - Bcl-w a pro-survival member of the Bcl-2 protein family, is expressed in a variety of cancer types, including gastric and colorectal adenocarcinomas, as well as glioblastoma multiforme (GBM), the most common and lethal brain tumor type. Previously, we demonstrated that Bcl-w is upregulated in gastric cancer cells, particularly those displaying infiltrative morphology. These reports propose that Bcl-w is strongly associated with aggressive characteristic, such as invasive or mesenchymal phenotype of GBM. However, there is no information from studies of the role of Bcl-w in GBM. In the current study, we showed that Bcl-w is upregulated in human glioblastoma multiforme (WHO grade IV) tissues, compared with normal and glioma (WHO grade III) tissues. Bcl-w promotes the mesenchymal traits of glioblastoma cells by inducing vimentin expression via activation of transcription factors, beta-catenin, Twist1 and Snail in glioblastoma U251 cells. Moreover, Bcl-w induces invasiveness by promoting MMP-2 and FAK activation via the PI3K-p-Akt-p-

GSK3beta-beta-catenin pathway. We further confirmed that Bcl-w has the capacity to induce invasiveness in several human cancer cell lines. In particular, Bcl-w-stimulated beta-catenin is translocated into the nucleus as a transcription factor and promotes the expression of target genes, such as mesenchymal markers or MMPs, thereby increasing mesenchymal traits and invasiveness. Our findings collectively indicate that Bcl-w functions as a positive regulator of invasiveness by inducing mesenchymal changes and that trigger their aggressiveness of glioblastoma cells.

[683]

TÍTULO / TITLE: - The Effect of Z-Ligustilide on the Mobility of Human Glioblastoma T98G Cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 21;8(6):e66598. Print 2013.

●● Enlace al texto completo (gratis o de pago)

1371/journal.pone.0066598

AUTORES / AUTHORS: - Yin J; Wang C; Mody A; Bao L; Hung SH; Svoronos SA; Tseng Y

INSTITUCIÓN / INSTITUTION: - Department of Chemical Engineering, University of Florida, Gainesville, Florida, United States of America ; National Cancer Institute - Physical Science Oncology Center, Gainesville, Florida, United States of America.

RESUMEN / SUMMARY: - Z-ligustilide (LIG), an essential oil extract from *Radix Angelica sinensis*, has broad pharmaceutical applications in treating cardiovascular diseases and ischemic brain injury. Recently, LIG has been connected to Glioblastoma multiforme (GBM) because of its structural similarity to 3-n-alkylphthalide (NBP), which is specifically cytotoxic to GBM cells. Hence, we investigated LIG's effect on GBM T98G cells. The study shows that LIG can significantly reduce T98G cells' migration in a dose-dependent manner. Furthermore, the attenuation of cellular mobility can be linked to the activity of the Rho GTPases (RhoA, Rac1 and Cdc42), the three critical molecular switches governing cytoskeleton remodeling; thus, regulating cell migration. LIG significantly reduces the expression of RhoA and affects in a milder manner the expression of Cdc42 and Rac1.

[684]

TÍTULO / TITLE: - Anti-migratory effect of vinflunine in endothelial and glioblastoma cells is associated with changes in EB1 C-terminal detyrosinated/tyrosinated status.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 4;8(6):e65694. doi: 10.1371/journal.pone.0065694. Print 2013.

●● Enlace al texto completo (gratis o de pago)

1371/journal.pone.0065694

AUTORES / AUTHORS: - Rovini A; Gauthier G; Berges R; Kruczynski A; Braguer D; Honore S

INSTITUCIÓN / INSTITUTION: - Aix Marseille Universite, Institut National de la Sante et de la Recherche Medicale UMR_S 911, Marseille, France.

RESUMEN / SUMMARY: - We previously showed that vinflunine, a microtubule-targeting drug of the Vinca-alkaloid family exerted its anti-angiogenic/anti-migratory activities through an increase in microtubule dynamics and an inhibition of microtubule targeting to adhesion sites. Such effect was associated with a reduction of EB1 comet length at microtubule (+) ends. In this work we first showed that the pro-angiogenic vascular endothelial growth factor VEGF suppressed microtubule dynamics in living Human Umbilical Vein Endothelial Cells (HUVECs), increased EB1 comet length by 40%, and induced EB1 to bind all along the microtubules, without modifying its expression level. Such microtubule (+) end stabilization occurred close to the plasma membrane in the vicinity of focal adhesion as shown by TIRF microscopy experiments. Vinflunine completely abolished the effect of VEGF on EB1 comets. Interestingly, we found a correlation between the reduction of EB1 comet length by vinflunine and the inhibition of cell migration. By using 2D gel electrophoresis we demonstrated for the first time that EB1 underwent several post-translational modifications in endothelial and tumor cells. Particularly, the C-terminal EEY sequence was poorly detectable in control and VEGF-treated HUVECs suggesting the existence of a non-tyrosinated form of EB1. By using specific antibodies that specifically recognized and discriminated the native tyrosinated form of EB1 and a putative C-terminal detyrosinated form, we showed that a detyrosinated form of EB1 exists in HUVECs and tumor cells. Interestingly, vinflunine decreased the level of the detyrosinated form and increased the native tyrosinated form of EB1. Using 3-L-Nitrotyrosine incorporation experiments, we concluded that the EB1 C-terminal modifications result from a detyrosination/retyrosination cycle as described for tubulin. Altogether, our results show that vinflunine inhibits endothelial cell migration through an alteration of EB1 comet length and EB1 detyrosination/retyrosination cycle.

[685]

TÍTULO / TITLE: - Coibamide A induces mTOR-independent autophagy and cell death in human glioblastoma cells.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 6;8(6):e65250. doi: 10.1371/journal.pone.0065250. Print 2013.

●● Enlace al texto completo (gratis o de pago)

1371/journal.pone.0065250

AUTORES / AUTHORS: - Hau AM; Greenwood JA; Lohr CV; Serrill JD; Proteau PJ; Ganley IG; McPhail KL; Ishmael JE

INSTITUCIÓN / INSTITUTION: - Department of Pharmaceutical Sciences, Oregon State University, Corvallis, Oregon, United States of America.

RESUMEN / SUMMARY: - Coibamide A is an N-methyl-stabilized depsipeptide that was isolated from a marine cyanobacterium as part of an International Cooperative Biodiversity Groups (ICBG) program based in Panama. Previous testing of coibamide A in the NCI in vitro 60 cancer cell line panel revealed a potent anti-proliferative response and “COMPARE-negative” profile indicative of a unique mechanism of action. We report that coibamide A is a more potent and efficacious cytotoxin than was previously appreciated, inducing concentration- and time-dependent cytotoxicity (EC₅₀<100 nM) in human U87-MG and SF-295 glioblastoma cells and mouse embryonic fibroblasts (MEFs). This activity was lost upon linearization of the molecule, highlighting the importance of the cyclized structure for both anti-proliferative and cytotoxic responses. We show that coibamide A induces autophagosome accumulation in human glioblastoma cell types and MEFs via an mTOR-independent mechanism; no change was observed in the phosphorylation state of ULK1 (Ser-757), p70 S6K1 (Thr-389), S6 ribosomal protein (Ser-235/236) and 4EBP-1 (Thr-37/46). Coibamide A also induces morphologically and biochemically distinct forms of cell death according to cell type. SF-295 glioblastoma cells showed caspase-3 activation and evidence of apoptotic cell death in a pattern that was also seen in wild-type and autophagy-deficient (ATG5-null) MEFs. In contrast, cell death in U87-MG glioblastoma cells was characterized by extensive cytoplasmic vacuolization and lacked clear apoptotic features. Cell death was attenuated, but still triggered, in Apaf-1-null MEFs lacking a functional mitochondria-mediated apoptotic pathway. From the study of ATG5-null MEFs we conclude that a conventional autophagy response is not required for coibamide A-induced cell death, but likely occurs in dying cells in response to treatment. Coibamide A represents a natural product scaffold with potential for the study of mTOR-independent signaling and cell death mechanisms in apoptotic-resistant cancer cells.

[686]

TÍTULO / TITLE: - Shikonin Kills Glioma Cells through Necroptosis Mediated by RIP-1.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 28;8(6):e66326. doi: 10.1371/journal.pone.0066326. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0066326](https://doi.org/10.1371/journal.pone.0066326)

AUTORES / AUTHORS: - Huang C; Luo Y; Zhao J; Yang F; Zhao H; Fan W; Ge P
INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, First Bethune hospital of Jilin University, Changchun, China.

RESUMEN / SUMMARY: - BACKGROUND AND PURPOSE: Shikonin was reported to induce necroptosis in leukemia cells, but apoptosis in glioma cell lines. Thus, it is needed to clarify whether shikonin could cause necroptosis in glioma cells and investigate its underlying mechanisms. METHODS: Shikonin

and rat C6 glioma cell line and Human U87 glioma cell line were used in this study. The cellular viability was assayed by MTT. Flow cytometry with annexin V-FITC and PI double staining was used to analyze cellular death modes. Morphological alterations in C6 glioma cells treated with shikonin were evaluated by electronic transmission microscopy and fluorescence microscopy with Hoechst 33342 and PI double staining. The level of reactive oxygen species was assessed by using redox-sensitive dye DCFH-DA. The expressional level of necroptosis associated protein RIP-1 was analyzed by western blotting. RESULTS: Shikonin induced cell death in C6 and U87 glioma cells in a dose and time dependent manner. The cell death in C6 and U87 glioma cells could be inhibited by necroptosis inhibitor necrostatin-1, not by pan-caspase inhibitor z-VAD-fmk. Shikonin treated C6 glioma cells presented electron-lucent cytoplasm, loss of plasma membrane integrity and intact nuclear membrane in morphology. The increased ROS level caused by shikonin was attenuated by necrostatin-1 and blocking ROS by anti-oxidant NAC rescued shikonin-induced cell death in both C6 and U87 glioma cells. Moreover, the expressional level of RIP-1 was up-regulated by shikonin in a dose and time dependent manner as well, but NAC suppressed RIP-1 expression. CONCLUSIONS: We demonstrated that the cell death caused by shikonin in C6 and U87 glioma cells was mainly via necroptosis. Moreover, not only RIP-1 pathway, but also oxidative stress participated in the activation of shikonin induced necroptosis.

[687]

TÍTULO / TITLE: - Primary central nervous system lymphoma with lymphomatosis cerebri in an immunocompetent child: MRI and F-FDG PET-CT findings.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Rev Esp Med Nucl. Acceso gratuito al texto completo a partir de los 2 años de la fecha de publicación.

- Enlace a la Editora de la Revista <http://db.doyma.es/>

- Cita: Revista Española de Medicina Nuclear: <> Imagen Mol. 2013 Jun 3. pii: S2253-654X(13)00054-1. doi: 10.1016/j.remn.2013.04.002.

- Enlace al texto completo (gratuito o de pago)

[1016/j.remn.2013.04.002](#)

AUTORES / AUTHORS: - Jain TK; Sharma P; Suman SK; Faizi NA; Bal C; Kumar R

INSTITUCIÓN / INSTITUTION: - Department of Nuclear Medicine, All India Institute of Medical Sciences, New Delhi, India.

RESUMEN / SUMMARY: - Primary central nervous system lymphoma (PCNSL) is extremely rare in immunocompetent children. We present the magnetic resonance imaging (MRI) and 18F-fluorodeoxyglucose (18F-FDG) positron emission tomography-computed tomography (PET-CT) findings of such a case in a 14-year old immunocompetent boy. In this patient, PCNSL was associated with lymphomatosis cerebri. Familiarity with the findings of this rare condition

will improve the diagnostic confidence of the nuclear radiologist and avoid misdiagnosis.

[688]

TÍTULO / TITLE: - Comparison of T2 and T2*-weighted MR molecular imaging of a mouse model of glioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - BMC Med Imaging. 2013 Jul 18;13(1):20.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1471-2342-13-20](#)

AUTORES / AUTHORS: - Blasiak B; Barnes S; Foniok T; Rushforth D; Matyas J; Ponjevic D; Weglarz WP; Tyson R; Iqbal U; Abulrob A; Sutherland GR; Obenaus A; Tomanek B

RESUMEN / SUMMARY: - BACKGROUND: Standard MRI has been used for high-grade gliomas detection, albeit with limited success as it does not provide sufficient specificity and sensitivity to detect complex tumor structure. Therefore targeted contrast agents based on iron oxide, that shorten mostly T2 relaxation time, have been recently applied. However pulse sequences for molecular imaging in animal models of gliomas have not been yet fully studied. The aim of this study was therefore to compare contrast-to-noise ratio (CNR) and explain its origin using spin-echo (SE), gradient echo (GE), GE with flow compensation (GEFC) as well as susceptibility weighted imaging (SWI) in T2 and T2* contrast-enhanced molecular MRI of glioma. METHODS: A mouse model was used. U87MGdEGFRvIII cells (U87MG), derived from a human tumor, were injected intracerebrally. A 9.4 T MRI system was used and MR imaging was performed on the 10 day after the inoculation of the tumor. The CNR was measured prior, 20 min, 2 hrs and 24 hrs post intravenous tail administration of glioma targeted paramagnetic nanoparticles (NPs) using SE, SWI, GE and GEFC pulse sequences. RESULTS: The results showed significant differences in CNR among all pulse sequences prior injection. GEFC provided higher CNR post contrast agent injection when compared to GE and SE. Post injection CNR was the highest with SWI and significantly different from any other pulse sequence. CONCLUSIONS: Molecular MR imaging using targeted contrast agents can enhance the detection of glioma cells at 9.4 T if the optimal pulse sequence is used. Hence, the use of flow compensated pulse sequences, beside SWI, should to be considered in the molecular imaging studies.

[689]

TÍTULO / TITLE: - Mutation Analysis of IDH1 in Paired Gliomas Revealed IDH1 Mutation Was Not Associated with Malignant Progression but Predicted Longer Survival.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 28;8(6):e67421. doi: 10.1371/journal.pone.0067421. Print 2013.

- Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0067421](https://doi.org/10.1371/journal.pone.0067421)

AUTORES / AUTHORS: - Yao Y; Chan AK; Qin ZY; Chen LC; Zhang X; Pang JC; Li HM; Wang Y; Mao Y; Ng HK; Zhou LF

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai, China.

RESUMEN / SUMMARY: - Recurrence and progression to higher grade lesions are characteristic behaviors of gliomas. Though IDH1 mutation frequently occurs and is considered as an early event in gliomagenesis, little is known about its role in the recurrence and progression of gliomas. We therefore analysed IDH1 and IDH2 status at codon 132 of IDH1 and codon 172 of IDH2 by direct sequencing and anti-IDH1-R132H immunohistochemistry in 53 paired samples and their recurrences, including 29 low-grade gliomas, 16 anaplastic gliomas and 8 Glioblastomas. IDH1/IDH2 mutation was detected in 32 primary tumors, with 25 low-grade gliomas and 6 anaplastic gliomas harboring IDH1 mutation and 1 low-grade glioma harboring IDH2 mutation. All of the paired tumors showed consistent IDH1 and IDH2 status. Patients were analyzed according to IDH1 status and tumor-related factors. Malignant progression at recurrence was noted in 22 gliomas and was not associated with IDH1 mutation. Survival analysis revealed patients with IDH1 mutated gliomas had a significantly longer progression-free survival (PFS) and overall survival (OS). In conclusion, this study demonstrated a strong tendency of IDH1/IDH2 status being consistent during progression of glioma. IDH1 mutation was not a predictive marker for malignant progression and it was a potential prognostic marker for gliomas of Chinese patients.

[690]

TÍTULO / TITLE: - Microglia and macrophages in malignant gliomas: recent discoveries and implications for promising therapies.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Clin Dev Immunol. 2013;2013:264124. doi: 10.1155/2013/264124. Epub 2013 Jun 25.

- Enlace al texto completo (gratis o de pago) [1155/2013/264124](https://doi.org/10.1155/2013/264124)

AUTORES / AUTHORS: - Carvalho da Fonseca AC; Badie B

INSTITUCIÓN / INSTITUTION: - Laboratorio de Morfogenese Celular, Instituto de Ciencias Biomedicas, Universidade Federal do Rio de Janeiro, 21941-902, Rio de Janeiro, RJ, Brazil.

RESUMEN / SUMMARY: - Malignant gliomas are the most common primary brain tumors. Their deadliest manifestation, glioblastoma multiforme (GBM), accounts for 15% of all primary brain tumors and is associated with a median survival of only 15 months even after multimodal therapy. There is substantial presence of microglia and macrophages within and surrounding brain tumors. These immune cells acquire an alternatively activated phenotype with potent tumor-tropic functions that contribute to glioma growth and invasion. In this review, we

briefly summarize recent data that has been reported on the interaction of microglia/macrophages with brain tumors and discuss potential application of these findings to the development of future anti-glioma therapies.

[691]

TÍTULO / TITLE: - Bevacizumab for the treatment of glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Clin Med Insights Oncol. 2013 Jun 6;7:123-35. doi: 10.4137/CMO.S8503. Print 2013.

●● Enlace al texto completo (gratis o de pago) [4137/CMO.S8503](#)

AUTORES / AUTHORS: - Gil-Gil MJ; Mesia C; Rey M; Bruna J

INSTITUCIÓN / INSTITUTION: - Neurooncology Unit and Medical Oncology Department, Institut Catala d'Oncologia-IDIBELL, L'Hospitalet de Llobregat, Barcelona, España.

RESUMEN / SUMMARY: - Glioblastoma (GBM) or grade IV glioma is the most common primary brain tumor in adults. Standard treatment median overall survival (OS) is only 14-15 months and less than 10% of patients will survive 5 years after diagnosis. There is no standard treatment in recurrent GBM and OS ranges from 3 to 9 months. GBM is 1 of the most vascularized human tumors and GBM cells produce vascular endothelial growth factor (VEGF).

Bevacizumab, a humanized monoclonal antibody against VEGF, has demonstrated activity in vitro and in phase II trials in relapse, as well as in 1 phase III trial as first line therapy. Bevacizumab also improves quality of life for patients suffering GBM. This paper reviews the mechanism of action of bevacizumab, its metabolism and pharmacokinetic profile. It summarizes the clinical studies in recurrent and newly diagnosed GBM, its potential side effects and complications and its place in therapy.

[692]

TÍTULO / TITLE: - Impressive shrinkage of a giant prolactinoma treated with cabergoline in a prepubescent girl. What now?

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neuro Endocrinol Lett. 2013;34(4):275-7.

AUTORES / AUTHORS: - Christoforidis A; Tsakalides C; Anastasiou A; Pavlaki A; Dimitriadou M

INSTITUCIÓN / INSTITUTION: - 1st Paediatric Department, Aristotle University, Thessaloniki, Greece. christoforidis @doctors.org.uk.

RESUMEN / SUMMARY: - Giant prolactinomas are extremely rare in the pediatric population. We describe the case of a giant prolactinoma in a girl aged 14 years and 9 months old presented with delayed puberty. Medical treatment with dopamine agonist cabergoline resulted in a rapid normalization of prolactin levels and an impressive shrinkage and liquefaction of the mass as illustrated in serial MRIs. The therapeutic dilemma regarding the type of treatment (medical versus surgical) has now been replaced by the dilemma regarding the optimal

treatment strategy and duration. Initial, rather optimistic, estimations regarding the probability of treatment discontinuation without increased relapsing risk have now been replaced by guidelines with more strict criteria for selecting candidates for treatment discontinuation.

[693]

TÍTULO / TITLE: - Treatment of anaplastic oligodendrogliomas: should resources be used to codify the old or to create the new?

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncology (Williston Park). 2013 Apr;27(4):322, 324.

AUTORES / AUTHORS: - Levin VA

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery and Neuroscience, Kaiser Permanente, Redwood City, California USA.

[694]

TÍTULO / TITLE: - Current treatment of low grade gliomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Memo. 2012 Sep;5(3):223-227. Epub 2012 Jun 5.

- Enlace al texto completo (gratis o de pago) [1007/s12254-012-0014-](#)

[3](#)

AUTORES / AUTHORS: - van den Bent MJ; Snijders TJ; Bromberg JE

INSTITUCIÓN / INSTITUTION: - Erasmus MC-Daniel den Hoed Cancer Center, Rotterdam, The Netherlands ; Daniel den Hoed Oncology Center, Neuro-Oncology Unit, PO Box 5201, 3008 AE Rotterdam, The Netherlands.

RESUMEN / SUMMARY: - Low grade gliomas affect predominantly young adults, and have a relatively favorable prognosis compared to grade III and grade IV gliomas. The challenge for an optimal management of these patients is to find the balance between an optimal survival and the preservation of neurological function including cognition. Because all medical treatments may induce side effects, in young and nearly asymptomatic patients the choices can be difficult. This review summarizes the current strategies: a watch-and-wait policy, surgery, chemotherapy, and radiotherapy.

[695]

TÍTULO / TITLE: - Treatment of morton neuroma with botulinum toxin a: a pilot study.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Clin Drug Investig. 2013 Jul;33(7):497-503. doi: 10.1007/s40261-013-0090-0.

- Enlace al texto completo (gratis o de pago) [1007/s40261-013-0090-](#)

[0](#)

AUTORES / AUTHORS: - Climent JM; Mondejar-Gomez F; Rodriguez-Ruiz C; Diaz-Llopis I; Gomez-Gallego D; Martin-Medina P

INSTITUCIÓN / INSTITUTION: - Department of Physical Medicine and Rehabilitation, Hospital General Universitario, Maestro Alonso 109, 03010, Alicante, España, jclimentba@gmail.com.

RESUMEN / SUMMARY: - BACKGROUND AND OBJECTIVE: Morton neuroma is a common cause of metatarsalgia of neuropathic origin. Systematic reviews suggest that insufficient studies have been performed on the efficacy of the different treatments available. OnabotulinumtoxinA has shown a degree of usefulness in other conditions associated with neuropathic pain. The aim of this study was to investigate the therapeutic potential of onabotulinumtoxinA in Morton neuroma. PATIENTS AND METHODS: We present an open-label, pilot study with 17 consecutive patients with Morton neuroma and pain of more than 3 months' duration that had not responded to conservative treatment with physical measures or corticosteroid injection. Patients received one onabotulinumtoxinA injection in the area of the neuroma. The main outcome measure was the variation in the pain on walking evaluated using a visual analogue scale (VAS) before treatment and at 1 and 3 months after treatment. The secondary outcome was the change in foot function, which was assessed using the Foot Health Status Questionnaire. RESULTS: In the overall group, the mean initial VAS score on walking was 7. This mean score had fallen to 4.8 at 1 month after treatment and to 3.7 at 3 months. Twelve patients (70.6 %) reported an improvement in their pain and five patients (29.4 %) reported no change; exacerbation of the pain did not occur in any patient. Improvements were also observed in two of the dimensions of the Foot Health Status Questionnaire: foot pain, which improved from a mean of 38.88 before treatment to 57 at 3 months, and foot function, which improved from a mean of 42.27 before treatment to 59.9 at 3 months. Clinical variables including age, sex, site and size of the lesion, standing activity, weekly duration of walking, footwear, foot type and footprint had no influence on the outcome. No adverse effects were reported. CONCLUSIONS: In this pilot study, injection with onabotulinumtoxinA was shown to be of possible usefulness to relieve the pain and improve function in Morton neuroma. This finding opens the door to further clinical research.

[696]

TÍTULO / TITLE: - Epigenetic pathways and glioblastoma treatment.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Epigenetics. 2013 Jun 27;8(8).

AUTORES / AUTHORS: - Clarke J; Penas C; Pastori C; Komotar RJ; Bregy A; Shah AH; Wahlestedt C; Ayad NG

INSTITUCIÓN / INSTITUTION: - Division of Biostatistics; Department of Epidemiology and Public Health; University of Miami Miller School of Medicine; Miami, FL USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common malignant adult brain tumor. Standard GBM treatment includes maximal safe surgical resection with combination radiotherapy and adjuvant temozolomide

(TMZ) chemotherapy. Alarming, patient survival at five-years is below 10%. This is in part due to the invasive behavior of the tumor and the resulting inability to resect greater than 98% of some tumors. In fact, recurrence after such treatment may be inevitable, even in cases where gross total resection is achieved. The Cancer Genome Atlas (TCGA) research network performed whole genome sequencing of GBM tumors and found that GBM recurrence is linked to epigenetic mechanisms and pathways. Central to these pathways are epigenetic enzymes, which have recently emerged as possible new drug targets for multiple cancers, including GBM. Here we review GBM treatment, and provide a systems approach to identifying epigenetic drivers of GBM tumor progression based on temporal modeling of putative GBM cells of origin. We also discuss advances in defining epigenetic mechanisms controlling GBM initiation and recurrence and the drug discovery considerations associated with targeting epigenetic enzymes for GBM treatment.

[697]

TÍTULO / TITLE: - Vasculogenic mimicry: a novel target for glioma therapy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Chin J Cancer. 2013 Jul 2. doi: 10.5732/cjc.012.10292.

●● [Enlace al texto completo \(gratis o de pago\) 5732/cjc.012.10292](#)

AUTORES / AUTHORS: - Chen YS; 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: - Anti-angiogenic therapy has shown promising but insufficient efficacy for gliomas. Recent studies suggest that vasculogenic mimicry (VM), or the formation of non-endothelial, tumor-cell-lined microvascular channels, occurs in aggressive tumors, including gliomas. There is also evidence of a physiological connection between the endothelial-lined vasculature and VM channels. Tumor cells, by virtue of their high plasticity, can form vessel-like structures themselves, which may function as blood supply networks. Our previous study in gliomas showed that microvessel density was comparably less in VM-positive tumors than in VM-negative tumors. Thus, VM may act as a complement to ensure tumor blood supply, especially in regions with less microvessel density. Patients with VM-positive gliomas survived a shorter period of time than did patients with VM-negative gliomas. Although the detailed molecular mechanisms for VM are not fully understood, glioma stem cells might play a key role, since they are involved in tumor tissue remodeling and contribute to neovascularization via transdifferentiation. In the future, successful treatment of gliomas should involve targeting both VM and angiogenesis. In this review, we summarize the progress and challenges of VM in gliomas.

[698]

TÍTULO / TITLE: - Therapeutic nanomedicine for brain cancer.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Ther Deliv. 2013 Jun;4(6):687-704. doi: 10.4155/tde.13.38.

●● Enlace al texto completo (gratis o de pago) [4155/tde.13.38](#)

AUTORES / AUTHORS: - Tzeng SY; Green JJ

INSTITUCIÓN / INSTITUTION: - Department of Biomedical Engineering, 400 N. Broadway, Smith Building 5017, Baltimore, MD 21231, USA.

RESUMEN / SUMMARY: - Malignant brain cancer treatment is limited by a number of barriers, including the blood-brain barrier, transport within the brain interstitium, difficulties in delivering therapeutics specifically to tumor cells, the highly invasive quality of gliomas and drug resistance. As a result, the prognosis for patients with high-grade gliomas is poor and has improved little in recent years. Nanomedicine approaches have been developed in the laboratory, with some technologies being translated to the clinic, in order to address these needs. This review discusses the obstacles to effective treatment that are currently faced in the field, as well as various nanomedicine techniques that have been used or are being explored to overcome them, with a focus on liposomal and polymeric nanoparticles.

[699]

TÍTULO / TITLE: - Protective effect on normal brain tissue during a combinational therapy of 2-deoxy-d-glucose and hypofractionated irradiation in malignant gliomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Asian J Neurosurg. 2013 Jan;8(1):9-14. doi: 10.4103/1793-5482.110274.

●● Enlace al texto completo (gratis o de pago) [4103/1793-5482.110274](#)

AUTORES / AUTHORS: - Venkataramana NK; Venkatesh PK; Dwarakanath BS; Vani S

INSTITUCIÓN / INSTITUTION: - Global Neuro and Spine Institute, BGS Global Hospital, Bangalore, India.

RESUMEN / SUMMARY: - PURPOSE: To investigate the effect of 2-deoxy-D-glucose (2-DG), an inhibitor of glucose transport and glycolysis, on glioblastoma and the normal brain tissue during combined treatment with hypofractionated radiotherapy. MATERIALS AND METHODS: Twenty patients with malignant gliomas (18 Glioblastoma Multiformae, 2 Anaplastic Astrocytoma grade III) following surgery were treated weekly (once) with 2-DG, (250 mg/kg body weight), followed by 5 Gy of radiation to the tumor bed per fraction for 7 weeks. Clinical evaluation, complete hemogram, and random blood sugar levels were carried out in each cycle. Follow-up computed tomography (CT)/magnetic resonance imaging (MRI) was done to evaluate radiation-induced changes.

Kernofsky Performance scale (KPS) was recorded preoperatively; postoperatively, and post-therapy till the last follow-up. RESULTS: Twenty patients were recruited for this trail; 19 of them completed the treatment and 1 discontinued. The survival period ranged between 6 and 36 months after the treatment, with a median survival of 14 months. CT and MRI revealed significant tumor necrosis. Histological evidence from the tissue during reexploration confirms the hypothesis of protective effect of 2-DG on normal brain. KPS was above 80% in majority of the patients, 6 months after the surgery. CONCLUSION: Radiotherapy coupled with 2-DG enhances tumor necrosis selectively and significantly while the normal brain gets relatively protected. This has been reflected in our study both clinically by preservation of quality-of-life and pathologically by retaining the integrity of normal brain architecture.

[700]

TÍTULO / TITLE: - Posterior fossa tumors and their impact on sleep and ventilatory control: A clinical perspective.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Respir Physiol Neurobiol. 2013 May 28. pii: S1569-9048(13)00177-8. doi: 10.1016/j.resp.2013.05.027.

●● Enlace al texto completo (gratis o de pago) 1016/j.resp.2013.05.027

AUTORES / AUTHORS: - Lee A; Chen ML; Abeshaus S; Poliakov A; Ojemann JG
INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of Washington School of Medicine, Seattle Children's Hospital, Seattle, Washington, United States. Electronic address: amy.lee@seattlechildrens.org.

RESUMEN / SUMMARY: - The cerebellum, classically viewed as a motor structure of the brain, may play a role in respiration. Brainstem dysfunction has been implicated in sleep disordered breathing (SDB), but apnea after surgery of brain tumors in the posterior fossa, not involving the brainstem has been reported. We report four cases with posterior fossa tumors without brainstem invasion who suffered SDB after surgery diagnosed by polysomnography (PSG). Advanced MRI techniques with DTI were used to find correlations with SDB. Abnormal signals in the superior, middle and inferior cerebellar peduncles were seen in these patients with the most severe changes in the inferior peduncle. SDB may be under diagnosed in the setting of posterior fossa tumors without brainstem involvement. Damage to the cerebellar peduncles, especially the inferior cerebellar peduncle, without brainstem involvement, can cause significant disruption of respiration.

[701]

TÍTULO / TITLE: - Association rule mining based study for identification of clinical parameters akin to occurrence of brain tumor.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Bioinformation. 2013 Jun 29;9(11):555-9. doi: 10.6026/97320630009555. Print 2013.

●● Enlace al texto completo (gratis o de pago) [6026/97320630009555](https://doi.org/10.6026/97320630009555)

AUTORES / AUTHORS: - Sengupta D; Sood M; Vijayvargia P; Hota S; Naik PK

INSTITUCIÓN / INSTITUTION: - Dept. of Biotechnology & Bioinformatics, Jaypee University of Information Technology, Waknaghat, Solan, H.P., India.

RESUMEN / SUMMARY: - Healthcare sector is generating a large amount of information corresponding to diagnosis, disease identification and treatment of an individual. Mining knowledge and providing scientific decision-making for the diagnosis & treatment of disease from the clinical dataset is therefore increasingly becoming necessary. Aim of this study was to assess the applicability of knowledge discovery in brain tumor data warehouse, applying data mining techniques for investigation of clinical parameters that can be associated with occurrence of brain tumor. In this study, a brain tumor warehouse was developed comprising of clinical data for 550 patients. Apriori association rule algorithm was applied to discover associative rules among the clinical parameters. The rules discovered in the study suggests - high values of Creatinine, Blood Urea Nitrogen (BUN), SGOT & SGPT to be directly associated with tumor occurrence for patients in the primary stage with at least 85% confidence and more than 50% support. A normalized regression model is proposed based on these parameters along with Haemoglobin content, Alkaline Phosphatase and Serum Bilirubin for prediction of occurrence of STATE (brain tumor) as 0 (absent) or 1 (present). The results indicate that the methodology followed will be of good value for the diagnostic procedure of brain tumor, especially when large data volumes are involved and screening based on discovered parameters would allow clinicians to detect tumors at an early stage of development.

[702]

TÍTULO / TITLE: - MicroRNA-326 Functions as a Tumor Suppressor in Glioma by Targeting the Nin One Binding Protein (NOB1).

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 15;8(7):e68469. doi: 10.1371/journal.pone.0068469. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0068469](https://doi.org/10.1371/journal.pone.0068469)

AUTORES / AUTHORS: - Zhou J; Xu T; Yan Y; Qin R; Wang H; Zhang X; Huang Y; Wang Y; Lu Y; Fu D; Chen J

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Shanghai Institute of Neurosurgery, Changzheng Hospital, Second Military Medical University, Shanghai, China ; Department of Neurosurgery, PLA Hospital 101, Wuxi, Jiangsu, China.

RESUMEN / SUMMARY: - Malignant glioma is the most common type of primary brain tumor in adults, characterized by rapid tumor growth and infiltration of

tumor cells throughout the brain. Alterations in the activity of the 26S proteasome have been associated with malignant glioma cells, although the specific defects have not been identified. Recently, microRNA-326 (miR-326) was shown to play an important role in glioblastoma and breast cancer, but the underlying molecular mechanisms remain unclear. In the present study, the human Nin one binding protein (NOB1) was identified as a direct target of miR-326 and a potential oncogene in human glioma. Similar to NOB1 silencing by shRNA, overexpression of miR-326 in human glioma cell lines (A172 and U373) caused cell cycle arrest at the G1 phase, delayed cell proliferation and enhanced apoptosis. MiR-326 inhibited colony formation in soft agar and decreased growth of a xenograft tumor model, suggesting that miR-326 and NOB1 are required for tumorigenesis in vitro and in vivo. Furthermore, these processes were shown to involve the MAPK pathway. NOB1 overexpression in human glioma samples was detected by Affymetrix array analysis, and NOB1 mRNA and protein levels were shown to be increased in high-grade glioma compared to low-grade glioma and normal brain tissue. Furthermore, high levels of NOB1 were associated with unfavorable prognosis of glioma patients. Taken together, these results indicate that miR-326 and NOB1 may play an important role in the development of glioma.

[703]

TÍTULO / TITLE: - Giant cell glioblastoma in the pediatric age group: Report of two cases.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Pediatr Neurosci. 2013 Jan;8(1):38-40. doi: 10.4103/1817-1745.111421.

●● Enlace al texto completo (gratis o de pago) [4103/1817-1745.111421](#)

AUTORES / AUTHORS: - Borkar SA; Lakshmi Prasad G; Subbarao KC; Sharma MC; Mahapatra AK

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, All India Institute of Medical Sciences, New Delhi, India.

RESUMEN / SUMMARY: - Giant cell glioblastoma multiforme is a rare subgroup of glioblastoma multiforme. It constitutes about 5% of all glioblastoma cases. Pediatric giant cell glioblastoma is extremely rare. We report two such cases of giant cell glioblastoma in pediatric age group (≤ 18 years). The pertinent literature is reviewed regarding this uncommon entity.

[704]

TÍTULO / TITLE: - Supratentorial ependymomas in children: Analysis of nine cases.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Pediatr Neurosci. 2013 Jan;8(1):15-8. doi: 10.4103/1817-1745.111415.

- Enlace al texto completo (gratis o de pago) [4103/1817-1745.111415](#)

AUTORES / AUTHORS: - Alexiou GA; Moschovi M; Stefanaki K; Panagopoulos D; Tsotra M; Siozos G; Sfakianos G; Prodromou N

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Children's Hospital "Agia Sofia", Athens, Greece.

RESUMEN / SUMMARY: - BACKGROUND: Intracranial ependymomas are the third most common primary brain tumor in children. In the present study, we set out to investigate the expression of p-53, p-27, bcl-2, epidermal growth factor receptor (EGFR) and of neuronal markers in pediatric supratentorial ependymomas, in correlation with Ki-67/MIB-1 proliferation index and prognosis. MATERIALS AND METHODS: Nine children with supratentorial ependymomas that were treated surgically in our institute over the last seven years were identified and included in the study. The extent of resection was classified as gross total and subtotal, and was determined by MRI scans. The ependymal tumors were classified according to WHO classification. RESULTS: Headache and seizures were the most common presenting symptoms and papilledema the most common sign. In seven cases, gross total excision was performed, and in two cases, the resection was subtotal. All ependymomas were anaplastic. Ki-67/MIB-1 was detected in 20-40% of the nuclei in all tumors. There was also increased expression of p-53, bcl-2, p-27, and EGFR. There was expression of neuronal markers in three cases. After a mean follow-up period of 32.1 months (range 16-74 months), eight children were alive. Five children suffered from tumor recurrence. CONCLUSIONS: Complete surgical excision should be the goal of surgery. The prognostic role of Ki-67, p-53, p-27, bcl-2, EGFR, and neuronal markers expression needs to be determined in multi-institutional studies due to tumor's rarity.

[705]

TÍTULO / TITLE: - Investigating the link between molecular subtypes of glioblastoma, epithelial-mesenchymal transition, and CD133 cell surface protein.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 May 29;8(5):e64169. doi: 10.1371/journal.pone.0064169. Print 2013.

- Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0064169](#)

AUTORES / AUTHORS: - Zarkoob H; Taube JH; Singh SK; Mani SA; Kohandel M
INSTITUCIÓN / INSTITUTION: - Department of Applied Mathematics, University of Waterloo, Waterloo, Ontario, Canada.

RESUMEN / SUMMARY: - In this manuscript, we use genetic data to provide a three-faceted analysis on the links between molecular subclasses of glioblastoma, epithelial-to-mesenchymal transition (EMT) and CD133 cell surface protein. The contribution of this paper is three-fold: First, we use a

newly identified signature for epithelial-to-mesenchymal transition in human mammary epithelial cells, and demonstrate that genes in this signature have significant overlap with genes differentially expressed in all known GBM subtypes. However, the overlap between genes up regulated in the mesenchymal subtype of GBM and in the EMT signature was more significant than other GBM subtypes. Second, we provide evidence that there is a negative correlation between the genetic signature of EMT and that of CD133 cell surface protein, a putative marker for neural stem cells. Third, we study the correlation between GBM molecular subtypes and the genetic signature of CD133 cell surface protein. We demonstrate that the mesenchymal and neural subtypes of GBM have the strongest correlations with the CD133 genetic signature. While the mesenchymal subtype of GBM displays similarity with the signatures of both EMT and CD133, it also exhibits some differences with each of these signatures that are partly due to the fact that the signatures of EMT and CD133 are inversely related to each other. Taken together these data shed light on the role of the mesenchymal transition and neural stem cells, and their mutual interaction, in molecular subtypes of glioblastoma multiforme.

[706]

TÍTULO / TITLE: - Inflammatory myofibroblastic tumors of the central nervous system that express anaplastic lymphoma kinase have a high recurrence rate.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Surg Neurol Int. 2013 May 28;4:70. doi: 10.4103/2152-7806.112614. Print 2013.

●● Enlace al texto completo (gratis o de pago) [4103/2152-](#)

[7806.112614](#)

AUTORES / AUTHORS: - Denis DJ; Elayoubi K; Weil AG; Berthelet F; Bojanowski MW

INSTITUCIÓN / INSTITUTION: - Department of Surgery, Division of Neurosurgery, Centre Hospitalier de l'Université de Montreal, Hopital Notre-Dame, Montreal, QC, Canada.

RESUMEN / SUMMARY: - BACKGROUND: Inflammatory myofibroblastic tumors (IMTs) of the central nervous system (CNS) are rare entities with diverse histopathological features and varying propensities to recur. CASE DESCRIPTION: A 26 year-old male with an IMT of the CNS of the left tentorium had tumor progression 2 months after partial surgical resection.

Histopathological studies confirmed expression of ALK. Macroscopic total resection was performed followed by radiotherapy. A recurrence occurred 20 months after the second surgery that necessitate reoperation. Including the present case, we identified 30 cases of IMT of the CNS corresponding to our search criteria in the literature. The extent of resection was reported in 26 of these cases. Gross total resection was done in 75% of ALK-positive and in 61% of ALK-negative cases. Recurrence rate after gross total resection for ALK-positive and ALK-negative cases was 33% and 9%, respectively. Every

recurrence in ALK-positive patients occurred within 2 years after surgery.
CONCLUSION: IMT of the CNS are a heterogeneous group of tumors and the treatment of choice is complete surgical resection. Because of the high recurrence rate reported for IMT of the CNS expressing ALK, a closed follow-up is recommended. When faced with an early recurrence, a surgical resection followed by radiotherapy may be advised.

[707]

TÍTULO / TITLE: - Parasellar Meningiomas in Pregnancy: Surgical Results and Visual Outcomes.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jul 9. pii: S1878-8750(13)00765-1. doi: 10.1016/j.wneu.2013.06.019.

●● Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.06.019](#)

AUTORES / AUTHORS: - Moscovici S; Fraifeld S; Cohen JE; Dotan S; Elchalal U; Shoshan Y; Spektor S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Hadassah-Hebrew University Medical Center, Jerusalem, Israel. Electronic address: samuelsmoscovici@hotmail.com.

RESUMEN / SUMMARY: - BACKGROUND: Rapid visual deterioration may occur due to rapid growth of parasellar meningiomas in the high hormone/increased fluid retention milieu of pregnancy; however, surgery before delivery entails increased maternal-fetal risk. We present our experience in the management of parasellar meningiomas compressing the optic apparatus during pregnancy, with a focus on decisions regarding the timing of surgery. METHODS: Serial visual examinations and other clinical data for 11 women presenting from 2002-2012 with visual deterioration during pregnancy or delivery due to parasellar meningiomas involving the optic apparatus were reviewed. Indications for surgery during pregnancy included severely compromised vision, rapid visual deterioration, and early-to-midstage pregnancy with the potential for significant tumor growth and visual decline before delivery. All patients were operated using skull base techniques via pterional craniotomy. An advanced extradural-intradural (Dolenc) approach, with modifications, was used in seven. RESULTS: All women achieved Glasgow Outcome Score 5 at discharge with no new neurological deficits; all children are developing normally at a mean 4.5 years of age (range 1-9.5). Surgery during pregnancy was recommended for six women: four operated at gestational weeks (GW) 20-23 had excellent postoperative visual recovery; two who delayed surgery until after delivery have permanent unilateral blindness. Among five others operated after delivery, four had good visual recovery, one has pronounced but correctable deficits; 3/5 women diagnosed GW 32-35 experienced spontaneous visual improvement after delivery, before surgery. CONCLUSIONS: We recommend that surgery be

offered to patients during pregnancy when delay may result in severe permanent visual impairment.

[708]

TÍTULO / TITLE: - Reverse engineering of modified genes by bayesian network analysis defines molecular determinants critical to the development of glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 May 30;8(5):e64140. doi: 10.1371/journal.pone.0064140. Print 2013.

●● [Enlace al texto completo \(gratis o de pago\)](#)

1371/journal.pone.0064140

AUTORES / AUTHORS: - Kunkle BW; Yoo C; Roy D

INSTITUCIÓN / INSTITUTION: - Department of Environmental and Occupational Health, Florida International University, Miami, Florida, USA.

RESUMEN / SUMMARY: - In this study we have identified key genes that are critical in development of astrocytic tumors. Meta-analysis of microarray studies which compared normal tissue to astrocytoma revealed a set of 646 differentially expressed genes in the majority of astrocytoma. Reverse engineering of these 646 genes using Bayesian network analysis produced a gene network for each grade of astrocytoma (Grade I-IV), and 'key genes' within each grade were identified. Genes found to be most influential to development of the highest grade of astrocytoma, Glioblastoma multiforme were: COL4A1, EGFR, BTF3, MPP2, RAB31, CDK4, CD99, ANXA2, TOP2A, and SERBP1. All of these genes were up-regulated, except MPP2 (down regulated). These 10 genes were able to predict tumor status with 96-100% confidence when using logistic regression, cross validation, and the support vector machine analysis. Markov genes interact with NFkbeta, ERK, MAPK, VEGF, growth hormone and collagen to produce a network whose top biological functions are cancer, neurological disease, and cellular movement. Three of the 10 genes - EGFR, COL4A1, and CDK4, in particular, seemed to be potential 'hubs of activity'. Modified expression of these 10 Markov Blanket genes increases lifetime risk of developing glioblastoma compared to the normal population. The glioblastoma risk estimates were dramatically increased with joint effects of 4 or more than 4 Markov Blanket genes. Joint interaction effects of 4, 5, 6, 7, 8, 9 or 10 Markov Blanket genes produced 9, 13, 20.9, 26.7, 52.8, 53.2, 78.1 or 85.9%, respectively, increase in lifetime risk of developing glioblastoma compared to normal population. In summary, it appears that modified expression of several 'key genes' may be required for the development of glioblastoma. Further studies are needed to validate these 'key genes' as useful tools for early detection and novel therapeutic options for these tumors.

[709]

TÍTULO / TITLE: - High Cytoplasmic FOXO1 and pFOXO1 Expression in Astrocytomas Are Associated with Worse Surgical Outcome.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 9;8(7):e69260. doi: 10.1371/journal.pone.0069260. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0069260](#)

AUTORES / AUTHORS: - Chen C; Xu T; Zhou J; Yan Y; Li W; Yu H; Hu G; Ding X; Chen J; Lu Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Shanghai Institute of Neurosurgery, Changzheng Hospital, Second Military Medical University, Shanghai, China.

RESUMEN / SUMMARY: - FOXO1 is at a convergence point of receptor tyrosine kinase (RTK) signaling, which is one of the three core pathways implicated in glioblastoma. It was recently shown that FOXO1 can effectively induce glioma cell death and inhibit tumor growth through cell cycle arrest and apoptosis. We therefore evaluated FOXO1 and pFOXO1 protein expression in 181 primary astrocytoma samples and 16 normal brain samples. Astrocytoma samples expressed higher cytoplasmic FOXO1 and pFOXO1 than normal brain samples. Nuclear pFOXO1 level was significantly higher than nuclear FOXO1 in astrocytomas. High cytoplasmic FOXO1 expression was associated with older onset age ($P = 0.001$) and higher WHO grade ($P = 0.001$). The trend was also observed between cytoplasmic pFOXO1 expression and WHO grade although not significant. Univariate survival analysis showed that both high cytoplasmic FOXO1 and pFOXO1 expression indicated a significantly shorter median overall survival and progression-free survival. Multivariate survival analysis revealed cytoplasmic FOXO1 expression, cytoplasmic pFOXO1 expression, WHO grade, gender, extent of resection and radiotherapy to be independent prognostic factors for overall survival and progression-free survival. Thus, our data suggested that cytoplasmic FOXO1 and pFOXO1 expression may serve as valuable prognostic variables in astrocytomas and may have significant implications for the development and application of targeted therapy.

[710]

TÍTULO / TITLE: - Advanced MR Imaging of Gliomas: An Update.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Biomed Res Int. 2013;2013:970586. doi: 10.1155/2013/970586. Epub 2013 Jun 4.

●● Enlace al texto completo (gratis o de pago) [1155/2013/970586](#)

AUTORES / AUTHORS: - Kao HW; Chiang SW; Chung HW; Tsai FY; Chen CY

INSTITUCIÓN / INSTITUTION: - Department of Biomedical Imaging and Radiological Sciences, National Yang-Ming University, No. 155, Sec. 2, Linong Street, Taipei 112, Taiwan ; Department of Radiology, Tri-Service General

Hospital, National Defense Medical Center, No. 325, Sec. 2, Cheng-Kong Road, Neihu, Taipei 114, Taiwan.

RESUMEN / SUMMARY: - Recent advances in the treatment of cerebral gliomas have increased the demands on noninvasive neuroimaging for the diagnosis, therapeutic planning, tumor monitoring, and patient outcome prediction. In the meantime, improved magnetic resonance (MR) imaging techniques have shown much potentials in evaluating the key pathological features of the gliomas, including cellularity, invasiveness, mitotic activity, angiogenesis, and necrosis, hence, further shedding light on glioma grading before treatment. In this paper, an update of advanced MR imaging techniques is reviewed, and their potential roles as biomarkers of tumor grading are discussed.

[711]

TÍTULO / TITLE: - Numerical simulations of MREIT conductivity imaging for brain tumor detection.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Comput Math Methods Med. 2013;2013:704829. doi: 10.1155/2013/704829. Epub 2013 Apr 29.

●● Enlace al texto completo (gratis o de pago) [1155/2013/704829](#)

AUTORES / AUTHORS: - Meng ZJ; Sajib SZ; Chauhan M; Sadleir RJ; Kim HJ; Kwon OI; Woo EJ

INSTITUCIÓN / INSTITUTION: - Department of Biomedical Engineering, Impedance Imaging Research Center (IIRC), Kyung Hee University, Yongin, Republic of Korea.

RESUMEN / SUMMARY: - Magnetic resonance electrical impedance tomography (MREIT) is a new modality capable of imaging the electrical properties of human body using MRI phase information in conjunction with external current injection. Recent in vivo animal and human MREIT studies have revealed unique conductivity contrasts related to different physiological and pathological conditions of tissues or organs. When performing in vivo brain imaging, small imaging currents must be injected so as not to stimulate peripheral nerves in the skin, while delivery of imaging currents to the brain is relatively small due to the skull's low conductivity. As a result, injected imaging currents may induce small phase signals and the overall low phase SNR in brain tissues. In this study, we present numerical simulation results of the use of head MREIT for brain tumor detection. We used a realistic three-dimensional head model to compute signal levels produced as a consequence of a predicted doubling of conductivity occurring within simulated tumorous brain tissues. We determined the feasibility of measuring these changes in a time acceptable to human subjects by adding realistic noise levels measured from a candidate 3 T system. We also reconstructed conductivity contrast images, showing that such conductivity differences can be both detected and imaged.

[712]

TÍTULO / TITLE: - Voltage-gated potassium channel antibody paraneoplastic limbic encephalitis associated with acute myeloid leukemia.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Oncol. 2013 May 29;6(2):289-92. doi: 10.1159/000351835. Print 2013 May.

●● Enlace al texto completo (gratis o de pago) [1159/000351835](#)

AUTORES / AUTHORS: - Alcantara M; Bennani O; Verdure P; Lepretre S; Tilly H; Jardin F

INSTITUCIÓN / INSTITUTION: - Department of Hematology, Centre Henri Becquerel, Rouen, France.

RESUMEN / SUMMARY: - Among paraneoplastic syndromes (PNS) associated with malignant hemopathies, there are few reports of PNS of the central nervous system and most of them are associated with lymphomas. Limbic encephalitis is a rare neurological syndrome classically diagnosed in the context of PNS. We report the case of a 81-year-old man who presented with a relapsed acute myeloid leukemia (AML) with minimal maturation. He was admitted for confusion with unfavorable evolution as he presented a rapidly progressive dementia resulting in death. A brain magnetic resonance imaging, performed 2 months after the onset, was considered normal. An electroencephalogram showed non-specific bilateral slow waves. We received the results of the blood screening of neuronal autoantibodies after the patient's death and detected the presence of anti-voltage-gated potassium channel (VGKC) antibodies at 102 pmol/l (normal at <30 pmol/l). Other etiologic studies, including the screening for another cause of rapidly progressive dementia, were negative. To our knowledge, this is the first case of anti-VGKC paraneoplastic limbic encephalitis related to AML.

[713]

TÍTULO / TITLE: - MRI patterns of T1 enhancing radiation necrosis versus tumour recurrence in high-grade gliomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Med Imaging Radiat Oncol. 2013 Jun;57(3):349-55. doi: 10.1111/j.1754-9485.2012.02472.x.

●● Enlace al texto completo (gratis o de pago) [1111/j.1754-9485.2012.02472.x](#)

AUTORES / AUTHORS: - Reddy K; Westerly D; Chen C

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, University of Colorado School of Medicine, Aurora, Colorado 80045, USA.

Krishna.Reddy@ucdenver.edu

RESUMEN / SUMMARY: - INTRODUCTION: Despite the emergence of new imaging technologies, the differentiation of treatment-related changes from recurrent tumour in patients with high-grade gliomas remains a difficult challenge. We evaluated whether specific MRI (magnetic resonance imaging) T1 post-contrast enhancement patterns can help to distinguish between

radiation necrosis and tumour recurrence. METHODS: This study was approved by local institutional review board. Fifty-one patients with World Health Organization grade III-IV glioma underwent reoperation after prior chemoradiation. The percentage of radiation necrosis versus recurrent tumour in reoperation specimens was estimated by an experienced neuropathologist. Enhancement patterns on T1 post-contrast sequences from the MRIs obtained prior to reoperation were evaluated according to pathology. RESULTS: T1 contrast enhancement patterns correlating with recurrent tumour included focal solid nodules and solid uniform enhancement with distinct margins. Eighty-five per cent (17/20) of patients with $\geq 70\%$ recurrent tumour at reoperation demonstrated one of these patterns on preoperative MRI. Enhancement patterns correlating with radiation necrosis included a hazy mesh-like diffuse enhancement and rim enhancement with feathery indistinct margins. Ninety-four per cent (17/18) of patients with $\geq 70\%$ radiation necrosis demonstrated one of these two patterns. Thirteen cases had more mixed pathology ($>30\%$ of tumour/necrosis) and demonstrated patterns associated with recurrence and/or necrosis. Compared to MR spectroscopy performed in 10 patients, enhancement patterns on MRI were just as accurate in predicting pathologic diagnosis. CONCLUSION: Identifying distinct patterns of contrast enhancement on MRI may help to differentiate between radiation necrosis and tumour recurrence in high-grade gliomas.

[714]

TÍTULO / TITLE: - Neuro-oncology: Telomerase-related mechanisms are implicated in gliomas with late age of onset.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Nat Rev Neurol. 2013 Jul;9(7):359. doi: 10.1038/nrneurol.2013.123. Epub 2013 Jun 18.

●● Enlace al texto completo (gratis o de pago) [1038/nrneurol.2013.123](#)

[715]

TÍTULO / TITLE: - Myxopapillary ependymoma as a cause of back pain in a young male - A case report.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Can Chiropr Assoc. 2013 Jun;57(2):150-5.

AUTORES / AUTHORS: - Ngo TP; Dufton J; Stern PJ; Islam O

INSTITUCIÓN / INSTITUTION: - Canadian Memorial Chiropractic College, Toronto, Ontario, Canada.

RESUMEN / SUMMARY: - OBJECTIVE: Primary spinal cord tumours are rare causes of low back pain but can be a significant cause of morbidity if undiagnosed and untreated. The following is a case of a young male patient presenting with low back pain and radicular symptoms caused by myxopapillary ependymoma. CLINICAL FEATURES: A nineteen year old male presented to an orthopaedic surgeon with a long history of back pain. He was initially

diagnosed with soft tissue injuries and discharged. He began to experience erectile and bowel dysfunction two years later and was re-referred to the orthopaedic surgeon by his family physician but was lost to follow-up. The patient did not present to the surgeon until two years after his symptom profile changed. At that point, MRI examinations revealed a large myxopapillary ependymoma extending from T12 to L4 that was confirmed by a pathologist. INTERVENTION AND OUTCOME: The tumour was surgically resected with subsequent adjuvant radiotherapy. After one year, the patient required continued catheterization and had poor anal tone. His back and leg complaints were almost normal. Follow-up MRI examinations revealed no disease progression or new spinal lesions at 4 years after the initial diagnosis. CONCLUSION: The clinical presentation of primary spinal cord tumours is non-specific and can easily be missed. In cases of chronic back pain, signs and symptoms should be regularly monitored for changes indicative of progressive neurological compromise such as sensory, motor and bowel/bladder dysfunction. If there is deterioration of clinical signs and symptoms, a spinal tumour should be considered in the list of differential diagnoses. Delayed diagnosis and treatment of these rare causes of back pain could lead to poor outcomes; therefore, a referral to a surgeon should be done immediately with proper follow up to ensure continuity of care.

[716]

TÍTULO / TITLE: - Prognostic value of peritumoral edema and angiogenesis in intracranial meningioma surgery.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J BUON. 2013 Apr-Jun;18(2):430-6.

AUTORES / AUTHORS: - Markovic M; Antunovic V; Milenkovic S; Zivkovic N

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Clinical Hospital Center Zemun, Belgrade, Serbia.

RESUMEN / SUMMARY: - Purpose: In a series of 78 consecutive patients we analyzed the influence of peritumoral edema (PTE) and angiogenesis (vascular endothelial growth factor/ VEGF expression) on the prognosis of morbidity and postoperative complications after intracranial meningioma surgery. Methods: A retrospective analysis was performed of clinical, neuroradiological and histological data of 78 microsurgically treated patients with intracranial supratentorial meningioma, with follow-up period of at least one year. Results: The severity of PTE showed significant correlation with VEGF expression, and all patients with large PTE (>40 mm) had strong VEGF expression (>50%). Treatment outcome was significantly better in patients with low VEGF expression ($p < 0.05$). All of the monitored postoperative complications were more frequent in the group with PTE. The duration of intensive care treatment in the group with PTE (mean 6.85 days) was significantly longer than in the group without PTE (mean 3.68 days) ($p = 0.003$). In the group without PTE, the outcome was significantly better than in patients with PTE ($p < 0.01$). Conclusion:

PTE in intracranial meningiomas has significant influence on the prognosis in surgically treated patients in terms of increased risk of morbidity and postoperative complications. VEGF expression is strongly correlated with PTE formation, which also affects the outcome in the management of patients with intracranial meningioma.

[717]

TÍTULO / TITLE: - Brain tumor detection and segmentation in a CRF (conditional random fields) framework with pixel-pairwise affinity and superpixel-level features.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Int J Comput Assist Radiol Surg. 2013 Jul 17.

- [Enlace al texto completo \(gratis o de pago\) 1007/s11548-013-0922-](#)

[7](#)

AUTORES / AUTHORS: - Wu W; Chen AY; Zhao L; Corso JJ

INSTITUCIÓN / INSTITUTION: - Department of Computer Science and Engineering, SUNY at Buffalo, Buffalo, NY, USA, hustwuwei@gmail.com.

RESUMEN / SUMMARY: - PURPOSE: Detection and segmentation of a brain tumor such as glioblastoma multiforme (GBM) in magnetic resonance (MR) images are often challenging due to its intrinsically heterogeneous signal characteristics. A robust segmentation method for brain tumor MRI scans was developed and tested. METHODS: Simple thresholds and statistical methods are unable to adequately segment the various elements of the GBM, such as local contrast enhancement, necrosis, and edema. Most voxel-based methods cannot achieve satisfactory results in larger data sets, and the methods based on generative or discriminative models have intrinsic limitations during application, such as small sample set learning and transfer. A new method was developed to overcome these challenges. Multimodal MR images are segmented into superpixels using algorithms to alleviate the sampling issue and to improve the sample representativeness. Next, features were extracted from the superpixels using multi-level Gabor wavelet filters. Based on the features, a support vector machine (SVM) model and an affinity metric model for tumors were trained to overcome the limitations of previous generative models. Based on the output of the SVM and spatial affinity models, conditional random fields theory was applied to segment the tumor in a maximum a posteriori fashion given the smoothness prior defined by our affinity model. Finally, labeling noise was removed using “structural knowledge” such as the symmetrical and continuous characteristics of the tumor in spatial domain. RESULTS: The system was evaluated with 20 GBM cases and the BraTS challenge data set. Dice coefficients were computed, and the results were highly consistent with those reported by Zikic et al. (MICCAI 2012, Lecture notes in computer science. vol 7512, pp 369-376, 2012). CONCLUSION: A brain tumor segmentation method using model-aware affinity demonstrates comparable performance with other state-of-the art algorithms.

[718]

TÍTULO / TITLE: - Heterogeneous Nuclear Ribonucleoproteins and Their Interactors Are a Major Class of Deregulated Proteins in Anaplastic Astrocytoma: A Grade III Malignant Glioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Proteome Res. 2013 Jul 5;12(7):3128-38. doi: 10.1021/pr400339h. Epub 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago) [1021/pr400339h](#)

AUTORES / AUTHORS: - Polisetty RV; Gautam P; Gupta MK; Sharma R; Uppin MS; Challa S; Ankathi P; Purohit AK; Renu D; Harsha HC; Pandey A; Sirdeshmukh R

INSTITUCIÓN / INSTITUTION: - Centre for Cellular and Molecular Biology (CSIR), Hyderabad, India.

RESUMEN / SUMMARY: - Anaplastic astrocytoma is a high grade malignant glioma (WHO grade III) of the central nervous system which arises from a low grade II tumor and invariably progresses into lethal glioblastoma (WHO grade IV). We have studied differentially expressed proteins from the microsomal fraction of the clinical specimens of these tumors, using iTRAQ and high-resolution mass spectrometry followed by immunohistochemistry for representative proteins on tissue sections. A total of 2642 proteins were identified, 266 of them with minimum 2 peptide signatures and 2-fold change in expression. The major groups of proteins revealed to be differentially expressed were associated with key cellular processes such as post transcriptional processing, protein translation, and acute phase response signaling. A distinct inclusion among these important proteins is 10 heterogeneous nuclear ribonucleoproteins (hnRNPs) and their interacting partners which have regulatory functions in the cell. hnRNP-mediated post transcriptional events are known to play a major role in mRNA processing, stability, and distribution. Their altered levels have also been observed by us in lower (diffused astrocytoma) and higher (glioblastoma) grades of gliomas, and membrane localization of hnRNPs has also been documented in the literature. hnRNPs may thus be major factors underlying global gene expression changes observed in glial tumors while their differential presence in the microsomal fraction suggests yet additional and unknown roles in tumorigenesis.

[719]

TÍTULO / TITLE: - A spliceosome protein is essential for glioma stem cell viability.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cancer Discov. 2013 Jul;3(7):OF22. doi: 10.1158/2159-8290.CD-RW2013-105. Epub 2013 May 16.

●● Enlace al texto completo (gratis o de pago) [1158/2159-8290.CD-RW2013-105](#)

RESUMEN / SUMMARY: - PHF5A-mediated exon recognition is selectively required for GSC viability and tumor formation.

[720]

TÍTULO / TITLE: - Molecular Characteristics in MRI-Classified Group 1 Glioblastoma Multiforme.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Front Oncol. 2013 Jul 11;3:182. doi: 10.3389/fonc.2013.00182. Print 2013.

●● Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00182](#)

AUTORES / AUTHORS: - Haskins WE; Zablotsky BL; Foret MR; Ihrie RA; Alvarez-Buylla A; Eisenman RN; Berger MS; Lin CH

INSTITUCIÓN / INSTITUTION: - Department of Chemistry, University of Texas at San Antonio, San Antonio, TX, USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is a clinically and pathologically heterogeneous brain tumor. Previous studies of transcriptional profiling have revealed biologically relevant GBM subtypes associated with specific mutations and dysregulated pathways. Here, we applied a modified proteome to uncover abnormal protein expression profile in a MRI-classified group I GBM (GBM1), which has a spatial relationship with one of the adult neural stem cell niches, subventricular zone (SVZ). Most importantly, we identified molecular characteristics in this type of GBM that include up-regulation of metabolic enzymes, ribosomal proteins, and heat shock proteins. As GBM1 often recurs at great distances from the initial lesion, the rewiring of metabolism, and ribosomal biogenesis may facilitate cancer cells' growth and survival during tumor progression. The intimate contact between GBM1 and the SVZ raises the possibility that tumor cells in GBM1 may be most related to SVZ cells. In support of this notion, we found that markers representing SVZ cells are highly expressed in GBM1. Emerged findings from our study provide a specific protein expression profile in GBM1 and offer better prediction or therapeutic implication for this multifocal GBM.

[721]

TÍTULO / TITLE: - Gene set based integrated data analysis reveals phenotypic differences in a brain cancer model.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 9;8(7):e68288. doi: 10.1371/journal.pone.0068288. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0068288](#)

AUTORES / AUTHORS: - Petersen K; Rajcevic U; Abdul Rahim SA; Jonassen I; Kalland KH; Jimenez CR; Bjerkvig R; Niclou SP

INSTITUCIÓN / INSTITUTION: - Computational Biology Unit, Uni Computing, Uni Research AS, Bergen, Norway.

RESUMEN / SUMMARY: - A key challenge in the data analysis of biological high-throughput experiments is to handle the often low number of samples in the experiments compared to the number of biomolecules that are simultaneously measured. Combining experimental data using independent technologies to illuminate the same biological trends, as well as complementing each other in a larger perspective, is one natural way to overcome this challenge. In this work we investigated if integrating proteomics and transcriptomics data from a brain cancer animal model using gene set based analysis methodology, could enhance the biological interpretation of the data relative to more traditional analysis of the two datasets individually. The brain cancer model used is based on serial passaging of transplanted human brain tumor material (glioblastoma - GBM) through several generations in rats. These serial transplantations lead over time to genotypic and phenotypic changes in the tumors and represent a medically relevant model with a rare access to samples and where consequent analyses of individual datasets have revealed relatively few significant findings on their own. We found that the integrated analysis both performed better in terms of significance measure of its findings compared to individual analyses, as well as providing independent verification of the individual results. Thus a better context for overall biological interpretation of the data can be achieved.

[722]

TÍTULO / TITLE: - Genetic and epigenetic alterations in primary-progressive paired oligodendroglial tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 24;8(6):e67139. doi: 10.1371/journal.pone.0067139. Print 2013.

●● Enlace al texto completo (gratis o de pago)

1371/journal.pone.0067139

AUTORES / AUTHORS: - Kuo LT; Tsai SY; Chang CC; Kuo KT; Huang AP; Tsai JC; Tseng HM; Kuo MF; Tu YK

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery, Department of Surgery, National Taiwan University Hospital, Yun-Lin branch, Yun-Lin County, Taiwan.

RESUMEN / SUMMARY: - The aim of the present study was to identify genetic and epigenetic alterations involved in the progression of oligodendroglial tumors. We characterized 21 paired, World Health Organization (WHO) grade II and III oligodendroglial tumors from patients who received craniotomies for the partial or complete resection of primary and secondary oligodendroglial tumors. Tumor DNA was analyzed for alterations in selected genetic loci (1p36, 9p22, 10q23-24, 17p13, 19q13, 22q12), isocitrate dehydrogenase 1 (IDH1), isocitrate dehydrogenase 2 (IDH2) and the CpG island methylation status of critical tumor-related genes (MGMT, P16, DAPK, PTEN, RASSF1A, Rb1). Alterations of these markers were common early in the tumorigenesis. In the primary tumors we identified 12 patients (57.1%) with 1p36 deletions, 17 (81.0%) with 19q13 deletions, 9 (42.9%) with 1p36/19q13 codeletions, 11 (52.3%) with 9p22

deletions, and 12 (57.1%) with IDH1 mutation. Epigenetic analysis detected promoter methylation of the MGMT, P16, DAPK, PTEN, RASSF1A, and Rb1 genes in 38.1%, 19.0%, 38.1%, 33.3%, 66.7%, and 14.3% of primary tumors, respectively. After progression, additional losses of 1p, 9p, 10q, 17p, 19q and 22q were observed in 3 (14.3%), 1 (4.8%), 3 (14.3%), 2 (9.5%), 1 (4.8%) and 3 (14.3%) cases, respectively. Additional methylations of the MGMT, P16, DAPK, PTEN, RASSF1A, and RB1 promoters was observed in 4 (19.0%), 2 (9.5%), 0 (0%), 6 (28.6%), 2(9.5%) and 3 (14.3%) cases, respectively. The status of IDH1 mutation remained unchanged in all tumors after progression. The primary tumors of three patients with subsequent progression to high-grade astrocytomas, all had 9p deletion, intact 1p, intact 10q and unmethylated MGMT. Whether this may represent a molecular signature of patients at-risk for the development of aggressive astrocytomas needs further investigation.

[723]

TÍTULO / TITLE: - CPEB1, a histone-modified hypomethylated gene, is regulated by miR-101 and involved in cell senescence in glioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cell Death Dis. 2013 Jun 20;4:e675. doi: 10.1038/cddis.2013.197.

●● Enlace al texto completo (gratis o de pago) [1038/cddis.2013.197](#)

AUTORES / AUTHORS: - Xiaoping L; Zhibin Y; Wenjuan L; Zeyou W; Gang X; Zhaohui L; Ying Z; Minghua W; Guiyuan L

INSTITUCIÓN / INSTITUTION: - 1] Cancer Research Institute, Central South University, Changsha, China [2] Key Laboratory of Carcinogenesis and Cancer Invasion, Ministry of Education Changsha, China [3] Key Laboratory of Carcinogenesis, Ministry of Health, Changsha, China [4] The Center for Skull Base Surgery and Neurooncology, Changsha, China [5] Center for Infection and Immunity, Guangzhou Institutes of Biomedicine and Health, Chinese Academy of Sciences, Guangzhou, China.

RESUMEN / SUMMARY: - Epigenetic mechanisms have important roles in carcinogenesis. We certified that the mRNA translation-related gene cytoplasmic polyadenylation element-binding protein 1 (CPEB1) is hypomethylated and overexpressed in glioma cells and tissues. The knockdown of CPEB1 reduced cell senescence by regulating the expression or distribution of p53 in glioma cells. CPEB1 is also regulated directly by the tumor suppressor miR-101, a potential marker of glioma. It is known that the histone methyltransferase enhancer of zeste homolog 2 (EZH2) and embryonic ectoderm development (EED) are direct targets of miR-101. We demonstrated that miR-101 downregulated the expression of CPEB1 through reversing the methylation status of the CPEB1 promoter by regulating the presence on the promoter of the methylation-related histones H3K4me2, H3K27me3, H3K9me3 and H4K20me3. The epigenetic regulation of H3K27me3 on CPEB1 promoter is mediated by EZH2 and EED. EZH2 has a role in the regulation of H3K4me2.

Furthermore, the downregulation of CPEB1 induced senescence in a p53-dependent manner.

[724]

TÍTULO / TITLE: - Identification of novel hypoxia response genes in human glioma cell line a172.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Iran J Basic Med Sci. 2013 May;16(5):675-82.

AUTORES / AUTHORS: - Baghbani F; Raofian R; Hasanzadeh Nazarabadi M; Hamzehloei T; Soukhtanloo M; Heidari M; Afsharzadeh SM; Shekouhi S; Moradi F; Sarli AA; Zavar-Reza J; Mojarrad M

INSTITUCIÓN / INSTITUTION: - Department of Medical Genetics, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

RESUMEN / SUMMARY: - Objective(s): Hypoxia is a serious challenge for treatment of solid tumors. This condition has been manifested to exert significant therapeutic effects on glioblastoma multiform or (WHO) astrocytoma grade IV. Hypoxia contributes numerous changes in cellular mechanisms such as angiogenesis, metastasis and apoptosis evasion. Furthermore, in molecular level, hypoxia can cause induction of DNA breaks in tumor cells. Identification of mechanisms responsible for these effects can lead to designing more efficient therapeutic strategies against tumor progression which results in improvement of patient prognosis. Materials and Methods : In order to identify more hypoxia regulated genes which may have a role in glioblastoma progression, cDNA-AFLP was optimized as a Differential display method which is able to identify and isolate transcripts with no prior sequence knowledge. Results: Using this method, the current study identified 120 Transcription Derived Fragments (TDFs) which were completely differentially regulated in response to hypoxia. By sequence homology searching, the current study could detect 22 completely differentially regulated known genes and two unknown sequence matching with two chromosome contig and four sequence matches with some Expressed Sequence Tags (ESTs). Conclusion: Further characterizing of these genes may help to achieve better understanding of hypoxia mediated phenotype change in tumor cells.

[725]

TÍTULO / TITLE: - Usefulness of 320-row area detector computed tomography for the diagnosis of cystic falx meningioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Oncol. 2013 Jul 6;6(2):362-6. doi: 10.1159/000353929. Print 2013 May.

●● Enlace al texto completo (gratis o de pago) [1159/000353929](#)

AUTORES / AUTHORS: - Tabuchi S; Nakajima S

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Tottori Prefectural Central Hospital, Tottori, Japan.

RESUMEN / SUMMARY: - We present a case of cystic falx meningioma. Cystic meningioma is rare and not easy to diagnose preoperatively; it is often misdiagnosed as other tumors, including glial or metastatic tumors with cystic or necrotic changes. This study showed the potential impact of 320-row computed tomography (CT) on image-based diagnostic evaluation of cystic meningioma with special attention to the novel techniques of 4-dimensional CT angiography (4D-CTA) and CT whole-brain perfusion (CTP). 4D-CTA showed the arterial supply feeding the tumor and late enhancement of the tumor nodule, similar to that seen in meningioma by conventional angiography. CTP showed that the tumor had a higher cerebral blood flow and cerebral blood volume and a longer mean transit time than adjacent brain tissue. These findings were consistent with meningioma and reinforced the other imaging findings, resulting in the correct preoperative diagnosis. The new techniques available for 320-row CT can potentially be used to improve differential diagnosis and preoperative assessment of cystic tumors with nodules.

[726]

TÍTULO / TITLE: - Availability of a microglia and macrophage marker, iba-1, for differential diagnosis of spontaneous malignant reticulosos from astrocytomas in rats.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Toxicol Pathol. 2013 Mar;26(1):55-60. doi: 10.1293/tox.26.55. Epub 2013 Apr 22.

●● Enlace al texto completo (gratis o de pago) [1293/tox.26.55](#)

AUTORES / AUTHORS: - Nakamura R; Nishimura T; Ochiai T; Nakada S; Nagatani M; Ogasawara H

INSTITUCIÓN / INSTITUTION: - Faculty of Safety & ADME, Asubio Pharma Co., Ltd., 6-4-3 Minatojima-minamimachi, Chuo-ku, Kobe 650-0047, Japan.

RESUMEN / SUMMARY: - In rats, it is sometimes difficult to distinguish malignant reticulosos from astrocytomas in routine histopathological assessment. In the present study, four spontaneous brain neoplasms developing in the cerebrum of one Wistar Hannover rat and three Sprague-Dawley rats were immunohistochemically examined using microglia and macrophage markers. Histopathologically, these neoplasms were localized mainly in the cerebral cortex, hypothalamus or piriform lobe, and the portions showing solid growth did not show characteristic cellular arrangement but had an indistinct boundary with the surrounding brain parenchyma. Neoplastic cells had oval or pleomorphic small nuclei with abundant eosinophilic cytoplasm. Two cases showed neoplastic cell infiltration into the meninges and perivascular spaces. Silver staining showed lack of reticulin fiber production in the stroma of the neoplasms. Immunohistochemically, the neoplastic cells were strongly positive for Iba-1 and sporadically positive for CD68 in all four cases. On the basis of these results, all the neoplasms examined here could be distinguished from astrocytomas and diagnosed as malignant reticulosos. Thus,

immunohistochemical demonstration of microglia/macrophage characters, such as using Iba-1, is considered to be helpful for differential diagnosis of malignant reticuloses from astrocytomas among spontaneously occurring primary brain neoplasms in rats.

[727]

- CASTELLANO -

TÍTULO / TITLE: Resonancia magnetica de perfusion en astrocitomas de alto grado: el volumen sanguineo cerebral, la altura del pico y el porcentaje de recuperacion de intensidad de senal¿pueden discriminar entre progresion y pseudoprogresion?

TÍTULO / TITLE: - Perfusion magnetic resonance imaging for high grade astrocytomas: Can cerebral blood volume, peak height, and percentage of signal intensity recovery distinguish between progression and pseudoprogresion?

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Radiologia. 2013 Jun 20. pii: S0033-8338(13)00094-5. doi: 10.1016/j.rx.2013.02.006.

●● Enlace al texto completo (gratis o de pago) [1016/j.rx.2013.02.006](#)

AUTORES / AUTHORS: - Martinez-Martinez A; Martinez-Bosch J

INSTITUCIÓN / INSTITUTION: - Seccion de Neurorradiologia, Unidad de Gestion Clinica de Radiodiagnostico, Hospital Universitario Virgen de las Nieves, Granada, España. Electronic address: almarez83@gmail.com.

RESUMEN / SUMMARY: - OBJECTIVES: To study the usefulness of common MRI perfusion parameters for identifying pseudoprogresion in high grade astrocytomas. MATERIAL AND METHODS: This retrospective case-control study compared the relative cerebral blood volume (rCBV), the relative percentage of signal intensity recovery (rPSR), and the relative peak height (rPH) recorded in a sample of 17 cases of anaplastic astrocytomas and gliomas considered to be undergoing pseudoprogresion by biopsy or follow-up with those recorded in a sample of histologically similar tumors that were treated and considered to be undergoing progresion by histologic study or follow-up. We evaluated the accuracy of these parameters and the correlations among them. Statistical significance was set at $P < .05$. RESULTS: The rCBV, rPSR, and rPH were significantly different between the two groups ($P = .001$). The cutoff values $rPH = 1.37$, $rCBV = 0.9$, and $rPSR = 99\%$ yielded sensitivity (S) = 88% and specificity (Sp) = 82.2% for rPH, $S = 100\%$ and $Sp = 100\%$ for rCBV, and $S = 100\%$ and $Sp = 70.6\%$ for rPSR, respectively. We found negative correlations between rPRS and rPH (-0.76) and between rPRS and rCBV (-0.81) and a high positive correlation between rPH and rCBV (0.87). CONCLUSION: The variables rPH and rCBV were useful for differentiating between pseudoprogresion and true progresion in our sample. The variable rPRS was also very sensitive, although the overlap in the values between samples make it less useful a priori.

[728]

TÍTULO / TITLE: - United Kingdom 30-day mortality rates after surgery for pediatric central nervous system tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Jun 28.

- Enlace al texto completo (gratis o de pago)

[3171/2013.5.PEDS12514](#)

AUTORES / AUTHORS: - O'Kane R; Mathew R; Kenny T; Stiller C; Chumas P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Royal Hospital for Sick Children, Glasgow, Scotland;

RESUMEN / SUMMARY: - Object In an increasing culture of medical accountability, 30-day operative mortality rates remain one of the most objective measurements reported for the surgical field. The authors report population-based 30-day postoperative mortality rates among children who had undergone CNS tumor surgery in the United Kingdom. Methods To determine overall 30-day operative mortality rates, the authors analyzed the National Registry of Childhood Tumors for CNS tumors for the period 2004-2007. The operative mortality rate for each tumor category was derived. In addition, comparison was made with the 30-day operative mortality rates after CNS tumor surgery reported in the contemporary literature. Finally, by use of a funnel plot, institutional performance for 30-day operative mortality was compared for all units across the United Kingdom. Results The overall 30-day operative mortality rate for children undergoing CNS tumor surgery in the United Kingdom during the study period was 2.7%. When only malignant CNS tumors were analyzed, the rate increased to 3.5%. One third of the deaths occurred after discharge from the hospital in which the surgery had been performed. The highest 30-day operative mortality rate (19%) was for patients with choroid plexus carcinomas. A total of 20 institutions performed CNS tumor surgery during the study period. Rates for all institutions fell within 2 SDs. No trend associating operative mortality rates and institutional volume was found. In comparison, review of the contemporary literature suggests that the postoperative mortality rate should be approximately 1%. Conclusions The authors believe this to be the first report of national 30-day surgical mortality rates specifically for children with CNS tumors. The study raises questions about the 30-day mortality rate among children undergoing surgery for CNS tumors. International consensus should be reached on a minimum data set for outcomes and should include 30-day operative mortality rates.

[729]

TÍTULO / TITLE: - An unusual posterior fossa tumour in a young child.

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 Jun 26;2013. pii: bcr2013010158. doi: 10.1136/bcr-2013-010158.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-010158

AUTORES / AUTHORS: - Crawford JR; Newbury RO; Levy ML

INSTITUCIÓN / INSTITUTION: - Department of Neurosciences and Pediatrics, University of California San Diego, San Diego, California, USA.

jrcrawford@ucsd.edu

[730]

TÍTULO / TITLE: - Extracellular sphingosine-1-phosphate: a novel actor in human glioblastoma stem cell survival.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 24;8(6):e68229. doi: 10.1371/journal.pone.0068229. Print 2013.

●● Enlace al texto completo (gratis o de pago)

1371/journal.pone.0068229

AUTORES / AUTHORS: - Riccitelli E; Giussani P; Di Vito C; Condomitti G; Tringali C; Caroli M; Galli R; Viani P; Riboni L

INSTITUCIÓN / INSTITUTION: - Department of Medical Biotechnology and Translational Medicine, University of Milan, LITA-Segrate, Milan, Italy.

RESUMEN / SUMMARY: - Glioblastomas are the most frequent and aggressive intracranial neoplasms in humans, and despite advances and the introduction of the alkylating agent temozolomide in therapy have improved patient survival, resistance mechanisms limit benefits. Recent studies support that glioblastoma stem-like cells (GSCs), a cell subpopulation within the tumour, are involved in the aberrant expansion and therapy resistance properties of glioblastomas, through still unclear mechanisms. Emerging evidence suggests that sphingosine-1-phosphate (S1P) a potent onco-promoter able to act as extracellular signal, favours malignant and chemoresistance properties in GSCs. Notwithstanding, the origin of S1P in the GSC environment remains unknown. We investigated S1P metabolism, release, and role in cell survival properties of GSCs isolated from either U87-MG cell line or a primary culture of human glioblastoma. We show that both GSC models, grown as neurospheres and expressing GSC markers, are resistant to temozolomide, despite not expressing the DNA repair protein MGMT, a major contributor to temozolomide-resistance. Pulse experiments with labelled sphingosine revealed that both GSC types are able to rapidly phosphorylate the long-chain base, and that the newly produced S1P is efficiently degraded. Of relevance, we found that S1P was present in GSC extracellular medium, its level being significantly higher than in U87-MG cells, and that the extracellular/intracellular ratio of S1P was about ten-fold higher in GSCs. The activity of sphingosine kinases was undetectable in GSC media, suggesting that mechanisms of S1P transport to the extracellular environment are constitutive in GSCs. In addition we found that

an inhibitor of S1P biosynthesis made GSCs sensitive to temozolomide (TMZ), and that exogenous S1P reverted this effect, thus involving extracellular S1P as a GSC survival signal in TMZ resistance. Altogether our data implicate for the first time GSCs as a pivotal source of extracellular S1P, which might act as an autocrine/paracrine signal contributing to their malignant properties.

[731]

TÍTULO / TITLE: - A mechanism for the upregulation of EGF receptor levels in glioblastomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cell Rep. 2013 Jun 27;3(6):2008-20. doi: 10.1016/j.celrep.2013.05.021. Epub 2013 Jun 13.

●● Enlace al texto completo (gratis o de pago)

[1016/j.celrep.2013.05.021](#)

AUTORES / AUTHORS: - Zhang J; Antonyak MA; Singh G; Cerione RA

INSTITUCIÓN / INSTITUTION: - Department of Molecular Medicine, Cornell University, Ithaca, NY 14853, USA.

RESUMEN / SUMMARY: - Tissue transglutaminase (tTG) is a GTP-binding protein/acyltransferase whose expression is upregulated in glioblastoma and associated with decreased patient survival. Here, we delineate a unique mechanism by which tTG contributes to the development of gliomas by using two glioblastoma cell lines, U87 and LN229, whose growth and survival are dependent on tTG. We show that tTG significantly enhances the signaling activity and lifespan of EGF receptors (EGFRs) in these brain cancer cells. Moreover, overexpressing tTG in T98G glioblastoma cells that normally express low levels of tTG caused a marked upregulation of EGFR expression and transforming activity. Furthermore, we show that tTG accentuates EGFR signaling by blocking c-Cbl-catalyzed EGFR ubiquitylation through the ability of tTG to bind GTP and adopt a specific conformation that enables it to interact with c-Cbl. These findings demonstrate that tTG contributes to gliomagenesis by interfering with EGFR downregulation and, thereby, promoting transformation.

[732]

TÍTULO / TITLE: - Gabapentin for Postoperative Vomiting in Children Requiring Posterior Fossa Tumor Resection.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Pediatr Neonatol. 2013 Jun 10. pii: S1875-9572(13)00072-7. doi: 10.1016/j.pedneo.2013.04.002.

●● Enlace al texto completo (gratis o de pago)

[1016/j.pedneo.2013.04.002](#)

AUTORES / AUTHORS: - Tsai KC; Yang YL; Fan PC

INSTITUCIÓN / INSTITUTION: - Division of Pediatric, Taipei Hospital, Department of Health, Taipei, Taiwan; Division of Neurology, Department of Pediatrics, National Taiwan University Hospital, Taipei, Taiwan.

RESUMEN / SUMMARY: - Gabapentin is well known for its pain control and antiepileptic effect, but its antiemetic effect is poorly investigated. Here we report on effective gabapentin use for refractory vomiting after craniotomy in two children with medulloblastoma in the fourth ventricle. The two pediatric patients (an 11-year-old girl and a 4-year-old boy) underwent near-total excision of the tumor via craniotomy. Both patients suffered from refractory postoperative nausea and vomiting, treated with multiple traditional antiemetic drugs but without relief. After gabapentin intake, their nausea and vomiting improved from one to two episodes per day to complete resolution of symptoms. This report suggests that gabapentin may be a novel antiemetic therapeutic intervention for patients with refractory nausea and vomiting after craniotomy.

[733]

TÍTULO / TITLE: - Early Assessment of the Efficacy of Temozolomide Chemotherapy in Experimental Glioblastoma Using [(18)F]FLT-PET Imaging.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 4;8(7):e67911. doi: 10.1371/journal.pone.0067911. Print 2013.

●● Enlace al texto completo (gratis o de pago)

1371/journal.pone.0067911

AUTORES / AUTHORS: - Viel T; Schelhaas S; Wagner S; Wachsmuth L; Schwegmann K; Kuhlmann M; Faber C; Kopka K; Schafers M; Jacobs AH

INSTITUCIÓN / INSTITUTION: - European Institute for Molecular Imaging (EIMI), Westfälische Wilhelms-University (WWU), Münster, Germany.

RESUMEN / SUMMARY: - Addition of temozolomide (TMZ) to radiation therapy is the standard treatment for patients with glioblastoma (GBM). However, there is uncertainty regarding the effectiveness of TMZ. Considering the rapid evolution of the disease, methods to assess TMZ efficacy early during treatment would be of great benefit. Our aim was to monitor early effects of TMZ in a mouse model of GBM using positron emission tomography (PET) with 3'-deoxy-3'-[(18)F]fluorothymidine [(18)F]FLT). **METHODS:** Human glioma cells sensitive to TMZ (Gli36dEGFR-1) were treated with sub-lethal doses of TMZ to obtain cells with lower sensitivity to TMZ (Gli36dEGFR-2), as measured by growth and clonogenic assays. Gli36dEGFR-1 and Gli36dEGFR-2 cells were subcutaneously (s.c.) or intracranially (i.c.) xenografted into nude mice. Mice were treated for 7 days with daily injection of 25 or 50 mg/kg TMZ. Treatment efficacy was measured using [(18)F]FLT-PET before treatment and after 2 days. Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) were used to determine tumor volumes before treatment and after 7 days. **RESULTS:** A significant difference was observed between TMZ and DMSO treated tumors in terms of variations of [(18)F]FLT T/B ratio as soon as day 2 in the i.c. as well

as in the s.c. mouse model. Variations of [(18)F]FLT T/B uptake ratio between days 0 and 2 correlated with variations of tumor size between days 0 and 7 (s.c. model: $n_{\text{tumor}} = 17$ in $n_{\text{mice}} = 11$, $P < 0.01$; i.c. model: $n_{\text{tumor}}/n_{\text{mice}} = 9$, $P < 0.01$). CONCLUSIONS: Our results indicate that [(18)F]FLT-PET may be useful for an early evaluation of the response of GBM to TMZ chemotherapy in patients with glioma.

[734]

TÍTULO / TITLE: - Atypical Meningioma: a Study of Prognostic Factors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jul 16. pii: S1878-8750(13)00772-9. doi: 10.1016/j.wneu.2013.07.001.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1016/j.wneu.2013.07.001](#)

AUTORES / AUTHORS: - Zaher A; Bari Mattar MA; Zayed DH; Ellatif RA; Ashamallah SA **INSTITUCIÓN / INSTITUTION:** - Department of Faculty of Medicine, Mansoura University, Egypt. **RESUMEN / SUMMARY:** - OBJECTIVE: Atypical meningiomas now represent 20% Of all meningiomas. This retrospective study aims to analyze the prognostic factors, the effect of different methods of treatments and the behavior of atypical meningioma. MATERIAL AND METHODS: Forty four patients diagnosed with atypical meningioma according to the 2007 WHO classification in the period between January 2009 and March 2012. Data were collected including patients age, gender, tumors location, presenting symptoms and treatment received. Patients were followed up to detect recurrence and asses' survival. RESULTS: Median overall survival (OAS) was 57months, with a 5-year survival of 35%. Significantly better survival was observed for patients < 50 years (65 versus 46 months, $P=0.033$) , and patients with total resection(Simpson G1-2) over subtotal(Simpson G3-4) or biopsy(Simpson G5); (75,46 and 24 months respectively, $P < 0.0001$). Patients with a tumor located in brain convexity had better survival with no statistical significance ($P=0.052$). Multivariate analysis showed prognostic significance with age ($P=0.030$) and extent of resection ($P < 0.000$). Progression free survival (PFS) ranged from 7-83 months with a median value of 39 months, it showed significant relation with subtotal resection when compared to biopsy ($P=0.007$) . Recurrences were less in patients who received radiotherapy and was statistically significant ($P=0.007$). CONCLUSION:: Long term survival is possible for patients with atypical meningiomas treated with surgery and post-operative radiation. Multivariate analysis confirmed that age (< 50 years) and total surgical excision were independent prognostic factors for survival. Adjuvant radiotherapy reduces tumor recurrence especially after incomplete surgery.

[735]

TÍTULO / TITLE: - A Radiation-Induced Meningioma "Cures" A Complex Dural Arteriovenous Fistula.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurol Surg A Cent Eur Neurosurg. 2013 Jun 13.

●● Enlace al texto completo (gratis o de pago) [1055/s-0033-1345099](#)

AUTORES / AUTHORS: - Copeland WR; Link MJ

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, Mayo Clinic, Rochester, Minnesota.

RESUMEN / SUMMARY: - Objective We report a case of spontaneous thrombosis of an extremely complex dural arteriovenous fistula (DAVF), believed to be previously incurable, after the development of a radiation-induced meningioma resulting from prior attempts to treat the fistula with radiosurgery. Methods A very large DAVF was treated over the course of 3 decades with a combination of partial embolization and stereotactic radiosurgery with no angiographic or clinical treatment response at long-term follow-up. However, with the development of new neurologic symptoms 13 years after radiosurgery, a meningioma was found to have arisen in the previously irradiated field, and surprisingly, the fistula had spontaneously thrombosed. The meningioma was successfully removed. Results We discuss the unique pathophysiology of the radiation-induced meningioma causing this previously incurable DAVF progressing to obliteration. We also review the natural history of DAVFs, including reported rates of spontaneous occlusion, as well as the success of radiosurgery in their treatment. Finally, the incidence of radiosurgery-induced tumors, particularly meningiomas, is reviewed. Conclusion The relationship between the spontaneous thrombosis of a DAVF and the radiation-induced meningioma is unique and has not previously been reported.

[736]

TÍTULO / TITLE: - Combined awake craniotomy with endoscopic port surgery for resection of a deep-seated temporal lobe glioma: a case report.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Med. 2013;2013:401359. doi: 10.1155/2013/401359. Epub 2013 Apr 29.

●● Enlace al texto completo (gratis o de pago) [1155/2013/401359](#)

AUTORES / AUTHORS: - Bodily L; Mintz AH; Engh J

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of Pittsburgh School of Medicine, UPMC Presbyterian, Suite B-400, 200 Lothrop Street, Pittsburgh, PA 15213, USA.

RESUMEN / SUMMARY: - The authors describe the combination of awake craniotomy and minimally invasive endoscopic port surgery to resect a high-grade glioma located near eloquent structures of the temporal lobe. Combined minimally invasive techniques such as these may facilitate deep tumor resection within eloquent regions of the brain, allowing minimum white matter dissection. Technical aspects of this procedure, a case outcome involving this technique, and the direction of further investigations for the utility of these techniques are discussed.

[737]

TÍTULO / TITLE: - Preoperative endoscopic third ventriculostomy in children with posterior fossa tumors: an institution experience.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Turk Neurosurg. 2013;23(3):359-65. doi: 10.5137/1019-5149.JTN.7035-12.1.

●● Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.7035-12.1](#)

AUTORES / AUTHORS: - Azab W; Al-Sheikh T; Yahia A

INSTITUCIÓN / INSTITUTION: - Ibn Sina Hospital, Department of Neurosurgery, Kuwait. waleedazab@hotmail.com

RESUMEN / SUMMARY: - AIM: To assess the effectiveness and safety of pre-resection endoscopic third ventriculostomy (ETV) in permanently relieving hydrocephalus in children with posterior fossa tumors. MATERIAL and METHODS: 17 pediatric patients with posterior fossa tumors and associated triventricular obstructive hydrocephalus underwent ETV before definitive tumor resection, and ETV was repeated after tumor resection if hydrocephalus with increased intracranial pressure persisted or recurred. The medical records, operative notes and imaging studies were retrospectively reviewed. RESULTS: 18 ETV procedures were performed in 17 patients, consisting of 11 males and 6 females, age range (1.5 to 13 years; mean 6+/-3.86). Follow-up periods ranged from 6 to 23 months (mean follow-up 13.9+/-5.4 months). ETV was successful in relieving hydrocephalus during the follow-up period in 15 out of 17 patients (88.2%). Prior to surgical excision of the posterior fossa tumors, no failures of ETV were detected and all of the 17 patients showed marked clinical improvement and radiological disappearance of signs of active hydrocephalus. CONCLUSION: Preoperative ETV is a highly effective long-term CSF diversion procedure for treatment of hydrocephalus associated with posterior fossa tumors in children. In experienced hands, ETV has a very low complication rate.

[738]

TÍTULO / TITLE: - CCM3 Mutations Are Associated with Early-Onset Cerebral Hemorrhage and Multiple Meningiomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Mol Syndromol. 2013 Apr;4(4):165-72. doi: 10.1159/000350042. Epub 2013 Apr 3.

●● Enlace al texto completo (gratis o de pago) [1159/000350042](#)

AUTORES / AUTHORS: - Riant F; Bergametti F; Fournier HD; Chapon F; Michalak-Provost S; Cecillon M; Lejeune P; Hosseini H; Choe C; Orth M; Bernreuther C; Boulday G; Denier C; Labauge P; Tournier-Lasserre E

INSTITUCIÓN / INSTITUTION: - Service de Genetique Neuro-Vasculaire, Assistance Publique-Hopitaux de Paris, Paris, France ; Centre de Reference des Maladies Vasculaires Rares du Cerveau et de L'OEil, Groupe Hospitalier

Lariboisiere - Fernand Widal, Paris, France ; Unite Mixte de Recherche-S-740, Institut National de la Sante et de la Recherche Medicale, Paris, France ; Unite Mixte de Recherche-S-740, Universite Paris Diderot, Sorbonne Paris Cite, Paris, France.

RESUMEN / SUMMARY: - Mutations of CCM3/PDCD10 cause 10-15% of hereditary cerebral cavernous malformations. The phenotypic characterization of CCM3-mutated patients has been hampered by the limited number of patients harboring a mutation in this gene. This is the first report on molecular and clinical features of a large cohort of CCM3 patients. Molecular screening for point mutations and deletions was used to identify 54 CCM3-mutated index patients. Age at referral and clinical onset, type of inaugural events and presence of extra-axial lesions were investigated in these 54 index patients and 22 of their mutated relatives. Mean age at clinical onset was 23.0 +/- 16 years. Clinical onset occurred before 10 years in 26% of the patients, and cerebral hemorrhage was the initial presentation in 72% of these patients. Multiple extra-axial, dural-based lesions were detected in 7 unrelated patients. These lesions proved to be meningiomas in 3 patients who underwent neurosurgery and pathological examination. This 'multiple meningiomas' phenotype is not associated with a specific CCM3 mutation. Hence, CCM3 mutations are associated with a high risk of early-onset cerebral hemorrhage and with the presence of multiple meningiomas.

[739]

TÍTULO / TITLE: - Craniopharyngioma and epidermoid tumour in same child: a rare association.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+J3s

<http://bmj.com/search.dtl> ●● British Medical J. (BMJ): <> Case Rep. 2013 Jun 3;2013. pii: bcr2013009421. doi: 10.1136/bcr-2013-009421.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-009421

AUTORES / AUTHORS: - Singh DK; Singh N; Parihar A; Singh R

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Dr. RMLIMS, Lucknow, Uttar Pradesh, India.

RESUMEN / SUMMARY: - Simultaneous occurrence of histologically different primary brain tumours is rare, and its preoperative diagnosis is still challenging. The explanations for the simultaneous occurrence of different primary intracranial tumours in the absence of phacomatoses or prior radiation exposure are at present hypothetical, and these tumours could be simply coincidental. Herein, we report a case of a boy presenting with features of raised intracranial pressure and right-sided sensorineural hearing loss. Brain MRI revealed two different neoplastic pathologies at different sites: an intrasellar and suprasellar craniopharyngioma and a right cerebello-pontine angle epidermoid. To the best of our knowledge, this is the first report in literature of a craniopharyngioma coexisting with an epidermoid, in the same individual.

[740]

TÍTULO / TITLE: - An unusual presentation of posterior fossa ependymoma in a child.

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 5;2013. pii: bcr2013010267. doi: 10.1136/bcr-2013-010267.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-010267

AUTORES / AUTHORS: - Crawford JR; Newbury RO; Friedman JR

INSTITUCIÓN / INSTITUTION: - Department of Neurosciences and Pediatrics, University of California San Diego, San Diego, California, USA.

[741]

TÍTULO / TITLE: - Delayed presentation of diencephalic syndrome associated with leptomeningeal dissemination in a child.

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 Jun 16;2013. pii: bcr2013010265. doi: 10.1136/bcr-2013-010265.

●● Enlace al texto completo (gratis o de pago) 1136/bcr-2013-010265

AUTORES / AUTHORS: - Crawford JR; Shayan K; Levy ML

INSTITUCIÓN / INSTITUTION: - Department of Neurosciences and Pediatrics, University of California San Diego, San Diego, California, USA.

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[742]

TÍTULO / TITLE: - Differentiation of glioblastomas from metastatic brain tumors by tryptophan uptake and kinetic analysis: a positron emission tomographic study with magnetic resonance imaging comparison.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Mol Imaging. 2013 Jul-Aug;12(5):327-37.

AUTORES / AUTHORS: - Kamson DO; Mittal S; Buth A; Muzik O; Kupsky WJ; Robinette NL; Barger GR; Juhasz C

INSTITUCIÓN / INSTITUTION: - PET Center and Translational Imaging Laboratory, Children's Hospital of Michigan, Detroit, MI 48201, USA.

RESUMEN / SUMMARY: - Differentiating high-grade gliomas from solitary brain metastases is often difficult by conventional magnetic resonance imaging (MRI); molecular imaging may facilitate such discrimination. We tested the accuracy of alpha[11C]methyl-l-tryptophan (AMT)-positron emission tomography (PET) to differentiate newly diagnosed glioblastomas from brain metastases. AMT-PET was performed in 36 adults with suspected brain malignancy. Tumoral AMT accumulation was measured by standardized uptake values (SUVs). Tracer kinetic analysis was also performed to separate tumoral net tryptophan

transport (by AMT volume of distribution [VD]) from unidirectional uptake rates using dynamic PET and blood input function. Differentiating the accuracy of these PET variables was evaluated and compared to conventional MRI. For glioblastoma/metastasis differentiation, tumoral AMT SUV showed the highest accuracy (74%) and the tumor/cortex VD ratio had the highest positive predictive value (82%). The combined accuracy of MRI (size of contrast-enhancing lesion) and AMT-PET reached up to 93%. For ring-enhancing lesions, tumor/cortex SUV ratios were higher in glioblastomas than in metastatic tumors and could differentiate these two tumor types with > 90% accuracy. These results demonstrate that evaluation of tryptophan accumulation by PET can enhance pretreatment differentiation of glioblastomas and metastatic brain tumors. This approach may be particularly useful in patients with a newly diagnosed solitary ring-enhancing mass.

[743]

TÍTULO / TITLE: - CDKN2A promoter hypermethylation in astrocytomas is associated with age and sex.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Int J Surg. 2013;11(7):549-53. doi: 10.1016/j.ijisu.2013.05.030. Epub 2013 May 27.

●● Enlace al texto completo (gratis o de pago) 1016/j.ijisu.2013.05.030

AUTORES / AUTHORS: - Alves MK; Faria MH; Neves Filho EH; Ferrasi AC; Pardini MI; de Moraes Filho MO; Rabenhorst SH

INSTITUCIÓN / INSTITUTION: - Universidade Federal do Ceara, Department of Pathology and Forensic Medicine, Rua Alexandre Barauna, 949, Porangabussu, CEP 60183-630 Fortaleza, Brazil. Electronic address: markenialves@yahoo.com.br.

RESUMEN / SUMMARY: - CDKN2A promoter hypermethylation has been widely related to many cancers. In astrocytomas, although CDKN2A (p16(INK4A) protein) is often inactivated, there are still some controversial issues regarding the mechanism by which this alteration occurs. Thus, we analyzed a series of astrocytomas to assess the association between CDKN2A expression and methylation of grade I-IV tumors (WHO) and clinicopathological parameters. DNA extracted from formalin-fixed paraffin-embedded material of 93 astrocytic tumors was available for CDKN2A promoter methylation analysis and p16(INK4A) expression by methylation-specific PCR and immunohistochemistry, respectively. A strong negative correlation between nuclear and cytoplasmic immunostaining and CDKN2A promoter methylation was found. Additionally, a significant negative correlation between CDKN2A promoter methylation and age was observed; also, female patients had statistically more CDKN2A methylated promoters ($p = 0.036$) than men. In conclusion, CDKN2A inactivation by promoter methylation is a frequent event in astrocytomas and it is related to the age and sex of patients.

[744]

TÍTULO / TITLE: - Expression of brain-specific angiogenesis inhibitor 1 is inversely correlated with pathological grade, angiogenesis and peritumoral brain edema in human astrocytomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncol Lett. 2013 May;5(5):1513-1518. Epub 2013 Mar 12.

●● [Enlace al texto completo \(gratis o de pago\) 3892/ol.2013.1250](#)

AUTORES / AUTHORS: - Wang W; DA R; Wang M; Wang T; Qi L; Jiang H; Chen W; Li Q

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, The First Affiliated Hospital of the Medical College of Xi'an Jiaotong University, Xi'an, Shaanxi 710061, P.R. China.

RESUMEN / SUMMARY: - As the most common intracranial malignant neoplasms, astrocytomas are characterized by high neovascularization and severe peritumoral brain edema (PTBE). Angiogenesis is a prerequisite for the growth of solid tumors, including astrocytoma, and brain-specific angiogenesis inhibitor 1 (BAI1) is a novel angiogenesis inhibitor. In the present study, the expression levels of BAI1, vascular endothelial growth factor (VEGF) and basic fibroblast growth factor (bFGF) were investigated using immunohistochemical methods in 90 human brain astrocytoma specimens of various pathological grades and in 11 normal human brain tissues. Vascular endothelial cells were stained for CD105 and the microvessel density (MVD) was assessed. The volume of astrocytoma and PTBE in each case was evaluated by magnetic resonance imaging (MRI). The results showed that BAI1 was highly expressed in the normal brain tissues, but that the expression decreased with the rising pathological grades of astrocytoma, MVD number and PTBE, indicating that BAI1 expression was inversely correlated with these factors. Furthermore, it was observed that the expression of VEGF and bFGF were inversely correlated with BAI1 expression in the human brain astrocytomas. These results indicate that the BAI1 gene may be used as a marker of decreased tumor progression and tumoral neovascularization, as well as PTBE.

[745]

TÍTULO / TITLE: - Small intracranial lipomas may be a frequent finding on computed tomography of the brain. A case series.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neuroradiol J. 2013 Feb;26(1):27-9. Epub 2013 Mar 8.

AUTORES / AUTHORS: - Gossner J

INSTITUCIÓN / INSTITUTION: - Department of Clinical Radiology, Evangelisches Krankenhaus Gottingen-Weende; Gottingen, Germany.

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RESUMEN / SUMMARY: - Intracranial lipomas are described as a rare finding. In this small retrospective analysis of 50 cases undergoing brain CT for various

reasons small intracranial lipomas were found in nine patients. In contrast to previous reports lipomas may be a frequent finding on CT imaging of the brain. In particular, these small lipomas seem to be incidental findings lacking clinical relevance. Radiologists should be aware of intracranial lipomas to establish proper differential diagnosis.

[746]

TÍTULO / TITLE: - Integral dose delivered to normal brain with conventional intensity-modulated radiotherapy (IMRT) and helical tomotherapy IMRT during partial brain radiotherapy for high-grade gliomas with and without selective sparing of the hippocampus, limbic circuit and neural stem cell compartment.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Med Imaging Radiat Oncol. 2013 Jun;57(3):378-83. doi: 10.1111/1754-9485.12048. Epub 2013 Apr 7.

●● Enlace al texto completo (gratis o de pago) [1111/1754-9485.12048](#)

AUTORES / AUTHORS: - Marsh JC; Ziel GE; Diaz AZ; Wendt JA; Gobole R; Turian JV

INSTITUCIÓN / INSTITUTION: - 21st Century Oncology of Arizona, Peoria, Arizona, USA. jmarsh@rtsx.com

RESUMEN / SUMMARY: - INTRODUCTION: We compared integral dose with uninvolved brain (IDbrain) during partial brain radiotherapy (PBRT) for high-grade glioma patients using helical tomotherapy (HT) and seven field traditional inverse-planned intensity-modulated radiotherapy (IMRT) with and without selective sparing (SPA) of contralateral hippocampus, neural stem cell compartment (NSC) and limbic circuit. METHODS: We prepared four PBRT treatment plans for four patients with high-grade gliomas (60 Gy in 30 fractions delivered to planning treatment volume (PTV60Gy)). For all plans, a structure denoted 'uninvolved brain' was created, which included all brain tissue not part of PTV or standard (STD) organs at risk (OAR). No dosimetric constraints were included for uninvolved brain. Selective SPA plans were prepared with IMRT and HT; contralateral hippocampus, NSC and limbic circuit were contoured; and dosimetric constraints were entered for these structures without compromising dose to PTV or STD OAR. We compared V100 and D95 for PTV46Gy and PTV60Gy, and IDbrain for all plans. RESULTS: There were no significant differences in V100 and D95 for PTV46Gy and PTV60Gy. IDbrain was lower in traditional IMRT versus HT plans for STD and SPA plans (mean IDbrain 23.64 Gy vs. 28 Gy and 18.7 Gy vs. 24.5 Gy, respectively) and in SPA versus STD plans both with IMRT and HT (18.7 Gy vs. 23.64 Gy and 24.5 Gy vs. 28 Gy, respectively). CONCLUSIONS: In the setting of PBRT for high-grade gliomas, IMRT reduces IDbrain compared with HT with or without selective SPA of contralateral hippocampus, limbic circuit and NSC, and the use of selective SPA reduces IDbrain compared with STD PBRT delivered with either traditional IMRT or HT.

[747]

TÍTULO / TITLE: - Differential biodistribution of intravenously administered endothelial progenitor and cytotoxic T-cells in rat bearing orthotopic human glioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - BMC Med Imaging. 2013 Jun 10;13(1):17. doi: 10.1186/1471-2342-13-17.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1471-2342-13-17](#)

AUTORES / AUTHORS: - Varma NR; Shankar A; Iskander A; Janic B; Borin TF; Ali MM; Arbab AS

INSTITUCIÓN / INSTITUTION: - Cellular and Molecular Imaging Laboratory, Radiology, Henry Ford Hospital, Detroit, MI, USA. ravin@rad.hfh.edu.

RESUMEN / SUMMARY: - BACKGROUND: A major challenge in the development of cell based therapies for glioma is to deliver optimal number of cells (therapeutic dose) to the tumor. Imaging tools such as magnetic resonance imaging (MRI), optical imaging, positron emission tomography (PET) and single-photon emission computed tomography (SPECT) has been used in cell tracking and/or biodistribution studies. In this study, we evaluate the dynamic biodistribution of systemic injected labeled cells [human cord blood derived endothelial progenitor cells (EPCs) and cytotoxic T-cells (CTLs)] in rat glioma model with in vivo SPECT imaging. METHODS: Human cord blood EPCs, T-cells and CD14+ cells (monocytes/dendritic cells) were isolated using the MidiMACS system. CD14+ cells were converted to dendritic cells (DC) and also primed with U251 tumor cell line lysate. T-cells were co-cultured with irradiated primed DCs at 10:1 ratio to make CTLs. Both EPCs and CTLs were labeled with In-111-oxine at 37 degrees C in serum free DMEM media. Glioma bearing animals were randomly assigned into three groups. In-111 labeled cells or In-111 oxine alone were injected through tail vein and SPECT imaging was performed on day 0, 1, and 3. In-111 oxine activity in various organs and tumor area was determined. Histochemical analysis was performed to further confirm the migration and homing of injected cells at the tumor site. RESULTS: EPCs and CTLs showed an In-111 labeling efficiency of 87.06 +/- 7.75% and 70.8 +/- 12.9% respectively. Initially cell migration was observed in lung following intravenous administration of In-111 labeled cells and decreased on day 1 and 3, which indicate re-distribution of labeled cells from lung to other organs. Relatively higher In-111 oxine activity was observed in tumor areas at 24 hours in animals received In-111 labeled cells (EPCs or CTLs). Histological analysis revealed iron positive cells in and around the tumor area in animals that received labeled cells (CTLs and EPCs). CONCLUSION: We observed differential biodistribution of In-111-oxine labeled EPCs and CTLs in different organs and intracranial glioma. This study indicates In-111 oxine based SPECT imaging is an effective tool to study the biodistribution of therapeutically important cells.

[748]

TÍTULO / TITLE: - Hemiparesis after Operation of Astrocytoma Grade II in Adults: Effects of Acupuncture on Sensory-Motor Behavior and Quality of Life.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Evid Based Complement Alternat Med.

2013;2013:859763. doi: 10.1155/2013/859763. Epub 2013 Jun 24.

●● Enlace al texto completo (gratis o de pago) [1155/2013/859763](#)

AUTORES / AUTHORS: - Yu H; Schroder S; Liu Y; Li Z; Yang Y; Chen Y; Huang X

INSTITUCIÓN / INSTITUTION: - Shenzhen Traditional Chinese Medicine Hospital, Shenzhen City, Guangdong 518033, China.

RESUMEN / SUMMARY: - To evaluate the effect of acupuncture on hemiparesis and quality of life for adults with brain astrocytoma grade II, we conducted a randomized, observer-blinded clinical trial. Fifty-eight patients were randomized to standard rehabilitation (SR) therapy without acupuncture (n = 20), SR plus standard acupuncture (SA) (n = 19), and SR plus individualized acupuncture (IA) (n = 19). SA points were PC6, SP6, HT1, LU5, BL40, and ST36, while a special concept called “connecting and regulation Ren and Du” and “Jin-3-needling” served as IA. This treatment was individualized according to the clinical syndrome. The outcome was measured by the Barthel Index (BI), the Fugl-Meyer scale (FM), and the EORTC Core Quality of Life Questionnaire (QLQ-C30) with the Brain Cancer Module (BCM20). IA + SR reached significantly higher BI scores than SA + SR, which reached significantly higher BI scores than SR. IA + SR was significantly superior to SA + SR and to SR at the 8th week for the scores of FM motor and sensory assessments and most QLQ-C30-BCM20 items. In conclusion, the individualized acupuncture concept of “connecting and regulating Ren and Du” combined with “Jin-3-needling” offers a promising possibility for the treatment of hemiparesis due to astrocytoma, but further evaluation is mandatory.

[749]

TÍTULO / TITLE: - Adult Cerebellar Glioblastomas: A Distinct Entity or Parcel of the Whole?

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jun 21. pii: S1878-8750(13)00489-0. doi: 10.1016/j.wneu.2013.03.040.

●● Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.03.040](#)

AUTORES / AUTHORS: - Bi WL; Chiocca EA

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Harvard Medical School, Boston, Massachusetts, USA.

[750]

TÍTULO / TITLE: - 1'-Acetoxychavicol acetate promotes caspase 3-activated glioblastoma cell death by overcoming enhanced cytokine expression.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncol Lett. 2013 Jun;5(6):1968-1972. Epub 2013 Apr 5.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1292](#)

AUTORES / AUTHORS: - Williams M; Tietzel I; Quick QA

INSTITUCIÓN / INSTITUTION: - Department of Biology, Southern University at New Orleans, New Orleans, LA 70126, USA.

RESUMEN / SUMMARY: - The brain consumes approximately 20% of the oxygen utilized in the human body, meaning that brain tumors are vulnerable to paradoxical physiological effects from free radical generation. In the present study, 1'-acetoxychavicol acetate (ACA), a naturally derived antioxidant that inhibits xanthine oxidase, was evaluated for its role as an anti-tumorigenic agent in glioblastomas. The study revealed that ACA inhibited glioblastoma cell proliferation as a consequence of promoting apoptotic cell death by enhancing caspase 3 activity. It was also shown that ACA impaired the migratory ability of glioblastoma cells by decreasing their adhesive properties. Additionally, ACA increased the protein expression levels of the pro-survival signaling cytokines, IL-6 and IL-1alpha, established cell protectors and survival molecules in brain tumors. Together, these results demonstrate that, despite enhanced expression of compensatory signaling molecules that contribute to tumor cell survival, ACA is an effective pro-apoptotic inducing agent in glioblastomas.

[751]

TÍTULO / TITLE: - Primary hypothyroidism with growth failure and pituitary pseudotumor in a 13-year-old female: a case report.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Med Case Rep. 2013 May 31;7(1):149. doi: 10.1186/1752-1947-7-149.

●● Enlace al texto completo (gratis o de pago) [1186/1752-1947-7-149](#)

AUTORES / AUTHORS: - Larson NS; Pinsker JE

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, Division of Pediatric Endocrinology, Tripler Army Medical Center, 1 Jarrett White Road, Honolulu, HI 96859, USA. jordan.pinsker@us.army.mil.

RESUMEN / SUMMARY: - INTRODUCTION: Primary hypothyroidism is a well-known cause of poor linear growth in children. A rare finding with profound or long-standing disease is anterior pituitary enlargement (pituitary pseudotumor). This case highlights this uncommon finding, discusses clinical situations in which gradual dose escalation of levothyroxine may be advisable and reviews adjuvant therapies that have been previously attempted to improve final height in the setting of profound hypothyroidism. CASE PRESENTATION: We report the case of a 13-year-old Hispanic girl initially evaluated for poor linear growth and delayed puberty, and found to have pituitary enlargement secondary to profound primary hypothyroidism. Treatment with progressive doses of levothyroxine normalized her symptoms and led to complete resolution of her pituitary findings, but she then rapidly progressed through puberty, achieving an

adult height of only 142cm, significantly below her calculated mid-parental height. CONCLUSIONS: In cases of severe primary hypothyroidism with prolonged elevation of thyroid-stimulating hormone and pituitary pseudotumor, gradual replacement of thyroid hormone with slowly escalating doses of levothyroxine may be beneficial to prevent complications of therapy. Early recognition and treatment of hypothyroidism during childhood is essential for normal growth, as final height is invariably compromised in children with prolonged disease. Additional study is needed to determine the potential beneficial effects of gonadotropin-releasing hormone agonist and recombinant human growth hormone treatment in this setting.

[752]

TÍTULO / TITLE: - Intraoperative ultrasound assistance in resection of intracranial meningiomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Chin J Cancer Res. 2013 Jun;25(3):339-45. doi: 10.3978/j.issn.1000-9604.2013.06.13.

●● Enlace al texto completo (gratis o de pago) [3978/j.issn.1000-9604.2013.06.13](#)

AUTORES / AUTHORS: - Tang H; Sun H; Xie L; Tang Q; Gong Y; Mao Y; Xie Q; Zheng M; Wang D; Zhu H; Zhu J; Feng X; Yao Z; Chen X; Zhou L

INSTITUCIÓN / INSTITUTION: - Neurosurgery Department of Huashan Hospital, Shanghai 200040, China;

RESUMEN / SUMMARY: - OBJECTIVE: Intracranial meningiomas, especially those located at anterior and middle skull base, are difficult to be completely resected due to their complicated anatomy structures and adjacent vessels. It's essential to locate the tumor and its vessels precisely during operation to reduce the risk of neurological deficits. The purpose of this study was to evaluate intraoperative ultrasonography in displaying intracranial meningioma and its surrounding arteries, and evaluate its potential to improve surgical precision and minimize surgical trauma. METHODS: Between December 2011 and January 2013, 20 patients with anterior and middle skull base meningioma underwent surgery with the assistance of intraoperative ultrasonography in the Neurosurgery Department of Shanghai Huashan Hospital. There were 7 male and 13 female patients, aged from 31 to 66 years old. Their sonographic features were analyzed and the advantages of intraoperative ultrasonography were discussed. RESULTS: The border of the meningioma and its adjacent vessels could be exhibited on intraoperative ultrasonography. The sonographic visualization allowed the neurosurgeon to choose an appropriate approach before the operation. In addition, intraoperative ultrasonography could inform neurosurgeons about the location of the tumor, its relation to the surrounding arteries during the operation, thus these essential arteries could be protected carefully. CONCLUSIONS: Intraoperative ultrasonography is a useful intraoperative technique. When appropriately applied to assist surgical

procedures for intracranial meningioma, it could offer very important intraoperative information (such as the tumor supplying vessels) that helps to improve surgical resection and therefore might reduce the postoperative morbidity.

[753]

TÍTULO / TITLE: - Brain tumor stem cell multipotency correlates with nanog expression and extent of passaging in human glioblastoma xenografts.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncotarget. 2013 May;4(5):792-801.

AUTORES / AUTHORS: - Higgins DM; Wang R; Milligan B; Schroeder M; Carlson B; Pokorny J; Cheshier SH; Meyer FB; Weissman IL; Sarkaria JN; Henley JR

INSTITUCIÓN / INSTITUTION: - Medical Scientist Training Program, Mayo Clinic: College of Medicine, Rochester, Minnesota, USA.

RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is the most common primary brain tumor, with a median survival of only 15 months. A subpopulation of cells, the brain tumor stem cells (BTSCs), may be responsible for the malignancy of this disease. Xenografts have proven to be a robust model of human BTSCs, but the effects of long-term passaging have yet to be determined. Here we present a study detailing changes in BTSC multipotency, invasive migration, and proliferation after serial passaging of human GBM xenografts. Immunocytochemistry and tumorsphere formation assays demonstrated the presence of BTSCs in both early generation (EG-BTSCs; less than 15 passages) and late generation (LG-BTSCs; more than 24 passages) xenografts. The EG-BTSCs upregulated expression of lineage markers for neurons and oligodendrocytes upon differentiation, indicating multipotency. In contrast, the LG-BTSCs were restricted to an astrocytic differentiation. Quantitative migration and proliferation assays showed that EG-BTSCs are more migratory and proliferative than LG-BTSCs. However, both populations respond similarly to the chemokine SDF-1 by increasing invasive migration. These differences between the EG- and LG-BTSCs were correlated with a significant decrease in nanog expression as determined by qRT-PCR. Mice implanted intracranially with EG-BTSCs showed shorter survival when compared to LG-BTSCs. Moreover, differentiation prior to implantation of EG-BTSCs, but not LG-BTSCs, led to increased survival. Thus, nanog may identify multipotent BTSCs. Furthermore, limited passaging of xenografts preserves these multipotent BTSCs, which may be an essential underlying feature of GBM lethality.

[754]

TÍTULO / TITLE: - Radiation-induced temporal lobe injury for nasopharyngeal carcinoma: a comparison of intensity-modulated radiotherapy and conventional two-dimensional radiotherapy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 10;8(7):e67488. doi: 10.1371/journal.pone.0067488. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0067488](https://doi.org/10.1371/journal.pone.0067488)

AUTORES / AUTHORS: - Zhou GQ; Yu XL; Chen M; Guo R; Lei Y; Sun Y; Mao YP; Liu LZ; Li L; Lin AH; Ma J

INSTITUCIÓN / INSTITUTION: - State Key Laboratory of Oncology in Southern China, Department of Radiation Oncology, Cancer Center, Sun Yat-sen University, Guangzhou, People's Republic of China.

RESUMEN / SUMMARY: - **BACKGROUND:** To compare the radiation-induced temporal lobe injury (TLI) in patients with nasopharyngeal carcinoma (NPC) treated with intensity-modulated radiotherapy (IMRT) or two-dimensional conventional radiotherapy (2D-CRT). **PATIENTS AND METHODS:** 1276 cases of NPC treated with IMRT or 2D-CRT were retrospectively reviewed. A diagnosis of TLI was made on follow-up magnetic resonance imaging (MRI). **RESULTS:** The crude incidence of TLI was 7.5% and 10.8% ($P = 0.048$), and the actuarial 5-year incidence was 16% and 34.9% ($P < 0.001$) for the IMRT and 2D-CRT groups, respectively. Multivariate analysis revealed both T stage ($P < 0.001$) and radiation technique ($P < 0.001$) as independent predictors. Patients with T1, T2 and T3 disease had a significantly higher risk when treated with 2D-CRT ($P = 0.005, 0.016, < 0.001$, respectively). This trend was not evident for T4 patients ($P = 0.680$). The 2D-CRT group had a longer latency for the development of TLI ($P < 0.001$). Those with T4 disease had a shorter median time to TLI ($P = 0.006, 0.042, < 0.001$ when compared with T1, T2 and T3, respectively). **CONCLUSIONS:** IMRT is superior to 2DRT for the management of T1-T3 NPC in terms of sparing the temporal lobe. The high incidence of TLI in T4 disease needs to be addressed.

[755]

TÍTULO / TITLE: - Upregulation of Glutamate-Aspartate Transporter by Glial Cell Line-Derived Neurotrophic Factor Ameliorates Cell Apoptosis in Neural Retina in Streptozotocin-Induced Diabetic Rats.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - CNS Neurosci Ther. 2013 Jul 22. doi: 10.1111/cns.12150.

●● Enlace al texto completo (gratis o de pago) [1111/cns.12150](https://doi.org/10.1111/cns.12150)

AUTORES / AUTHORS: - Wang L; Deng QQ; Wu XH; Yu J; Yang XL; Zhong YM

INSTITUCIÓN / INSTITUTION: - Institute of Neurobiology, Institutes of Brain Science and State Key Laboratory of Medical Neurobiology, Fudan University, Shanghai, China.

RESUMEN / SUMMARY: - **AIMS:** Dysfunction of glutamate uptake, largely mediated by the glutamate-aspartate transporter (GLAST), may lead to retinal cell apoptosis in diabetic retinopathy. The aim of this study is to examine how cell apoptosis and the expression level of GLAST in neural retina of a diabetic rat model are changed and whether the neuroretinal apoptosis could be

ameliorated by the administration of glial cell line-derived neurotrophic factor (GDNF). METHODS: Diabetes was induced by intraperitoneal injection of streptozotocin (STZ) in Sprague-Dawley rats. GLAST protein expression levels were determined by Western blotting, whereas apoptosis of retinal neurons was evaluated by TUNEL staining. To assess the role of GDNF in ameliorating the STZ-induced retinal changes, GDNF/GDNF with siRNA directed against GLAST was injected into the vitreous after STZ injection. RESULTS: In rat retinas 4 weeks after the onset of STZ-induced diabetes, TUNEL-positive cells were significantly increased, whereas GLAST levels were significantly reduced. Intraocular administration of GDNF at the early stage of diabetes remarkably increased the GLAST levels and decreased TUNEL-positive signals in the retinas. These effects of GDNF were largely abolished by coadministration of GLAST siRNA. CONCLUSIONS: GDNF, administered at the early stage of diabetes, could rescue retinal cells from neurodegeneration by upregulating the expression of GLAST.

PTPTPTP - JOURNAL ARTICLE

[756]

TÍTULO / TITLE: - Intradural extramedullary spinal ependymoma: a case report of malignant transformation occurring.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Asian Spine J. 2013 Jun;7(2):139-42. doi: 10.4184/asj.2013.7.2.139. Epub 2013 May 22.

●● Enlace al texto completo (gratis o de pago) [4184/asj.2013.7.2.139](#)

AUTORES / AUTHORS: - Moriwaki T; Iwatsuki K; Ohnishi Y; Umegaki M; Ishihara M; Yoshimine T

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Osaka University Graduate School of Medicine, Suita, Japan.

RESUMEN / SUMMARY: - Intradural extramedullary spinal ependymomas are extremely rare. Herein, we describe a lesion-type spinal ependymoma that followed a malignant course, and discuss its clinical presentation, etiopathogenesis, and treatment. We present a patient who was diagnosed with an intradural extramedullary spinal tumor at T4-T6. The patient underwent gross total resection of the tumor without damage to the spinal cord. Histological examination, classified the lesion as a World Health Organization (WHO)-grade 2 ependymoma. One and a half years later, magnetic resonance imaging detected a recurring tumor at T4-T5. The tumor was removed and classified as a WHO-grade 3 anaplastic ependymoma. The patient was started on a course of regional spinal cord radiotherapy. The patient achieved tumoral control and clinical stabilization after the recurrence. We must consider the differential diagnosis of intradural extramedullary spinal tumors. The best treatment for this lesion is gross total resection and adjunctive radiotherapy is necessary in cases of malignant-change.

[757]

TÍTULO / TITLE: - Squamous cell carcinoma of the external auditory canal: A case report and review of the literature.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncol Lett. 2013 May;5(5):1587-1590. Epub 2013 Mar 8.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1241](#)

AUTORES / AUTHORS: - Visnyei K; Gill R; Azizi E; Culliney B

INSTITUCIÓN / INSTITUTION: - Departments of Internal Medicine, Beth Israel Medical Center, Albert Einstein College of Medicine, New York, NY 1003, USA.

RESUMEN / SUMMARY: - Squamous cell carcinoma of the external auditory canal, middle ear and temporal bone is a rare and unusual malignancy. The lack of a unifying classification system in the past, along with the rarity of the disease has made the development of clear treatment guidelines difficult. In this report, we describe a clinical case of a patient with this rare malignancy, discuss the challenges associated with the diagnosis and treatment of the disease, and review the literature for trends while outlining the most beneficial treatment strategy for this patient population.

[758]

TÍTULO / TITLE: - Intracranial epidermoid tumor; microneurosurgical management: An experience of 23 cases.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Asian J Neurosurg. 2013 Jan;8(1):21-8. doi: 10.4103/1793-5482.110276.

●● Enlace al texto completo (gratis o de pago) [4103/1793-5482.110276](#)

AUTORES / AUTHORS: - Chowdhury FH; Haque MR; Sarker MH

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Dhaka Medical College Hospital, Dhaka, Bangladesh.

RESUMEN / SUMMARY: - OBJECTIVES: An intracranial epidermoid tumor is relatively a rare tumor, accounting for approximately 0.1% of all intracranial space occupying lesions. These are also known as pearly tumor due to their pearl like appearance. In this series, the localization of the tumor, presenting age and symptoms, imaging criteria for diagnosis, surgical management strategy with completeness of excision and overall outcome were studied prospectively. Here, we report our short experience of intracranial epidermoid as a whole. MATERIALS AND METHODS: Between January 2006 to December 2010, 23 cases of intracranial epidermoid were diagnosed preoperatively with almost certainty by computed tomography (CT) and magnetic resonance imaging (MRI) of brain in plain, contrast and other relevant studies. All of them underwent operation in Dhaka Medical College Hospital and in some Private Hospital in Dhaka, Bangladesh. All patients were followed-up routinely by clinical examination and neuroimaging. Average follow-up was 39 (range-71-11months) months. Patients of the series were prospectively studied.

RESULTS: Supratentorial epidermoids were 04 cases and infratemporal epidermoids were 19 cases. Clinical features and surgical strategy varies according to the location and extension of the tumors. Age range was 19-71 years (37.46 years). Common clinical features were headache, cerebellar features, seizure, vertigo, hearing impairment and features of raised intracranial pressure (ICP). Investigation was CT scan or/+ MRI of brain in all cases. Pre-operative complete excision was 20 cases, but post-operative images showed complete excision in 17 cases. Content of tumor was pearly white/white material in all cases except one, where content was putty material. Re-operation for residual/recurrent tumor was nil. Complications included pre-operative mortality one case, persisted sixth nerve palsy in one case, transient memory disturbance one case, and extra dural hematoma one case. One senior patient expired three months after the operation from spontaneous intracerebral hemorrhage. Rest of the patients were stable and symptom/s free till last follow-up. CONCLUSION: In the management of such tumors, one should keep in mind that an aggressive radical surgery carrying a high morbidity and mortality and a conservative subtotal tumor excision is associated with a higher rate of recurrence, but earlier diagnosis and complete excision or near total excision of this benign tumor can cure the patient with the expectation of normal life.

[759]

TÍTULO / TITLE: - Composite pheochromocytoma-ganglioneuroma of the adrenal gland: A case report with immunohistochemical study.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Urol Ann. 2013 Apr;5(2):115-8. doi: 10.4103/0974-7796.110011.

●● Enlace al texto completo (gratis o de pago) [4103/0974-7796.110011](#)

AUTORES / AUTHORS: - Rao RN; Singla N; Yadav K

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India.

RESUMEN / SUMMARY: - Composite tumors of the adrenal medulla consisting of pheochromocytoma and ganglioneuroma are rare tumors accounting for less than 3% of all sympathoadrenal tumors. These tumors display more than one line of differentiation in which normal and neoplastic chromaffin cells are capable of differentiating into ganglion cells under the influence of nerve growth factors. To the best of our knowledge, we report the second case with a composite tumor of the adrenal medulla in a normotensive patient from India.

[760]

TÍTULO / TITLE: - Vascular cerebral anomalies associated with Septo-Optic Dysplasia. A case report.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neuroradiol J. 2013 Feb;26(1):66-70. Epub 2013 Mar 8.

AUTORES / AUTHORS: - Chiaramonte I; Cappello G; Uccello A; Guarrera V; D'Amore A; Cavallaro T; Chiaramonte R; Ettore GC

INSTITUCIÓN / INSTITUTION: - Neurosciences Department, University of Catania, Catania, Italy.

RESUMEN / SUMMARY: - We describe a case of Septo-Optic Dysplasia (SOD) characterized by the presence of anomalous cerebral vessels. In our young patient the classical features of SOD were associated with vascular anomalies including absence of the vein of Galen, right Rosenthal vein leading to the superior petrosal sinus, and anomalous origin of the anterior choroidal arteries. These findings have never been associated with SOD in the literature but their revelation supports the hypothesis of a vascular disruption as a possible cause of the SOD.

[761]

TÍTULO / TITLE: - A case of mature cystic teratoma arising from the fourth ventricle.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Pathol. 2013;2013:702424. doi: 10.1155/2013/702424. Epub 2013 May 26.

●● Enlace al texto completo (gratis o de pago) [1155/2013/702424](#)

AUTORES / AUTHORS: - Sanyal P; Barui S; Mathur S; Basak U

INSTITUCIÓN / INSTITUTION: - Department of Pathology, Command Hospital (EC), Alipore, Kolkata 27, India.

RESUMEN / SUMMARY: - Intracranial teratomas represent a rare lesion accounting for 0.1%-0.7% of all intracranial tumors. Those in the fourth ventricle have rarely been reported. The present case is that of a 28-year-old man with occipital headache for two months. MRI examination revealed a well-defined extra-axial cystic lesion in posterior fossa in the midline herniating through the foramen magnum. Pre operatively, the mass was seen to be occupying the whole of the posterior fossa and arising from the roof of the fourth ventricle. On gross examination, the lesion had both solid and cystic components. Histopathological examination showed multiple cystic areas lined by brain tissue admixed with islands of cartilage and salivary gland elements and intestinal type glands. A diagnosis of mature cystic teratoma was made.

[762]

TÍTULO / TITLE: - An uncommon case of neurofibromatosis type 2: a tribute to the intracranial calcifications.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Clin Imaging Sci. 2013 May 31;3:21. doi: 10.4103/2156-7514.112802. Print 2013.

●● Enlace al texto completo (gratis o de pago) [4103/2156-7514.112802](#)

AUTORES / AUTHORS: - Ozgur A; Karaman Y; Apaydin FD; Duce MN

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Mersin University Faculty of Medicine, Mersin, Turkey.

RESUMEN / SUMMARY: - Neurofibromatosis Type 2 (NF2) is a genetic disorder associated with schwannomas, meningiomas, and ependymomas. Intracranial calcifications, either tumoral or non-tumoral, are relatively lesser known features of NF2. Here, we present a case of NF2, in which the diagnosis was suspected due to the presence of choroid plexus and subependymal calcifications, although no obvious schwannoma or meningioma was detected initially on standard computed tomography or magnetic resonance imaging. This case highlights the importance of further evaluation with appropriate imaging techniques.

[763]

TÍTULO / TITLE: - Atypical Central Neurocytoma with Recurrent Spinal Dissemination over a Period of 20 Years: A Case Report and Review of the Literature.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Neurol Med. 2013;2013:925647. doi: 10.1155/2013/925647. Epub 2013 Jun 9.

●● Enlace al texto completo (gratis o de pago) [1155/2013/925647](#)

AUTORES / AUTHORS: - Juratli TA; Geiger K; Leimert M; Schackert G; Kirsch M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University Hospital Carl Gustav Carus Dresden, Technical University of Dresden, Fetscherstrasse 74, 01307 Dresden, Germany.

RESUMEN / SUMMARY: - We present an unusual case of a late recurrent central neurocytoma that was re-diagnosed as an ependymoma and neurocytoma in accordance with changes in histological classifications. Case Description. A 56-year-old male teacher presented with incomplete transverse syndrome due to several intradural extramedullary tumors at the level of lumbar vertebrae 1-3. The histological diagnosis at the time was atypical ependymoma. One year later, two additional tumors were removed at the L5-S1 vertebral level. For 12 years, the patient remained tumor free on followup. Fourteen years after the initial diagnosis, the patient presented with thoracic paresthesias due to two new extramedullary tumors in the C7-T1 and the T8-T9 vertebral levels. After complete removal of the tumors, a radiological survey revealed an intracranial lesion in the third ventricle. Five months later, an additional lesion recurrence was removed surgically. The most recent histological diagnosis revealed an atypical central neurocytoma. In retrospect, the previous tumors were reclassified as neurocytoma according to the additional immunohistochemistry evidence. Discussion. There is no standard adjuvant treatment regimen for atypical neurocytoma; therefore, the patient is currently under close followup. Modern histopathological diagnosis is essential in these cases. Potential routes for dissemination of the tumor should be considered upon first recurrence.

[764]

TÍTULO / TITLE: - Megalencephalic leukoencephalopathy with sub cortical cysts: An inherited dysmyelinating disorder.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Pediatr Neurosci. 2013 Jan;8(1):77-80. doi: 10.4103/1817-1745.111438.

●● Enlace al texto completo (gratis o de pago) [4103/1817-1745.111438](#)

AUTORES / AUTHORS: - Bajaj SK; Misra R; Gupta R; Chandra R; Malik A

INSTITUCIÓN / INSTITUTION: - Department of Radiodiagnosis, Safdarjung Hospital and VM Medical College, New Delhi, India.

[765]

TÍTULO / TITLE: - Natural history of multiple meningiomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Surg Neurol Int. 2013 May 28;4:71. doi: 10.4103/2152-7806.112617. Print 2013.

●● Enlace al texto completo (gratis o de pago) [4103/2152-7806.112617](#)

AUTORES / AUTHORS: - Wong RH; Wong AK; Vick N; Farhat HI

INSTITUCIÓN / INSTITUTION: - Section of Neurosurgery, University of Chicago, 5841 S. Maryland Ave MC3026, Chicago, IL 60637, (773) 702-2123, USA.

RESUMEN / SUMMARY: - BACKGROUND: Asymptomatic solitary meningiomas are typically managed with clinical and radiographic follow-up. Multiple meningiomas represents a clinical entity distinct from solitary meningiomas and can be sporadic, radiation-induced, associated with neurofibromatosis, or exhibit other familial inheritance. The growth rate for multiple meningiomas is not known and therefore management of these complicated patients can be difficult. METHODS: A retrospective chart review was performed on 12 patients with a total of 55 meningiomas. Patients with neurofibromatosis were not included. Serial enhanced magnetic resonance imaging was used to determine tumor growth rates. Treatment history was also reviewed and included for analysis. RESULTS: Analysis of all 55 tumors demonstrated an average rate of growth of 0.46 cm³/year (range: -0.57-2.94 cm³/year). In the 23 tumors that received no treatment, the average rate of growth was 0.34 cm³/year (range: -0.03-1.8 cm³/year). Ten of the 23 tumors that received no treatment had no history of cranial irradiation. This group demonstrated a growth rate of 0.44 cm³/year (range: -0.01-1.8 cm³/year). Linear regression analysis did not yield any significant relationship between tumor burden and rates of growth. CONCLUSION: Tumor growth rates in patients with multiple meningiomas did not appear to be higher than reported rates for incidentally found solitary meningiomas. As such, asymptomatic multiple meningioma patients should be managed with clinical and radiographic follow-up.

[766]

TÍTULO / TITLE: - Expanded endoscopic endonasal approaches to skull base meningiomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurol Surg B Skull Base. 2012 Jun;73(3):147-56. doi: 10.1055/s-0032-1301391.

●● Enlace al texto completo (gratis o de pago) [1055/s-0032-1301391](#)

AUTORES / AUTHORS: - Prosser JD; Vender JR; Alleyne CH; Solares CA

INSTITUCIÓN / INSTITUTION: - Department of Otolaryngology, Georgia Health Sciences University, Augusta, Georgia.

RESUMEN / SUMMARY: - Anterior cranial base meningiomas have traditionally been addressed via frontal or frontolateral approaches. However, with the advances in endoscopic endonasal treatment of pituitary lesions, the transphenoidal approach is being expanded to address lesions of the petrous ridge, anterior clinoid, clivus, sella, parasellar region, tuberculum, planum, olfactory groove, and crista galli regions. The expanded endoscopic endonasal approach (EEEA) has the advantage of limiting brain retraction and resultant brain edema, as well as minimizing manipulation of neural structures. Herein, we describe the techniques of transclival, transphenoidal, transplanum, and transcribiform resections of anterior skull base meningiomas. Selected cases are presented.

[767]

TÍTULO / TITLE: - Low-grade meningioma showing nearly equal density with spinal fluid on radiographic images.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+J3s

<http://bmj.com/search.dtl> ●● British Medical J. (BMJ): <> Case Rep. 2013 Jun 21;2013. pii: bcr2013009554. doi: 10.1136/bcr-2013-009554.

●● Enlace al texto completo (gratis o de pago) [1136/bcr-2013-009554](#)

AUTORES / AUTHORS: - Tamura R; Tomita H; Shimizu K; Sugiyama K

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Ashikaga Red Cross Hospital, Ashikaga City, Japan.

RESUMEN / SUMMARY: - A 61-year-old woman had an intracranial tumour that was located on the falx. Meningioma was suspected and the tumour rapidly grew over 1 year. It showed nearly equal density with spinal fluid showing almost no enhancement on radiographic images, like microcystic meningioma. Successful removal of the tumour was achieved. Histopathologically, the tumour was diagnosed as low-grade meningioma. The meningioma had variable sized microcysts and the appearance of solid area was meningothelial meningioma. This is a rare radiographic image for meningothelial meningioma.

[768]

TÍTULO / TITLE: - Intracranial hypertension due to meningioma of the unique transverse sinus.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neuroradiol J. 2013 Apr;26(2):209-12. Epub 2013 May 10.

AUTORES / AUTHORS: - Mariniello G; Giamundo A; Donzelli R; Severino R; Russo C; Elefante A; Maiuri F

INSTITUCIÓN / INSTITUTION: - Department of Neurological Sciences, Section of Neurosurgery, Federico II University of Naples, Naples, Italy. giumarin@unina.it

RESUMEN / SUMMARY: - We describe a 28-year-old woman with intracranial hypertension due to a meningioma invading the unique transverse sinus (with absent contralateral sinus). Clinical remission and normalization of orbital echography were obtained by resection of the intradural tumor and peeling of the dural attachment. In such cases, resection and reconstruction of the involved sinus segment is at high risk of venous infarction. Endovascular stenting of the obstructed sinus is a valid alternative when the stenosis is not remarkable. Single tumor removal may lead to partial sinus decompression and increased venous flow, resulting in long-term clinical remission.

[769]

TÍTULO / TITLE: - Paraneoplastic optic neuropathy associated with cerebellar choroid meningioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Eye (Lond). 2013 Jul 12. doi: 10.1038/eye.2013.150.

●● Enlace al texto completo (gratis o de pago) [1038/eye.2013.150](http://dx.doi.org/10.1038/eye.2013.150)

AUTORES / AUTHORS: - Nakano S; Kanamori A; Nakamura M; Mizukawa K; Negi A

INSTITUCIÓN / INSTITUTION: - Division of Ophthalmology, Kobe University Graduate School of Medicine, Kobe, Japan.

[770]

TÍTULO / TITLE: - Management of meningiomas invading the major dural venous sinuses: operative technique, results, and potential benefit for higher grade tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jul 10. pii: S1878-8750(13)00771-7. doi: 10.1016/j.wneu.2013.06.024.

●● Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.06.024](http://dx.doi.org/10.1016/j.wneu.2013.06.024)

AUTORES / AUTHORS: - Mantovani A; Di Maio S; Ferreira M Jr; Sekhar LN

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery. University of Washington. Harborview Medical Center. Seattle, Washington, USA. Electronic address: alessandra.mantovani@gmail.com.

RESUMEN / SUMMARY: - OBJECTIVE: The optimal surgical management of meningiomas involving the major venous sinuses represents a therapeutic dilemma. The decision is whether to leave a fragment of the lesion and have a higher recurrence rate, especially for WHO II/III tumors, or to attempt total removal and potentially increase risk to the venous circulation. We present the surgical strategies we follow in managing meningiomas involving the major venous sinuses and the potential benefit of these techniques for higher grade tumors. METHODS: Between 2005 and 2013, 38 patients underwent operations. Pre and post-operative data were retrospectively analyzed. The surgical strategies based on sinus invasion are discussed. RESULTS: Meningiomas involved the SSS (26), Torcular Herophili (5), transverse (5) or sigmoid sinus (2). In 13 patients, the sinus was totally occluded, in 9 subtotally (50-95%) and in 14 partially (<50%), while 2 tumors involved the outer layer of the sinus wall. Twenty-seven were WHO grade I meningiomas and 11 grade II. A GTR was achieved in 86.9% of patients, and sinus reconstruction followed in 21 cases: 13 by direct suture and 8 using a patch. Postoperatively, the sinus was patent (52.4%), or narrow but patent (33.3%) in 85.7% of these cases. No deaths and one major postoperative complication occurred, and the mean post-operative KPS score was 88.9 +/- 15.3. Two recurrences (5.3%) occurred during a mean follow-up of 26.05 months. CONCLUSION: The surgical strategies presented, achieving minimal morbidity, support the practice of aggressive removal of tumors invading the sinus, particularly in the case of higher grade meningiomas.

[771]

TÍTULO / TITLE: - Chemotherapy for gliomas in mainland China: An overview.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncol Lett. 2013 May;5(5):1448-1452. Epub 2013 Mar 19.

●● Enlace al texto completo (gratis o de pago) [3892/ol.2013.1264](#)

AUTORES / AUTHORS: - Sai K; Yang QY; Shen D; Chen ZP

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery/Neuro-Oncology, Sun Yat-Sen University Cancer Center, State Key Laboratory of Oncology in South China, Guangzhou 510060, P.R. China.

RESUMEN / SUMMARY: - Chemotherapy is currently the standard treatment modality for malignant gliomas. Many patients with gliomas are treated in mainland China every year. The history and development of chemotherapy for glioma, however, are not well documented. In this study, an extensive literature search of Pubmed and major Chinese electronic databases was performed to identify clinical studies. A total of 210 publications were identified, with a total of 10,105 patients. Among these studies, 76.2% were retrospective and 23.8% were prospective. Chemotherapy was found to have been administered by the Department of Neurosurgery in 143 studies (68.1%). Oral or intravenous administration was found in 55.7% of studies, followed by intra-arterial (26.7%)

and interstitial (15.7%) chemotherapy. Nitrosoureas were the most frequently used chemotherapeutic agents, as found in 133 studies (63.3%). Since 2003, 56 studies on temozolomide (TMZ) have been published. Studies on chemotherapy for gliomas began in the 1970s in mainland China but well-designed randomized controlled trials (RCTs) are rare. Much effort and collaboration should be made to carry out high-quality multicenter RCTs on chemotherapy for gliomas.

[772]

TÍTULO / TITLE: - One-Pot Construction of Functional Mesoporous Silica Nanoparticles for the Tumor-Acidity-Activated Synergistic Chemotherapy of Glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - ACS Appl Mater Interfaces. 2013 Aug 2.

●● Enlace al texto completo (gratis o de pago) [1021/am402082d](https://doi.org/10.1021/am402082d)

AUTORES / AUTHORS: - Li ZY; Liu Y; Wang XQ; Liu LH; Hu JJ; Luo GF; Chen WH; Rong L; Zhang XZ

INSTITUCIÓN / INSTITUTION: - Key Laboratory of Biomedical Polymers of the Ministry of Education & Department of Chemistry, Wuhan University, Wuhan 430072, P. R. China.

RESUMEN / SUMMARY: - Mesoporous silica nanoparticles (MSNs) have proved to be an effective carrier for controlled drug release and can be functionalized easily for use as stimuli-responsive vehicles. Here, a novel intelligent drug-delivery system (DDS), camptothecin (CPT)-loaded and doxorubicin (DOX)-conjugated MSN (CPT@MSN-hyd-DOX), is reported via a facile one-pot preparation for use in synergistic chemotherapy of glioblastoma. DOX was conjugated to MSNs via acid-labile hydrazone bonds, and CPT was loaded in the pores of the MSNs. At pH 6.5 (analogous to the pH in tumor tissues), a fast DOX release was observed that was attributed to the hydrolysis of the hydrazone bonds. In addition, a further burst release of DOX was found at pH 5.0 (analogous to the pH in lyso/endosomes of tumor cells), leading to a strong synergistic effect. In all, CPT and DOX could be delivered simultaneously into tumor cells, and this intelligent DDS has great potential for tumor-triggered drug release for use in the synergistic chemotherapy of tumors.

[773]

TÍTULO / TITLE: - Reporting standards for endovascular chemotherapy of head, neck and CNS tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurointerv Surg. 2013 Jul 4.

●● Enlace al texto completo (gratis o de pago) [1136/neurintsurg-2013-010841](https://doi.org/10.1136/neurintsurg-2013-010841)

AUTORES / AUTHORS: - Fraser JF; Hussain MS; Eskey C; Abruzzo T; Bulsara K; English J; Blackham K; Do HM; Prestigiacomio C; Jayaraman MV; Patsalides A; Kelly M; Sunshine JL; Meyers P

INSTITUCIÓN / INSTITUTION: - Department of Neurological Surgery, University of Kentucky, Lexington, Kentucky, USA.

RESUMEN / SUMMARY: - **BACKGROUND:** The goal of this article is to provide expert consensus recommendations for reporting standards, terminology and definitions when reporting on neurointerventional chemotherapy administration for head and neck tumors. These criteria may be used to design clinical trials, to provide definitions for patient stratification and to permit robust analysis of published data. **METHODS:** This publication represents a consensus document by the Society for Neurointerventional Surgery. A PubMed search was conducted and included articles published in 2002-2011, with the search strategy designed to identify all studies of intra-arterial chemotherapy for tumors of neck and head. Articles were evaluated for evidence class, and recommendations were made using guidelines for evidence-based medicine proposed by a joint committee of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons. Specifically, technical methods, outcome variables and reported complications were highlighted. **RESULTS:** Thirty-five publications were included in the review. While most studies represent class III evidence, there was sufficient concordance to justify level 2 recommendations regarding technical methods for administration of intra-arterial chemotherapy. The data also support level 2 recommendations regarding reporting of particular outcome variables subsumed within broad categories entitled 'Procedure-related', 'Disease control' and 'Survival'. The data support recommendations for the reporting of access site-related, neurologic, head and neck, ocular, hematologic and systemic complications, and also complications related to the percutaneous access site. **CONCLUSIONS:** Intra-arterial chemotherapy is a growing field in interventional neuroradiology. It is important to adopt uniform technical and reporting standards that will allow cross-publication comparisons and facilitate homogeneous practice standards. Published data support such standards, which are vital for the consistent evaluation of future published research.

[774]

TÍTULO / TITLE: - A Bayesian diagnostic system to differentiate glioblastomas from solitary brain metastases.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neuroradiol J. 2013 Apr;26(2):175-83. Epub 2013 May 10.

AUTORES / AUTHORS: - Chen R; Wang S; Poptani H; Melhem ER; Herskovits EH

INSTITUCIÓN / INSTITUTION: - Department of Diagnostic Radiology and Nuclear Medicine, University of Maryland Medical Center, Baltimore, MD 21201, USA. rchen@umm.edu

RESUMEN / SUMMARY: - This paper aimed to construct a Bayesian network-based decision support system to differentiate glioblastomas from solitary metastases, based on multimodality MR examination. We enrolled 51 patients with solitary brain tumors (26 with glioblastomas and 25 with solitary brain metastases). These patients underwent contrast-enhanced T1-weighted magnetic resonance (MR) examination, diffusion tensor imaging (DTI), dynamic susceptibility contrast (DSC) MRI, and fluid-attenuated inversion recovery (FLAIR). We generated a set of MR biomarkers, including relative cerebral blood volume in the enhancing region, and fractional anisotropy measured in the immediate peritumoral area. We then generated a Bayesian network model to represent associations among these imaging-derived predictors, and the group membership variable, (glioblastoma or solitary metastasis). This Bayesian network can be used to classify new patients' tumors based on their MR appearance. The Bayesian network model accurately differentiated glioblastomas from solitary metastases. Prediction accuracy was 0.94 (sensitivity = 0.96, specificity = 0.92) based on leave-one-out cross-validation. The area under the receiver operating characteristic curve was 0.90. A Bayesian network-based decision support system accurately differentiates glioblastomas from solitary metastases, based on MR-derived biomarkers.

[775]

TÍTULO / TITLE: - Signaling pathway and molecular subgroups of medulloblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Int J Clin Exp Pathol. 2013 Jun 15;6(7):1211-22. Print 2013.

AUTORES / AUTHORS: - Li KK; Lau KM; Ng HK

INSTITUCIÓN / INSTITUTION: - Department of Anatomical and Cellular Pathology, The Chinese University of Hong Kong Hong Kong.

RESUMEN / SUMMARY: - Medulloblastoma (MB) is the most common malignant brain tumor in children. Although multimodality treatment regimens including surgery, radiotherapy and chemotherapy have greatly improved disease outcome, about one-third of MB patient remains incurable, and many long-term survivors are suffered from deleterious effects due to aggressive treatment. Understanding the signaling pathways and the genetic mechanisms contributed to MB development would be the key to develop novel therapeutic treatment strategies for improving survival and outcome of MB. In this review, we discuss the biological signaling pathways involved in MB pathogenesis. We also go through the current international consensus of four core MB subgroups namely, SHH, WNT, Group 3, and Group 4. This is adopted based on the knowledge of genomic complexity of MB as analyzed by recent high-throughput genomic

technology. We talk about immunohistochemistry assays established to determine molecular subgroup affiliation. In the last part of review, we discuss how identification of molecular subgroups is going to change our routine disease diagnosis and clinical management.

[776]

TÍTULO / TITLE: - ID3 contributes to cerebrospinal fluid seeding and poor prognosis in medulloblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - BMC Cancer. 2013 Jun 15;13:291. doi: 10.1186/1471-2407-13-291.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-291](#)

AUTORES / AUTHORS: - Phi JH; Choi SA; Lim SH; Lee J; Wang KC; Park SH; Kim SK

INSTITUCIÓN / INSTITUTION: - Division of Pediatric Neurosurgery, Seoul National University Children's Hospital, Seoul, Republic of Korea. nstomas@snu.ac.kr.

RESUMEN / SUMMARY: - BACKGROUND: The inhibitor of differentiation (ID) genes have been implicated as promoters of tumor progression and metastasis in many human cancers. The current study investigated the expression and functional roles of ID genes in seeding and prognosis of medulloblastoma. METHODS: ID gene expression was screened in human medulloblastoma tissues. Knockdown of ID3 gene was performed in medulloblastoma cells in vitro. The expression of metastasis-related genes after ID3 knockdown was assessed. The effect of ID3 knockdown on tumor seeding was observed in an animal model in vivo. The survival of medulloblastoma patients was plotted according to the ID3 expression levels. RESULTS: Significantly higher ID3 expression was observed in medulloblastoma with cerebrospinal fluid seeding than tumors without seeding. Knockdown of ID3 decreased proliferation, increased apoptosis, and suppressed the migration of D283 medulloblastoma cells in vitro. In a seeding model of medulloblastoma, ID3 knockdown in vivo with shRNA inhibited the growth of primary tumors, prevented the development of leptomeningeal seeding, and prolonged animal survival. High ID3 expression was associated with shorter survival of medulloblastoma patients, especially in Group 4 medulloblastomas. CONCLUSIONS: High ID3 expression is associated with medulloblastoma seeding and is a poor prognostic factor, especially in patients with Group 4 tumors. ID3 may represent the metastatic/aggressive phenotype of a subgroup of medulloblastoma.

[777]

TÍTULO / TITLE: - The potential role of Ku80 in primary central nervous system lymphoma as a prognostic factor.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Contemp Oncol (Pozn). 2013;17(1):58-63. doi: 10.5114/wo.2013.33775. Epub 2013 Mar 15.

●● Enlace al texto completo (gratis o de pago) [5114/wo.2013.33775](https://doi.org/10.1186/1745-6215-33775)

AUTORES / AUTHORS: - Li X; He X; Xu X; Song Z; Qian C; Wang J; Wang Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Sir Run Run Shaw Hospital, The Affiliated Hospital of Medical College, Zhejiang University, Hangzhou, P.R. China ; Equal contributors.

RESUMEN / SUMMARY: - The aim of our study was to detect the expression of Ku80 in primary central nervous system lymphoma and to evaluate the relationship between Ku80 expression level and clinical outcomes. Thirty-eight patients with primary central nervous system lymphoma (PCNSL) were included in this retrospective study. The expression of Ku80 in tumor samples was determined by immunohistochemistry. One thousand neoplastic cells per specimen were counted. The expression levels were compared with the clinical data and statistically analyzed. The results of this study show that the expression of Ku80 can be found in the majority of PCNSLs. The mean expression level of Ku80 in 38 PCNSL is 64.1 +/-24.5. A significant difference in Ku80 expression could be found between the age < 65 years group and age >= 65 years group (P = 0.006). Kaplan-Meier analysis revealed that patients who showed a high Ku80 expression had a significantly shorter median survival time (MST) than patients who had low Ku80 expression (P = 0.036). Patients' age, tumor location, and treatment protocol were significantly related to prognosis in PCNSL (P < 0.05). The expression of Ku80 was observed in the majority of PCNSLs. Ku80 was a predictive factor for survival in this study. In addition to Ku80, other clinical variables including age, tumor location and therapeutic protocol are correlated significantly with overall survival.

[778]

TÍTULO / TITLE: - Brainstem Oligodendroglioma in a Puppy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Am Anim Hosp Assoc. 2013 Jul 16.

●● Enlace al texto completo (gratis o de pago) [5326/JAAHA-MS-5924](https://doi.org/10.1186/1745-6215-5924)

AUTORES / AUTHORS: - Mateo I; Orlandi R; Vazquez F; Munoz A

INSTITUCIÓN / INSTITUTION: - Servicio de Neurología, Hospital Clínico Veterinario, Universidad Alfonso X el Sabio, Madrid, España; and Departamento de radiología y Medicina Física, Facultad de Medicina, Universidad Complutense de Madrid, Madrid, España (A.M.).

RESUMEN / SUMMARY: - A 5 mo old male golden retriever presented for evaluation of an acute onset, progressive neurologic disease. Although computed tomography (CT) was unremarkable, MRI identified an ill-defined mass located in the medulla, which was considered likely responsible for the clinical signs. The imaging features closely resembled the classic features of human brainstem gliomas in the pediatric population. Histopathologic examination confirmed the lesion to be an anaplastic oligodendroglioma.

[779]

TÍTULO / TITLE: - p38gamma overexpression in gliomas and its role in proliferation and apoptosis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Sci Rep. 2013;3:2089. doi: 10.1038/srep02089.

●● Enlace al texto completo (gratis o de pago) [1038/srep02089](#)

AUTORES / AUTHORS: - Yang K; Liu Y; Liu Z; Liu J; Liu X; Chen X; Li C; Zeng Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Xiangya Hospital, Central South University, Changsha, 410008, China.

RESUMEN / SUMMARY: - The objective of this study was to confirm the biological role of p38gamma in human gliomas. The expression profiles of p38gamma and hTERT in human glioma samples were detected by Western Blot and immunohistochemistry. RNA interference was performed in U251 cells by p38gamma silencing. Cell proliferation and apoptosis were assayed by CCK-8 and flow cytometric analysis, and then RNA and protein expression levels were measured by real-time RT-PCR and Western Blot, respectively. Telomerase activity assays and Caspase-3,-9 activation assays were also conducted. The results showed p38gamma had a positive correlation with the glioma's malignancy grade and that the treatment of U251 cells with p38gamma-siRNA inhibited proliferation and induced apoptosis. Correspondingly, hTERT expression and telomerase activity were down regulated and Caspase-3 and -9 activities were elevated. In conclusion, p38gamma may serve as an oncogenic factor promoting the growth and progression of gliomas and may become a useful therapeutic target.

[780]

TÍTULO / TITLE: - The Diagnosis and Management of Morton's Neuroma: A Literature Review.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Foot Ankle Spec. 2013 Aug;6(4):307-17. doi: 10.1177/1938640013493464. Epub 2013 Jun 27.

●● Enlace al texto completo (gratis o de pago)

[1177/1938640013493464](#)

AUTORES / AUTHORS: - Jain S; Mannan K

INSTITUCIÓN / INSTITUTION: - Department of Trauma & Orthopaedic Surgery, Scarborough General Hospital, Woodlands Drive, Scarborough, North Yorkshire, YO12 6QL, UK.

RESUMEN / SUMMARY: - Morton's neuroma is a common condition mainly affecting middle aged women, and there are many proposed etiological theories involving chronic repetitive trauma, ischemia, entrapment, and intermetatarsal bursitis. Incorrect terminology suggests that the underlying pathological process is a nerve tumor, although histological examination reveals the presence of inflammatory tissue-that is, perineural fibrosis. The common digital nerve and its branches in the third planter webspace are most commonly affected. Diagnosis

is usually made through history taking and clinical examination but may be aided by ultrasonography and magnetic resonance imaging. Current nonoperative treatment strategies include shoe-wear modifications, custom made orthoses, and injections of local anesthetic agents, sclerosing agents, and steroids. Operative management options primarily involve either nerve decompression or neurectomy. We have reviewed the published literature to evaluate the outcomes of the available diagnostic modalities and treatment options and present an algorithm for clinical practice.

[781]

TÍTULO / TITLE: - Intracranial cysts: an imagery diagnostic challenge.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - ScientificWorldJournal. 2013 May 2;2013:172154. doi: 10.1155/2013/172154. Print 2013.

●● Enlace al texto completo (gratis o de pago) [1155/2013/172154](#)

AUTORES / AUTHORS: - Oprisan A; Popescu BO

INSTITUCIÓN / INSTITUTION: - Department of Neurology, Colentina Clinical Hospital, CDPC, School of Medicine, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania.

RESUMEN / SUMMARY: - Intracerebral cysts and cystic appearing intracerebral masses are common findings at routine cerebral imaging examination. We discuss here the most interesting aspects of some intracerebral cysts encountered in medical practice in terms of imaging, clinical and pathological description, and problems of differential diagnosis. On an almost routine basis, the neurologists have to deal with such differentials. Therefore, we aim to mention here some of the frequently encountered diagnosis problems when a patient presents with a cystic cerebral mass.

[782]

TÍTULO / TITLE: - What is your diagnosis? Cystic mass in the fourth ventricle of the brain of a dog.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Vet Clin Pathol. 2013 Jun 14. doi: 10.1111/vcp.12052.

●● Enlace al texto completo (gratis o de pago) [1111/vcp.12052](#)

AUTORES / AUTHORS: - Spoor MS; Spagnoli ST; Burton EN; Winger FA; Romsland TD; Kuroki K; Wiedmeyer CE

INSTITUCIÓN / INSTITUTION: - Department of Veterinary Pathobiology, Veterinary Medical Diagnostic Laboratory, College of Veterinary Medicine, University of Missouri, Columbia, MO, USA.

[783]

TÍTULO / TITLE: - Effects of pentoxifylline, 7-nitroindazole, and imipramine on tumor necrosis factor-alpha and indoleamine 2,3-dioxygenase enzyme activity in the hippocampus and frontal cortex of chronic mild-stress-exposed rats.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Neuropsychiatr Dis Treat. 2013;9:697-708. doi: 10.2147/NDT.S41020. Epub 2013 May 24.

●● Enlace al texto completo (gratis o de pago) [2147/NDT.S41020](#)

AUTORES / AUTHORS: - Mohamed BM; Aboul-Fotouh S; Ibrahim EA; Shehata H; Mansour AA; Yassin NA; El-Eraky W; Abdel-Tawab AM

INSTITUCIÓN / INSTITUTION: - Department of Pharmacology, National Research Centre, Cairo, Egypt; ; Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, PE, Canada.

RESUMEN / SUMMARY: - **OBJECTIVES:** This study aimed to investigate the role of tumor necrosis factor (TNF)-alpha and the neuronal nitric oxide synthase enzyme in dysregulation of indoleamine 2,3-dioxygenase (IDO) enzyme, and hence serotonin availability in chronic mild stress (CMS), an animal model of depression. **METHODS:** RATS WERE DIVIDED INTO FIVE GROUPS: two control and CMS-exposed for 6 weeks, and another three groups exposed to CMS and administered pentoxifylline 50 mg/kg/day intraperitoneally, 7-nitroindazole 40 mg/kg/day subcutaneously, or imipramine 20 mg/kg/day intraperitoneally for the previous 3 CMS weeks. Rats were assessed for neurochemical and immunohistochemical abnormalities. **RESULTS:** Pentoxifylline-, 7-nitroindazole-, and imipramine-treated rats showed amelioration of CMS-induced behavioral deficits that was accompanied by significant reduction in kynurenine/serotonin molar ratio and nitrates/nitrites in frontal cortex and hippocampus. In the pentoxifylline and 7-nitroindazole groups, serum TNF-alpha was reduced relative to the CMS group (18.54 +/- 0.85 and 19.16 +/- 1.54 vs 26.20 +/- 1.83 pg/mL, respectively; P < 0.05). Exposure to CMS increased TNF-alpha and IDO immunohistochemical staining scores in both hippocampus and midbrain raphe nuclei. 7-Nitroindazole and pentoxifylline significantly (P < 0.05) reduced TNF-alpha immunostaining in hippocampus and raphe nuclei, with significant (P < 0.01) reduction of IDO immunostaining in raphe nuclei. Likewise, imipramine reduced TNF-alpha immunostaining (P < 0.05) in hippocampus. **CONCLUSION:** Neuronal nitric oxide synthase and TNF-alpha may play a concerted role in modulating IDO enzyme activity in CMS-exposed rats and provide additional evidence for possible alternative approaches to switch the neurobiological processes in depression.

[784]

TÍTULO / TITLE: - Coenurus cerebralis Cysts in the Left Lateral Cerebral Ventricle of a Ewe.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Vet Med Sci. 2013 Jul 25.

AUTORES / AUTHORS: - Haridy M; Sakai H; El-Nahass ES; El-Morseay A; Anwar S; Yanai T

INSTITUCIÓN / INSTITUTION: - Department of Pathology and Clinical Pathology, Faculty of Veterinary Medicine, South Valley University.

RESUMEN / SUMMARY: - A three-and-a-half year-old female Rahmani ewe was presented suffering from nervous symptoms. Grossly, a large cyst measuring 7 x 4 cm and weighing 145 g occupied the dilated left lateral ventricle. The overlying cerebral tissue was thin, atrophied and congested. It tore easily, and the cyst was evacuated spontaneously. Microscopically, liquefactive necrosis surrounded by aggregations of macrophages, eosinophils, lymphocytes, fibroblasts and giant cells was predominantly observed. Hyperplasia and severe necrosis of the ependymal cell lining of the lateral ventricle were observed. Extensive subependymal inflammatory cell infiltrations, accompanied by neovascularization and fibroblastic proliferation, were seen. Based on the gross and histopathological lesions and cyst morphology and location, the cyst was diagnosed as *Coenurus cerebralis*. This report describes a rare case of coenurus cyst in the left lateral cerebral ventricle of a ewe and the associated lesion.

[785]

TÍTULO / TITLE: - Computer-aided detection of metastatic brain tumors in magnetic resonance images.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Nihon Hoshasen Gijutsu Gakkai Zasshi. 2013;69(6):632-40.

AUTORES / AUTHORS: - Takenaga T; Uchiyama Y; Hirai T; Nakamura H; Kai Y; Katsuragawa S; Shiraishi J

INSTITUCIÓN / INSTITUTION: - Graduate School of Health Sciences, Kumamoto University.

RESUMEN / SUMMARY: - The fact that accurate detection of metastatic brain tumors is important for making decisions on the treatment course of patients prompted us to develop a computer-aided diagnostic scheme for detecting metastatic brain tumors. In this paper, we first describe how we extracted the cerebral parenchyma region using a standard deviation filter. Second, initial candidates for tumors were decided by sphericity and cross-correlation value with a simulated ring template. Third, we made true positive and false positive templates obtained from actual clinical images and applied the template matching technique to them. Finally, we detected metastatic tumors using these two characteristics. Our improved method was applied to 13 cases with 97 brain metastases. Sensitivity of detection of metastatic brain tumors was 80.4%, with 5.6 false positives per patient. Our proposed method has potential for detection of metastatic brain tumors in brain magnetic resonance (MR) images.

[786]

TÍTULO / TITLE: - Implementing the cellular mechanisms of synaptic transmission in a neural mass model of the thalamo-cortical circuitry.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Front Comput Neurosci. 2013 Jul 4;7:81. doi: 10.3389/fncom.2013.00081. Print 2013.

●● Enlace al texto completo (gratis o de pago) [3389/fncom.2013.00081](#)

AUTORES / AUTHORS: - Bhattacharya BS

INSTITUCIÓN / INSTITUTION: - Engineering Hub, School of Engineering, University of Lincoln Lincoln, UK.

RESUMEN / SUMMARY: - A novel direction to existing neural mass modeling technique is proposed where the commonly used “alpha function” for representing synaptic transmission is replaced by a kinetic framework of neurotransmitter and receptor dynamics. The aim is to underpin neuro-transmission dynamics associated with abnormal brain rhythms commonly observed in neurological and psychiatric disorders. An existing thalamocortical neural mass model is modified by using the kinetic framework for modeling synaptic transmission mediated by glutamatergic and GABA (gamma-aminobutyric-acid)-ergic receptors. The model output is compared qualitatively with existing literature on in vitro experimental studies of ferret thalamic slices, as well as on single-neuron-level model based studies of neuro-receptor and transmitter dynamics in the thalamocortical tissue. The results are consistent with these studies: the activation of ligand-gated GABA receptors is essential for generation of spindle waves in the model, while blocking this pathway leads to low-frequency synchronized oscillations such as observed in slow-wave sleep; the frequency of spindle oscillations increase with increased levels of post-synaptic membrane conductance for AMPA (alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic-acid) receptors, and blocking this pathway effects a quiescent model output. In terms of computational efficiency, the simulation time is improved by a factor of 10 compared to a similar neural mass model based on alpha functions. This implies a dramatic improvement in computational resources for large-scale network simulation using this model. Thus, the model provides a platform for correlating high-level brain oscillatory activity with low-level synaptic attributes, and makes a significant contribution toward advancements in current neural mass modeling paradigm as a potential computational tool to better the understanding of brain oscillations in sickness and in health.

[787]

TÍTULO / TITLE: - Axon Guidance of Sympathetic Neurons to Cardiomyocytes by Glial Cell Line-Derived Neurotrophic Factor (GDNF).

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 3;8(7):e65202. doi: 10.1371/journal.pone.0065202. Print 2013.

●● Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0065202](https://doi.org/10.1371/journal.pone.0065202)

AUTORES / AUTHORS: - Miwa K; Lee JK; Takagishi Y; Opthof T; Fu X; Hirabayashi M; Watabe K; Jimbo Y; Kodama I; Komuro I

INSTITUCIÓN / INSTITUTION: - Department of Cardiovascular Research, Research Institute of Environmental Medicine, Nagoya University, Nagoya, Japan ; Departments of Medical Laboratory Science, Faculty of Health Sciences, Hokkaido University, Sapporo, Japan.

RESUMEN / SUMMARY: - Molecular signaling of cardiac autonomic innervation is an unresolved issue. Here, we show that glial cell line-derived neurotrophic factor (GDNF) promotes cardiac sympathetic innervation in vitro and in vivo. In vitro, ventricular myocytes (VMs) and sympathetic neurons (SNs) isolated from neonatal rat ventricles and superior cervical ganglia were cultured at a close distance. Then, morphological and functional coupling between SNs and VMs was assessed in response to GDNF (10 ng/ml) or nerve growth factor (50 ng/ml). As a result, fractions of neurofilament-M-positive axons and synapsin-I-positive area over the surface of VMs were markedly increased with GDNF by 9-fold and 25-fold, respectively, compared to control without neurotrophic factors. Pre- and post-synaptic stimulation of beta1-adrenergic receptors (BAR) with nicotine and noradrenaline, respectively, resulted in an increase of the spontaneous beating rate of VMs co-cultured with SNs in the presence of GDNF. GDNF overexpressing VMs by adenovirus vector (AdGDNF-VMs) attracted more axons from SNs compared with mock-transfected VMs. In vivo, axon outgrowth toward the denervated myocardium in adult rat hearts after cryoinjury was also enhanced significantly by adenovirus-mediated GDNF overexpression. GDNF acts as a potent chemoattractant for sympathetic innervation of ventricular myocytes, and is a promising molecular target for regulation of cardiac function in diseased hearts.

[788]

TÍTULO / TITLE: - Preliminary results of linac-based radiosurgery in arteriovenous malformations and cerebral tumours in the Oncology Centre in Bydgoszcz.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Contemp Oncol (Pozn). 2013;17(1):29-33. doi: 10.5114/wo.2013.33771. Epub 2013 Mar 15.

●● Enlace al texto completo (gratis o de pago) [5114/wo.2013.33771](https://doi.org/10.5114/wo.2013.33771)

AUTORES / AUTHORS: - Sokal P; Lebioda A; Harat M; Furtak J; Grzela M; Kabacinska R; Makarewicz R; Zielinski P; Windorbska W

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Military Clinical Hospital, Bydgoszcz, Poland.

RESUMEN / SUMMARY: - AIM OF THE STUDY: Efficacy of stereotactic radiosurgery (SRS) in the treatment in cerebral AVM's, meningiomas,

metastases, acoustic neuromas and recurrent anaplastic gliomas is well documented. The object of this work was the analysis of the results of the treatment of AVM and selected cerebral lesions with linear accelerator-based stereotactic radiosurgery. MATERIAL AND METHODS: THE LESIONS INCLUDED: 12 AVMs, 2 cavernomas, 27 meningiomas, 16 metastases, 5 acoustic neuromas, 16 gliomas in 78 patients. A mean radiation dose of 16Gy was delivered to the tumour or AVM margin and 12Gy to the tumours located in a ponto-cerebellar angle. Follow-up was 18 months. RESULTS: Control of tumour growth or AVM was achieved in all cases after 6 months and radiological regression was observed in 20 cases after 12 months. The best results were noted in AVM's, meningiomas and neuromas. There were no new permanent deficits nor complications after radiosurgery requiring medicamentation. CONCLUSIONS: Organization of SRS in Oncological Center in Bydgoszcz involving close co-operation of radiotherapist, neurosurgeon and physicist in the process of qualification and treatment planning is based on the best global standards. Preliminary results of treatment are consistent with the literature data. A longer follow-up is required to determine the long term efficacy and the toxicity of this treatment in our institution.

[789]

TÍTULO / TITLE: - Endoscopic assisted visualisation of 5-ALA induced fluorescence in malignant glioma surgery- a technical note.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jul 16. pii: S1878-8750(13)00773-0. doi: 10.1016/j.wneu.2013.07.002.

●● Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.07.002](#)

AUTORES / AUTHORS: - Rapp M; Kamp M; Steiger HJ; Sabel M

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Heinrich Heine University of Duesseldorf, Germany. Electronic address: marion.rapp@uni-duesseldorf.de.

RESUMEN / SUMMARY: - OBJECTIVE: By the use of fluorescence -guided resection with 5- aminolaevulinic acid (5-ALA) the rate of complete resection of the contrast enhancing part of malignant gliomas could be increased from 36% to 65% percent. Since the visualisation of 5-ALA induced fluorescence is dependent on a sufficient exposure to fluorescent light, residual tumor tissue in deep-seated resection cavities might not be detected. In addition, subcortical parts of a large spherical tumor might not be visualized, due to a tangential position at the periphery of the microscopic field. With the availability of a specially designed endoscope, capable to visualize 5-ALA fluorescence, we were interested in the impact of this new technique on the visualisation of residual glioma tissue. METHODS: 9 patients with deep-seated contrast enhancing brain tumors received a standard dose of 5-ALA 20 mg/kg 3 h prior to surgery. A standard surgical exposure was performed and supplemented by

the use of a specially designed endoscope with an option of 5-ALA fluorescence guidance. After microscopic visualisation of the surgical cavity, endoscopic visualisation was employed. If additional fluorescence tissue was detected, microscopic visualisation was performed and detected remnants of the tumor removed and evaluated by histological examination. RESULTS: In all cases, fluorescence guided endoscopic visualisation identified ALA positive tissue not sufficiently exposed by conventional microscopic visualisation. In eight patients histopathological examination confirmed residual tumor tissue, in one patient the endoscopic visualised tissue was classified as radiation necrosis. In this patient microscopically the tumor was completely ALA negative. CONCLUSION: As additional instrument fluorescence guided endoscopic visualisation might help to overcome technical limitations of the conventional microscopic exposure of 5-ALA positive tumor tissue. The false positive ALA tissue indicates that endoscopic visualisation may overestimate the amount of tumor so further analyses to ascertain the sensitivity and specificity of this technique are essential.

[790]

TÍTULO / TITLE: - Ruptured temporal lobe arachnoid cyst presenting with severe back pain.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Jul 5.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[3171/2013.6.PEDS13122](#)

AUTORES / AUTHORS: - Lohani S; Robertson RL; Proctor MR

INSTITUCIÓN / INSTITUTION: - Departments of Neurosurgery and.

RESUMEN / SUMMARY: - Arachnoid cyst is a common congenital anomaly in the pediatric population. The cysts are often asymptomatic, but they can cause headache and other symptoms. Occasionally a cyst may rupture after head trauma producing a subdural hematoma. The authors present the case of an 11-year-old boy who presented after a week of progressive and severe back pain radiating to the back of his thighs. Imaging revealed a spinal subdural blood collection at the L4-S1 level. This finding prompted further cephalad imaging of the spine and the brain, which revealed a sylvian fissure arachnoid cyst with intracystic hemorrhage and frontoparietal subdural hematoma. The child did not have headache at this time, although he had experienced chronic headaches since the age of 4 years. He was treated with a course of oral steroids, which immediately relieved his back and leg pain. Subsequent imaging showed resolution of the cranial and spinal subdural blood collections and diminished size of the arachnoid cyst. No surgical treatment was necessary.

[791]

TÍTULO / TITLE: - Craniofacial surgery for esthesioneuroblastoma: report of an international collaborative study.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurol Surg B Skull Base. 2012 Jun;73(3):208-20. doi: 10.1055/s-0032-1311754.

●● Enlace al texto completo (gratis o de pago) [1055/s-0032-1311754](#)

AUTORES / AUTHORS: - Patel SG; Singh B; Stambuk HE; Carlson D; Bridger PG; Cantu G; Cheesman AD; Donald P; Fliss D; Gullane P; Kamata SE; Janecka I; Kowalski LP; Kraus DH; Levine PA; Medina LR; Pradhan S; Schramm V; Snyderman C; Wei WI; Shah JP

INSTITUCIÓN / INSTITUTION: - Department of Surgery, Memorial Sloan Kettering Cancer Center, New York.

RESUMEN / SUMMARY: - Introduction Impact of treatment and prognostic indicators of outcome are relatively ill-defined in esthesioneuroblastomas (ENB) because of the rarity of these tumors. This study was undertaken to assess the impact of craniofacial resection (CFR) on outcome of ENB. Patients and Methods Data on 151 patients who underwent CFR for ENB were collected from 17 institutions that participated in an international collaborative study. Patient, tumor, treatment, and outcome data were collected by questionnaires and variables were analyzed for prognostic impact on overall, disease-specific and recurrence-free survival. The majority of tumors were staged Kadish stage C (116 or 77%). Overall, 90 patients (60%) had received treatment before CFR, radiation therapy in 51 (34%), and chemotherapy in 23 (15%). The margins of surgical resection were reported positive in 23 (15%) patients. Adjuvant postoperative radiation therapy was used in 51 (34%) and chemotherapy in 9 (6%) patients. Results Treatment-related complications were reported in 49 (32%) patients. With a median follow-up of 56 months, the 5-year overall, disease-specific, and recurrence-free survival rates were 78, 83, and 64%, respectively. Intracranial extension of the disease and positive surgical margins were independent predictors of worse overall, disease-specific, and recurrence-free survival on multivariate analysis. Conclusion This collaborative study of patients treated at various institutions across the world demonstrates the efficacy of CFR for ENB. Intracranial extension of disease and complete surgical excision were independent prognostic predictors of outcome.

[792]

TÍTULO / TITLE: - Current role and future perspective of molecular studies in pituitary tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Endocrinol Nutr. 2013 Jul 24. pii: S1575-0922(13)00163-0. doi: 10.1016/j.endonu.2013.05.002.

●● Enlace al texto completo (gratis o de pago)

[1016/j.endonu.2013.05.002](#)

AUTORES / AUTHORS: - Mercado M

INSTITUCIÓN / INSTITUTION: - Unidad de Investigación en Endocrinología Experimental, Hospital de Especialidades, Centro Médico Nacional siglo XXI,

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[793]

TÍTULO / TITLE: - Discovery of structural alterations in solid tumor oligodendroglioma by single molecule analysis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - BMC Genomics. 2013 Jul 26;14:505. doi: 10.1186/1471-2164-14-505.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2164-14-505](#)

AUTORES / AUTHORS: - Ray M; Goldstein S; Zhou S; Potamouis K; Sarkar D; Newton MA; Esterberg E; Kendzierski C; Bogler O; Schwartz DC

INSTITUCIÓN / INSTITUTION: - Laboratory for Molecular and Computational Genomics, Department of Chemistry, Laboratory of Genetics, UW Biotechnology Center, University of Wisconsin-Madison, Madison, WI 53706, USA. dcschwartz@facstaff.wisc.edu.

RESUMEN / SUMMARY: - BACKGROUND: Solid tumors present a panoply of genomic alterations, from single base changes to the gain or loss of entire chromosomes. Although aberrations at the two extremes of this spectrum are readily defined, comprehensive discernment of the complex and disperse mutational spectrum of cancer genomes remains a significant challenge for current genome analysis platforms. In this context, high throughput, single molecule platforms like Optical Mapping offer a unique perspective. RESULTS: Using measurements from large ensembles of individual DNA molecules, we have discovered genomic structural alterations in the solid tumor oligodendroglioma. Over a thousand structural variants were identified in each tumor sample, without any prior hypotheses, and often in genomic regions deemed intractable by other technologies. These findings were then validated by comprehensive comparisons to variants reported in external and internal databases, and by selected experimental corroborations. Alterations range in size from under 5 kb to hundreds of kilobases, and comprise insertions, deletions, inversions and compound events. Candidate mutations were scored at sub-genic resolution and unambiguously reveal structural details at aberrant loci. CONCLUSIONS: The Optical Mapping system provides a rich description of the complex genomes of solid tumors, including sequence level aberrations, structural alterations and copy number variants that power generation of functional hypotheses for oligodendroglioma genetics.

[794]

TÍTULO / TITLE: - CARP-1 functional mimetics: a novel class of small molecule inhibitors of medulloblastoma cell growth.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 24;8(6):e66733. doi: 10.1371/journal.pone.0066733. Print 2013.

- Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0066733](https://doi.org/10.1371/journal.pone.0066733)

AUTORES / AUTHORS: - Ashour AE; Jamal S; Cheryan VT; Muthu M; Zoheir KM; Alafeefy AM; Abd-Allah AR; Levi E; Tarca AL; Polin LA; Rishi AK

INSTITUCIÓN / INSTITUTION: - Department of Pharmacology and Toxicology, College of Pharmacy, King Saud University, Riyadh, Kingdom of Saudi Arabia.

RESUMEN / SUMMARY: - Medulloblastomas (MBs) constitute an aggressive class of intracranial pediatric tumors. Current multimodality treatments for MBs include surgery, ionizing radiation, and chemotherapy. Toxic side effects of therapies coupled with high incidence of recurrence and the metastatic spread warrant development of more effective, less toxic therapies for this disease. CARP-1/CCAR1 is a peri-nuclear phospho-protein that is a co-activator of the cell cycle regulatory anaphase promoting complex/cyclosome (APC/C) E3 ligase. CARP-1 functional mimetics (CFMs) are a novel class of small molecule compounds that interfere with CARP-1 binding with APC/C subunit APC-2, and suppress growth of a variety of cancer cells in part by promoting apoptosis. Here we investigated MB growth inhibitory potential of the CFMs and found that CFM-4 inhibits growth of MB cells in part by inducing CARP-1 expression, promoting PARP cleavage, activating pro-apoptotic stress-activated protein kinases (SAPK) p38 and JNK, and apoptosis. Gene-array-based analysis of the CFM-4-treated Daoy MB cells indicated down-regulation of a number of key cell growth and metastasis-promoting genes including cell motility regulating small GTP binding protein p21Rac1, and extracellular matrix metalloproteinase (MMP)-10. Moreover, CFM-4 treatment stimulated expression of a number of molecules such as neurotrophin (NTF)3, and NF-kappaB signaling inhibitors ABIN1 and 2 proteins. Overexpression of NTF3 resulted in reduced MB cell viability while knock-down of NTF3 interfered with CFM-4-dependent loss of viability. CFMs also attenuated biological properties of the MB cells by blocking their abilities to migrate, form colonies in suspension, and invade through the matrix-coated membranes. Together our data support anti-MB properties of CFM-4, and provide a proof-of-concept basis for further development of CFMs as potential anti-cancer agents for MBs.

[795]

TÍTULO / TITLE: - A Molecular Predictor Reassesses Classification of Human Grade II/III Gliomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 21;8(6):e66574. Print 2013.

- Enlace al texto completo (gratis o de pago)

[1371/journal.pone.0066574](https://doi.org/10.1371/journal.pone.0066574)

AUTORES / AUTHORS: - Reme T; Hugnot JP; Bieche I; Rigau V; Burel-Vandenbos F; Prevot V; Baroncini M; Fontaine D; Chevassus H; Vacher S; Lidereau R; Duffau H; Bauchet L; Joubert D

INSTITUCIÓN / INSTITUTION: - INSERM-UM1 U1040; CHRU Montpellier, Institute of Research in Biotherapy, Montpellier, France.

RESUMEN / SUMMARY: - Diffuse gliomas are incurable brain tumors divided in 3 WHO grades (II; III; IV) based on histological criteria. Grade II/III gliomas are clinically very heterogeneous and their prognosis somewhat unpredictable, preventing definition of appropriate treatment. On a cohort of 65 grade II/III glioma patients, a QPCR-based approach allowed selection of a biologically relevant gene list from which a gene signature significantly correlated to overall survival was extracted. This signature clustered the training cohort into two classes of low and high risk of progression and death, and similarly clustered two external independent test cohorts of 104 and 73 grade II/III patients. A 22-gene class predictor of the training clusters optimally distinguished poor from good prognosis patients (median survival of 13-20 months versus over 6 years) in the validation cohorts. This classification was stronger at predicting outcome than the WHO grade II/III classification ($P \leq 2.8E-10$ versus 0.018). When compared to other prognosis factors (histological subtype and genetic abnormalities) in a multivariate analysis, the 22-gene predictor remained significantly associated with overall survival. Early prediction of high risk patients (3% of WHO grade II), and low risk patients (29% of WHO grade III) in clinical routine will allow the development of more appropriate follow-up and treatments.

[796]

TÍTULO / TITLE: - Paeonia lactiflora Extract Attenuating Cerebral Ischemia and Arterial Intimal Hyperplasia Is Mediated by Paeoniflorin via Modulation of VSMC Migration and Ras/MEK/ERK Signaling Pathway.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Evid Based Complement Alternat Med.

2013;2013:482428. doi: 10.1155/2013/482428. Epub 2013 Jun 2.

●● Enlace al texto completo (gratis o de pago) [1155/2013/482428](#)

AUTORES / AUTHORS: - Chen YF; Wu KJ; Wood WG

INSTITUCIÓN / INSTITUTION: - Department of Pharmacology, China Medical University, No. 91 Hsueh-Shih Road, Taichung 40402, Taiwan ; Department of Pharmacy, China Medical University Hospital, No. 2 Yu-Der Road, Taichung 40447, Taiwan.

RESUMEN / SUMMARY: - Paeonia lactiflora is a well-known traditional Chinese medicine. Paeoniflorin is an active component found in Paeonia lactiflora, which is used to treat smooth muscle spasms and pain and to protect the cardiovascular system. The objective of this study was to determine if Paeonia lactiflora would be protective in rodent models of cerebral ischemia and arterial intimal hyperplasia. Paeonia lactiflora extract (PLex) and paeoniflorin (PF) significantly attenuated cerebral infarction in ischemia/reperfusion injury rats and the severity of intimal hyperplasia in mice where the carotid artery was ligated. PLex and PF reduced PDGF-stimulated VSMC proliferation and

migration in a dose-dependent manner by MTT, wound healing, and transwell assays. PF significantly reduced protein levels of Ras, MEK, p-MEK and p-ERK, but not MMP-2 and MMP-9. In summary, *Paeonia lactiflora* reduced cerebral ischemia and arterial intimal hyperplasia which were mainly made via the intermediary of PF. The protective effect of PF was related to the modulation of the Ras/MEK/ERK signaling pathway.

[797]

TÍTULO / TITLE: - Synergistic Antitumor Effect between Gefitinib and Fractionated Irradiation in Anaplastic Oligodendrogliomas Cannot Be Predicted by the Egfr Signaling Activity.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jul 18;8(7):e68333. doi: 10.1371/journal.pone.0068333. Print 2013.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1371/journal.pone.0068333](#)

AUTORES / AUTHORS: - Pinel S; Mriouah J; Vandamme M; Chateau A; Plenat F; Guerin E; Taillandier L; Bernier-Chastagner V; Merlin JL; Chastagner P

INSTITUCIÓN / INSTITUTION: - Universite de Lorraine, CRAN, UMR 7039, Campus Science, Vandoeuvre-les-Nancy, France ; CNRS, CRAN, UMR 7039, Vandoeuvre-les-Nancy, France.

RESUMEN / SUMMARY: - In high-grade gliomas, the identification of patients that could benefit from EGFR inhibitors remains a challenge, hindering the use of these agents. Using xenografts models, we evaluated the antitumor effect of the combined treatment “gefitinib + radiotherapy” and aimed to identify the profile of responsive tumors. Expression of phosphorylated proteins involved in the EGFR-dependent signaling pathways was analyzed in 10 glioma models. We focused on three models of anaplastic oligodendrogliomas (TCG2, TCG3 and TCG4) harboring high levels of phospho-EGFR, phospho-AKT and phospho-MEK1. They were treated with gefitinib (GEF 75 mg/kg/day x 5 days/week, for 2 weeks) and/or fractionated radiotherapy (RT: 5x2Gy/week for 2 weeks). Our results showed that GEF and/or RT induced significant tumor growth delays. However, only the TCG3 xenografts were highly responsive to the combination GEF+RT, with approximately 50% of tumor cure. Phosphoproteins analysis five days after treatment onset demonstrated in TCG3 xenografts, but not in TCG2 model, that the EGFR-dependent pathways were inhibited after GEF treatment. Moreover, TCG3-bearing mice receiving GEF monotherapy exhibited a transient beneficial therapeutic response, rapidly followed by tumor regrowth, along with a major vascular remodeling. Taken together, our data evoked an “EGFR-addictive” behavior for TCG3 tumors. This study confirms that combination of gefitinib with fractionated irradiation could be a potent therapeutic strategy for anaplastic oligodendrogliomas harboring EGFR abnormalities but this treatment seems mainly beneficial for “EGFR-addictive” tumors. Unfortunately, neither the usual molecular markers (EGFR

amplification, PTEN loss) nor the basal overexpression of phosphoproteins were useful to distinguish this responsive tumor. Evaluating the impact of TKIs on the EGFR-dependent pathways during the treatment might be more relevant, and requires further validation.

[798]

TÍTULO / TITLE: - A Filipino male with encephalocraniocutaneous lipomatosis (Haberland's syndrome).

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Dermatol Case Rep. 2013 Jun 30;7(2):46-8. doi: 10.3315/jdcr.2013.1137. Print 2013 Jun 30.

●● Enlace al texto completo (gratis o de pago) [3315/jdcr.2013.1137](#)

AUTORES / AUTHORS: - Pardo IA; Nicolas ME

INSTITUCIÓN / INSTITUTION: - Section of Dermatology, Department of Medicine, University of the Philippines-Philippine General Hospital (UP-PGH), Manila, Philippines;

RESUMEN / SUMMARY: - BACKGROUND: Encephalocraniocutaneous lipomatosis (ECCL), also known as Haberland's Syndrome, is a sporadically occurring neurocutaneous syndrome with no gender or race predilection. ECCL patients present with a broad spectrum of clinical manifestations, often in a unilateral distribution. The hallmark of ECCL is the nevus psiloliparus, a soft, bulging, lipomatous scalp lesion, with associated alopecia. MAIN OBSERVATIONS: We describe a case of a 2-month-old Filipino male with a soft, ill-defined mass with associated alopecia on the fronto-parietal scalp. Biopsy revealed findings consistent with a nevus psiloliparus. The patient also presented with a lipomatous nodule on the right temple, as well as choristomas and a coloboma on the right eye. He had no history of seizures and development was at par with age. CONCLUSION: Recognition of ECCL is important in order to work-up the patient for concomitant problems, such as central nervous system and cardiac anomalies, and employ a multidisciplinary approach in the management of these patients.

[799]

TÍTULO / TITLE: - Paediatrics: Surgical strategy and quality of life in craniopharyngioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Nat Rev Endocrinol. 2013 Aug;9(8):447-9. doi: 10.1038/nrendo.2013.125. Epub 2013 Jun 25.

●● Enlace al texto completo (gratis o de pago) [1038/nrendo.2013.125](#)

AUTORES / AUTHORS: - Muller HL

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[800]

TÍTULO / TITLE: - Standardized Uptake Value in High Uptake Area on Positron Emission Tomography with F-FRP170 as a Hypoxic Cell Tracer Correlates with Intratumoral Oxygen Pressure in Glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Mol Imaging Biol. 2013 Jul 20.

●● Enlace al texto completo (gratis o de pago) [1007/s11307-013-0670-](http://dx.doi.org/10.1007/s11307-013-0670-7)

[7](#)

AUTORES / AUTHORS: - Beppu T; Terasaki K; Sasaki T; Fujiwara S; Matsuura H; Ogasawara K; Sera K; Yamada N; Uesugi N; Sugai T; Kudo K; Sasaki M; Ehara S; Iwata R; Takai Y

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Iwate Medical University, Uchimarui 19-1, Morioka, 020-8505, Japan, tbeppu@iwate-med.ac.jp.

RESUMEN / SUMMARY: - PURPOSE: The aim of this study was to clarify the reliability of positron emission tomography (PET) using a new hypoxic cell tracer, 1-(2-[¹⁸F]fluoro-1-[hydroxymethyl]ethoxy)methyl-2-nitroimidazole (18F-FRP170). PROCEDURES: Twelve patients with glioblastoma underwent 18F-FRP170 PET before tumor resection. Mean standardized uptake value (SUV) and normalized SUV were calculated at regions within a tumor showing high (high-uptake area) and relatively low (low-uptake area) accumulations of 18F-FRP170. In these areas, intratumoral oxygen pressure (tpO₂) was measured using microelectrodes during tumor resection. RESULTS: Mean tpO₂ was significantly lower in the high-uptake area than in the low-uptake area. A significant negative correlation was evident between normalized SUV and tpO₂ in the high-uptake area. CONCLUSION: The present findings suggest that high accumulation on 18F-FRP170 PET represents viable hypoxic tissues in glioblastoma.

[801]

TÍTULO / TITLE: - The Impact of the Benign Brain Tumor Cancer Registries Amendment Act (Public Law 107-260) on Non-malignant Brain and Central Nervous System Tumor Incidence Trends.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Registry Manag. 2013 Spring;40(1):32-5.

AUTORES / AUTHORS: - McCarthy BJ; Kruchko C; Dolecek TA

RESUMEN / SUMMARY: - The study objective was to investigate patterns of reported non-malignant brain and CNS tumor incidence over a time period encompassing 1997-2008 during which time the Benign Brain Tumor Cancer Registries Amendment Act (PL 107-260) was passed and implemented. Analyses of 75,350 incident non-malignant brain and CNS tumors from eleven population-based central registries revealed that there were statistically significant increases in the age-adjusted incidence rate for non-malignant tumors for those diagnosed prior to 2002 and over the time period from 2002

until 2005. However, no significant change in the age-adjusted incidence rate for non-malignant tumors was observed over the time period 2005 to 2008 indicating that the incidence from this time period may quantify the “true” incidence of non-malignant brain and CNS tumors in the United States.

[802]

TÍTULO / TITLE: - Olfactory dysfunction as first presenting symptom of cranial fibrous dysplasia.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+J3s

<http://bmj.com/search.dtl> ●● British Medical J. (BMJ): <> Case Rep. 2013 Jul 26;2013. pii: bcr2013200432. doi: 10.1136/bcr-2013-200432.

●● [Enlace al texto completo \(gratis o de pago\) 1136/bcr-2013-200432](#)

AUTORES / AUTHORS: - Tsakiropoulou E; Konstantinidis I; Chatziavramidis A; Konstantinidis J

INSTITUCIÓN / INSTITUTION: - 2nd Academic ENT Department, Aristotle University of Thessaloniki, Papageorgiou General Hospital, Thessaloniki, Greece.

RESUMEN / SUMMARY: - Fibrous dysplasia (FD) is a benign bone disorder presenting with a variety of clinical manifestations. This is the first reported case of anosmia as presenting symptom of FD. We present the case of a 72-year-old female patient with a progressive olfactory dysfunction. Clinical examination revealed evidence of chronic rhinosinusitis; therefore the patient was treated with a course of oral corticosteroids. The patient had no improvement in her olfactory ability and imaging studies were ordered. Bony lesions characteristic of craniofacial FD were found, causing obstruction of the central olfactory pathway. This case emphasises the need to conduct further investigations in patients with rhinosinusitis and olfactory dysfunction especially when they present no response to oral steroid treatment.

[803]

TÍTULO / TITLE: - Mechlorethamine Based Drug Structures for Intervention of Central Nervous System Tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cent Nerv Syst Agents Med Chem. 2013 May 30;13.

AUTORES / AUTHORS: - Bartzatt R

INSTITUCIÓN / INSTITUTION: - University of Nebraska College of Arts & Sciences DurhamScience Center 6001Dodge Street Omaha,Nebraska 68182 USA.

RESUMEN / SUMMARY: - Spinal cord and brain tumors are the thirdmost common types of childhood cancers. Brain tumors do occur in children and adults, however pediatric treatmentrequires a different regimen. Thirteen analogous drugs of mechlorethamine presented here possess molecular properties enabling substantialand successful access totumors of the central nervous system. All compounds exhibitzero violations of Rule of5indicating favorable

bioavailability. The range in Log P, formula weight, and polar surface area for these compounds are: 1.554 to 3.52, 156.06 to 460.45, and 3.238 Angstroms² to 45.471 Angstroms², respectively. Hierarchical cluster analysis determined that agents 7 and 12 are most similar to the parent compound mechlorethamine. The mean values of Log P, formula weight, polar surface area, and molecular volume are 2.25, 268.51, 16.57 Angstroms², and 227.01 Angstroms³, respectively. Principal component analysis indicated that agents 7 and 12 are most similar to mechlorethamine and multiple regression analysis of molecular properties produced a model to enable the design of similar alkylating agents. Their chemical properties effectuate a very high total permeation into the central nervous system as measured Log (C_{brain}/C_{blood}).

[804]

TÍTULO / TITLE: - Hepatic paraganglioma and multifocal gastrointestinal stromal tumor in a female: Incomplete Carney triad.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World J Gastrointest Surg. 2013 Jul 27;5(7):229-32. doi: 10.4240/wjgs.v5.i7.229.

●● Enlace al texto completo (gratis o de pago) 4240/wjgs.v5.i7.229

AUTORES / AUTHORS: - Hong SW; Lee WY; Lee HK

INSTITUCIÓN / INSTITUTION: - Seong Woo Hong, Woo Yong Lee, Department of Surgery, Seoul Paik Hospital, Inje University College of Medicine, Seoul 100-032, South Korea.

RESUMEN / SUMMARY: - The Carney triad (CT) describes the coexistence of multiple neoplasms including gastrointestinal stromal tumors (GISTs), extra-adrenal paraganglioma and pulmonary chondroma. At least two neoplastic tumors are required for diagnosis. In most cases, however, CT is incomplete. We report a case of an incomplete CT in a 34-year-old woman with a multifocal GIST and non-functional paraganglioma of the liver. Preoperative evaluation with a gastrofiberscope and abdominal computed tomography revealed multiple gastric tumors resembling GISTs and a single liver lesion which was assumed to have metastasized from the gastric tumors. The patient underwent total gastrectomy and partial hepatectomy. Histologic findings confirmed multiple gastric GISTs and paraganglioma of the liver. We report a case of a patient with incomplete expression of CT.

[805]

TÍTULO / TITLE: - Reconstruction of the median anterior skull base with an intracranial free radial forearm flap after recurrent resection of tumour.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Plast Surg Hand Surg. 2013 Jul 8.

●● Enlace al texto completo (gratis o de pago)

3109/2000656X.2013.779795

AUTORES / AUTHORS: - Duchateau NC; Komen N; Dua G; Mertens M; M Colpaert SD

INSTITUCIÓN / INSTITUTION: - Department of Plastic, Reconstructive and Aesthetic Surgery.

RESUMEN / SUMMARY: - Abstract We report a case of a median anterior skull base defect that was reconstructed with a free radial forearm flap. The flap was used intracranially, whereas the vascular anastomosis was made extracranially, with the pedicle running through a burr hole in the skull. This technique was successful in sealing the skull base from the nasal cavity and preventing leakage of cerebrospinal fluid, infection, or herniation of brain tissue. We report the reconstructive procedure, an overview of other options, and the reasons for the decisions in this case.

[806]

TÍTULO / TITLE: - Neural stem cell sparing by linac based intensity modulated stereotactic radiotherapy in intracranial tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Radiat Oncol. 2013 Jul 24;8:187. doi: 10.1186/1748-717X-8-187.

●● Enlace al texto completo (gratis o de pago) [1186/1748-717X-8-187](#)

AUTORES / AUTHORS: - Oehler J; Brachwitz T; Wendt TG; Banz N; Walther M; Wiezorek T

INSTITUCIÓN / INSTITUTION: - Department of Radiation Oncology, Jena University Hospital, Friedrich-Schiller-University Jena, Bachstrasse 18, Jena, D-07743, Germany. Thomas.Wendt@med.uni-jena.de.

RESUMEN / SUMMARY: - BACKGROUND: Neurocognitive decline observed after radiotherapy (RT) for brain tumors in long time survivors is attributed to radiation exposure of the hippocampus and the subventricular zone (SVZ). The potential of sparing capabilities for both structures by optimized intensity modulated stereotactic radiotherapy (IMSRT) is investigated. METHODS: Brain tumors were irradiated by stereotactic 3D conformal RT or IMSRT using m3 collimator optimized for PTV and for sparing of the conventional OARs (lens, retina, optic nerve, chiasm, cochlea, brain stem and the medulla oblongata). Retrospectively both hippocampi and SVZ were added to the list of OAR and their dose volume histograms were compared to those from two newly generated IMSRT plans using 7 or 14 beamlets (IMSRT-7, IMSRT-14) dedicated for optimized additional sparing of these structures. Conventional OAR constraints were kept constant. Impact of plan complexity and planning target volume (PTV) topography on sparing of both hippocampi and SVZ, conformity index (CI), the homogeneity index (HI) and quality of coverage (QoC) were analyzed. Limits of agreement were used to compare sparing of stem cell niches with either IMSRT-7 or IMSRT-14. The influence of treatment technique related to the topography ratio between PTV and OARs, realized in group A-D, was assessed by a mixed model. RESULTS: In 47 patients CI ($p \leq 0.003$)

and HI ($p < 0.001$) improved by IMSRT-7, IMSRT-14, QoC remained stable ($p \geq 0.50$) indicating no compromise in radiotherapy. 90% of normal brain was exposed to a significantly higher dose using IMSRT. IMSRT-7 plans resulted in significantly lower biologically effective doses at all four neural stem cell structures, while contralateral neural stem cells are better spared compared to ipsilateral. A further increase of the number of beamlets (IMSRT-14) did not improve sparing significantly, so IMSRT-7 and IMSRT-14 can be used interchangeable. Patients with tumors contacting neither the subventricular zone nor the cortex benefit most from IMSRT ($p < 0.001$). CONCLUSION: The feasibility of neural stem cell niches sparing with sophisticated linac based inverse IMSRT with 7 beamlets in an unselected cohort of intracranial tumors in relation to topographic situation has been demonstrated. Clinical relevance testing neurotoxicity remains to be demonstrated.

[807]

TÍTULO / TITLE: - Malignant teratoid medulloepithelioma with retinoblastic and rhabdomyoblastic differentiation.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J AAPOS. 2013 Jun;17(3):328-31. doi: 10.1016/j.jaapos.2013.02.005.

- Enlace al texto completo (gratis o de pago)

[1016/j.jaapos.2013.02.005](#)

AUTORES / AUTHORS: - Earl JB; Minckler DS; Lee TC; Murphree AL

INSTITUCIÓN / INSTITUTION: - The Gavin Herbert Eye Institute, University of California-Irvine Medical Center, Orange, California.

RESUMEN / SUMMARY: - We describe an unusual case of malignant teratoid medulloepithelioma in which distinct populations of tumor cells with different immunohistochemical staining patterns existed within the same eye. A neuroblastic population exhibited atypical features of retinoblastoma, including organization into pseudo-Flexner-Wintersteiner and Homer-Wright rosettes. Other populations evolved in strikingly different patterns, with large fields of cells resembling astrocytes and intervening streams of spindle cells that suggested smooth muscle. The spindle cell population was negative for smooth muscle antigen but stained positively for desmin, myoglobin, and myogenin. Under high magnification, the desmin, myoglobin, and myogenin-staining cells exhibited striations consistent with skeletal muscle differentiation.

[808]

TÍTULO / TITLE: - Pure intraventricular origin of gliosarcoma - a rare entity.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Turk Neurosurg. 2013;23(3):392-4. doi: 10.5137/1019-5149.JTN.5436-12.0.

●● Enlace al texto completo (gratis o de pago) [5137/1019-5149.JTN.5436-12.0](#)

AUTORES / AUTHORS: - Sarkar H; K S; Ghosh S

INSTITUCIÓN / INSTITUTION: - Apollo Speciality Hospital, Department of Neurosurgery, Chennai, India. hreshikesh.sarkar@hotmail.com

RESUMEN / SUMMARY: - Gliosarcomas (GS) are high grade, rare tumours. Radiologically they are seen as a surfacing lesion, often having a thick dural attachment located within the parenchyma of the brain. We report a very unusual case of an intraventricular non-parenchymal gliosarcoma in a 60-year old female. Magnetic resonance imaging of the brain revealed a well defined brilliantly enhancing mass located in the septal region and extending into the body and the frontal horn of the lateral ventricle on either side. The mass was isointense on T1-weighted sequences and hypointense on T2-weighted sequences. Very few reports that describe this entity exist and our case report adds to the sparse literature.

[809]

TÍTULO / TITLE: - Surgical management of giant transdural glomus jugulare tumors with cerebellar and brainstem compression.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurol Surg B Skull Base. 2012 Jun;73(3):197-207. doi: 10.1055/s-0032-1312707.

●● Enlace al texto completo (gratis o de pago) [1055/s-0032-1312707](#)

AUTORES / AUTHORS: - Carlson ML; Driscoll CL; Garcia JJ; Janus JR; Link MJ

INSTITUCIÓN / INSTITUTION: - Department of Otolaryngology-Head and Neck Surgery, Mayo Clinic School of Medicine, Rochester, Minnesota, United States.

RESUMEN / SUMMARY: - Objective The objective of this study is to discuss the management of advanced glomus jugulare tumors (GJTs) presenting with intradural disease and concurrent brainstem compression. Study Design This is a retrospective case series. Results Over the last decade, four patients presented to our institution with large (Fisch D2; Glasscock-Jackson 4) primary or recurrent GJTs resulting in brainstem compression of varying severities. All patients underwent surgical resection through a transtemporal, transcervical approach resulting in adequate brainstem decompression; the average operative time was 12.75 hours and the estimated blood loss was 2.7 L. All four patients received postoperative adjuvant radiotherapy in the form of intensity-modulated radiation therapy or stereotactic radiosurgery. Combined modality treatment permitted tumor control in all patients (range of follow-up 5 to 9 years). Conclusion A small subset of GJTs may present with intracranial transdural extension with aggressive brainstem compression mandating surgical intervention. Surgical resection is extremely challenging; the surgical team must be prepared for extensive operating time and the patient for prolonged aggressive rehabilitation. Newly diagnosed and recurrent large GJTs involving the brainstem may be controlled with a combination of aggressive surgical resection and postoperative radiation.

[810]

TÍTULO / TITLE: - Abundance of Flt3 and its ligand in astrocytic tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Onco Targets Ther. 2013 May 24;6:555-61. doi: 10.2147/OTT.S43114. Print 2013.

●● Enlace al texto completo (gratis o de pago) [2147/OTT.S43114](#)

AUTORES / AUTHORS: - Essbach C; Andrae N; Pachow D; Warnke JP; Wilisch-Neumann A; Kirches E; Mawrin C

INSTITUCIÓN / INSTITUTION: - Department of Neuropathology, Otto-von-Guericke University, Magdeburg.

RESUMEN / SUMMARY: - BACKGROUND: Molecular targeted therapies for astrocytic tumors are the subject of growing research interest, due to the limited response of these tumors, especially glioblastoma multiforme, to conventional chemotherapeutic regimens. Several of these approaches exploit the inhibition of receptor tyrosine kinases. To date, it has not been elucidated if fms-like tyrosine kinase-3 (Flt3) and its natural ligand (Flt3L) are expressed in astrocytic tumors, although some of the clinically intended small-molecule receptor tyrosine kinase inhibitors affect Flt3, while others do not. More importantly, the recent proof of principle for successful stimulation of the immune system against gliomas in preclinical models via local Flt3L application requires elucidation of this receptor tyrosine kinase pathway in these tumors in more detail. This therapy is based on recruitment of Flt3-positive dendritic cells, but may be corroborated by activity of this signaling pathway in glioma cells. METHODS: Receptor and ligand expression was analyzed by real-time polymerase chain reaction in 31 astrocytic tumors (six diffuse and 11 anaplastic astrocytomas, 14 glioblastomas) derived from patients of both genders and in glioblastoma cell lines. The two most common activating mutations of the Flt3 gene, ie, internal tandem duplication and D835 point mutation, were assessed by specific polymerase chain reaction. RESULTS: A relatively high abundance of Flt3L mRNA (4%-6% of the reference, b2 microglobulin) could be demonstrated in all tumor samples. Flt3 expression could generally be demonstrated by 40 specific polymerase chain reaction cycles and gel electrophoresis in 87% of the tumors, including all grades, although the small quantities of the receptor did not allow reliable quantification. Expression of both mRNAs was verified in the cell lines, excluding a derivation solely from contaminating lymphocytes or macrophages. No activating mutations were found. CONCLUSION: Our results warrant further analysis of endogenous Flt3 signaling in these tumors prior to application of immunotherapy in human patients.

[811]

TÍTULO / TITLE: - FOXP3, a novel glioblastoma oncosuppressor, affects proliferation and migration.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncotarget. 2012 Sep 22;3(10):1146-57. Print 2012 Oct.

AUTORES / AUTHORS: - Frattini V; Pisati F; Speranza MC; Poliani PL; Frige G; Cantini G; Kapetis D; Cominelli M; Rossi A; Finocchiaro G; Pellegatta S

INSTITUCIÓN / INSTITUTION: - Unit of Molecular Neuro-Oncology, Fondazione I.R.C.C.S. Istituto Neurologico C. Besta, Milan, Italy ; Department of Experimental Oncology, European Institute of Oncology - Campus IFOM-IEO, Milan, Italy.

RESUMEN / SUMMARY: - The transcription factor FOXP3 plays an essential role in regulatory T cell development and function. In addition, it has recently been identified as a tumor suppressor in different cancers. Here, we report that FOXP3 is expressed in normal brain but strongly down-regulated in glioblastoma (GB) and in corresponding GB stem-like cells growing in culture as neurospheres (GB-NS), as evaluated by real time-PCR and confirmed by immunohistochemistry on an independent set of GB. FOXP3 expression was higher in low-grade gliomas than in GB. Interestingly, we also found that neurosphere generation, a feature present in 58% of the GB that we examined, correlated with lower expression of FOXP3 and shorter patient survival. FOXP3 silencing in one GB-NS expressing measurable levels of the gene caused a significant increase in proliferation and migration as well as highly aggressive growth in xenografts. Conversely, FOXP3 over-expression impaired GB-NS migration and proliferation in vitro. We also demonstrated using ChiP that FOXP3 is a transcriptional regulator of p21 and c-MYC supporting the idea that dysregulated expression of these factors is a major mechanism of tumorigenesis driven by the loss of FOXP3 expression in gliomas. These findings support the assertion that FOXP3 exhibits tumor suppressor activity in glioblastomas.

[812]

TÍTULO / TITLE: - Blockade of Glioma Proliferation Through Allosteric Inhibition of JAK2.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Sci Signal. 2013 Jul 9;6(283):ra55. doi: 10.1126/scisignal.2003900.

●● Enlace al texto completo (gratis o de pago) 1126/scisignal.2003900

AUTORES / AUTHORS: - He K; Qi Q; Chan CB; Xiao G; Liu X; Tucker-Burden C; Wang L; Mao H; Lu X; McDonald FE; Luo H; Fan QW; Weiss WA; Sun SY; Brat DJ; Ye K

INSTITUCIÓN / INSTITUTION: - 1Department of Pathology and Laboratory Medicine, Emory University School of Medicine, Atlanta, GA 30322, USA.

RESUMEN / SUMMARY: - The gene that encodes the epidermal growth factor receptor (EGFR) is frequently overexpressed or mutated in human cancers, including glioblastoma. However, the efficacy of EGFR-targeted small-molecule inhibitors or monoclonal antibodies in glioblastomas that also have mutation or deletion of the gene encoding phosphatase and tensin homolog (PTEN) has

been modest. We found that EGFR signaling was blocked by a small molecule (G5-7) that selectively inhibited Janus kinase 2 (JAK2)-mediated phosphorylation and activation of EGFR and STAT3 (signal transducer and activator of transcription 3) by binding to JAK2, thereby decreasing the activity of downstream signaling by mTOR (mammalian target of rapamycin) and inducing cell cycle arrest. G5-7 inhibited the proliferation of PTEN-deficient glioblastoma cell lines harboring a constitutively active variant of EGFR (U87MG/EGFRvIII) and human glioblastoma explant neurosphere cultures, but the drug only weakly inhibited the proliferation of either glioblastoma cell lines that were wild type for EGFR and stably transfected with PTEN (U87MG/PTEN) or normal neural progenitor cells and astrocytes. Additionally, G5-7 reduced vascular endothelial growth factor (VEGF) secretion and endothelial cell migration and induced apoptosis in glioblastoma xenografts, thereby suppressing glioblastoma growth in vivo. Furthermore, G5-7 was more potent than EGFR or JAK2 inhibitors that interfere with either ligand or adenosine 5'-triphosphate (ATP) binding at impeding glioblastoma cell proliferation, demonstrating that this allosteric JAK2 inhibitor may be an effective clinical strategy.

[813]

TÍTULO / TITLE: - Neuro-oncology: BCAT1 promotes cell proliferation in aggressive gliomas.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Nat Rev Neurol. 2013 Aug;9(8):420. doi: 10.1038/nrneurol.2013.135. Epub 2013 Jul 9.

●● Enlace al texto completo (gratis o de pago) [1038/nrneurol.2013.135](#)

AUTORES / AUTHORS: - Bible E

[814]

TÍTULO / TITLE: - Pituitary hyperplasia: a complication of the pseudomalabsorption of thyroxine.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Int J Gen Med. 2013 Apr 29;6:335-9. doi: 10.2147/IJGM.S43494. Print 2013.

●● Enlace al texto completo (gratis o de pago) [2147/IJGM.S43494](#)

AUTORES / AUTHORS: - Doyle MA; Lochnan HA

INSTITUCIÓN / INSTITUTION: - Division of Endocrinology, University of Ottawa, Ottawa, ON, Canada.

RESUMEN / SUMMARY: - OBJECTIVE: "The pseudomalabsorption of thyroxine" has been used to describe patients with hypothyroidism who fail to comply with their treatment. We describe a unique case of a 32-year-old with hypothyroidism who developed pituitary hyperplasia and hyperprolactinemia secondary to the pseudomalabsorption of thyroxine. INVESTIGATIONS AND TREATMENT: After baseline thyroid-function tests were performed, the patient was administered

levothyroxine 0.5 mg under the supervision of a registered nurse. Thyroid function testing was repeated at 30, 60, 120, and 180 minutes. Arrangements were made for further daily supervised loading of levothyroxine 0.1 mg. RESULTS: With the administration of 0.5 mg levothyroxine, free thyroxine levels increased by 120 minutes, and with daily supervised dosing of 0.1 mg there was normalization of the thyroid hormone levels and a reduction of thyroid-stimulating hormone levels. Maintenance of thyroid-stimulating hormone < 15 mU/L for 2 weeks led to a reduction in prolactin levels and regression in the size of the pituitary on magnetic resonance imaging. CONCLUSION: If left untreated, these patients face significant morbidity and are at risk of developing pituitary hyperplasia, complications from an increase in pituitary size, hyperprolactinemia, and potentially myxedema coma. Recognizing pituitary hyperplasia and hyperprolactinemia as a complication from the pseudomalabsorption of levothyroxine may prevent the potential of a misdiagnosis of a prolactinoma leading to unnecessary investigations and inappropriate treatment. Patient awareness of this serious complication and the rapid, demonstrable resolution with adequate thyroid hormone replacement may provide motivation to comply with supervised dosing of levothyroxine. It has also been suggested that supervised treatment enables the individual to maintain their patient status, which may be in part the motivation behind this disorder.

[815]

TÍTULO / TITLE: - CDR2L Antibodies: A New Player in Paraneoplastic Cerebellar Degeneration.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - PLoS One. 2013 Jun 18;8(6):e66002. Print 2013.

●● [Enlace al texto completo \(gratis o de pago\)](#)

[1371/journal.pone.0066002](http://dx.doi.org/10.1371/journal.pone.0066002)

AUTORES / AUTHORS: - Eichler TW; Totland C; Haugen M; Qvale TH; Mazengia K; Storstein A; Haukanes BI; Vedeler CA

INSTITUCIÓN / INSTITUTION: - Department of Clinical Medicine, University of Bergen, Bergen, Norway.

RESUMEN / SUMMARY: - OBJECTIVE: Yo antibodies are associated with paraneoplastic cerebellar degeneration (PCD). We have characterized Yo sera by measuring CDR2 and CDR2L antibodies and the localization of their antigens. METHODS: Forty-two Yo sera from patients with paraneoplastic neurological syndromes (PNS), 179 sera from ovarian and 114 sera from breast cancer patients without PNS and 100 blood donors were screened for CDR2 and CDR2L antibodies by radioactive immune assay (RIA). Fluorescence microscopy was also used to determine the presence of CDR2 or CDR2L antibodies by staining of HeLa cells transfected with CDR2 or CDR2L fused to green fluorescent protein (GFP). Confocal microscopy was further used to localize the CDR2 and CDR2L proteins. RESULTS: RIA showed that 36 of the

42 Yo positive sera contained CDR2 and CDR2L antibodies whereas 6 sera contained only CDR2 antibodies. Five of the ovarian cancer patients had CDR2L antibodies and 4 of the breast cancer patients had either CDR2 or CDR2L antibodies. Only patients with both antibodies had PCD. RIA and staining of transfected cells showed similar results. Yo antibodies were not present in the 100 blood donors. Confocal microscopy showed that CDR2 and CDR2L were localized to the cytoplasm, whereas CDR2L was also present on the cell membrane. INTERPRETATION: Yo sera usually contain CDR2 and CDR2L antibodies and both antibodies are associated with PCD. Since only CDR2L is localized to the cell membrane it is likely that CDR2L antibodies may be of primary pathogenic importance for the development of PCD.

[816]

TÍTULO / TITLE: - Antibody, T-cell and dendritic cell immunotherapy for malignant brain tumors.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Future Oncol. 2013 Jul;9(7):977-90. doi: 10.2217/fon.13.47.

●● Enlace al texto completo (gratis o de pago) [2217/fon.13.47](#)

AUTORES / AUTHORS: - Chandramohan V; Mitchell DA; Johnson LA; Sampson JH; Bigner DD

INSTITUCIÓN / INSTITUTION: - Duke University Medical Center, Department of Pathology, Medical Sciences Research Building 1, Box 3156, Durham, NC 27710, USA.

RESUMEN / SUMMARY: - Modest improvement in brain tumor patient survival has been achieved through advances in surgical, adjuvant radiation and chemotherapeutic strategies. However, these traditional approaches have been unsuccessful in permanently controlling these aggressive tumors, with recurrence being quite common. Hence, there is a need for novel therapeutic approaches that specifically target the molecularly diverse brain tumor cell population. The ability of the immune system to recognize altered tumor cells while avoiding surrounding normal cells offers an enormous advantage over the nonspecific nature of the conventional treatment schemes. Therefore, immunotherapy represents a promising approach that may supplement the standard therapies in eliminating the residual brain tumor cells. This review summarizes different immunotherapeutic approaches currently being tested for malignant brain tumor treatment.

[817]

TÍTULO / TITLE: - Concomitance of cervical intramedullary traumatic neuroma and cervical cord herniation in a tetraplegic woman.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Back Musculoskelet Rehabil. 2013 Jan 1;26(3):251-4. doi: 10.3233/BMR-130381.

●● Enlace al texto completo (gratis o de pago) [3233/BMR-130381](https://doi.org/10.1158/2159-8290.CD-RW2013-121)

AUTORES / AUTHORS: - Su HY; Wu YT; Liu MY; Lin YC; Chu HY; Chang ST

INSTITUCIÓN / INSTITUTION: - Department of Physical Medicine and Rehabilitation, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan.

RESUMEN / SUMMARY: - We present the first case of concomitant intramedullary traumatic neuroma and spinal cord herniation. A 57-year-old woman injured her cervical spine with subluxation and cord compression at the C5-C6 level. After the operation, the patient received intensive rehabilitation for one year with well response. Unfortunately, she experienced weakness and progressive numbness extending to all the limbs later. Cervical magnetic resonance imaging revealed spinal cord herniation at the C5-C6 level and pathology proved intramedullary traumatic neuroma. After the second operation, the paresthesia over the trunk and limbs persisted, and the patient was nearly totally assisted in her activities of daily living. The intramedullary traumatic neuroma and spinal cord herniation are rare causes in patients with spinal cord dysfunction. The case presented here indicates the possibility of the coexisting conditions leading to progressive neurologic deficits in patients with old spinal cord injury.

[818]

TÍTULO / TITLE: - Alternative splicing triggers metabolic transformation in glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cancer Discov. 2013 Jul;3(7):717. doi: 10.1158/2159-8290.CD-RW2013-121. Epub 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago) [1158/2159-8290.CD-RW2013-121](https://doi.org/10.1158/2159-8290.CD-RW2013-121)

RESUMEN / SUMMARY: - Alternative splicing of MAX in EGFRvIII-mutant glioblastoma promotes glycolytic metabolism.

[819]

TÍTULO / TITLE: - Tumor-associated macrophages in glioma: friend or foe?

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Oncol. 2013;2013:486912. doi: 10.1155/2013/486912. Epub 2013 May 8.

●● Enlace al texto completo (gratis o de pago) [1155/2013/486912](https://doi.org/10.1155/2013/486912)

AUTORES / AUTHORS: - Kennedy BC; Showers CR; Anderson DE; Anderson L; Canoll P; Bruce JN; Anderson RC

INSTITUCIÓN / INSTITUTION: - The Gabriele Bartoli Brain Tumor Research Laboratory, Department of Neurological Surgery, The Neurological Institute, Columbia University College of Physicians and Surgeons, New York City, NY 10032, USA.

RESUMEN / SUMMARY: - Tumor-associated macrophages (TAMs) contribute substantially to the tumor mass of gliomas and have been shown to play a

major role in the creation of a tumor microenvironment that promotes tumor progression. Shortcomings of attempts at antiglioma immunotherapy may result from a failure to adequately address these effects. Emerging evidence supports an independent categorization of glioma TAMs as alternatively activated M2-type macrophages, in contrast to classically activated proinflammatory M1-type macrophages. These M2-type macrophages exert glioma-supportive effects through reduced anti-tumor functions, increased expression of immunosuppressive mediators, and nonimmune tumor promotion through expression of trophic and invasion-facilitating substances. Much of our work has demonstrated these features of glioma TAMs, and together with the supporting literature will be reviewed here. Additionally, the dynamics of glioma cell-TAM interaction over the course of tumor development remain poorly understood; our efforts to elucidate glioma cell-TAM dynamics are summarized. Finally, the molecular pathways which underlie M2-type TAM polarization and gene expression similarly require further investigation, and may present the most potent targets for immunotherapeutic intervention. Highlighting recent evidence implicating the transcription factor STAT3 in immunosuppressive tumorigenic glioma TAMs, we advocate for gene array-based approaches to identify yet unappreciated expression regulators and effector molecules important to M2-type glioma TAMs polarization and function within the glioma tumor microenvironment.

[820]

TÍTULO / TITLE: - Assessing performance in brain tumor resection using a novel virtual reality simulator.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Int J Comput Assist Radiol Surg. 2013 Jun 20.

●● [Enlace al texto completo \(gratis o de pago\) 1007/s11548-013-0905-](#)

[8](#)

AUTORES / AUTHORS: - Gelinas-Phaneuf N; Choudhury N; Al-Habib AR; Cabral A; Nadeau E; Mora V; Pazos V; Debergue P; Diraddo R; Del Maestro RF

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery and Neurology, Neurosurgical Simulation Research Center, Montreal Neurological Institute and Hospital, McGill University, 4th floor, Montreal Neurological Hospital, 3801 University, Suite 438M, Montreal, QC, H3A 2B4, Canada, nicholas.g.phaneuf@gmail.com.

RESUMEN / SUMMARY: - **PURPOSE:** NeuroTouch is a virtual reality (VR) simulator developed for neurosurgical skill training. Validation demonstrating that the system is useful and reliable is required for formal adoption into training curriculums. Face and content validity have been demonstrated for some neurosurgical simulators, but construct validity remains difficult to establish. A pilot validation study was conducted for a NeuroTouch training exercise. **METHODS:** Participants completed the internal resection of a simulated convexity meningioma and filled out questionnaires to provide

feedback on the experience. Performance metrics included volume of tissues removed, tool path lengths, duration of excessive forces applied and efficient use of the aspirator. Results were analyzed according to participants' level of training, gender, handedness, surgical experience in meningioma removal and hours/week playing musical instruments or video games. RESULTS: Seventy-two participants (10 medical students, 18 junior residents and 44 senior residents) were enrolled. Analyses demonstrated statistically significant increase in tumor removed and efficiency of ultrasonic aspirator use between medical students and residents, but not between junior and senior residents. After covariate adjustment for the number of meningioma cases operated on, multivariate analysis of the level of training became nonsignificant. Participants judged the exercise appropriate and realistic, desiring use of the system in current training programs. CONCLUSION: We have conducted a pilot validation study for the NeuroTouch tumor resection scenario and demonstrated for the first time, face, content and construct validity of a VR neurosurgical simulation exercise. Future full-scale studies will be conducted in noncompetitive settings and incorporate expert participants.

[821]

TÍTULO / TITLE: - Intraoperative fluorescence-guided resection of high-grade gliomas: a comparison of the present techniques and evolution of future strategies.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jul 9. pii: S1878-8750(13)00760-2. doi: 10.1016/j.wneu.2013.06.014.

●● Enlace al texto completo (gratis o de pago)

1016/j.wneu.2013.06.014

AUTORES / AUTHORS: - Li Y; Rey-Dios R; Roberts DW; Valdes PA; Cohen-Gadol AA

INSTITUCIÓN / INSTITUTION: - Goodman Campbell Brain and Spine, Department of Neurological Surgery, Indiana University School of Medicine, Indianapolis, IN. Electronic address: liyip@iupui.edu.

RESUMEN / SUMMARY: - OBJECTIVE: Fluorescence-guidance has demonstrated potential in maximizing extent of high-grade glioma resection. Different fluorophores (fluorescent biomarkers), including 5-aminolevulinic acid (5-ALA) and fluorescein have been examined using several imaging techniques. The authors' goal is to review the state of this technology and discuss strategies for more widespread adoption. METHODS: A Medline search was performed using the key words "fluorescence," "intraoperative fluorescence-guided resection," "intraoperative image-guided resection," and "brain glioma" for articles from 1960 until the present. This initial search revealed 267 articles. Each abstract and article was reviewed and the reference lists from select articles were further evaluated for relevance. A total of 64 articles included information about the role of fluorescence in resection of high-grade gliomas and therefore were

selectively included for our analysis. RESULTS: 5-ALA and fluorescein sodium have shown promise as fluorescent markers in detecting residual tumor intra-operatively. These techniques have demonstrated significant increase in the extent of tumor resection. Regulatory barriers have limited the use of 5-ALA and technological challenges have restricted the use of fluorescein and its derivatives in the United States. There are currently limitations to this technology, such as the fact that fluorescence at tumor margins is not always reliable for identification of tumor-brain interface. CONCLUSIONS: These techniques are safe and effective for increasing gross total resection. Development of more tumor-specific fluorophores is needed to resolve problems with subjective interpretation of fluorescent signal at tumor margins. Techniques such as Quantum Dots and polymer or iron oxide-based nanoparticles have shown promise as potential future tools.

[822]

TÍTULO / TITLE: - Intracranial Glioblastoma with Drop Metastases to the Spine After Stereotactic Biopsy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurol Surg A Cent Eur Neurosurg. 2013 Jun 26.

●● Enlace al texto completo (gratis o de pago) [1055/s-0033-1345685](#)

AUTORES / AUTHORS: - Albert G; Wassef S; Dahdaleh N; Lindley T; Bruch L; Hitchon P

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Arkansas for Medical Sciences' College of Medicine, Little Rock, Arkansas, United States.

RESUMEN / SUMMARY: - Background Glioblastoma (GBM) is the most common primary intracranial tumor, but metastases are rarely reported. Previous reports have documented the occurrence of drop metastases to the spine. However, few of these reports have demonstrated the occurrence of spinal metastases after biopsy with stable intracranial disease. Here we present such a case. Case Description We present a case of GBM metastatic to the spinal cord after a stereotactic biopsy with stable intracranial disease. To our knowledge, this occurrence has only been reported in one previous case. Conclusion We propose that traversing the lateral ventricle at the time of biopsy contributed to cerebrospinal fluid seeding with tumor cells and subsequent development of spinal disease.

[823]

TÍTULO / TITLE: - Oligodendrogliomas: questions answered, answers questioned.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Oncology (Williston Park). 2013 Apr;27(4):326, 328.

AUTORES / AUTHORS: - Lassman AB

INSTITUCIÓN / INSTITUTION: - Department of Neurology and the Herbert Irving Comprehensive Cancer Center, NewYork-Presbyterian/Columbia University Medical Center, New York, New York, USA.

[824]

TÍTULO / TITLE: - Syringocystadenoma papilliferum of the bony external auditory canal: a rare tumor in a rare location.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Otolaryngol. 2013;2013:541679. doi: 10.1155/2013/541679. Epub 2013 May 23.

●● Enlace al texto completo (gratis o de pago) [1155/2013/541679](#)

AUTORES / AUTHORS: - Arechvo A; Balseris S; Neverauskiene L; Arechvo I

INSTITUCIÓN / INSTITUTION: - Faculty of Medicine, Vilnius University, Ciurlionio 21/27, 03101 Vilnius, Lithuania.

RESUMEN / SUMMARY: - Tumors originating from ceruminous glands are rare lesions of the external auditory canal. The lack of specific clinical and radiological signs makes their diagnosis challenging. We report the case of an exceptionally rare benign tumor, a syringocystadenoma papilliferum (SCAP), in an atypical location in the bony segment of the external auditory canal with uncommon clinical signs. The special traits of the case included the following: the most lateral component of the tumor was macroscopically cystic and a granular myringitis with an obstructing keratin mass plug was observed behind the mass. The clinical, audiological, radiological, and histological characteristics of the neoplasm are consequently presented. Intraoperative diagnosis of the epidermal cyst was proposed. The final diagnosis of SCAP was determined only by histological analysis after the surgical excision. The educational aspects of the case are critically discussed.

[825]

TÍTULO / TITLE: - Successful management of a giant pituitary lactosomatotroph adenoma only with cabergoline.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Endocrinol. 2013;2013:134241. doi: 10.1155/2013/134241. Epub 2013 May 9.

●● Enlace al texto completo (gratis o de pago) [1155/2013/134241](#)

AUTORES / AUTHORS: - Bozkirli E; Bakiner O; Ersozlu Bozkirli ED; Ertorer E; Bascil Tutuncu N; Guvener Demirag N

INSTITUCIÓN / INSTITUTION: - Department of Endocrinology and Metabolism Diseases, Faculty of Medicine, Baskent University, Turkey.

RESUMEN / SUMMARY: - Although advances in endocrinologic and neuroradiologic research allow easier recognition of pituitary adenomas, giant pituitary tumours are relatively rare. In the literature, the term “giant” is generally used when a pituitary tumour becomes larger than 4 cm in diameter. Cabergoline is a potent and long-acting inhibitor of prolactin secretion, which

exhibits high specificity and affinity for dopamine D2 receptor. Herein, we report a 46-year-old woman with a giant lactosomatotroph pituitary adenoma, sized 6 x 5 x 5.5 cm, who is treated successfully only with cabergoline. The patient showed dramatic response to cabergoline treatment by means of clinical, biochemical and radiological imaging findings. Cabergoline seems to be safe and effective in the treatment of prolactin and growth hormone cosecreting pituitary adenomas as well as prolactinomas. However, surgical or more aggressive approach must be considered where indicated.

[826]

TÍTULO / TITLE: - Esthesioneuroblastoma: one of the causes of proptosis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Head Face Med. 2013 Jul 27;9(1):19. doi: 10.1186/1746-160X-9-19.

●● Enlace al texto completo (gratis o de pago) [1186/1746-160X-9-19](#)

AUTORES / AUTHORS: - Ansari S; Ahmad K; Dhungel K; Gupta MK; Amanullah MF

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RESUMEN / SUMMARY: - Esthesioneuroblastoma (Olfactory neuroblastoma) is a rare malignant neoplasm arising from the olfactory epithelium with bimodal age distribution between with first peak in second decades and second peak in sixth decade. Proptosis due to esthesioneuroblastoma is one of the rare causes. They have a long natural history characterized by frequent local or regional recurrence. Computed tomography and magnetic resonance imaging are the imaging modalities for diagnosing these tumors. A multidisciplinary approach with surgery and radiation therapy is an excellent treatment options for these tumors with chemotherapy being used to treat advanced or recurrent disease.

[827]

TÍTULO / TITLE: - CXCR7 is induced by hypoxia and mediates glioma cell migration towards SDF-1alpha.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - BMC Cancer. 2013 Jul 17;13(1):347. doi: 10.1186/1471-2407-13-347.

●● Enlace al texto completo (gratis o de pago) [1186/1471-2407-13-347](#)

AUTORES / AUTHORS: - Esencay M; Sarfraz Y; Zagzag D

INSTITUCIÓN / INSTITUTION: - Microvascular and Molecular Neuro-oncology Laboratory, New York University Langone Medical Center, New York, NY, USA.
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RESUMEN / SUMMARY: - BACKGROUND: Glioblastomas, the most common and malignant brain tumors of the central nervous system, exhibit high invasive

capacity, which hinders effective therapy. Therefore, intense efforts aimed at improved therapeutics are ongoing to delineate the molecular mechanisms governing glioma cell migration and invasion. **METHODS:** In order to perform the studies, we employed optimal cell culture methods and hypoxic conditions, lentivirus-mediated knockdown of protein expression, Western Blot analysis, migration assays and immunoprecipitation. We determined statistical significance by unpaired t-test. **RESULTS:** In this report, we show that U87MG, LN229 and LN308 glioma cells express CXCR7 and that exposure to hypoxia upregulates CXCR7 protein expression in these cell lines. CXCR7-expressing U87MG, LN229 and LN308 glioma cells migrated towards stromal-derived factor (SDF)-1alpha/CXCL12 in hypoxic conditions in the Boyden chamber assays. While shRNA-mediated knockdown of CXCR7 expression did not affect the migration of any of the three cell lines in normoxic conditions, we observed a reduction in the migration of LN229 and LN308, but not U87MG, glioma cells towards SDF-1alpha in hypoxic conditions. In addition, knockdown of CXCR7 expression in LN229 and LN308 glioma cells decreased levels of SDF-1alpha-induced phosphorylation of ERK1/2 and Akt. Inhibiting CXCR4 in LN229 and LN308 glioma cells that were knocked down for CXCR7 did not further reduce migration towards SDF-1alpha in hypoxic conditions and did not affect the levels of phosphorylated ERK1/2 and Akt. Analysis of immunoprecipitated CXCR4 from LN229 and LN308 glioma cells revealed co-precipitated CXCR7. **CONCLUSIONS:** Taken together, our findings indicate that both CXCR4 and CXCR7 mediate glioma cell migration towards SDF-1alpha in hypoxic conditions and support the development of therapeutic agents targeting these receptors.

[828]

TÍTULO / TITLE: - The pathobiology of collagens in glioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Mol Cancer Res. 2013 Jul 16.

- [Enlace al texto completo \(gratis o de pago\) 1158/1541-7786.MCR-13-0236](#)

AUTORES / AUTHORS: - Payne LS; Huang P

INSTITUCIÓN / INSTITUTION: - Institute of Cancer Research.

RESUMEN / SUMMARY: - Malignant gliomas are characterised by diffuse infiltration into the surrounding brain parenchyma. Infiltrating glioma cells exist in close proximity with components of the tumour microenvironment, including the extracellular matrix (ECM). While levels of collagens in the normal adult brain are low, in glioma, collagen levels are elevated and play an important role in driving the tumor progression. In this review, we provide a comprehensive overview of the nature of collagens found in gliomas and offer insights into the mechanisms by which cancer cells interact with this ECM via receptors including the integrins, discoidin domain receptors and Endo180. We further describe the major remodelling pathways of brain tumour collagen mediated by

the matrix metalloproteinases and highlight the reciprocal relationship between these enzymes and the collagen receptors. Finally, we conclude by offering a perspective on how the biophysical properties of the collagen ECM, in particular, mechanical stiffness and compliance may influence malignant outcome. Understanding the complex interactions between glioma cells and the collagen ECM may provide new avenues to combat the rampant tumor progression and chemoresistance in brain cancer patients.

[829]

TÍTULO / TITLE: - Suprasellar colloid cyst: an unusual location.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jul 26. pii: S1878-8750(13)00887-5. doi: 10.1016/j.wneu.2013.07.073.

●● Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.07.073](#)

AUTORES / AUTHORS: - Paniraj GL; Panigrahi M; Reddy AK; Satish

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Krishna Institute of Medical sciences, Secunderabad, Andhra Pradesh, India. Electronic address: glphaniraj@yahoo.com.

RESUMEN / SUMMARY: - BACKGROUND: and importance: Colloid cysts are rare intracerebral lesions that are preferentially encountered within the third ventricle. There are only a few reports in which colloid cysts are described in other locations such as the fourth ventricle, brainstem, cerebellum and suprasellar region. CLINICAL PRESENTATION: Young female had presented with headache since one year and on episode of generalized tonic, clonic seizures one week ago. She had bitemporal visual field cuts on examination. Imaging showed an hyperdense suprasellar lesion which was isointense on T1 weighted MR images, Gurrum profoundly hypointense on T2 weighted images, and did not show any enhancement on post contrast MR study. It showed no restriction on DWI. A pteronal craniotomy and total excision of the lesion was done and the patient recovered well with no further neurological deficits. Pathology was consistent with a colloid cyst. CONCLUSION: Colloid cyst is rarely found in suprasellar location. Such a rare diagnosis has to be considered in the differential diagnosis in patients who present with a suprasellar cystic lesion.

[830]

TÍTULO / TITLE: - Solitary fibrous tumour of the pleura masquerading as catecholamine-secreting paraganglioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - British Medical J (BMJ). %8?(3k+J3s

<http://bmj.com/search.dtl> ●● British Medical J. (BMJ): <> Case Rep. 2013 Jul 4;2013. pii: bcr2013009939. doi: 10.1136/bcr-2013-009939.

●● Enlace al texto completo (gratis o de pago) [1136/bcr-2013-009939](#)

AUTORES / AUTHORS: - Rahnemai-Azar AA; Rahnemai-Aazr AA; Robinson P; Pham S

INSTITUCIÓN / INSTITUTION: - Department of Surgery, University of Miami, Miami, Florida, USA.

RESUMEN / SUMMARY: - A 33-year-old African-American woman presented with left-sided chest pain for 2 months before admission. Physical examination revealed no breath sound in the left chest and CT scan of the chest showed total obliteration of the left pleural cavity. The patient also had hypertension and elevated urinary metanephrines, leading to a tentative diagnosis of a catecholamine-secreting paraganglioma. MRI revealed a large, heterogeneous soft tissue mass that occupied the entire left chest cavity, causing displacement of the heart and mediastinal structures to the right. Through a left thoracotomy incision, a tumour weighing 2790 g was removed along with a small portion of adherent lung. The tumour was positive for CD34 but negative for S-100, keratin, desmin and progesterone-receptor, which is consistent with pathological diagnosis of a solitary fibrous tumour of the pleura. The patient remains symptom free 4 years after the operation.

[831]

TÍTULO / TITLE: - Neural masses and fields in dynamic causal modeling.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Front Comput Neurosci. 2013 May 28;7:57. doi: 10.3389/fncom.2013.00057. Print 2013.

●● Enlace al texto completo (gratis o de pago) [3389/fncom.2013.00057](https://doi.org/10.3389/fncom.2013.00057)

AUTORES / AUTHORS: - Moran R; Pinotsis DA; Friston K

INSTITUCIÓN / INSTITUTION: - Wellcome Trust Centre for Neuroimaging, Institute of Neurology, University College London London, UK ; Virginia Tech Carilion Research Institute, Virginia Tech Roanoke, VA, USA ; Bradley Department of Electrical and Computer Engineering, Virginia Tech Blacksburg, VA, USA.

RESUMEN / SUMMARY: - Dynamic causal modeling (DCM) provides a framework for the analysis of effective connectivity among neuronal subpopulations that subtend invasive (electrocorticograms and local field potentials) and non-invasive (electroencephalography and magnetoencephalography) electrophysiological responses. This paper reviews the suite of neuronal population models including neural masses, fields and conductance-based models that are used in DCM. These models are expressed in terms of sets of differential equations that allow one to model the synaptic underpinnings of connectivity. We describe early developments using neural mass models, where convolution-based dynamics are used to generate responses in laminar-specific populations of excitatory and inhibitory cells. We show that these models, though resting on only two simple transforms, can recapitulate the characteristics of both evoked and spectral responses observed empirically. Using an identical neuronal architecture, we show that a set of conductance based models-that consider the dynamics of specific ion-channels-present a

richer space of responses; owing to non-linear interactions between conductances and membrane potentials. We propose that conductance-based models may be more appropriate when spectra present with multiple resonances. Finally, we outline a third class of models, where each neuronal subpopulation is treated as a field; in other words, as a manifold on the cortical surface. By explicitly accounting for the spatial propagation of cortical activity through partial differential equations (PDEs), we show that the topology of connectivity-through local lateral interactions among cortical layers-may be inferred, even in the absence of spatially resolved data. We also show that these models allow for a detailed analysis of structure-function relationships in the cortex. Our review highlights the relationship among these models and how the hypothesis asked of empirical data suggests an appropriate model class.

[832]

TÍTULO / TITLE: - Limbal pseudoepitheliomatous hyperplasia mimicking ocular surface squamous neoplasia in palpebral vernal keratoconjunctivitis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Case Rep Ophthalmol Med. 2013;2013:527230. doi: 10.1155/2013/527230. Epub 2013 Jun 6.

●● [Enlace al texto completo \(gratis o de pago\) 1155/2013/527230](#)

AUTORES / AUTHORS: - Malhotra C; Jain AK; Thapa B

INSTITUCIÓN / INSTITUTION: - Advanced Eye Centre, Post Graduate Institute of Medical Education and Research (PGIMER), Sector 12, Chandigarh 160022, India.

RESUMEN / SUMMARY: - Purpose. Pseudoepitheliomatous hyperplasia at the limbus can mimic an ocular surface squamous neoplasia. It is an uncommon manifestation of vernal keratoconjunctivitis and has been reported previously in limbal VKC. It, however, has not been reported as a manifestation in the palpebral form of the disease and needs to be kept in the differential diagnosis of a limbal mass lesion in vernal keratoconjunctivitis. Case Report. We report the case of a 24 year old male patient having palpebral VKC and presenting with a papillomatous limbal mass with focal areas of keratinization mimicking an ocular surface squamous neoplasia. An excision biopsy was performed, and the specimen sent for histopathology which revealed features of pseudoepitheliomatous hyperplasia with no evidence of dysplasia or malignant transformation. The subepithelium revealed a dense plasma-rich inflammation. Discussion. We report this relatively uncommon presentation of limbal pseudoepitheliomatous hyperplasia mimicking an ocular surface squamous neoplasia in palpebral vernal keratoconjunctivitis. Wide excision as is required for an ocular surface neoplasia may thus be avoided if this entity is recognized in vernal keratoconjunctivitis.

[833]

TÍTULO / TITLE: - Rhabdoid glioblastoma: a recently recognized subtype of glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Acta Neurochir (Wien). 2013 Aug;155(8):1443-8. doi: 10.1007/s00701-013-1793-y. Epub 2013 Jun 29.

●● Enlace al texto completo (gratis o de pago) [1007/s00701-013-1793-](#)

[y](#)

AUTORES / AUTHORS: - Chen SC; Lin DS; Lee CC; Hung SC; Chen YW; Hsu SP; Lin CF; Wong TT; Chen MH; Chen HH

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Neurological Institute, Taipei Veterans General Hospital, 17F, No. 201, Shih-Pai Road, Sec. 2, Peitou, Taipei, 11217, Taiwan, Republic of China.

RESUMEN / SUMMARY: - BACKGROUND: Rhabdoid glioblastoma is a rare type of recently described malignant brain tumor. It is characterized by a glioblastoma associated with rhabdoid components. METHODS: Here we report two cases of rhabdoid glioblastoma and a brief literature review. The first patient was a 19-year-old boy who initially presented with a foul-smelling odor and progressive right-side weakness. The second case was a 29-year-old male patient who presented only with a severe headache. RESULTS: Both of these patients were young, and the disease progression was quick despite optimal treatment. CONCLUSION: The diagnosis of rhabdoid glioblastoma was confirmed after microscopic and immunohistochemical findings.

!973.95! TATATAT - Acta Neurochir (Wien)

[834]

TÍTULO / TITLE: - Primary histiocytic sarcoma of the brain mimicking cerebral abscess.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Neurosurg Pediatr. 2013 Jul 26.

●● Enlace al texto completo (gratis o de pago)

[3171/2013.6.PEDS12533](#)

AUTORES / AUTHORS: - Almefty RO; Tyree TL; Fusco DJ; Coons SW; Nakaji P
INSTITUCIÓN / INSTITUTION: - Division of Neurological Surgery, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, Phoenix, Arizona.

RESUMEN / SUMMARY: - Histiocytic sarcoma is a rare malignancy with only 10 reports confirmed primarily involving the CNS. The diagnosis is dependent on the finding of malignant cells with histiocytic morphology and immunophenotype. The authors report a case of pathologically proven HS of the CNS. A 16-year-old boy presented with headaches, emesis, and altered sensorium. Noncontrast head CT scanning demonstrated a left parietal mass consistent with a tumor. Surgery was undertaken. Intraoperative findings revealed green-yellow exudates consistent with an abscess. Cultures were obtained and broad-spectrum antibiotics were started. The patient subsequently

underwent multiple surgical procedures, including drainage and debulking of abscesses and hemicraniectomy. Two months after initial presentation, the patient's diagnosis of histiocytic sarcoma was confirmed. Pathological examination demonstrated necrotizing inflammation with preponderant neutrophil infiltration, variably atypical mononuclear and multinucleate histiocytes, and numerous mitoses. Additional immunohistochemistry studies confirmed immunoreactivity for CD68, CD45, CD45RO, and CD15 and were negative for CD3, CD20, melanoma cocktail, CD30, CD1a, CD34, HMB-45, and melan-A. Once the diagnosis of histiocytic sarcoma was confirmed, antibiotics were stopped and radiation therapy was undertaken. Despite treatment, the patient's neurological status continued to decline and the patient died 126 days after initial presentation. This case represents a rare confirmed example of CNS histiocytic sarcoma. A profound inflammatory infiltrate seen on pathology and green exudates seen intraoperatively make the condition difficult to distinguish from an abscess. Immunohistochemistry showing a histiocytic origin and negative for myeloid, dendritic, or other lymphoid markers is essential for the diagnosis. Further research is needed to establish consensus on treatment.

[835]

TÍTULO / TITLE: - Radioimmunotherapy for high-grade glioma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Immunotherapy. 2013 Jun;5(6):647-59. doi: 10.2217/imt.13.43.

●● Enlace al texto completo (gratis o de pago) [2217/imt.13.43](#)

AUTORES / AUTHORS: - De Bonis P; Lofrese G; Anile C; Pompucci A; Vigo V; Mangiola A

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Catholic University School of Medicine, Rome, Italy. debonisvox@gmail.com

RESUMEN / SUMMARY: - Patients with high-grade glioma (HGG) still have a very poor prognosis. The infiltrative nature of the tumor and the inter- and intra-tumoral cellular and genetic heterogeneity, leading to the acquisition of new mutations over time, represent the main causes of treatment failure. Radioimmunotherapy represents an emerging approach for the treatment of HGG. Radioimmunotherapy utilizes a molecular vehicle (monoclonal antibodies) to deliver a radionuclide (the drug) to a selected cell population target. This review will provide an overview of preclinical and clinical studies to date and assess the effectiveness of radioimmunotherapy, focusing on possible future therapies for the treatment of HGG.

[836]

TÍTULO / TITLE: - Is Mda-7/IL-24 a Potential Target and Biomarker for Enhancing Drug Sensitivity in Human Glioma U87 Cell Line?

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Anat Rec (Hoboken). 2013 Aug;296(8):1154-60. doi: 10.1002/ar.22723. Epub 2013 Jun 24.

●● Enlace al texto completo (gratis o de pago) [1002/ar.22723](https://doi.org/10.1002/ar.22723)

AUTORES / AUTHORS: - Wang Q; Zhu Y; Yang P

INSTITUCIÓN / INSTITUTION: - Department of Clinical Laboratory, Tianjin Huanhu Hospital, Tianjin Health Bureau, Tianjin, 300060, China.

RESUMEN / SUMMARY: - Gliomas are the most common form of primary brain tumor with the highest mortality rates. Drug resistance is a major cause of treatment failure in patients with glioma. Melanoma differentiation associated gene-7/interleukin-24 (mda-7/IL-24) has been demonstrated to play an important role in drug resistance in human cancer cell lines. However, the reversing effect of mda-7/IL-24 on drug resistance of human glioma is not fully clear. Here, we investigated the effects of overexpression of the mda-7/IL-24 gene in human glioma. We established a cisplatin-resistant U87 glioma cell line and found that mda-7/IL-24 was highly correlated with drug resistance. Furthermore, we investigated the apoptotic rate, intracellular accumulation of Rhodamine-123, and expression of glutathione and P-glycoprotein. The overexpression of mda-7/IL-24 enhanced cisplatin cytotoxicity and reversal of drug resistance in glioma cells. The reversing effect of mda-7/IL-24 on drug resistance was induced mainly through the regulation of drug resistance-related genes and efflux drug pumps. Thus, mda-7/IL-24 can be used as a promising predictive biomarker and potential therapeutic target for chemotherapy in glioma. Anat Rec, 2013. © 2013 Wiley Periodicals, Inc.

[837]

TÍTULO / TITLE: - Novel approaches to glioma drug design and drug screening.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Expert Opin Drug Discov. 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago)

[1517/17460441.2013.807248](https://doi.org/10.1517/17460441.2013.807248)

AUTORES / AUTHORS: - Patil SA; Hosni-Ahmed A; Jones TS; Patil R; Pfeffer LM; Miller DD

INSTITUCIÓN / INSTITUTION: - The University of Tennessee Health Science Center, College of Pharmacy, Department of Pharmaceutical Sciences, 847 Monroe Avenue, Room 327, 881 Madison, Room 435, Memphis, TN 38163, USA +1 901 448 7837/6026 ; +1 901 448 6828/3446 ; spatil3@uthsc.edu ; dmiller@uthsc.edu.

RESUMEN / SUMMARY: - Introduction: Gliomas are considered the most malignant form of brain tumors, and ranked among the most aggressive human cancers. Despite advanced standard therapy the prognosis for patients with gliomas remains poor. Chemotherapy has played an important role as an adjuvant in treating gliomas. The efficacy of the chemotherapeutic drug is limited due to poor drug delivery and the inherent chemo- and radio-resistance. Challenges of the brain cancer therapy in clinical settings are; i) to overcome

the chemo- and radio-resistance, ii) to improve drug delivery to tumors and iii) the development of effective drug screening procedures. Areas covered: In this review, the authors discuss clinically important chemotherapeutic agents used for treating malignant gliomas along with novel drug design approaches. The authors, furthermore, discuss the in vitro and in vivo drug screening procedures for the development of novel drug candidates. Expert opinion: The development of novel and highly potent chemotherapeutic agents for both glioma and glioma stem cells (GSCs) is highly important for future brain cancer research. Thus, research efforts should be directed towards developing innovative molecularly targeted antiglioma agents in order to reduce the toxicity and drug resistance which are associated with current forms of therapy. Development of novel pre-clinical drug screening procedures is also very critical for the overall success of brain cancer therapies in clinical settings.

[838]

TÍTULO / TITLE: - The emerging role of d-2-hydroxyglutarate as an oncometabolite in hematolymphoid and central nervous system neoplasms.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Front Oncol. 2013 Jul 2;3:169. doi: 10.3389/fonc.2013.00169. Print 2013.

●● Enlace al texto completo (gratis o de pago) [3389/fonc.2013.00169](#)

AUTORES / AUTHORS: - Rakheja D; Medeiros LJ; Bevan S; Chen W

INSTITUCIÓN / INSTITUTION: - Department of Pathology, University of Texas Southwestern Medical Center and Children's Medical Center , Dallas, TX , USA ; Department of Pediatrics, University of Texas Southwestern Medical Center and Children's Medical Center , Dallas, TX , USA.

RESUMEN / SUMMARY: - Approximately 20% of unselected cases and 30% cytogenetically diploid cases of acute myeloid leukemia (AML) and 80% of grade II-III gliomas and secondary glioblastomas carry mutations in the isocitrate dehydrogenase (IDH) 1 and 2 genes. IDH1/2 mutations prevent oxidative decarboxylation of isocitrate to alpha-ketoglutarate (alpha-KG) and modulate the function of IDH (neomorphic activity) thereby facilitating reduction of alpha-KG to D-2-hydroxyglutarate (D-2HG), a putative oncometabolite. D-2HG is thought to act as a competitive inhibitor of alpha-KG-dependent dioxygenases that include prolyl hydroxylases and chromatin-modifying enzymes. The end result is a global increase of cellular DNA hypermethylation and alterations of the cellular epigenetic state, which has been proposed to play a role in the development of a variety of tumors. In this review, we provide an update on potential molecular mechanisms linking IDH1/2 mutations and the resulting oncometabolite, D-2HG, with malignant transformation. In addition, in patients with AML and glioma we focus on the associations between IDH1/2 mutations and clinical, morphologic, cytogenetic, and molecular characteristics.

[839]

TÍTULO / TITLE: - Cancer of the external auditory canal.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Eur Ann Otorhinolaryngol Head Neck Dis. 2013 Jul 8. pii: S1879-7296(13)00049-5. doi: 10.1016/j.anorl.2012.08.003.

●● Enlace al texto completo (gratis o de pago)

[1016/j.anorl.2012.08.003](#)

AUTORES / AUTHORS: - Ouaz K; Robier A; Lescanne E; Bobillier C; Moriniere S; Bakhos D

INSTITUCIÓN / INSTITUTION: - Service d'ORL et chirurgie cervico-faciale, CHRU de Tours, boulevard Tonnelles, 37044 Tours, France.

RESUMEN / SUMMARY: - INTRODUCTION: Cancer of the external auditory canal is a rare tumour with an annual incidence of one per one million inhabitants. The objective of this study was to evaluate the 5-year overall survival and disease-free survival rates in a series of patients with carcinoma of the external auditory canal and to compare our results concerning the clinical presentation, management and survival with those of the literature. PATIENTS AND METHOD: Ten patients were included in this retrospective, single-centre study over a 20-year period. Data concerning age, symptoms, imaging, TNM stage according to the Pittsburgh classification, histology, management, sequelae, recurrences and survival were recorded. RESULTS: The mean age of the patients of this series was 60.7 years. Seven patients had a squamous cell carcinoma. The other histological types were undifferentiated carcinoma, adenoid cystic carcinoma and neuroendocrine carcinoma. Staging was based on the Pittsburgh classification with one stage I, one stage III and eight stage IV tumours. Five-year overall survival rates were 100%, 50% and 0%, respectively. The mean 5-year overall survival rate was 35% and the mean 5-year disease-free survival rate was 24%. CONCLUSION: Carcinoma of the external auditory canal is a difficult diagnosis when the tumour does not present as a fungating mass protruding from the external auditory canal. The Pittsburgh classification was used for TNM staging of these tumours, allowing comparison of our results with those of the literature. The clinical findings and survival rates observed in this study are comparable to those reported in the literature. These tumours are associated with a poor prognosis on the basis of our results and published data.

[840]

TÍTULO / TITLE: - Hitting Them Where They Live: Targeting the Glioblastoma Perivascular Stem Cell Niche.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Curr Pathobiol Rep. 2013 Jun 1;1(2):101-110.

●● Enlace al texto completo (gratis o de pago) [1007/s40139-013-0012-](#)

[0](#)

AUTORES / AUTHORS: - Brooks MD; Sengupta R; Snyder SC; Rubin JB

INSTITUCIÓN / INSTITUTION: - Department of Pediatrics, Washington University School of Medicine, 660 South Euclid Ave. St Louis, MO 63110.

RESUMEN / SUMMARY: - Glioblastoma growth potential and resistance to therapy is currently largely attributed to a subset of tumor cells with stem-like properties. If correct, this means that cure will not be possible without eradication of the stem cell fraction and abrogation of those mechanisms through which stem cell activity is induced and maintained. Glioblastoma stem cell functions appear to be non-cell autonomous and the consequence of tumor cell residence within specialized domains such as the perivascular stem cell niche. In this review we consider the multiple cellular constituents of the perivascular niche, the molecular mechanisms that support niche structure and function and the implications of the perivascular localization of stem cells for anti-angiogenic approaches to cure.

[841]

TÍTULO / TITLE: - Extra-adrenal paraganglioma of the prostate.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Can Urol Assoc J. 2013 May-Jun;7(5-6):E370-2. doi: 10.5489/cuaj.1221.

●● Enlace al texto completo (gratis o de pago) [5489/cuaj.1221](#)

AUTORES / AUTHORS: - Wang HH; Chen YL; Kao HL; Lin SC; Lee CH; Huang GS; Chang WC

INSTITUCIÓN / INSTITUTION: - Department of Radiology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan, Republic of China;

RESUMEN / SUMMARY: - Extra-adrenal pheochromocytomas, or paragangliomas, are rare tumours that may develop from extra-adrenal chromaffin cells, and most occur in the organ of Zuckerkandl. Extra-adrenal paraganglioma of the prostate is extremely rare. We report a 53-year-old man with hypertension and lower urinary tract symptoms, who was initially diagnosed with benign prostate hyperplasia. Computed tomography (CT) showed a large heterogeneously enhancing mass in the prostate, imprinting the right distal ureter and urinary bladder. Before surgical intervention, CT-guided biopsy of the prostatic mass was performed and the result of histologic examination confirmed extra-adrenal paraganglioma. He underwent radical prostatectomy, partial cystectomy and right ureteroneocystostomy. The patient recovered and his blood pressure returned within normal range after surgical removal of the prostate tumour. In this article, we stress that the rarity of prostatic paraganglioma, preoperative localization and imaging-guided biopsy were useful in determining the surgical strategy.

[842]

TÍTULO / TITLE: - Neurobehavioral effects of levetiracetam in brain tumor related epilepsy.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Front Neurol. 2013 Jul 22;4:99. doi: 10.3389/fneur.2013.00099. Print 2013.

●● Enlace al texto completo (gratis o de pago) [3389/fneur.2013.00099](https://doi.org/10.3389/fneur.2013.00099)

AUTORES / AUTHORS: - Bennett A; Phenis R; Fonkem E; Aceves J; Kirmani B; Cruz-Laureano D

INSTITUCIÓN / INSTITUTION: - Division of Neuropsychology, Scott & White Memorial Medical Center, Temple, TX, USA.

RESUMEN / SUMMARY: - The neurobehavioral profile of anti-epileptic drugs (AEDs) has been a recurrent research topic in the scientific literature. As pharmacological treatments for epilepsy continue to evolve, there is a general consensus that newer AEDs have less detrimental side effects in comparison to their older counterparts. Among newer AEDs and epilepsy patients, potential risk for neurobehavioral changes has been reported with levetiracetam (LEV). Conversely, limited data exists regarding the manifestation of this symptomatology in a subgroup of epilepsy patients with brain tumors. The current paper reviews the literature regarding the neurobehavioral profile of LEV in brain tumor related epilepsy and suggestions for future research will be discussed.

[843]

TÍTULO / TITLE: - Classification of cerebral lymphomas and glioblastomas featuring luminance distribution analysis.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Comput Math Methods Med. 2013;2013:619658. doi: 10.1155/2013/619658. Epub 2013 Jun 6.

●● Enlace al texto completo (gratis o de pago) [1155/2013/619658](https://doi.org/10.1155/2013/619658)

AUTORES / AUTHORS: - Yamasaki T; Chen T; Hirai T; Murakami R

INSTITUCIÓN / INSTITUTION: - School of Electrical and Computer Engineering, Cornell University, Phillips Hall, Ithaca, NY 14853-5401, USA; Department of Information and Communications Engineering, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan.

RESUMEN / SUMMARY: - Differentiating lymphomas and glioblastomas is important for proper treatment planning. A number of works have been proposed but there are still some problems. For example, many works depend on thresholding a single feature value, which is susceptible to noise. In other cases, experienced observers are required to extract the feature values or to provide some interactions with the system. Even if experts are involved, interobserver variance becomes another problem. In addition, most of the works use only one or a few slice(s) because 3D tumor segmentation is time consuming. In this paper, we propose a tumor classification system that analyzes the luminance distribution of the whole tumor region. Typical cases are classified by the luminance range thresholding and the apparent diffusion coefficients (ADC) thresholding. Nontypical cases are classified by a support vector machine (SVM). Most of the processing elements are semiautomatic.

Therefore, even novice users can use the system easily and get the same results as experts. The experiments were conducted using 40 MRI datasets. The classification accuracy of the proposed method was 91.1% without the ADC thresholding and 95.4% with the ADC thresholding. On the other hand, the baseline method, the conventional ADC thresholding, yielded only 67.5% accuracy.

[844]

TÍTULO / TITLE: - Pilomyxoid astrocytoma of the brainstem.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Rare Tumors. 2013 Apr 15;5(2):65-7. doi: 10.4081/rt.2013.e17. Print 2013 Apr 15.

●● Enlace al texto completo (gratis o de pago) [4081/rt.2013.e17](#)

AUTORES / AUTHORS: - Pereira FO; Lombardi IA; Mello AY; Romero FR; Ducati LG; Gabarra RC; Zanini MA

INSTITUCIÓN / INSTITUTION: - Division of Neurosurgery.

RESUMEN / SUMMARY: - ABSTRACT: A pilomyxoid astrocytoma is a recently described tumor that occurs predominantly in the hypothalamic-chiasmatic region and is rarely found elsewhere. It has similar features as pilocytic astrocytomas, but has distinct histological characteristics and a poorer prognosis. A pilomyxoid astrocytoma is an aggressive tumor, and increased awareness is necessary with a suspect case. We present the first case of a pilomyxoid astrocytoma of the brainstem described after the newest World Health Organization classification of central nervous system tumors.

[845]

TÍTULO / TITLE: - Extra-adrenal paraganglioma of the median nerve.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Plast Surg Hand Surg. 2013 Jun 10.

●● Enlace al texto completo (gratis o de pago)

[3109/2000656X.2013.806409](#)

AUTORES / AUTHORS: - Chong Y; Park M; Ko YH

INSTITUCIÓN / INSTITUTION: - Departments of Pathology, Yonsei University Wonju College of Medicine.

RESUMEN / SUMMARY: - Abstract An extra-adrenal paraganglioma is an uncommon tumour that arises from the paraganglia associated with the autonomous nervous system. A paraganglioma arising in the sensory-somatic nervous system is extremely rare and clinically is easily confused with other neurogenic tumours. We describe a paraganglioma that arose in the median nerve of a 22-year-old woman.

[846]

TÍTULO / TITLE: - Concentric Craniotomy : Removal of Tumor Involving the Skull and the Intracranial Space:A Technical Note.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - World Neurosurg. 2013 Jun 25. pii: S1878-8750(13)00748-1. doi: 10.1016/j.wneu.2013.06.006.

●● Enlace al texto completo (gratis o de pago)

[1016/j.wneu.2013.06.006](#)

AUTORES / AUTHORS: - Michael BH; Kebede T; Biluts H; Affefa G; Schneider J; Freidberg SR

INSTITUCIÓN / INSTITUTION: - Department of Surgery, Section of Neurosurgery, Addis Ababa University; Addis Ababa, Ethiopia.

RESUMEN / SUMMARY: - Removal of a tumor involving both the intracranial space and the skull presents technical challenges. This is especially so if there is the potential for significant hemorrhage that one might encounter with a hemangioma or a significant attachment to the brain that one might encounter with a meningioma. We are describing a technique where the tumor attached to the skull is left undisturbed and a second wider concentric craniotomy exposes normal dura. The entire tumor, both intracranial and that involving the skull and dura can then be removed as one specimen.

[847]

TÍTULO / TITLE: - Methylation by EZH2 Activates STAT3 in Glioblastoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Cancer Discov. 2013 Jul;3(7):OF21. doi: 10.1158/2159-8290.CD-RW2013-112. Epub 2013 May 23.

●● Enlace al texto completo (gratis o de pago) [1158/2159-8290.CD-RW2013-112](#)

RESUMEN / SUMMARY: - Methylation of STAT3 by EZH2 is required for STAT3 activity in glioblastoma stem cells (GSC).

[848]

TÍTULO / TITLE: - Where are We Now with Decompressive Hemicraniectomy for Malignant Middle Cerebral Artery Infarction?

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Cerebrovasc Endovasc Neurosurg. 2013 Jun;15(2):61-6. doi: 10.7461/jcen.2013.15.2.61.

●● Enlace al texto completo (gratis o de pago) [7461/jcen.2013.15.2.61](#)

AUTORES / AUTHORS: - Park J; Hwang JH

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, Cardiocerebrovascular Center, Kyungpook National University, Daegu, Republic of Korea.

RESUMEN / SUMMARY: - In spite of the best medical treatment, large hemispheric infarction, resulting from acute occlusion of either the internal carotid or the proximal middle cerebral artery with insufficient collateral blood flow is associated with a high case fatality rate of approximately 60%. Thus, a decompressive hemicraniectomy is considered a life-saving procedure for this

devastating disease. Findings of three recent randomized, controlled clinical trials and their meta-analysis showed that early surgical decompression not only reduced the number of case fatalities but also increased the incidence of favorable outcomes. The authors review the pathophysiology, historical background in previous studies, operative timing, surgical technique and clinical outcomes of surgical decompression for malignant hemispheric infarction.

[849]

TÍTULO / TITLE: - Mathematical modelling of spatio-temporal glioma evolution.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Theor Biol Med Model. 2013 Jul 24;10:47. doi: 10.1186/1742-4682-10-47.

●● [Enlace al texto completo \(gratis o de pago\) 1186/1742-4682-10-47](#)

AUTORES / AUTHORS: - Papadogiorgaki M; Koliou P; Kotsiakos X; Zervakis ME

INSTITUCIÓN / INSTITUTION: - Digital Image and Signal Processing Laboratory, Electronic and Computer Engineering Department, Technical University of Crete, Polytechniopolis, Kounopidiana Campus, Chania, Crete 73100, Greece. mpapadogiorgaki@isc.tuc.gr.

RESUMEN / SUMMARY: - BACKGROUND: Gliomas are the most common types of brain cancer, well known for their aggressive proliferation and the invasive behavior leading to a high mortality rate. Several mathematical models have been developed for identifying the interactions between glioma cells and tissue microenvironment, which play an important role in the mechanism of the tumor formation and progression. METHODS: Building and expanding on existing approaches, this paper develops a continuous three-dimensional model of avascular glioma spatio-temporal evolution. The proposed spherical model incorporates the interactions between the populations of four different glioma cell phenotypes (proliferative, hypoxic, hypoglycemic and necrotic) and their tissue microenvironment, in order to investigate how they affect tumor growth and invasion in an isotropic and homogeneous medium. The model includes two key variables involved in the proliferation and invasion processes of cancer cells; i.e. the extracellular matrix and the matrix-degradative enzymes concentrations inside the tumor and its surroundings. Additionally, the proposed model focuses on innovative features, such as the separate and independent impact of two vital nutrients, namely oxygen and glucose, in tumor growth, leading to the formation of cell populations with different metabolic profiles. The model implementation takes under consideration the variations of particular factors, such as the local cell proliferation rate, the variable conversion rates of cells from one category to another and the nutrient-dependent thresholds of conversion. All model variables (cell densities, ingredients concentrations) are continuous and described by reaction-diffusion equations. RESULTS: Several simulations were performed using combinations of growth and invasion rates, for different evolution times. The model results

were evaluated by medical experts and validated on experimental glioma models available in the literature, revealing high agreement between simulated and experimental results. CONCLUSIONS: Based on the experimental validation, as well as the evaluation by clinical experts, the proposed model may provide an essential tool for the patient-specific simulation of different tumor evolution scenarios and reliable prognosis of glioma spatio-temporal progression.

[850]

TÍTULO / TITLE: - The ZEB1 pathway links glioblastoma initiation, invasion and chemoresistance.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - EMBO Mol Med. 2013 Aug;5(8):1196-212. doi: 10.1002/emmm.201302827. Epub 2013 Jul 1.

- Enlace al texto completo (gratis o de pago)

[1002/emmm.201302827](#)

AUTORES / AUTHORS: - Siebzehnrbul FA; Silver DJ; Tugertimur B; Deleyrolle LP; Siebzehnrbul D; Sarkisian MR; Devers KG; Yachnis AT; Kupper MD; Neal D; Nabilsi NH; Kladd MP; Suslov O; Brabletz S; Brabletz T; Reynolds BA; Steindler DA

INSTITUCIÓN / INSTITUTION: - Department of Neurosurgery, University of Florida, Gainesville, FL, USA.

RESUMEN / SUMMARY: - Glioblastoma remains one of the most lethal types of cancer, and is the most common brain tumour in adults. In particular, tumour recurrence after surgical resection and radiation invariably occurs regardless of aggressive chemotherapy. Here, we provide evidence that the transcription factor ZEB1 (zinc finger E-box binding homeobox 1) exerts simultaneous influence over invasion, chemoresistance and tumourigenesis in glioblastoma. ZEB1 is preferentially expressed in invasive glioblastoma cells, where the ZEB1-miR-200 feedback loop interconnects these processes through the downstream effectors ROBO1, c-MYB and MGMT. Moreover, ZEB1 expression in glioblastoma patients is predictive of shorter survival and poor Temozolomide response. Our findings indicate that this regulator of epithelial-mesenchymal transition orchestrates key features of cancer stem cells in malignant glioma and identify ROBO1, OLIG2, CD133 and MGMT as novel targets of the ZEB1 pathway. Thus, ZEB1 is an important candidate molecule for glioblastoma recurrence, a marker of invasive tumour cells and a potential therapeutic target, along with its downstream effectors.

[851]

TÍTULO / TITLE: - MicroRNA-26^a Promotes Tumor Growth and Angiogenesis in Glioma by Directly Targeting Prohibitin.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - CNS Neurosci Ther. 2013 Jul 22. doi: 10.1111/cns.12149.

●● Enlace al texto completo (gratis o de pago) 1111/cns.12149

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INSTITUCIÓN / INSTITUTION: - Department of Pathology, Jiangsu Key Lab of Cancer Biomarkers, Prevention and Treatment, Cancer Center, Nanjing Medical University, Nanjing, China.

RESUMEN / SUMMARY: - **BACKGROUNDS AND AIMS:** Glioma accounts for the majority of primary malignant brain tumors in adults. Upregulation of microRNA-26^a (miR-26^a) has been observed in glioma. However, the biological function and molecular mechanism of miR-26^a in glioma remain to be elucidated. **METHODS:** Glioma cells stably overexpressing or down-expressing miR-26^a were analyzed for both in vitro and in vivo biological functions. Novel target of miR-26^a was identified by bioinformatics searching and molecular biological assays. Glioma specimens and normal brain tissues were analyzed for both expression levels of miR-26^a and its target. **RESULTS:** Forced expression of miR-26^a in glioma cells significantly increased both growth rate and colony formation in vitro and tumor growth and angiogenesis in vivo, while reduced expression of miR-26^a played opposite roles. MiR-26^a directly targeted prohibitin (PHB) whose expression levels were downregulated in glioma specimens. The levels of miR-26^a were inversely correlated with PHB expression levels in glioma samples and strongly correlated with clinical WHO grades of glioma. **CONCLUSION:** These results reveal that miR-26^a regulates PHB and promotes glioma progression both in vitro and in vivo and that miR-26^a and its target PHB are associated with glioma development, which can be helpful in developing microRNA-based treatment for glioma in the future.

[852]

TÍTULO / TITLE: - miR-124 inhibits the growth of glioblastoma through the downregulation of SOS1.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Mol Med Rep. 2013 Aug;8(2):345-9. doi: 10.3892/mmr.2013.1561. Epub 2013 Jun 28.

●● Enlace al texto completo (gratis o de pago) 3892/mmr.2013.1561

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RESUMEN / SUMMARY: - Glioblastoma multiforme (GBM) is a lethal brain tumor in adults. Despite advances in treatments, such as surgery, radiotherapy and chemotherapy, highgrade glioma remains fatal. The molecular and cellular mechanisms for GBM are not entirely clear and further studies are required to elucidate these. MicroRNAs (miRNAs) are small, noncoding, endogenous RNAs that are involved in cell differentiation and proliferation, and have been suggested to play a role in a variety of types of cancer. In this study, we investigated the role of miR-124 in the inhibition of proliferation of GBM cells.

The downregulation of miR-124 in human GBM tumor cell lines was detected using quantitative RT-PCR. To assess the function of miR-124, we constructed stable cell lines, U87-124 and U373-124, which overexpressed miR-124 using lentiviral vectors. Overexpression of miR-124 inhibited the proliferation of GBM cancer cells in vitro. Using integrated bioinformatics analysis, SOS1 was found to be a direct target for miR-124, which is frequently upregulated in gliomas. Dual-luciferase reporter assays confirmed that the SOS1 mRNA 3'untranslated regions (UTR) was directly targeted by miR-124 and that the mutated 3'UTR was not affected. This was revealed to be mechanistically associated with the induction of SOS/Ras/Raf/ERK and the suppression of ERK activity, which was achieved by silencing SOS1. This study therefore indicates an important role for miR-124 in the regulation of growth in the molecular etiology of GBM, and offers a potential strategy for the use of miR-124 in cancer treatment.

[853]

TÍTULO / TITLE: - A Rare Presentation of Hypertrophic Olivary Degeneration Secondary to Primary Central Nervous System Lymphoma.

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 Jul 15. doi: 10.1001/2013.jamaneurol.218.
- [Enlace al texto completo \(gratis o de pago\)](#)

1001/2013.jamaneurol.218

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[854]

TÍTULO / TITLE: - Spinal glioblastoma multiforme.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Hematol Oncol Stem Cell Ther. 2013 Jul 22. pii: S1658-3876(13)00066-6. doi: 10.1016/j.hemonc.2013.06.006.

- [Enlace al texto completo \(gratis o de pago\)](#)

1016/j.hemonc.2013.06.006

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[855]

TÍTULO / TITLE: - Oesophageal Adenocarcinoma Presenting with Multiple Streptococcus intermedius Cerebral Abscesses.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - J Gastrointest Cancer. 2013 Jul 5.

- Enlace al texto completo (gratis o de pago) [1007/s12029-013-9522-](#)

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[856]

TÍTULO / TITLE: - Corpus callosum lymphoma.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Hematol Oncol Stem Cell Ther. 2013 Jul 22. pii: S1658-3876(13)00063-0. doi: 10.1016/j.hemonc.2013.05.009.

- Enlace al texto completo (gratis o de pago)

[1016/j.hemonc.2013.05.009](#)

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[857]

TÍTULO / TITLE: - Anterior cervical arachnoid cyst.

RESUMEN / SUMMARY: - [Enlace al Resumen / Link to its Summary](#)

REVISTA / JOURNAL: - Asian Spine J. 2013 Jun;7(2):119-25. doi: 10.4184/asj.2013.7.2.119. Epub 2013 May 22.

- Enlace al texto completo (gratis o de pago) [4184/asj.2013.7.2.119](#)

AUTORES / AUTHORS: - Rahimizadeh A; Sharifi G

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RESUMEN / SUMMARY: - This report is composed of two patients with anteriorly located cervical intradural arachnoid cyst and review of 24 cases in English language literature. Both of our patients were in the first two decades of life with neck pain and motor weakness. With suspicious diagnosis of anterior arachnoid cyst surgery was carried out in both cases, though laminectomy in one and laminoplasty in the other. The cyst wall was widely fenestrated with subsequent subtotal excision of the cyst. Both cases had good long-term outcome. The review disclosed male predominance. 73% of the patients were diagnosed within the first two decades of life. Neck pain and motor weakness were the dominant signs and symptoms of this pathology. Magnetic resonance imaging showing a cerebrospinal fluid (CSF) containing cyst was the best mode of diagnosis. Wide cyst fenestration with waying CSF into subarachnoid cyst was the most appropriate and applied surgery with optimal outcome.