

Mitchel S. Berger

Professor and Chairman, Department of Neurological Surgery

UCSF Neurological Surgery Faculty since 1997

Clinical interests

Dr. Berger's main clinical interests are the treatment of brain tumors in adults and children and of epilepsy related to brain tumors. He has extensive expertise in intraoperative mapping of the brain to identify the sites of motor, sensory, and language function and thereby avoid their involvement or injury during surgery. Dr. Berger is Director of the Adult Hydrocephalus and Shunt Program, and he also practices in the Neuro-Oncology Program and the Radiosurgery Program.

Research interests

His current research interests involve identifying molecular markers in gliomas as correlates of tumor progression and prognosis. This is done in conjunction with the Molecular Marker Core of the BTRC. He also works in conjunction with Dr. Krys Bankiewicz to test small molecule inhibitors in brain tumors using the drug delivery technique of [convection enhanced delivery](#). He is a co-investigator with Dr. John Park in UCSF's Comprehensive Cancer Center to develop immunoliposome-directed targeted therapy for treating gliomas that express EGF receptors. Other collaborations include functional mapping localization of language pathways in the brain in conjunction with Dr. Robert Knight and the Cognitive Neuroscience Graduate Program at UC Berkeley. Dr. Berger is currently the Principal Investigator of UCSF's SPORE Brain Tumor Program, funded by the National Cancer Institute and NINDS.

Education, Training, and Previous Positions

1974: BA, Harvard College, Cambridge, Massachusetts 1979: MD, University of Miami School of Medicine 1979-1980: Internship, UCSF 1980-1985: Residency in Neurological Surgery, UCSF 1985: Clinical Fellowship in Neuro-oncology, Brain Tumor Research Center at UCSF 1986: Fellowship in Pediatric Neurosurgery, Department of Neurosurgery, Hospital for Sick Children of the University of Toronto, Ontario, Canada 1986: Assistant Professor, Department of Neurosurgery at the University of Washington School of Medicine in Seattle/Concomitant appointments as Chief of Pediatric Neurosurgical Oncology at the Children's Hospital and Medical Center in Seattle and Chief of the Northwest Neuro-Oncology Research & Therapy Section at the University of Washington 1990: Associate Professor at the University of Washington 1996: Professor of Neurosurgery at the University of Washington

Selected Professional Memberships and Appointments

Board of Directors, American Association of Neurological Surgeons (AANS) American Academy of Neurological Surgery American Association for the Advancement of Science American Association for Cancer Research American College of Surgeons American Society of Clinical Oncology American

Society of Gene Therapy American Society for Stereotactic and Functional Neurosurgery California Association of Neurological Surgeons Congress of Neurological Surgeons (CNS) Joint Tumor Section, AANS and CNS National Tuberous Sclerosis Association Neurosurgical Society of American Pediatric Section, AANS and CNS San Francisco Medical Society Society of Neurological Surgeons Society for Neuro-Oncology Society of Surgical Oncology Vanderbilt Meacham Society World Federation of Neurosurgical Societies Medical Advisor, North American Brain Tumor Coalition Executive Council, American Brain Tumor Association Advisory Council, National Brain Tumor Foundation NFL Head, Neck and Spine Medical Committee Editorial board: The American Journal of Neuroradiology Editorial board: The Journal of Neuro-Oncology Editorial board: Journal of Neurosurgery Editorial board: Neuro-Oncology Editorial board: Neurosurgery Editorial board: Operative Neurosurgery Editorial board: Techniques in Neurosurgery

Selected Honors and Awards

1979: Lange Medical Publishing Company Medical Student Award for Outstanding Academic Performance, University of Miami School of Medicine 1979: Alpha Omega Alpha Award for Best Patient-Student Physician Relationship During Clinical Clerkships, University of Miami School of Medicine 1983: Donald Matson Award in Pediatric Neurosurgical Research from the American Association of Neurological Surgeons (AANS) 1991: Diplomate of the American Board of Neurological Surgery 1993: Fellow of the American College of Surgeons (FACS) 1994: Appointed to the Executive Committee of the Congress of Neurological Surgeons 1997-1999: President of the Society for Neuro-Oncology 1997-1998: Vice President of the Congress of Neurological Surgeons 1997-present: Director of the Brain Tumor Research Center, UCSF 1999: Appointment to the Board of Directors of the California Division of the American Cancer Society (ACS) 2002-present: America's Top Doctors, Castle Connolly Medical Ltd. 2004: UCSF Medical Center THANKS Star Award for exceptional contribution 2005-2006: Appointed Chairman of the Scientific Program Committee, AANS Annual Meeting 2006: Ronald L. Bittner Lecturer, Tumor Section, AANS Annual Meeting 2006: Farber Award, AANS Annual Meeting 2006: Jeannette and Bernard S. Post MD Endowed Lecturer, Mt. Sinai School of Medicine 2006: UCSF Medical Center THANKS Star Award for exceptional contribution 2007-2010: Director, American Board of Neurological Surgery 2007-2010: Board of Directors, American Association of Neurological Surgeons 2009: Winn Prize, Society of Neurological Surgeons 2009: Elected Member, UCSF Institute of Molecular Medicine 2010: Vice President, American Association of Neurological Surgeons 2010-2013: Secretary, American Academy of Neurological Surgery 2011: President Elect, American Association of Neurological Surgeons 2012: President, American Association of Neurological Surgeons

Selected Recent Publications Books

Bernstein M, Berger MS (eds): Neuro-Oncology: The Essentials, Second Edition. Thieme, New York, 2008, 496 pp.

Bernstein M, Berger MS (eds): Neuro-Oncology: The Essentials. Thieme, New York, 2000, 528 pp.

Berger MS, Wilson CD (eds): The Gliomas. WB Saunders, Philadelphia, 1998, 796 pp.

Berger MS (guest ed): Neurosurgery Clinics of North America, Pediatric Neuro-Oncology (vol 3, no 4). WB Saunders, Philadelphia, October 1992. Articles

Cage TA, Pekmezci M, Prados M, Berger MS. Subependymal spread of recurrent glioblastoma detected with the intraoperative use of 5-aminolevulinic acid [published online ahead of print February 19, 2013]. J Neurosurg. DOI: 10.3171/2013.1.JNS121537

Shchors K, Persson AI, Rostker F, Tihan T, Lyubynska N, Li N, Swigart LB, Berger MS, Hanahan D, Weiss WA, Evan GI. Using a preclinical mouse model of high-grade astrocytoma to optimize p53 restoration therapy [published online ahead of print March 29, 2013]. *Proc Natl Acad Sci U S A*. doi: 10.1073/pnas.1219142110. Free Article

Barajas RF Jr, Hess CP, Phillips JJ, Von Morze CJ, Yu JP, Chang SM, Nelson SJ, McDermott MW, Berger MS, Cha S. Super-Resolution Track Density Imaging of Glioblastoma: Histopathologic Correlation [published online ahead of print February 14, 2013]. *AJNR Am J Neuroradiol*. doi: 10.3174/ajnr.A3400

Rice T, Zheng S, Decker PA, Walsh KM, Bracci P, Xiao Y, McCoy LS, Smirnov I, Patoka JS, Hansen HM, Hsuang G, Wiemels JL, Tihan T, Pico AR, Prados MD, Chang SM, Berger MS, Caron A, Fink S, Kollmeyer T, Ryneerson A, Voss J, Kosel ML, Fridley BL, Lachance DH, Eckel-Passow JE, Sicotte H, O'Neill BP, Giannini C, Wiencke JK, Jenkins RB, Wrensch MR. Inherited variant on chromosome 11q23 increases susceptibility to IDH-mutated but not IDH-normal gliomas regardless of grade or histology [published online ahead of print February 7, 2013]. *AJNR Am J Neuroradiol*. doi: 10.1093/neuonc/nos324

Kaur G, Kane AJ, Sughrue ME, Madden M, Oh MC, Sun MZ, Safaee M, El-Sayed I, Aghi M, McDermott MW, Berger MS, Parsa AT. The prognostic implications of Hyam's subtype for patients with Kadish stage C esthesioneuroblastoma. *J Clin Neurosci* 2013;20(2):281-6.

Chen PY, Ozawa T, Drummond DC, Kalra A, Fitzgerald JB, Kirpotin DB, Wei KC, Butowski N, Prados MD, Berger MS, Forsayeth JR, Bankiewicz K, James CD. Comparing routes of delivery for nanoliposomal irinotecan shows superior anti-tumor activity of local administration in treating intracranial glioblastoma xenografts. *Neuro Oncol* 2013;15(2):189-97.

Silber J, Hashizume R, Felix T, Hariono S, Yu M, Berger MS, Huse JT, VandenBerg SR, James CD, Hodgson JG, Gupta N. Expression of miR-124 inhibits growth of medulloblastoma cells. *Neuro Oncol* 2013;15(1):83-90.

Kaur G, Kane AJ, Sughrue ME, Oh M, Safaee M, Sun M, Tihan T, McDermott MW, Berger MS, Parsa AT. MIB-1 labeling index predicts recurrence in intraventricular central neurocytomas. *J Clin Neurosci* 2013;20(1):89-93.

Lau CY, Greysen SR, Mistry RI, Han SJ, Mummaneni PV, Berger MS. Creating a culture of safety within operative neurosurgery: the design and implementation of a perioperative safety video. *Neurosurg Focus* 2012;33(5):E3.

Bloch O, Han SJ, Cha S, Sun MZ, Aghi MK, McDermott MW, Berger MS, Parsa AT. Impact of extent of resection for recurrent glioblastoma on overall survival: clinical article. *J Neurosurg* 2012;117(6):1032-8.

Crane CA, Han SJ, Ahn B, Oehlke J, Kivett V, Fedoroff A, Butowski N, Chang SM, Clarke J, Berger MS, McDermott MW, Prados MD, Parsa AT. Individual patient-specific immunity against high-grade glioma after vaccination with autologous tumor derived peptides bound to the 96 KD chaperone protein. *Clin Cancer Res* 2013;19(1):205-14.

De Witt Hamer PC, Robles SG, Zwinderman AH, Duffau H, Berger MS. Impact of intraoperative stimulation brain mapping on glioma surgery outcome: a meta-analysis. *J Clin Oncol* 2012 Jul 10;30(20):2559-65.

Chaumeil MM, Gini B, Yang H, Iwanami A, Sukumar S, Ozawa T, Pieper RO, Mischel PS, James CD, Berger MS, Ronen SM. Longitudinal evaluation of MPIO-labeled stem cell biodistribution in glioblastoma using high resolution and contrast-enhanced MR imaging at 14.1Tesla. *Neuro Oncol*

2012;14(8):1050-61.

Felicella MM, Hagenkord JM, Kash SF, Powers MP, Berger MS, Perry A. A common 8q (MYC) amplification detected in a multifocal anaplastic astrocytoma by SNP array karyotyping. Clin Neuropathol 2012;31(4):210-5.

Mueller S, Phillips J, Onar-Thomas A, Romero E, Zheng S, Wiencke JK, McBride SM, Cowdrey C, Prados MD, Weiss WA, Berger MS, Gupta N, Haas-Kogan DA. PTEN promoter methylation and activation of the PI3K/Akt/mTOR pathway in pediatric gliomas and influence on clinical outcome. Neuro Oncol 2012;14(9):1146-52.

Barajas RF Jr, Phillips JJ, Parvataneni R, Molinaro A, Essock-Burns E, Bourne G, Parsa AT, Aghi MK, McDermott MW, Berger MS, Cha S, Chang SM, Nelson SJ. Regional variation in histopathologic features of tumor specimens from treatment-naïve glioblastoma correlates with anatomic and physiologic MR Imaging. Neuro Oncol 2012;14(7):942-54.

Tarapore PE, Tate MC, Findlay AM, Honma SM, Mizuiri D, Berger MS, Nagarajan SS. Preoperative multimodal motor mapping: a comparison of magnetoencephalography imaging, navigated transcranial magnetic stimulation, and direct cortical stimulation. J Neurosurg 2012;117(2):354-62.

Xiao Y, Decker PA, Rice T, et al. SSBP2 variants are associated with survival in glioblastoma patients. Clin Cancer Res 2012;18(11):3154-62.

Elkhaled A, Jalbert L, Phillips JJ, Yoshihara HAI, Parvataneni R, Srinivasan R, Bourne1 G, Berger MS, Chang SM, Cha S, Nelson SJ. Magnetic Resonance of 2-hydroxyglutarate in IDH1-mutated low-grade gliomas. Sci Transl Med 2012;4:116ra5.

Chesler DA, Berger MS, Quinones-Hinojosa A. The potential origin of glioblastoma initiating cells. Front Biosci (Schol Ed) 2012;4:190-205.

Goldhoff P, Clarke J, Smirnov I, Berger MS, Prados MD, James CD, Perry A, Phillips JJ. Clinical stratification of glioblastoma based on alterations in RB1 protein and association with the proneural subtype. J Neuropathol Exp Neurol 2012;71:83-89.

Sanai N, Nguyen T, Ihrie RA, Mirzadeh Z, Tsai HH, Wong M, Gupta N, Berger MS, Huang E, Garcia-Verdugo JM, Rowitch DH, Alvarez-Buylla A. Corridors of migrating neurons in the human brain and their decline during infancy. Nature 2011;478(7369):382-86.

Fiandaca MS, Berger MS, Bankiewicz KS. The use of use of convection-enhanced delivery with liposomal toxins in neuro-oncology. Toxins (Basel) 2011;3:369-97.

Goldhoff P, Clarke J, Smirnov I, Berger MS, Prados MD, James CD, Perry A, Phillips JJ. Clinical stratification of glioblastoma based on alterations in RB1 protein and association with the proneural subtype. J Neuropathol Exp Neurol 2012;71:83-9.

Chesler DA, Berger MS, Quinones-Hinojosa A. The potential origin of glioblastoma initiating cells. Front Biosci (Schol Ed) 2012;4:190-205.

Sugiarto S, Persson AI, Munoz EG, Waldhuber M, Lamagna C, Andor N, Hanecker P, Ayers-Ringler J, Phillips J, Siu J, Lim DA, Vandenberg S, Stallcup W, Berger MS, Bergers G, Weiss WA, Petritsch C. Asymmetry-defective oligodendrocyte progenitors are glioma precursors. Cancer Cell 2011;20:328-40.

Sanai N, Berger MS. Extent of resection influences outcomes for patients with gliomas. *Rev Neurol (Paris)* 2011;167:648-54.

Englot DJ, Berger MS, Barbaro NM, Chang EF. Predictors of seizure freedom after resection of supratentorial low-grade gliomas. *J Neurosurg* 2011;115(2):240-4.

Clark AJ, Lamborn KR, Butowski NA, Chang SM, Prados MD, Clarke JL, McDermott MW, Parsa AT, Berger MS, Aghi MK. Neurosurgical management and prognosis of patients with glioblastoma that progress during bevacizumab treatment. *Neurosurgery* 2012;70(2):361-70.

Sanai N, Chang S, Berger MS. Low-grade gliomas in adults. *J Neurosurg* 2011;115:948-65.

Sanai N, Berger MS. Extent of resection influences outcomes for patients with gliomas. *Rev Neurol (Paris)* 2011;167(10):648-54.

Sugiarto S, Persson AI, Munoz EG, Waldburger M, Lamagna C, Andor N, Hanecker P, Ayers-Ringler J, Phillips J, Siu J, Lim DA, Vandenberg S, Stallcup W, Berger MS, Bergers G, Weiss WA, Petritsch C. Asymmetry-defective oligodendrocyte progenitors are glioma precursors. *Cancer Cell* 2011;20(3):328-40.

Richardson R, Gimenez F, Aguilar-Salegio E, Bringas J, Berger MS, Bankiewicz K. T2 imaging in monitoring of intraparenchymal real-time convection enhanced delivery. *Neurosurgery* 2011;69(1):154-163.

McKnight TR, Smith KJ, Chu PW, Chiu KS, Cloyd CP, Chang SM, Phillips JJ, Berger MS. Choline metabolism, proliferation, and angiogenesis in non-enhancing grades 2 and 3 astrocytoma. *J Magn Reson Imaging* 2011;33:808-816.

Sanai N, Polley M-Y, McDermott MW, Parsa AT, Berger MS. An extent of resection threshold for newly diagnosed glioblastomas. *J Neurosurg* 2011;115:3-8.

Richardson RM, Kells AP, Martin AJ, Larson PS, Starr PA, Piferi PG, Bates G, Tansey L, Rosenbluth KH, Bringas JR, Berger MS, Bankiewicz KS. Novel platform for MRI-guided convection-enhanced delivery of therapeutics: preclinical validation in nonhuman primate brain. *Stereotact Funct Neurosurg* 2011;89(3):141-151.

Chang EF, Wang DD, Perry DW, Barbaro NM, Berger MS. Homotopic organization of essential language sites in right and bilateral cerebral hemispheric dominance. *J Neurosurg* 2011;114(4):893-902.

Parsons DW, Li M, Zhang X, et al. The genetic landscape of a childhood cancer. *Science* 2011;331(6016):435-9.

Sughrue ME, Rutkowski MJ, Chang EF, Shangari G, Kane AJ, McDermott MW, Berger MS, Parsa AT. Postoperative seizures following the resection of convexity meningiomas: are prophylactic anticonvulsants indicated? *J Neurosurg* 2011;114(3):705-9.

Chang EF, Clark A, Smith JS, Polley MY, Chang SM, Barbaro NM, Parsa AT, McDermott MW, Berger MS. Functional mapping-guided resection of low-grade gliomas in eloquent areas of the brain: improvement of long-term survival. *J Neurosurg* 2011;114(3):566-73.

Martino J, Honma SM, Findlay AM, Owen JP, Guggisberg AG, Kirsch HE, Berger MS, Nagarajan SS. Resting functional connectivity in patients with brain tumors in eloquent areas. *Ann Neurol* 2011;69(3):521-32.

Zheng S, Houseman EA, Morrison Z, Wrensch MR, Patoka JS, Ramos C, Haas-Kogan DA, McBride S, Marsit CJ, Christensen BC, Nelson HH, Stokoe D, Wiemels JL, Chang SM, Prados MD, Tihan T, Vandenberg SR, Kelsey KT, Berger MS, Wiencke JK. DNA hypermethylation profiles associated with glioma subtypes and EZH2 and IGFBP2 mRNA expression. *Neuro Oncol* 2011;13(3):280-9.

Prasad G, Sottero T, Yang X, Mueller S, James CD, Weiss WA, Polley M-Y, Ozawa T, Berger MS, Aftab DT, Prados MD, Haas-Kogan DA Inhibition of PI3K/mTOR pathways in glioblastoma and implications for combination therapy with temozolomide. *Neuro Oncol* 2011;13(4):384-92.

Ellenbogen RG, Berger MS, Batjer HH. The national football league and concussion: leading a culture change in contact sports. *World Neurosurg* 2010;74(6):560-5.

Persson AI, Petritsch C, Itsara M, Swartling FJ, Itsara M, Sim FJ, Auvergne R, Goldenberg DD, Vandenberg SR, Nguyen KN, Yakovenko S, Ayers-Ringler J, Nishiyama A, Stallcup WB, Berger MS, Bergers G, McKnight TR, Goldman SA, Weiss WA. Non-stem cell origin for oligodendroglioma *Cancer Cell* 2010;18:1-14.

Clark AJ, Butowski NA, Chang SM, Prados MD, Clarke J, Polley M-YC, Sughrue ME, McDermott MW, Parsa AT, Berger MS, Aghi MK. Impact of bevacizumab chemotherapy on craniotomy wound healing. *J Neurosurg* 2011;114(6):1609-16.

Flinker A, Chang EF, Barbaro NM, Berger MS, Knight RT. Sub-centimeter language organization in the human temporal lobe. *Brain Lang* 2011;117(3):103-9.

Chang EF, Rieger JW, Johnson K, Berger MS, Barbaro NM, Knight RT. Categorical speech representation in human superior temporal gyrus. *Nat Neurosci* 2010;13(11):1428-32.

Zlotnick D, Kalkanis SN, Quinones-Hinojosa A, Chung K, Linskey ME, Jensen RL, DeMonte F, Barker FG, Racine CA, Berger MS, Black PM, Cusimano M, Sekhar LN, Parsa A, Aghi M, McDermott MW. FACT-MNG: tumor site specific web-based outcome instrument for meningioma patients. *J Neurooncol* 2010;99(3):423-31.

Ramakrishna R, Barber J, Kennedy G, Rizvi A, Goodkin R, Winn RH, Ojemann GA, Berger MS, Spence AM, Rostomily RC. Imaging features of invasion and preoperative and postoperative tumor burden in previously untreated glioblastoma: Correlation with survival. *Surg Neurol Int* 2010;1:pii40.

Zhu X, Bidlingmaier S, Hashizume R, James CD, Berger MS, Liu B. Identification of internalizing human single-chain antibodies targeting brain tumor sphere cells. *Mol Cancer Ther* 2010;9(7):2131-41.

Dickinson PJ, Lecouteur RA, Higgins RJ, Bringas JR, Larson RF, Yamashita Y, Krauze MT, Forsayeth J, Noble CO, Drummond DC, Kirpotin DB, Park JW, Berger MS, Bankiewicz KS. Canine spontaneous glioma: A translational model system for convection-enhanced delivery. *Neuro Oncol* 2010;12(9):928-40.

Sughrue ME, Kane AJ, Shangari G, Parsa AT, Berger MS, McDermott MW. Prevalence of previous extracranial malignancies in a series of 1228 patients presenting with meningioma. *J Neurosurg* 2010;113(5):1115-21.

Yin D, Richardson RM, Fiandaca MS, Bringas J, Forsayeth J, Berger MS, Bankiewicz KS. Cannula placement for effective convection-enhanced delivery in the nonhuman primate thalamus and brainstem: implications for clinical delivery of therapeutics. *J Neurosurg* 2010;113(2):240-8.

Sanai N, Berger MS. Intraoperative stimulation techniques for functional pathway preservation and

glioma resection. *Neurosurg Focus* 2010;28(2):E1.

Barajas RF Jr, Hodgson JG, Chang JS, Vandenberg SR, Yeh RF, Parsa AT, McDermott MW, Berger MS, Dillon WP, Cha S. Glioblastoma multiforme regional genetic and cellular expression patterns: influence on anatomic and physiologic MR imaging. *Radiology*. 2010 Feb;254(2):564-76.

Han SJ, Yang I, Ahn BJ, Otero JJ, Tihan T, McDermott MW, Berger MS, Prados MD, Parsa AT. Clinical characteristics and outcomes for a modern series of primary gliosarcoma patients. *Cancer* 2010;116(5):1358-66.

Schiffman JD, Hodgson JG, Vandenberg SR, Flaherty P, Polley MY, Yu M, Fisher PG, Rowitch DH, Ford JM, Berger MS, Ji H, Gutmann DH, James CD. Oncogenic BRAF mutation with CDKN2A inactivation is characteristic of a subset of pediatric malignant astrocytomas. *Cancer Res* 2010;70(2):512-9.

Chang EF, Christie C, Sullivan JE, Garcia PA, Tihan T, Gupta N, Berger MS, Barbaro NM. Seizure control outcomes after resection of dysembryoplastic neuroepithelial tumor in 50 patients. *J Neurosurg Pediatr*. 2010 Jan;5(1):123-30.

Wrensch M, Jenkins RB, Chang JS, Yeh RF, Xiao Y, Decker PA, Ballman KV, Berger M, Buckner JC, Chang S, Giannini C, Halder C, Kollmeyer TM, Kosel ML, LaChance DH, McCoy L, O'Neill BP, Patoka J, Pico AR, Prados M, Quesenberry C, Rice T, Ryneerson AL, Smirnov I, Tihan T, Wiemels J, Yang P, Wiencke JK. Variants in the CDKN2B and RTEL1 regions are associated with high-grade glioma susceptibility. *Nat Genet* 2009;41(8):905-8.

Chang SM, Nelson S, Vandenberg S, Cha S, Prados M, Butowski N, McDermott M, Parsa AT, Aghi M, Clarke J, Berger M. Integration of preoperative anatomic and metabolic physiologic imaging of newly diagnosed glioma. *J Neurooncol* 2009;92(3):401-15.

Chang EF, Clark A, Jensen RL, Bernstein M, Guha A, Carrabba G, Mukhopadhyay D, Kim W, Liau LM, Chang SM, Smith JS, Berger MS, McDermott MW. Multiinstitutional validation of the University of California at San Francisco Low-Grade Glioma Prognostic Scoring System. *J Neurosurg* 2009;111(2):203-10.

Nagarajan S, Kirsch H, Lin P, Findlay A, Honma S, Berger MS. Preoperative localization of hand motor cortex by adaptive spatial filtering of magnetoencephalography data. *J Neurosurg* 2008;109(2):228-37.

Chang EF, Smith JS, Chang SM, Lamborn KR, Prados MD, Butowski N, Barbaro NM, Parsa AT, Berger MS, McDermott MM. Preoperative prognostic classification system for hemispheric low-grade gliomas in adults. *J Neurosurg*. 2008 Nov;109(5):817-24.

Sanai N, Berger MS. Glioma Extent of Resection and Its Impact on Patient Outcome. *Neurosurgery* 2008;62(4):753-66.

Dickinson PJ, LeCouteur RA, Higgins RJ, Bringas JR, Roberts B, Larson RF, Yamashita Y, Krauze M, Noble CO, Drummond D, Kirpotin DB, Park JW, Berger MS, Bankiewicz KS. Canine model of convection-enhanced delivery of liposomes containing CPT-11 monitored with real-time magnetic resonance imaging: laboratory investigation. *J Neurosurg* 2008;108(5):989-98.

Smith JS, Chang EF, Lamborn KR, Chang SM, Prados MD, Cha S, Tihan T, Vandenberg S, McDermott MW, Berger MS. Role of extent of resection in the long-term outcome of low-grade hemispheric gliomas. *J Clin Oncol* 2008;26(8):1338-45.

Chang EF, Potts MB, Keles GE, Lamborn KR, Chang SM, Barbaro NM, Berger MS. Seizure characteristics and control following resection in 332 patients with low-grade gliomas. *J Neurosurg* 2008;108(2):227-35.

Sanai N, Mirzadeh Z, Berger MS. Functional Outcome after Language Mapping for Glioma Resection. *N Engl J Med* 2008;358(1):18-27.

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First Author

1: Berger MS. The fluorescein-guided technique. *Neurosurg Focus*. 2014 Feb;36(2):E6. doi: 10.3171/2013.11.FOCUS13535. PubMed PMID: 24484259.

2: Berger MS. Use of 5-aminolevulinic acid helps see the way beyond MRI. *Neurosurg Focus*. 2014 Feb;36(2):E4. doi: 10.3171/2013.12.FOCUS13553. PubMed PMID: 24484257.

3: Berger MS, Wachter RM, Greysen SR, Lau CY. Changing our culture to advance patient safety: the 2013 AANS Presidential Address. *J Neurosurg*. 2013 Dec;119(6):1359-69. doi: 10.3171/2013.10.JNS132034. PubMed PMID: 24289847.

4: Berger MS, Carter BS. Low grade gliomas. *Neurosurg Focus*. 2013 Feb;34(2):1. doi: 10.3171/2012.12.FOCUS12407. PubMed PMID: 23373455.

5: Berger MS. Glioma surgery: a century of challenge. *Clin Neurosurg*. 2011;58:7-9. PubMed PMID: 21916122.

6: Berger MS. Defining and achieving excellence in surgical neuro-oncology. *Clin Neurosurg*. 2010;57:10-4. PubMed PMID: 21280488.

7: Berger MS, Couldwell WT, Rutka JT, Selden NR. Introduction: neurogenomics and neuroproteomics. *Neurosurg Focus*. 2010 Jan;28(1):E1. doi: 10.3171/2009.11.FOCUS.JAN10.INTRO. PubMed PMID: 20043713.

8: Berger MS, Hadjipanayis CG. Surgery of intrinsic cerebral tumors. *Neurosurgery*. 2007 Jul;61(1 Suppl):279-304; discussion 304-5. doi: 10.1227/01.NEU.0000255489.88321.18. Review. PubMed PMID: 18813160.

9: Berger MS, Rostomily RC. Low grade gliomas: functional mapping resection strategies, extent of resection, and outcome. *J Neurooncol*. 1997 Aug;34(1):85-101. Review. PubMed PMID: 9210055.

10: Berger MS, Stieg PE, Danks RA, Schwartz RB, Folkerth RD. Lesions in eloquent cortex. *Neurosurgery*. 1997 May;40(5):1059-63. PubMed PMID: 9149265.

11: Berger MS. Surgery of low-grade gliomas-technical aspects. *Clin Neurosurg*. 1997;44:161-80. Review. PubMed PMID: 10080007.

12: Berger MS. The impact of technical adjuncts in the surgical management of cerebral hemispheric low-grade gliomas of childhood. *J Neurooncol*. 1996 May-Jun;28(2-3):129-55. Review. PubMed PMID: 8832458.

13: Berger MS. Malignant astrocytomas: surgical aspects. *Semin Oncol*. 1994 Apr;21(2):172-85.

Review. PubMed PMID: 8153663.

14: Berger MS, Keles GE, Geyer JR. Cerebral hemispheric tumors of childhood. *Neurosurg Clin N Am*. 1992 Oct;3(4):839-52. Review. PubMed PMID: 1392579.

15: Berger MS, Tucker A, Spence A, Winn HR. Reoperation for glioma. *Clin Neurosurg*. 1992;39:172-86. Review. PubMed PMID: 1333931.

16: Berger MS, Baumeister B, Geyer JR, Milstein J, Kanev PM, LeRoux PD. The risks of metastases from shunting in children with primary central nervous system tumors. *J Neurosurg*. 1991 Jun;74(6):872-7. PubMed PMID: 2033446.

17: Berger MS, Sundsten J, Lemire RJ, Silbergeld D, Newell D, Shurtleff D. Pathophysiology of isolated lateral ventriculomegaly in shunted myelodysplastic children. *Pediatr Neurosurg*. 1990-1991;16(6):301-4. Erratum in: *Pediatr Neurosurg* 1991-92;17(3):168. PubMed PMID: 2134740.

18: Berger MS, Kincaid J, Ojemann GA, Lettich E. Brain mapping techniques to maximize resection, safety, and seizure control in children with brain tumors. *Neurosurgery*. 1989 Nov;25(5):786-92. PubMed PMID: 2586730.

19: Berger MS. Ultrasound-guided stereotaxic biopsy using a new apparatus. *J Neurosurg*. 1986 Oct;65(4):550-4. PubMed PMID: 3531431.

20: Berger MS. Neurosurgery: intrauterine surgical procedures and the management of hydrocephalic fetuses. *West J Med*. 1986 Jul;145(1):87. PubMed PMID: 18750026; PubMed Central PMCID: PMC1306827.

21: Berger MS, Edwards MS, Wara WM, Levin VA, Wilson CB. Primary cerebral neuroblastoma. Long-term follow-up review and therapeutic guidelines. *J Neurosurg*. 1983 Sep;59(3):418-23. PubMed PMID: 6886755.

22: Berger MS, Edwards MS, LaMasters D, Davis RL, Wilson CB. Pediatric brain stem tumors: radiographic, pathological, and clinical correlations. *Neurosurgery*. 1983 Mar;12(3):298-302. PubMed PMID: 6302553.

23: Berger MS, Edwards MS, Bingham WG. Hypoglossal neurilemmoma: case report and review of the literature. *Neurosurgery*. 1982 May;10(5):617-20. PubMed PMID: 7099413.

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