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CURRENT PROFESSIONAL EXPERIENCE and DISTINCTIONS

Professor and Neurosurgeon, Henry Ford Medical Group, Detroit, MI

January 2004 - present

Professor of Neurosurgery (2014 – present), Wayne State University School of Medicine;
Complex Cranial and Spinal Neurosurgery with a focus in brain tumor surgery

*Chair, Henry Ford Department of Neurosurgery;
Co-Director, Neuroscience Institute*

April 2014 – present

MARK ROSENBLUM ENDOWED CHAIR IN NEUROSURGERY, AND VLASIC ENDOWED CHAIR IN NEUROSURGERY

- Responsible for the growth of neurosurgery and neuroscience systemwide with **34 senior staff faculty physicians** (including 17 neurosurgeons, 4 neuro-intensivists, 3 neuro-oncologists, 1 physiatrist, 2 neuro-endovascular interventionalists, 2 neuro-pathologists and 5 senior neuroscience research faculty) covering 4 hospitals while matching 2 neurosurgery residents/year in a 7-year academic program
- Achieved dramatic departmental **financial and academic growth** from 2014 - 2016, including surpassing prior year contribution margins by \$4M, with increased downstream revenue of \$37M, led by a 20% increase in surgical volume and external referrals as a result of our statewide and national referring physician outreach program, clinical trials expansion and leadership in the Michigan Spine Collaborative
- **Recognized by Henry Ford leadership:** #1 department in **Academic Productivity** (per capita publications and national presentations, 2015), #1 department in **Quality and Safety** (*Choosing Wisely* winner for spine radiographic decision support and brain tumor board collaboration initiatives, 2015), #1 in **Faculty Engagement** and #1 in **Philanthropic Support** (personally raised \$4.25M since 2014 for Neuroscience); *US News and World Report* Top National Honor Roll with #1 reputation score in Michigan 2015
- **Vice-Chair (2011-2014):** operations across all sites; strategic planning with Wayne State University-Smart Sensors and Integrative Microsystems, and Blue Cross - Spine Collaborative; **HFMG Operations Council**

Medical Director, Henry Ford Cancer Center

February 2016 – present

Selected to lead, in a transitional role, the building of a new \$110M cancer center and development of a systemwide, comprehensive cancer experience, with programmatic support at all System hospitals and the destination main campus hub, including clinical trials and precision medicine platforms to prepare for eventual NCI designation status. Previously, founded the Center for Cancer Surgery (2012), in partnership with Josephine Ford Cancer Institute, to unify surgical oncology across disciplines while creating 24-hour patient access with nurse navigation, concierge support, “preferred referring provider” marketing outreach and a cancer mobile app

Co-Director, Hermelin Brain Tumor Center

April 2008 - present

Offer the most brain tumor clinical trials in Midwest with 2nd largest tissue bank in the world; largest contributor to The Cancer Genome Atlas (TCGA) for personalized medicine therapies based on targeted molecular genomics; one of only 15 sites nationally in NIH-designated Adult Brain Tumor Consortium (2004-present); spearheaded first-in-the-state intraoperative MRI (2011), laser ablation (2014) and BrightMatter (2016) platforms

Medical Director, Henry Ford Referring Physician Office

June 2009 – February 2016

Partnered with administrative leadership to develop immediate access and communication standards to support external referring physicians; as chair of the **Statewide Growth Strategy**, increased outside referrals, hospital transfers and new patient MRNs by over 119% since 2010, along with overall case mix index at Henry Ford

- * **Director**, Cell-Based Therapeutics Laboratory for Translational Brain Tumor Research, Henry Ford (2004 – present)
- * **Neurosurgery Residency Co-Director**, Henry Ford West Bloomfield Hospital (2009 – 2014)
- * Selected for “*Castle Connolly*,” “*Who’s Who in American Medicine*,” “*Best Doctors in America*,” “*Leading Physicians of the World*,” and as one of Michigan’s “**Top Docs**” in Neurosurgery by referring physicians, *Hour Detroit Magazine*: **2008 – present**, including the honor of top statewide vote earner in 2014, 2015.
- * Distinguished as the only Department Chair throughout Henry Ford Health System to be awarded two endowed chairs

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SPECIAL COURSES

Harvard Program for Chiefs of Clinical Services *January 2016* Boston, Massachusetts
Harvard School of Public Health, Executive Professional Education Course in business, leadership, management, fiscal and responsibility structure planning and implementation

Physician Leadership Institute *2012 -2013* Detroit, Michigan
Selected by Henry Ford leadership for year-long executive business, negotiation, innovation and financial planning course
Final project designing a referring physician outreach and communication platform ultimately adopted systemwide

BOARD CERTIFICATION and LICENSURE

- * Passed USMLE Step 1 (1995), Step 2 (1996), Step 3 (1997) and written Neurosurgical Board exam (2001)
- * Oral Board Certification ~ **Diplomate, American Board of Neurological Surgery** (2009)
- * Invited as *Guest Examiner* for the oral boards by the ABNS (2014 - 2015)
- * *Licensure*: State of Massachusetts (1997-2004), State of Michigan (2004 – present)

NEUROSURGICAL TRAINING

Chief Resident in Neurosurgery, Harvard-Massachusetts General Hospital Boston, Massachusetts
June through December 2003, served as North Service attending, leading the trauma service and all teaching conferences

Resident in Neurosurgery, Harvard-Massachusetts General Hospital Boston, Massachusetts
July 1997 through June 2003, including *Internship in General Surgery* (MGH July 1997 – June 1998), rotation in *Pediatric Neurosurgery* (Children’s Hospital – Boston 1999), and *infolded Neuro-oncology training* (2002-2003)

- * First Prize Winner, 2002 American College of Surgeons *Best Resident Paper Award*, for “Intraspinal Cell Based Therapy as a Novel Treatment for ALS and Spinal Cord Injury”
- * National recipient of *Project ALS Grant Award* involving novel stem cell transplantation applications (2000 – 2002)
- * *Stem Cell Research Award Recipient*, Society for Neuroscience and Motor Neuron Diseases, San Francisco, CA, 2001
- * Co-Presenter, Primate Motor Neuron Regeneration project; national *CNS Resident Prize* winner, San Diego, CA, 2001
- * Selected as *Course Lecturer and Laboratory Instructor*, and winner of *Anatomy Section Teaching Prize*, for *Advanced Neuroanatomy*, Harvard Medical School – MIT Health Sciences and Technology Curriculum, (2001 – 2002)

EDUCATION, HONORS and AWARDS

Harvard Medical School *1993-1997* Boston, Massachusetts
Doctor of Medicine degree conferred in June 1997. Selected as Class Marshal for Commencement (1997) and elected *President*, HMS Student Body (1994-1997).

- * Awarded the *Linnane Prize*, “given to those two students who have demonstrated superior academic achievement as evidenced by tutorial and clinical evaluations and who have shown inspiring leadership at Harvard Medical School.”
- * *Highest Honors* clinical distinctions in Neurosurgery, Core Surgery, Core Medicine, Neurology, Psychiatry, Neurosurgery as Neuroscience, and Obstetrics and Gynecology.

Harvard University *1989-1993* Cambridge, Massachusetts
B.A. Honors degree in Government, *Magna Cum Laude*, awarded in June 1993 with special emphasis in American Democracy, Economics and International Relations, in addition to advanced science courses. Elected *Phi Beta Kappa*.
*Recipient of the John Harvard Award (Group I) all years in recognition of highest academic achievement.
*Senior thesis on post-Cold War international relations selected for Harvard Archives placement and highest honors.

Oxford University Oxford, England
Visiting Fellow 1991, New College, Oxford. Coursework in Biomedical Cancer Research/cell cycle control as an intern with the Imperial Cancer Research Fund, and Changing East-West Relations in the Post-Cold War World.
*Recipient of the Oxford Honour Prize for highest academic performance during the summer term.

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LEADERSHIP in NATIONAL PROFESSIONAL ORGANIZATIONS

Congress of Neurological Surgeons (CNS), *Executive Board* **2010 – present**

The CNS is the largest neurosurgical association in the world with over 8,500 active members from over 100 nations, and is governed by a 15-member Executive Board, with a central mission to enhance neurosurgical education and advance scientific and clinical discovery in neuroscience while promoting the profession of neurosurgery

***CNS Officer, Secretary of the Congress of Neurological Surgeons** (2015 – 2018)

***CNS Annual Meeting Chairman** (2015 – 2016, San Diego, CA annual meeting)

***CNS Scientific Program Chairman** (2014 – 2015, New Orleans, LA annual meeting)

***CNS Foundation, Board of Directors** (2013 – present)

***CNS Guidelines Committee, Chair** (2012 – 2016)

Spearheaded and led Guidelines development and publication for the comprehensive multidisciplinary management of brain metastases, primary and recurrent glioblastoma, low grade glioma, pituitary adenoma, pediatric hydrocephalus, thoraco-lumbar fusion, spinal metastases and deep brain stimulation

***CNS Fellowships Committee, Chair** (2010 – 2012)

***NEUROSURGERY®** journal, *Editorial Board* (2010 – present)

Joint Section on Tumors **2006 - present**

A joint section of the American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS), the Tumor Section represents the field of neurosurgical oncology in the US and around the world

***Chair of the Tumor Section** (2016 – 2018)

***Secretary-Treasurer** (2015 – 2016)

***Tumor Section Guidelines Committee, Chair** (2010 – 2015)

***Journal of Neuro-oncology®**, *Editorial Board* (2012 – present)

***Chair, Brain Metastases Guidelines Project** involving multidisciplinary collaborations with neurosurgeons, radiation oncologists and medical and neuro-oncologists, along with the McMaster University Evidenced-Based Medicine Practice Center; comprehensive national brain metastases treatment guidelines published in January 2010, in the *Journal of Neuro-oncology*

AANS/CNS Joint Guidelines Committee, *Executive Committee* **2008 – present**

***Joint Guidelines Committee, Vice-Chair** (2012 – present)

*Neurosurgical Liaison to the **American College of Radiology Appropriateness Criteria Panel** (2013 – present)

American Association of Neurological Surgeons (AANS) **1998 - present**

The AANS is the organization that speaks for all of neurosurgery, and it is dedicated to advancing the specialty of neurological surgery in order to promote the highest quality of patient care

***Ex-Officio Member, AANS Board of Directors** (2016 – present)

***AANS Neurosurgeon®**, *Editorial Board* (2012 – 2015)

***National Neurosurgery Quality and Outcomes Database (N2QOD)**, *Scientific Committee Vice-Chair* (2013)

***AANS Young Neurosurgeons Committee** (2004 – 2011)

Michigan Association of Neurological Surgeons (MANS) **2005 – present**

* **President** (2012 – 2014); *Vice-President* (2010 – 2012)

Society for Neuro-Oncology (SNO) **2005 - present**

Phi Beta Kappa **1992 - present**

Harvard Medical School Alumni Officer, Aesculapian Society **1997 - present**

Harvard Club of Michigan *President, 2009-2012* **2004 - present**

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NEUROSCIENCE RESEARCH and GRANT AWARDS

Henry Ford Health System - Hermelin Brain Tumor Center

January 2004 - present

Serve as Principal Investigator and *Director* of the **Cell-based Translational Therapeutics Laboratory**, investigating multiple translational research projects aimed at developing novel clinical trials and therapies for pre-treatment screening protocols and gene-based personalized medicine approaches for treating brain tumor patients; we are also conducting several ongoing projects involving convection enhanced delivery and the creation of stem cell delivery vehicles for anti-tumor therapy in animal models, in conjunction with the laboratories of Tom Mikkelsen MD and Chaya Brodie PhD, through the Hermelin Brain Tumor Center and Henry Ford Hospital

Research Support Funding

* **U01 CA137443-01: Mikkelsen/Kalkanis** (co-PI, role: Neurosurgery Investigator) 3/13/09 – present
NIH/NCI (RFA: CA-04-001): *New Applications in Brain Tumor Therapy* [Johns Hopkins University, Henry Ford]
To improve the therapeutic outcome of patients with primary brain tumors. (\$2,000,000)

***Hermelin – Shoot for a Cure Grant # H60071: Kalkanis** (PI, role: Neurosurgery Investigator) 1/15/12 – present
Wayne State University – Smart Sensors and Integrative Microsystems Grant Award – Henry Ford Innovations in collaboration with Greg Auner PhD, Mark Rosenblum, MD, Tom Mikkelsen, MD PhD, Rachel Kast PhD and Panos Varelas, MD; initial award \$1,500,000 with an additional \$750,000 in specific project grants for:

Raman Spectroscopy for Real-Time, Intra-operative Validated Detection of Tumor vs. Normal Brain (\$450,000)

Remote Intracranial Pressure Monitoring: Novel Methodologies to monitor patient neurological status (\$150,000)

Focused Ultrasound for use in ablating intracranial lesions while protecting normal brain tissue (\$50,000)

***Henry Ford Research Grant H10191: Brodie/Kalkanis** (co-PI, role: Neurosurgery Investigator) 9/1/13 – 10/1/15
To investigate the role of micro-RNA as a predictive biomarker for long vs. short term glioblastoma survivors (\$250,000)

***Henry Ford Research Grant H10192: Kalkanis** (PI, role: Neurosurgery Investigator) 12/1/13 – 1/1/16
To develop an animal model of brain metastases for drug throughput analysis (\$100,000)

***Hermelin Brain Tumor Grant H101493: Kalkanis** (PI, role: Neurosurgery Investigator) 12/1/13 – 1/1/15
To develop an animal model of glioma surgical resection using human xenograft tumor tissue (\$50,000)

* **Brain Tumor Society: Kalkanis** (PI, role: Neurosurgery Investigator) 09/01/06 - 08/31/12
Brain Tumor Society, Novel Cell-Based Therapies for Malignant Glioma
To develop a protocol using stem cells as intelligent delivery vehicles able to seek out invading tumor cells (\$300,000)

* **American Brain Tumor Association (ABTA) Award Recipient: Kalkanis** (PI) 07/01/06 - 06/30/07
Translational Brain Tumor Research Grant, Cell-Based Gene Therapy to develop a personalized medicine stem-cell based protocols for malignant glioma (\$100,000)

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Neuroscience Research and Grant Awards continued

Massachusetts General Hospital - Spinal Cord Stem Cell Transplantation July, 2000 – December 2003

Principal Investigator: Robert H. Brown, Jr., D.Phil., MD., Department of Neurology, Massachusetts General Hospital
Specific project involved the systemic and stereotactic intraspinal transplantation of fetal pig, human umbilical cord and other stem cell lines into a novel transgenic murine model (superoxide dismutase) of spinal cord dysfunction resulting from amyotrophic lateral sclerosis (ALS). Awarded \$50,000 research grant supported jointly by *Project ALS* and Massachusetts General Hospital – Harvard Medical School

*Selected as one of three surgeons to travel to the St. Kitts Primate Research Lab to conduct intraspinal transplantation of stem cells and neuroproliferative growth factors in a Project ALS-sponsored national collaboration for nerve regeneration studies between Harvard Medical School, Johns Hopkins, Yale, and Columbia University, St. Kitts, August 2000.

Harvard Medical Research Fellowship in Neurosurgery

1994 – 1997

Principal Investigator: Peter McL. Black, M.D., Ph.D., Department of Neurosurgery, Brigham and Women's Hospital
Sponsored by the Boston Neurosurgical Foundation and Harvard Medical School

Specific projects examined the effects of various steroid hormone receptors (i.e. progesterone) and growth factors (VEGF) on cell growth and peritumoral edema, in meningiomas by analyzing mRNA expression (Northern blots) and cDNA (PCR)

SELECTED PEER-REVIEWED PUBLICATIONS

1. **Kalkanis SN**, Carroll RS, Zhang J, Zamani AA, Black PM: Vascular endothelial growth factor (VEGF) expression correlates with peritumoral vasogenic cerebral edema in meningiomas. *Journal of Neurosurgery*, 85: 1095-1101, 1996.
2. **Kalkanis SN**, Blumenfeld H, Sherman JC, Krebs DE, Irizarry MC, Parker SW, Cosgrove GR: Delayed complications thirty-six years after hemispherectomy: a case report. *Epilepsia*, 37 (8): 758-762, 1996.
3. **Kalkanis SN**, Quinones-Hinojosa A, Black PM: Quality of life following surgery for intracranial meningiomas: a study of 164 patients using a modification of the functional assessment of cancer therapy-brain questionnaire. *Journal of Neuro-Oncology* 48: 233-241, 2000.
4. **Kalkanis SN**, Eskandar E, Carter B, Barker F: Microvascular Decompression (MVD) Surgery in the United States, 1996-2000: mortality, morbidity, and the effect of hospital and surgeon volume. *Neurosurgery* 52(6): 1251-1263, 2003.
5. **Kalkanis SN**, Welty C, Upchurch K, Chen R, Ende N, Brown RH: Human Umbilical Cord Blood Stem Cell therapy delays onset and improves survival in a transgenic murine model of ALS. *Harvard Research Journal* 38(2): 56-63, 2005.
6. Cheung, A, **Kalkanis SN**, Ogilvy CS: Paraplegia after tethered cord surgery: an uncommon combined anomaly of spinal arteriovenous fistula and sacral lipoma. *Neurosurgery* 2005 Sep;57(3):E598.
7. Kiehl TR, **Kalkanis SN**, Louis D: Pigmented Neurocytoma. *Acta Neuropathologica* 2004 Jun;107(6):571-4.
8. Zhang X, Jiang F, **Kalkanis S**, Zhang Z, Hong X, Chopp M. Low-dose photodynamic therapy increases endothelial cell proliferation and VEGF expression in nude mouse Brain. *Lasers Med Sci.* (2005): 20: 74-79.

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Peer-Reviewed Publications continued

9. Jiang F, Zhang Z, **Kalkanis S**, Katakowski M, Robin A, Zhang X, Gotlib A, Chelst I, Mikkelsen T, Chopp M: A quantitative model of tumor-induced angiogenesis in the nude mouse. *Neurosurgery* 2005 Aug;57(2):320-4.
10. Hong X, Jiang F, **Kalkanis S**, Zhang ZG, Zhang X, deCarvalho A, Katakowski M, Bobbitt K, Mikkelsen T, Chopp M: SDF-1 and CXCR4 are up-regulated by VEGF and contribute to glioma cell invasion. *Cancer Lett.*, MS-CL-1332-05, 2005.
11. Zhang X, Jiang F, **Kalkanis S**, Zhang ZG, Hong X, Yang H, Chopp M: Post-acute response of 9L gliosarcoma to PhotofrinTM-mediated PDT in athymic nude mice. *Lasers in Medical Science*, 22:253-259, February 2006.
12. Zhang X, Jiang F, **Kalkanis S**, Yang H, Zhang ZG, Katakowski M, Hong X, Zheng X, Chopp M: Combination of Surgical Resection and Photodynamic Therapy of 9L Gliosarcoma in the Nude Rat. *Photochemistry and Photobiology*, December 2006.
13. Zheng X, Jiang F, Katakowski M, **Kalkanis S**, Hong X, Zhang X, Zhang ZG, Yang H, Chopp M. Inhibition of ADAM17 reduces hypoxia-induced brain tumor cell invasiveness. *Cancer Sci.* 2007 May;98(5):674-84. Epub 2007 Mar 9. PMID: 17355261
14. Hong X, Jiang F, **Kalkanis SN**, Zhang ZG, Zhang X, Zheng X, Mikkelsen T, Jiang H, Chopp M. Decrease of endogenous vascular endothelial growth factor may not affect glioma cell proliferation and invasion. *J Exp Ther Oncol.* 2007; 6(3):219-29.
15. deCarvalho A, Zhang X, Jiang F, **Kalkanis S**, Hong X, Lu M, Chopp M. Subclinical photodynamic therapy treatment modifies the brain microenvironment and promotes glioma growth. *Glia* 55(10):1053-60, 2007.
16. Yang H, Chopp M, Zhang X, Jiang F, Zhang Z, **Kalkanis S**, Schallert T. Using behavioral measurement to assess tumor progression and functional outcome after antiangiogenic treatment in mouse glioma models. *Behavioural Brain Research* 182(1):42-50, 2007.
17. Hong X, Jiang F, **Kalkanis S**, Zhang ZG, Zhang X, Jiang H, Mikkelsen T, Chopp M. Increased chemotactic migration and growth in heparanase-overexpressing human U251n glioma cells. *Journal of Experimental & Clinical Cancer Research*, 27(1):23, 2008
18. Jiang F, Zhang X, **Kalkanis SN**, Zhang Z, Yang H, Katakowski M, Hong X, Zheng X, Zhu Z, Chopp M. Combination therapy with antiangiogenic treatment and photodynamic therapy for the nude mouse bearing U87 glioblastoma. *Photochem Photobiol.* 2008 Jan-Feb;84(1):128-37.
19. Hong X, Jiang F, **Kalkanis SN**, Zhang ZG, Zhang X, Zheng X, Jiang H, Chopp M. Intracellular free calcium mediates glioma cell detachment and cytotoxicity after photodynamic therapy. *Lasers Med Sci.* 24(5):777-86, 2009. PMCID: PMC2746241.
20. Lomonaco SL, Finniss S, Xiang C, deCarvalho A, Umansky F, **Kalkanis SN**, Mikkelsen T, Brodie C. The induction of autophagy by gamma-radiation contributes to the radioresistance of glioma stem cells. *Int J Cancer.* 125(3):717-22, 2009. PMID: 19431142.
21. Rosenblum ML, **Kalkanis S**, Goldberg W, Rock J, Mikkelsen T, Remer S, Whitehouse S, Nerenz D. Odyssey of hope: a physician's guide to communicating with brain tumor patients across the continuum of care. *J Neurooncol.* 92(3):241-51, 2009. PMID: 19357952.

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Peer-Reviewed Publications continued

22. Hong X, Miller C, Savant-Bhonsale S, **Kalkanis SN**. Antitumor Treatment Using Interleukin-12-Secreting Marrow Stromal Cells in an Invasive Glioma Model. *Neurosurgery*. 64(6):1139-46, 2009. PMID: 19487894.
23. deCarvalho AC, Nelson K, Lemke N, Lehman NL, Arbab AS, **Kalkanis S**, Mikkelsen T. Gliosarcoma Stem Cells Undergo Glial Mesenchymal Differentiation *In Vivo*. *Stem Cells*. 2009 Nov 23. [Epub ahead of print]. PMID: 19937755.
24. Linksey ME, **Kalkanis SN**. Evidence-linked clinical practice guidelines-getting serious: getting professional. *J Neurooncol*. 96(1):1-5, 2010. PMCID: PMC2810238.
25. **Kalkanis SN**, Linksey ME. Evidence-based clinical practice parameter guidelines for the treatment of patients with metastatic brain tumors: introduction. *J Neurooncol*. 96(1):7-10, 2010. PMCID: PMC2808533.
26. Robinson PD, **Kalkanis SN**, Linksey ME, Santaguida PL. Methodology used to develop the AANS/CNS management of brain metastases evidence-based clinical practice parameter guidelines. *J Neurooncol*. 96(1): 11-6, 2010. PMCID: PMC2808528.
27. Olson JJ, Paleologos NA, Gaspar LE, Robinson PD, Morris RE, Ammirati M, Andrews DW, Asher AL, Burri SH, Cobbs CS, Kondziolka D, Linksey ME, Loeffler JS, McDermott M, Mehta MP, Mikkelsen T, Patchell RA, Ryken TC, **Kalkanis SN**. The role of emerging and investigational therapies for metastatic brain tumors: a systematic review and evidence-based clinical practice guideline of selected topics. *J Neurooncol*. 96(1): 115-42, 2010. PMCID: PMC2808529.
28. Ryken TC, McDermott M, Robinson PD, Ammirati M, Andrews DW, Asher AL, Burri SH, Cobbs CS, Gaspar LE, Kondziolka D, Linksey ME, Loeffler JS, Mehta MP, Mikkelsen T, Olson JJ, Paleologos NA, Patchell RA, **Kalkanis SN**. The role of steroids in the management of brain metastases: a systematic review and evidence-based clinical practice guideline. *J Neurooncol*. 96(1): 103-14, 2010. PMCID: PMC2808527.
29. Mikkelsen T, Paleologos NA, Robinson PD, Ammirati M, Andrews DW, Asher AL, Burri SH, Cobbs CS, Gaspar LE, Kondziolka D, Linksey ME, Loeffler JS, McDermott M, Mehta MP, Olson JJ, Patchell RA, Ryken TC, **Kalkanis SN**. The role of prophylactic anticonvulsants in the management of brain metastases: a systematic review and evidence-based clinical practice guideline. *J Neurooncol*. 96(1): 97-102, 2010. PMCID: PMC2808526.
30. Ammirati M, Cobbs CS, Linksey ME, Paleologos NA, Ryken TC, Burri SH, Asher AL, Loeffler JS, Robinson PD, Andrews DW, Gaspar LE, Kondziolka D, McDermott M, Mehta MP, Mikkelsen T, Olson JJ, Patchell RA, **Kalkanis SN**. The role of retreatment in the management of recurrent/progressive brain metastases: a systematic review and evidence-based clinical practice guideline. *J Neurooncol*. 96(1): 85-96, 2010. PMCID: PMC2808530.
31. Linksey ME, Andrews DW, Asher AL, Burri SH, Kondziolka D, Robinson PD, Ammirati M, Cobbs CS, Gaspar LE, Loeffler JS, McDermott M, Mehta MP, Mikkelsen T, Olson JJ, Paleologos NA, Patchell RA, Ryken TC, **Kalkanis SN**. The role of stereotactic radiosurgery in the management of patients with newly diagnosed brain metastases: a systematic review and evidence-based clinical practice guideline. *J Neurooncol*. 96(1): 45-68, 2010. PMCID: PMC519.

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Peer-Reviewed Publications continued

32. Mehta MP, Paleologos NA, Mikkelsen T, Robinson PD, Ammirati M, Andrews DW, Asher AL, Burri SH, Cobbs CS, Gaspar LE, Kondziolka D, Linksey ME, Loeffler JS, McDermott M, Olson JJ, Patchell RA, Ryken TC, **Kalkanis SN**. The role of chemotherapy in the management of newly-diagnosed brain metastases: a systematic review and evidence-based clinical practice guideline. *J Neurooncol.* 96(1): 71-83, 2010. PMID: PMC2808518.
33. **Kalkanis SN**, Kondziolka D, Gaspar LE, Burri SH, Asher AL, Cobbs CS, Ammirati M, Robinson PD, Andrews DW, Loeffler JS, McDermott M, Mehta MP, Mikkelsen T, Olson JJ, Paleologos NA, Patchell RA, Ryken TC, Linksey ME. The role of surgical resection in the management of newly-diagnosed brain metastases: a systematic review and evidence-based clinical practice guideline. *J. Neurooncol.* 96(1): 33-43, 2010. PMID: PMC2808516.
34. Gaspar LE, Mehta MP, Patchell RA, Burri SH, Robinson PD, Morris RE, Ammirati M, Andrews DW, Asher AL, Cobbs CS, Kondziolka D, Linksey ME, Loeffler JS, McDermott M, Mikkelsen T, Olson JJ, Paleologos NA, Ryken TC, **Kalkanis SN**. The role of whole brain radiation therapy in the management of newly-diagnosed brain metastases: a systematic review and evidence-based clinical practice guideline. *J. Neurooncol.* 96(1): 17-32, 2010. PMID: PMC2808517.
35. Hong, X., K. K. Nelson, A. C. deCarvalho and **S. N. Kalkanis** (2010). "Heparanase expression of glioma in human and animal models." *J Neurosurg* **113**(2): 261-9.
36. Lee, I. Y., **S. N. Kalkanis** and M. L. Rosenblum (2010). "Malignant Gliomas: Current Concepts." *Neurosurgery Quarterly* **20**(3): 115-121.
37. D. Zlotnick, **S.N. Kalkanis**, A. Quinones-Hinojosa, K. Chung, M. E. Linskey, R.L. Jensen, F. DeMonte, F.G. Barker, C.A. Racine, M.S. Berger, P.M. Black, M. Cusimano, L.N. Sekhar, A. Parsa, M. Aghi, M. W. McDermott, "FACT-MNG: tumor site specific web-based outcome instrument for meningioma patients," *J. Neurooncol.* DOI 10.1007/s11060-010-0394-3, September 2010
38. X. Hong, K. Nelson, N. Lemke, **S. Kalkanis** (2011): "Heparanase expression is associated with histone modifications in glioblastoma." *International Journal of Oncology* (10.3892/ijo.2011.1229)
39. X. Hong, K. Chedid, **S. Kalkanis**: "Glioblastoma Cell-Line derived spheres in serum containing medium vs. serum free medium: comparison of cancer stem cell properties." *Int. J. Oncol* (10.3892/ijo.2012.1592), May 2012
40. Robbins JR, Ryu S, **Kalkanis S**, Cogan C, Rock J, Movsas B, Kim JH, Rosenblum M, "Radiosurgery to the Surgical Cavity as Adjuvant Therapy for Resected Brain Metastasis" *Neurosurgery*: June 2012, PMID 22806080
41. DD Gonda, JC Akers, R Kim, **SN Kalkanis**, FH Hochberg, CC Chen, BS Carter, "Neuro-Oncologic Applications of Exosomes, Microvesicles, and Other Nano-sized Extra-cellular Particles." *Neurosurgery*: Dec 2012, PMID 23277376
42. Teng YD, Benn SC, **Kalkanis SN**, Shefner JM, Onario RC, Cheng B, Lachyankar MB, Marconi M, Li J, Yu D, Han I, Maragakis NJ, Lládo J, Erkmén K, Redmond DE Jr, Sidman RL, Przedborski S, Rothstein JD, Brown RH Jr, Snyder EY., "Multimodal Actions of Neural Stem Cells in a Mouse Model of ALS: A Meta-Analysis," *Science Transl Med.* 2012 Dec 19;4(165):165ra164. doi: 10.1126/scitranslmed.3004579. PMID: 23253611

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Peer-Reviewed Publications continued

43. Lee IY, Ekram T, Jain R, Scarpace L, Omodon M, Rock J, Rosenblum M, **Kalkanis SN**, “Intraoperative MRI improves brain tumor extent of resection: Henry Ford Hospital initial experience,” *Neuro-oncology* 2012; 14.
44. Gates M, Alsaidi M and **Kalkanis SN**, “Surgical Treatment of Solitary Brain Metastases,” *Prog Neurol Surg.* 2012; 25: 74-81.
45. N. Lin, J. Wefel, E. Lee, M. Vogelbaum, M. Mehta, M. Linskey, **S. Kalkanis** et al, “Challenges relating to solid tumour brain metastases in clinical trials, part 1: patient population, response, and progression. A report from the RANO group,” *Lancet Oncology* 2013; 14: e396-406
46. N. Lin, J. Wefel, E. Lee, M. Vogelbaum, M. Mehta, M. Linskey, **S. Kalkanis** et al, “Challenges relating to solid tumour brain metastases in clinical trials, part 2: neurocognitive, neurological, and quality of life outcomes. A report from the RANO group,” *Lancet Oncology* 2013; 14: e407-416
47. Cloughesy TF, Liau LM, Chiocca EA, Jolly DJ, Robbins JM, Ostertag D, Ibanez CE, Gruber HE, Kasahara N, Vogelbaum MA, Kesari S, Mikkelsen T, **Kalkanis S**, Landolfi J, Bloomfield S, Foltz G, and Pertschuk D. “Evidence supporting mechanism of action and drug activity in phase I trial of patients with recurrent high grade glioma administered Toca 511 at surgical resection followed by Toca FC,” *Neuro Oncol* 2013; 15:69-69
48. Brennan CW, Verhaak RG, McKenna A, Campos B, Nouseh H, Salama SR, Zheng S, Chakravarty D, Sanborn JZ, Berman SH, Beroukhi R, Bernard B, Wu CJ, Genovese G, Shmulevich I, Barnholtz-Sloan J, Zou L, Vegesna R, Shukla SA, Ciriello G, Yung WK, Zhang W, Sougnez C, Mikkelsen T, Aldape K, Bigner DD, Van Meir EG, Prados M, Sloan A, Black KL, Eschbacher J, Finocchiaro G, Friedman W, Andrews DW, Guha A, Iacocca M, O'Neill BP, Foltz G, Myers J, Weisenberger DJ, Penny R, Kucherlapati R, Perou CM, Hayes DN, Gibbs R, Marra M, Mills GB, Lander E, Spellman P, Wilson R, Sander C, Weinstein J, Meyerson M, Gabriel S, Laird PW, **SN Kalkanis**, Haussler D, Getz G, Chin L; TCGA Research Network. The Somatic Genomic Landscape of Glioblastoma. *Cell.* 2013 Oct 10;155(2):462-77. doi: 10.1016/j.cell.2013.09.034. Erratum in: *Cell.* 2014 Apr 24;157(3):753. PMID: 24120142
49. E. Kim, R. Yechieli, J. Kim, T. Mikkelsen, **S. Kalkanis**, J. Rock, M. Rosenblum, S. Ryu, “Patterns of failure after radiosurgery to two different target volumes of enhancing lesions with and without FLAIR abnormalities in recurrent glioblastoma multiforme,” *Journal of Neuro-oncology*, 2014, 116 (2), DOI 10.1007/s11060-013-1290-4
50. **S. Kalkanis**, R. Kast, M. Rosenblum, T. Mikkelsen, S. Yurgelevic, K. Nelson, A. Raghunathan, L. Poisson, G. Auner, “Raman Spectroscopy to distinguish grey matter, necrosis and glioblastoma multiforme in frozen tissue sections,” *Journal of Neuro-oncology*, January 2014, PMID: 24390405
51. T. Owonkikoko, J. Arbiser, A. Zelnak, H. Shu, H. Shim, A. Robin, **SN Kalkanis**, T. Whitsett, B. Salhia, N. Tran, T. Ryken, M. Moore, K. Egan, J. Olson, “Current Approaches to the Treatment of Metastatic Brain Tumours,” *Nature Reviews Clinical Oncology*, February 2014, NRCO-13-216V1C, PMID: 24569448
52. J. Olson, M. Linskey, **S. Kalkanis**, “The Management of Progressive Glioblastoma: A Systematic Review and Evidence-Based Clinical Practice Guideline, Introduction and Methodology,” *Journal of Neuro-oncology*, April 2014, PMID: 24715655.
53. T. Ryken, N. Aygun, J. Morris, M. Schweizer, R. Nair, C. Spracklen, **S. Kalkanis**, J. Olson, “The Role of Imaging in the Management of Progressive Glioblastoma,” *Journal of Neuro-oncology*, April 2014, PMID 24715656.

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Peer-Reviewed Publications continued

54. D. Brat, T. Ryken, **S. Kalkanis**, J. Olson, “The Role of Neuropathology in the Management of Progressive Glioblastoma,” *Journal of Neuro-oncology*, April 2014, PMID 24733643.
55. T. Ryken, **S. Kalkanis**, J. Buatti, J. Olson, “The Role of Cytoreductive Surgery in the Management of Progressive Glioblastoma,” *Journal of Neuro-oncology*, April 2014, PMID 24756348.
56. S. Ryu, J. Buatti, A. Morris, **S. Kalkanis**, T. Ryken, J. Olson, “The Role of Radiotherapy in the Management of Progressive Glioblastoma,” *Journal of Neuro-oncology*, April 2014, PMID 24728785.
57. J. Olson, L. Nayak, D. Ormond, P. Wen, **S. Kalkanis**, “The Role of Cytotoxic Chemotherapy in the Management of Progressive Glioblastoma,” *Journal of Neuro-oncology*, April 2014, PMID 24740194.
58. J. Olson, L. Nayak, D. Ormond, P. Wen, **S. Kalkanis**, T. Ryken, “The Role of Targeted Therapies in the Management of Progressive Glioblastoma,” *Journal of Neuro-oncology*, April 2014, PMID 24740195.
59. P. Mazaris, X. Hong, D. Altshuler, L. Schultz, L. Poisson, R. Jain, T. Mikkelsen, M. Rosenblum, **S. Kalkanis**. “Key determinants of short-term and long-term glioblastoma survival: A 14-year retrospective study of patients from the Hermelin Brain Tumor Center at Henry Ford Hospital,” *Clinical Neurology and Neurosurgery*, May 2014, 120: 103-112
60. Kondziolka D., **Kalkanis SN**, Mehta M, Ahluwalia M, Loeffler J. “It is time to re-evaluate the management of patients with brain metastases,” *Neurosurgery* 2014; PMID: 24662510
61. S. Devpura, K. Barton, S. Brown, O. Palyvoda, **S. Kalkanis**, F. Siddiqui, I. Chetty. “Vision 20/20: The role of Raman spectroscopy in early stage cancer detection and feasibility for application in radiation therapy response assessment,” *Medical Physics* 41, 050901 (2014); doi 10.1118/1.4870981
62. Robin AM, **Kalkanis SN**, Rock J, Lee I, Rosenblum ML. “Through the patient’s eyes: an emphasis on patient-centered values in operative decision making in the management of malignant glioma,” *Journal of Neuro-oncology*, 2014, PMID 24962199
63. Robin AM, Walbert T, Mikkelsen T, **Kalkanis SN**, Rock J, Lee I, Rosenblum ML. “Through the patient’s eyes: the value of a comprehensive brain tumor center,” *Journal of Neuro-oncology* 2014, PMID: 25026994
64. Godil SS, McGirt MJ, Glassman SD, Knightly JJ, Mummaneni PV, Oetting G, Theodore N, Gottfried ON, Khairi S, Schmidt MH, Boakye M, **Kalkanis SN**, Rabin D, Ryken TC, Balturshot GW, Chaddock J, Fassett DR, Reeder RE, Miller CF, Briggs TB, Zhang D, Bambakidis NC, Shaffrey ME, Hadley MN, Karahalios DG, Angevine PD, Martin MD, Ewend MG, Bydon A, Kremer MA, Holly LT, Slotkin J, Kaakaji W, Powers AK, Griffitt WE, Tippet TM, Cozzens JW, Christiano LD, Grahm TW, Guthrie BL, Harrington JF, Shaffrey CI, Elowitz EH, Foley KT, Watridge CB, Asher AL, “Defining the effectiveness of lumbar spine surgery in a nationwide, prospective longitudinal quality of life registry: an analysis of variability in patient-reported outcomes and preliminary predictive models of treatment failure.” *Neurosurgery* 2014 Aug;61 Suppl 1:194-5. doi:10.1227/01.neu.0000452383.18082.73, PMID: 25032560
65. Hamani C, Pilitsis J, Rughani AI, Rosenow JM, Patil PG, Slavin K, Abosch A, Eskandar E, Mitchell L, and **Kalkanis S**. Deep brain stimulation for obsessive-compulsive disorder: Systematic review and evidence-based guideline sponsored by the American Society for Stereotactic and Functional Neurosurgery (ASSFN) and the Congress of Neurological Surgeons (CNS) and endorsed by the CNS and American Association of Neurological Surgeons (AANS) *Neurosurgery* October 2014; PMID: 25050579.

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Peer-Reviewed Publications continued

66. Jolly DJ, Ibanez C, Robbins JM, Ostertag D, Kasahara N, Aghi MK, Vogelbaum MA, Bankiewicz K, Cloughsey TF, Liao LM, Chang SM, Butowski N, Kesari S, Chen C, Mikkelsen T, **Kalkanis SN**, Landolfi JC, Bloomfield SM, Elder JB, Gruber HE, and Pertschuk D. Interim report from two ongoing ascending dose trials of a retroviral replicating vector (toca 511) in patients with recurrent high grade glioma. *Mol Ther* 2014; 22:S11-S11.
67. Linskey M, Olson J, Mitchell L, **Kalkanis SN**. Clinical practice guidelines in the AANS/CNS Section on Tumors: Past, Present and Future Directions. *Journal of Neuro-oncology*, August 2014, DOI 10.1007/s11060-014-1497-z.
68. Kast RE, Auner GW, Rosenblum ML, Mikkelsen T, Yurgelevic SM, Raghunathan A, Poisson LM, **Kalkanis SN**: Raman molecular imaging of brain frozen tissue sections. *Journal of Neuro-oncology*, October 2014, 120(1): 55-62. DOI 10.1007/s11060-014-1536-9.
69. Hamani C, Pilitsis J, Rughani AI, Rosenow JM, Patil PG, Slavin K, Abosch A, Eskandar E, Mitchell L, **Kalkanis S.**, “Stereotactic Microanatomy of the Nucleus Accumbens Stimulation for Obsessive-Compulsive Disorder: Reported Coordinates and Mavridis' Area.” *Neurosurgery* 2015 May 1. PMID: 25938691
70. **Kalkanis SN**: “Setting the stage: local delivery of cytoreductive agents for the treatment of glioblastoma,” *Neuro Oncol*. 2015 May; 17 Suppl 2:ii1-ii2. PMID: 25746088
71. Nancy U Lin*, Eudocia Q Lee*, Hidefumi Aoyama, Igor J Barani, Daniel P Barboriak, Brigitta G Baumert, Martin Bendszus, Susan M Chang, Laurie E Gaspar, Gordon J Harris, F Stephen Hodi, **Steven N Kalkanis**, Mark E Linskey, David R Macdonald, Kim Margolin, Minesh P Mehta, David Schiff, Riccardo Soffietti, John H Suh, Martin J van den Bent, Michael A Vogelbaum, Patrick Y Wen, for the Response Assessment in Neuro-Oncology (RANO) group, “Response assessment criteria for brain metastases: proposal from the RANO group,” *Lancet Oncology*, Vol. 16, June 2015
72. Wen N, Li H, Song K, Chin-Snyder K, Qin Y, Kim J, Bellon M, Gulam M, Gardner S, Doemer A, Devpura S, Gordon J, Chetty I, Siddiqui F, Ajlouni M, Pompa R, Hammoud Z, Simoff M, **Kalkanis S**, Movsas B, Siddiqui MS, “Characteristics of a Novel Treatment System for Linear Accelerator-Based Stereotactic Radiosurgery,” *J Appl Clin Med Phys*. 2015 Jul 8;16(4):5313. PMID:26218998
73. Olson JJ, **Kalkanis SN**, Ryken TC., “Evidence-based clinical practice parameter guidelines for the treatment of adults with diffuse low grade glioma: introduction and methods.” *J Neurooncol*. 2015 Jun 25. PMID: 26108657
74. Ragel BT, Ryken TC, **Kalkanis SN**, Ziu M, Cahill D, Olson JJ, “The role of biopsy in the management of patients with presumed diffuse low grade glioma : A systematic review and evidence-based clinical practice guideline.” *J Neurooncol* 2015 Nov 3. PMID: 26530259
75. Sloan AE, Okada H, Ryken TC, **Kalkanis SN**, Olson JJ., “The role of emerging therapy in the management of patients with diffuse low grade glioma.” *J Neurooncol* 2015 Nov 3. PMID: 26530260
76. Ziu M, **Kalkanis SN**, Gilbert M, Ryken TC, Olson JJ., “The role of initial chemotherapy for the treatment of adults with diffuse low grade glioma : A systematic review and evidence-based clinical practice guideline.” *J Neurooncol* 2015 Nov 3. PMID: 26530261
77. Fouke SJ, Benzinger T, Gibson D, Ryken TC, **Kalkanis SN**, Olson JJ., “The role of imaging in the management of adults with diffuse low grade glioma : A systematic review and evidence-based clinical practice guideline.” *J Neurooncol* 2015 Nov 3. PMID: 26530262

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Peer-Reviewed Publications continued

78. Cahill DP, Sloan AE, Nahed BV, Aldape KD, Louis DN, Ryken TC, **Kalkanis SN**, Olson JJ., “The role of neuropathology in the management of patients with diffuse low grade glioma : A systematic review and evidence-based clinical practice guideline.” *J Neurooncol* 2015 Nov 3. PMID: 26530263
79. Nahed BV, Redjal N, Brat DJ, Chi AS, Oh K, Batchelor TT, Ryken TC, **Kalkanis SN**, Olson JJ., “Management of patients with recurrence of diffuse low grade glioma : A systematic review and evidence-based clinical practice guideline.” *J Neurooncol* 2015 Nov 3. PMID: 26530264
80. Aghi MK, Nahed BV, Sloan AE, Ryken TC, **Kalkanis SN**, Olson JJ., “The role of surgery in the management of patients with diffuse low grade glioma : A systematic review and evidence-based clinical practice guideline.” *J Neurooncol* 2015 Nov 3. PMID: 26530265
81. Ryken TC, Parney I, Buatti J, **Kalkanis SN**, Olson JJ., “The role of radiotherapy in the management of patients with diffuse low grade glioma : A systematic review and evidence-based clinical practice guideline.” *J Neurooncol* 2015 Nov 3. PMID: 26530266
82. Kast R, Auner G, Yurgelevic S, Broadbent B, Raghunathan A, Poisson LM, Mikkelsen T, Rosenblum ML, **Kalkanis SN**., “Identification of regions of normal grey matter and white matter from pathologic glioblastoma and necrosis in frozen sections using Raman imaging,” *J Neurooncol*. 2015 Nov;125(2):287-95. doi: 10.1007/s11060-015-1929-4. Epub 2015 Sep 10. PMID: 26359131

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INVITED BOOK CHAPTERS, REVIEWS and EDITORIALS

1. **Kalkanis SN** and Sloane DE: Chapter 16, Cardiovascular Pharmacology. *In* Lilly LS (ed.) *Pathophysiology of Heart Disease*. Philadelphia: Lea and Febiger, Second Edition, 1997.
2. **Kalkanis SN** and Borges L: Surgical Options for Neck and Back Pain in the Elderly. *Current Treatment Options in Neurology*, Current Science, Inc., Vol. 3, No. 3, May 2001: 215-226.
3. **Kalkanis S**, Rosenblum M: Malignant Gliomas. *Neuro-oncology: The Essentials, 2nd Edition*, Chapter 26, 2007.
4. S. Bhangoo, M. Linskey and **S.N. Kalkanis** (2011). "Evidence-based guidelines for the management of brain metastases." *Neurosurgery Clinics of North America* (Vol. 22, No. 1) 96-104.
5. M. Gates, M. Alsaïdi, **S. Kalkanis**, "Surgical Treatment of Solitary Brain Metastases," *Current and Future Management of Brain Metastases*, Kim DB, Lunsford LD, eds., Karger Press, Vol 26, 2011.
6. **S. Kalkanis**, T. Ryken, "Evidence-Based Guidelines for Stereotactic Radiosurgery: Status and Future Directions," *AANS Neurosurgeon*, Vol. 20, No. 3, 2011.
7. A. Robin, M. Rosenblum, **S. Kalkanis**, "Future Therapies for the Patient with a Brain Tumor," *CNS Quarterly*, Vol. 13, No. 3, Summer 2012.
8. A. Robin, **S. Kalkanis**, M. Rosenblum, "Past Advances in the Treatment of the Patient with a Brain Tumor," *CNS Quarterly*, Volume 13, No. 3, Summer 2012
9. S. Patra, **S. Kalkanis**, "Brain Metastases," *The Evidence for Neurosurgery*, Ghogawala, Barker, eds., Chapter 17, pp. 195-210, TFM Publishing, June 2012
10. **Kalkanis S**, Patra S. Metastatic Brain Tumors, *Clinical Management and Evolving Novel Therapeutic Strategies for Patients with Brain Tumors*, Dr. Terry Lichtor (Ed.), ISBN: 978-953-51-1058-3, InTech, DOI: 10.5772/51041, 2013.
11. C. Farrell, **S. Kalkanis**, "Brain Tumor Management in the Elderly: Too Old to Treat?" *CNS Quarterly*, Volume 14, Number 3, Summer 2013, 19-22.
12. M. Omodon, **S. Kalkanis**, "The Role of Whole Brain Radiation Therapy in Brain Metastases," *Tumors of the Central Nervous System*, M. A. Hayat, ed., Springer Science, Volume 12, 2013
13. A. Pabaney, **S. Kalkanis**, "The Role of Surgical Resection in Brain Metastases," *Tumors of the Central Nervous System*, M. A. Hayat, ed., Springer Science, Volume 13, 2013
14. R. Ali, **S. Kalkanis**, "The Role of Stereotactic Radiosurgery in Brain Metastases," *Tumors of the Central Nervous System*, M. A. Hayat, ed., Springer Science, Volume 13, 2013
15. D. Nerenz, **S. Kalkanis**, M. Abdulhak, "Enhancing Patient Safety and Functional Outcomes through Patient Registries," *AANS Neurosurgeon*, Volume 22, Number 3, 2013

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Book Chapters and Reviews continued

16. L. Mubita, S. Kalkanis, “The Role of Chemotherapy in Metastatic Brain Tumors,” *Brain Metastases from Primary Tumors: Epidemiology, Biology and Therapy*, Volume 1, M. A. Hayat (ed.), Elsevier, Inc., San Diego, CA, 2014

INVITED VISITING PROFESSORSHIPS

Invited Visiting Professor, University of Chicago – Northshore Hospital, Dept. of Neurosurgery, “Current Concepts in Surgical Neuro-oncology,” Chicago, March 10-11, 2009

Keynote Speaker and recipient of Marquette Hospital Honored Guest Award, Neuroscience Symposium, Marquette General Hospital, “Comprehensive Management of Brain Metastases,” Marquette, Michigan, May 26, 2010

Invited Visiting Professor, Harvard Medical School – Massachusetts General Hospital, Dept. of Neurosurgery, “Novel Therapies for Brain Tumors,” Boston, April 27-28, 2011

Invited Visiting Professor and Leonard Malis, MD Endowed Lecturer, Mount Sinai Hospital, “Novel Surgical Advances in Brain Tumor Therapy,” New York, New York, November 11-12, 2014.

Invited Visiting Professor, Louisiana State University – Shreveport, Neuroscience Institute, “Clinical Practice Guidelines in Neurosurgery,” Shreveport, LA, March 2015

Invited Visiting Professor, New York University Department of Neurosurgery, “Next Generation Surgical Adjuncts in Brain Tumor Surgery,” New York, New York, February 2016

Invited Speaker and Brain Tumor Society Award Recipient, South American Neurosurgical Association, “Advances in Brain Tumor Therapy,” Buenos Aires, Argentina, October 25-27, 2016

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INVITED NATIONAL ORAL PAPER PRESENTATIONS

1. Ogilvy CS and **Kalkanis SN**: “Micro-AVMs: Significant Hemorrhage from Small Arteriovenous Shunting Vessels,” *Poster Presentation, American Association of Neurological Surgeons Annual Meeting*, Denver, April 1997.
2. **Kalkanis SN**, Black P. M., “Vascular endothelial growth factor (VEGF) and Progesterone receptor expression in human meningiomas: a correlation with peritumoral brain edema,” Harvard Medical School Research Day forum, Invited Soma Weiss honoree, Boston, MA, May 2000
3. **Kalkanis SN**: “Experimental microsurgery in transgenic mice,” *Boston ALS Foundation*, Boston, MA, January 2001.
4. **Kalkanis SN**: “Neurosurgical Indications for Novel Stem Cell Therapies,” *Neurosurgery Grand Rounds*, Massachusetts General Hospital, Boston, MA, September 2001.
5. **Kalkanis SN** and Brown RH: “Stereotactic intraspinal stem cell transplantation techniques in transgenic ALS mice,” *Oral Paper Presentation, New England Neurosurgical Society fall meeting*, Lee, Massachusetts, September 2001.
6. Erkmen K, Teng Y, Sidman R, Ensrud E, DeGirolami U, **Kalkanis SN**, Brown RH, Rothstein J, Redmond DE, Snyder EY: “Transplantation of Human Neural Stem Cells (hNSCs) in a New Primate Model of Motor Neuron Degeneration – An Experimental Study of Potential Cell Therapy for ALS,” *CNS Annual Meeting*, San Diego, CA, October 2001.
7. **Kalkanis SN**, Dreibelbis J, Welty C, Haque J, Doucette W, Chen R, Ende N, Cudkowicz M, Brown RH: “Intraspinal and systemic human umbilical cord blood stem cell transplantation delays onset, improves survival in ALS mice,” *Oral Paper Presentation, Section on Spine Disorders, CNS Annual Meeting*, San Diego, CA, October 2001. **Selected for Plenary Session Presentation**
8. **Kalkanis SN**, Ende N, Chen R, Brown RH: “Stem cell transplantation delays onset, improves survival in transgenic ALS mice,” *Plenary Session Speaker, 12th International Symposium on ALS/MND*, San Francisco, CA, November 2001. **Selected for Plenary Session Presentation**
9. **Kalkanis SN** and Ogilvy CS: “Current Management of Intracranial Aneurysms,” *General Surgery Grand Rounds*, Massachusetts General Hospital, Boston, MA, January 2002.
10. **Kalkanis SN** and Ogilvy CS: “Distal MCA Fusiform Aneurysms: Diagnosis and Treatment,” *Neurosurgery Grand Rounds*, Massachusetts General Hospital, Boston, MA, February 2002.
11. Ogilvy CS and **Kalkanis SN**: “New Approaches to Triple-H Therapy for SAH-induced Cerebral Vasospasm,” *Neurology Grand Rounds*, Massachusetts General Hospital, Boston, MA, April 2002.
12. **Kalkanis SN**, Ojemann RG, McKenna MJ, Poe DS, Nadol JB, Barker FG: “Subtotal Resection for Acoustic Neuromas: Long Term Results,” *Oral Paper Presentation, Section on Tumors, Congress of Neurological Surgeons Annual Meeting*, Philadelphia, PA, September 2002.
13. **Kalkanis SN** and Ogilvy CS: “Case Report: Spinal Cord A-V fistula within a lipomatous tethered cord,” *Neurosurgery Grand Rounds*, Massachusetts General Hospital, Boston, MA, June 2002.

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Invited National Oral Presentations continued

14. **Kalkanis SN**, Ojemann RG, Barker FG: "New Treatment Paradigms for Acoustic Neuroma Surgery," *Oral Paper Presentation, New England Neurosurgical Society spring meeting*, Concord, Massachusetts, June 2002.
15. **Kalkanis SN** and Brown RH: "Neurosurgical Treatment for Neurodegenerative Disease: Stereotactic intraspinal delivery of a variety of stem cell lines in a transgenic murine model of ALS," *Oral Paper Presentation, American Association of Neurological Surgeons Annual Meeting*, Chicago, IL, April 2002
16. **Kalkanis SN**, Eskandar E, Carter BS, Barker FG: "Microvascular Decompression (MVD) Surgery in the United States, 1996-2000: mortality, morbidity, and the effect of hospital and surgeon volume," *Oral Paper Presentation, American Association of Neurological Surgeons Annual Meeting*, San Diego, CA, April 2003. **Selected for Plenary Session Presentation**
17. **Kalkanis SN**: "New Stem Cell Based Therapies for the Treatment of Malignant Gliomas," *Oral Paper Presentation, Section on Tumors Biennial National Meeting*, San Francisco, CA, October 2004. **Selected for Plenary Session Presentation**
18. **Kalkanis SN**: "IL12 Transfected Cell Therapy Significantly Decreases Tumor Volume in an Animal Glioma Model," *Oral Paper Presentation, CNS Annual Meeting*, San Francisco, CA, October 2004.
19. **Kalkanis SN**, Jiang F, Chopp M: "Combination photodynamic therapy (PDT) and anti-angiogenesis treatment in a malignant glioma animal model," *Congress of Neurological Surgeons Annual Meeting*, Boston, MA, October 2005
20. **Kalkanis SN**, deCarvalho A: "InVitro and InVivo Characterization of a Gliosarcoma Model," *Congress of Neurological Surgeons Annual Meeting*, Chicago, IL, September 2006.
21. **Kalkanis SN**: "Update on the Brain Metastases Clinical Practice Guideline Initiative," *American Association of Neurological Surgeons annual meeting*, Washington, DC, April 2007.
22. **Kalkanis SN**: "New Paradigms in Radiosurgery for Brain Metastases," *CNS Annual Meeting*, San Diego, CA, Oct. 2007.
23. **Kalkanis SN**: "MSCs + IL-12 as a novel therapy in a GBM animal model," *AANS Annual Meeting*, Chicago, April 2008.
24. **Kalkanis SN**: "Novel Therapies for Malignant Glioma," *MANS Annual Meeting*, Mackinac Island, MI, June 2008.
25. **Kalkanis SN**: "Update on the Brain Metastases Clinical Practice Guideline Initiative," *Congress of Neurological Surgeons Executive Committee annual meeting*, Orlando, FL, October 2008.
26. **Kalkanis SN**: "A Ten Year Experience at Henry Ford Hospital with post-operative radiosurgery for brain metastases to the resection cavity only," *Society for Neuro-Oncology annual meeting*, Las Vegas, NV, November 2008. **Selected for Plenary Session Presentation**
27. **Kalkanis SN**: "Radiosurgery in Neurosurgical Practice," *MANS Annual Meeting*, Boyne Mountain, MI, June 2009
28. **Kalkanis SN**: "Novel Clinical Trials for Malignant Glioma," Grand Rounds, University of Chicago and Northshore Medical Center, Chicago, IL, March 2009

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Invited National Oral Presentations continued

29. **Kalkanis SN:** “Comprehensive Brain Metastases Guidelines,” CNS Special Course and Afternoon Seminar, *CNS Annual Meeting*, New Orleans, LA, October 2009
30. **Kalkanis SN:** “Applying the Brain Metastases Guidelines to Clinical Practice,” AANS Plenary Session, *AANS National Meeting*, Philadelphia, PA, May 2010. ***Selected for Plenary Session Presentation***
31. **Kalkanis SN:** Dinner Course Seminar T1, “Surgery vs. Radiosurgery for Brain Metastases,” *CNS Annual Meeting*, San Francisco, October 2010
32. **Kalkanis SN:** Luncheon Seminar Course Director T25, “Role of WBRT for Brain Metastases,” *CNS Annual Meeting*, San Francisco, CA, October 2010
33. **Kalkanis SN:** Practical Course 32 Director, “Implementing the Brain Metastases Guidelines into Clinical Practice,” *Congress of Neurological Surgeons Annual Meeting*, San Francisco, October 2010. ***Selected for Plenary Session Presentation***
34. **Kalkanis SN:** “Building a robust referral network in an accountable care organization,” *Physician-Executive Leadership Summit*, Scottsdale, Arizona, October 2010. ***Selected for Plenary Session Presentation***
35. **Kalkanis SN:** “Comparing the Neurosurgical Brain Mets Guidelines to the Radiation Oncology Guidelines: an Evidence-Based Approach,” *ASTRO Plenary Session*, San Diego, November 2010. ***Selected for Plenary Session Presentation***
36. **Kalkanis SN:** “Radiosurgery for Brain Metastases,” T25 Luncheon Seminar, Course Director: R. Sawaya, *CNS Annual Meeting*, Washington DC, October 2011
37. **Kalkanis SN:** “Neurosurgical Best Practice Parameters: Tumor,” Special Course 2, Plenary Session, *CNS Annual Meeting*, Washington DC, October 2011. ***Selected for Plenary Session Presentation***
38. **Kalkanis SN:** “Guidelines for Brain Metastases,” PC21 Practical Course, Course Directors: S. Kalkanis, M. Linskey, *CNS Annual Meeting*, Washington DC, October 2011
39. **Kalkanis SN:** “Knowledge Gaps: Strategies for Guidelines Prioritization,” CNS Executive Committee, *AANS Annual Meeting*, Miami, Florida, April 2012
40. **Kalkanis SN:** “Institute of Medicine Guidelines on Guidelines,” National Joint Guidelines Committee (JGC) Presentation, *AANS Annual Meeting*, Miami, April 2012
41. **Kalkanis SN:** “Guidelines Development in the Tumor Section: Spine Mets, Recurrent Glioblastoma Treatment Protocols, Pediatric Tumors and Pituitary Adenomas,” National Joint Guidelines Committee (JGC) Presentation, *AANS Annual Meeting*, Miami, FL, April 2012
42. **Kalkanis SN:** “Novel uses of intra-operative MRI and functional mapping techniques for resection of complex brain tumors,” *MANS Annual Meeting*, Boyne, MI, June 2012
43. **Kalkanis SN:** “Radiosurgery or Open Surgery for Brain Mets: What does the Evidence Say?” CNS Luncheon Seminar, *CNS Annual Meeting*, Chicago, IL, October 2012

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Invited National Oral Presentations continued

44. **Kalkanis SN:** “Beyond the Guidelines: New and Emerging Evidence for Brain Metastases,” CNS Special Tumor Symposium, *CNS Annual Meeting*, Chicago, IL, October 2012. ***Selected for Plenary Session Presentation***
45. **Kalkanis SN:** “On the Horizon: Innovative Treatments for Brain Metastases,” AANS Dinner Seminar, Anil Nanda, Zvi Ram, Gene Barnett, L. Dade Lunsford, *AANS Annual Meeting*, New Orleans, April 2013
46. **Kalkanis SN:** “Clinical Practice Guidelines for Low Grade Glioma,” CNS Luncheon Seminar, Michael McDermott, Gene Barnett, Fred Barker, *CNS Annual Meeting*, San Francisco, CA, October 2013
47. **Kalkanis SN:** “Novel Treatment for Brain Metastases,” *Course Director*, CNS Featured Dinner Symposium, Timothy C. Ryken, David Andrews, Mark Linskey, *CNS Annual Meeting*, San Francisco, CA, October 2013
48. **Kalkanis SN:** “Neurosurgical Innovations in Brain Tumors: A Glimpse into the Future,” *Course Co-Director*, CNS Featured All-Day Technology and Innovation Symposium, Brian Hoh, Ashwini Sharan, Ali Rezai, *CNS Annual Meeting*, San Francisco, CA, October 2013
49. **Kalkanis SN:** “New Advances in the Management of Brain Metastases,” AANS Practical Clinic Course Faculty, “Brain Neoplasms – Advances in Tumor Management through Diagnostics and Therapeutics,” *AANS Annual Meeting*, San Francisco, April 2014.
50. J. Robbins, T. Huang, D. Jolly, M. Aghi, M. Vogelbaum, T. Cloughesy, S. Chang, S. Kesari, T. Mikkelsen, **S. Kalkanis**, E. A. Chiocca, H. Gruber, D. Pertschuk, “Ascending Dose Trials of a Retroviral Replicating Vector (Toca 511) in Patients with Recurrent High Grade Glioma,” ASCO Annual Meeting, May 2014
51. **Kalkanis SN:** Innovations in Brain Tumor Therapy at Henry Ford,” *Focused Forward – National Brain Tumor Symposium*, Detroit, Michigan, April 2015
52. **Kalkanis SN:** “Beyond the Guidelines: Contemporary Management of Brain Metastases 2015,” *AANS/CNS Section on Tumors National Satellite Meeting*, Washington DC, May 2015
53. **Kalkanis SN:** “Novel Clinical Trials for Malignant Brain Tumors,” AANS Practical Clinic Course Faculty, Brain Neoplasms Update, *AANS Annual Meeting*, Washington DC, May 2015
54. **Kalkanis SN:** “The Impact of Neurosurgical Guidelines on Clinical Practice: Closing the Knowledge Gap,” *AANS Annual Meeting*, Washington DC, May 2015
55. **Kalkanis SN:** “Surgical Adjuncts for Brain Tumor Surgery: New Innovations,” ***Invited Guest***, *Turkish Neurosurgical Society Annual Meeting*, Antalya, Turkey, May 2015
56. **Kalkanis SN:** “New Imaging Tools and Navigation Devices for Brain Tumor Surgery,” Session Co-Director, *CNS Annual Meeting*, New Orleans, Louisiana, October 2015
57. **Kalkanis SN:** “Introduction to the Congress of Neurological Surgeons,” Plenary Session, *CNS Annual Meeting*, New Orleans, Louisiana, October 2015
58. **Kalkanis SN:** “Update on Guidelines in Organized Neurosurgery,” Special Session, *CNS Annual Meeting*, New Orleans, Louisiana, October 2015

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Invited National Oral Presentations continued

59. **Kalkanis SN:** “Viral Vector Therapy for Glioma,” Course Moderator and Speaker, Special Plenary Session, *Society for Neuro-oncology Annual Meeting*, San Antonio, Texas, November 2015
60. **Kalkanis SN:** “Innovations in Neuroscience,” *Harvard Club of Detroit* Featured Invited Speaker, Detroit, Michigan, February 2016
61. **Kalkanis SN:** “Evidenced Based Guidelines for CNS Metastases,” AANS Practical Clinic: Update on Tumors (Mitchel Berger, course director), *AANS Annual Meeting*, Chicago, Illinois, April 2016
62. **Kalkanis SN:** Overview on Brain Mapping, Course Moderator, *First International Brain Mapping Course*, Chicago, Illinois, April 2016
63. **Kalkanis SN:** “Stereotactic Radiosurgery for Brain Metastases,” AANS Dinner Seminar Invited Speaker: Cutting Edge Stereotactic Radiosurgery, *AANS Annual Meeting*, Chicago, Illinois, May 2016
64. **Kalkanis SN:** “Laser Ablation Therapy for Brain Tumors,” *Michigan Association of Neurological Surgeons Annual Meeting*, Bay Harbor, Michigan, May 2016
65. **Kalkanis SN:** “Novel Surgical Approaches for Brain Tumors,” *International College of Surgeons – American Academy of Neurological and Orthopedic Surgeons Joint Annual Meeting*, Troy, Michigan, June 2016
66. **Kalkanis SN:** “Current Treatment for Brain Metastases,” *Neurosurgery Update Course in the Wine Country*, Napa, California, August 2016
67. **Kalkanis SN:** “Novel Surgical Innovations for Brain Tumors,” *Neurosurgery Update Course in the Wine Country*, Napa, California, August 2016

STEVEN N. KALKANIS, M.D.

MENTORSHIP, TEACHING and TRAINING

Faculty Teaching Positions and Teaching Experience

1. Harvard Medical School – Health Science Technology Neuroanatomy, Course Instructor, Boston, MA, 1997 – 2000
2. Harvard Medical School Advanced Neuroanatomy II, Course Director, Boston, MA, 2001
3. Massachusetts General Hospital – Harvard Spine Anatomy Resident Dissection Clinic, Chief Resident Course Director, Boston, MA, 2003
4. Massachusetts General Hospital – Harvard Skull Base Cranial Resident Dissection Clinic, Chief Resident Course Director, Boston, MA, 2003
5. Massachusetts General Hospital – Harvard Medical School, Instructor in Surgery, Department of Neurosurgery, Boston, MA, 2003
6. Henry Ford Neurosurgery Resident Spine Anatomy Teaching Series, *Attending Course Director*, Detroit, MI, 2004 – 2006
7. Henry Ford Neurosurgery Resident Cranial Anatomy Teaching Series, *Attending Course Director*, Detroit, MI, 2006 – 2008
8. Hermelin Brain Tumor Center Multidisciplinary Tumor Board Symposium and Teaching Session for Neurosurgeons, Neuro-oncologists, Radiation Oncologists, Neuroradiologists, Neuropathologists and Clinical Trials Liaisons, *Course Director*, Dearborn, MI, May 2010 (CME Credit Awarded)
9. CNS Teaching Course: Surgery vs. Radiosurgery for Brain Metastases, *Faculty Presenter*, San Francisco, CA, October 2010 (CME Credit awarded)
10. CNS Teaching Course: Role of Whole Brain Radiotherapy for Brain Metastases, *Faculty Presenter*, San Francisco, CA, October 2010 (CME Credit awarded)
11. CNS Practical Course: Implementing the Brain Metastases Guidelines into Clinical Practice, *Course Director and Faculty Presenter*, San Francisco, CA, October 2010 (CME Credit Awarded)
12. CNS Teaching Course: Radiosurgery for Brain Metastases, *Faculty Presenter*, Washington DC, October 2011 (CME Credit awarded)
13. CNS Practical Course: Neurosurgical Best Practices Parameters in Tumor, *Faculty Presenter*, Washington DC, October 2011 (CME Credit awarded)
14. American Association of Neuroscience Nurses Teaching Session: Head Trauma and Craniotomy Anatomic Landmarks, *Faculty Presenter*, Rochester, MI, October 2012 (CME Credit awarded)
15. CNS Teaching Course: Radiosurgery vs. Open Surgery for Brain Metastases – What Does the Evidence Say?, *Course Director and Faculty Presenter*, Chicago, IL, October 2012 (CME Credit awarded)
16. AANS Teaching Course: On The Horizon – New and Emerging Therapies for Brain Metastases, *Faculty Presenter*, New Orleans, LA, April 2013 (CME Credit Awarded)

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Mentorship, Teaching and Training Continued

17. Henry Ford Practical START training course sponsored by Varian, Inc: The Neurosurgical Applications for Radiosurgery, *Faculty Presenter*, Detroit, MI, April 2013 (CME Credit awarded)
18. Philips intraoperative MRI training course: The Henry Ford experience, *Faculty Presenter*, Detroit, MI, May 2013
19. Michigan Association of Neurological Surgeons teaching session: Spine Cadaver Lab, *Course Director*, Traverse City, MI, June 2013 (CME Credit awarded)
20. Michigan Association of Neurological Surgeons teaching session: Understanding Patient Quality and Outcomes Reporting in a Changing Health Care Environment, *Course Director*, Traverse City, MI, June 2013 (CME Credit Awarded)
21. Michigan Association of Neurological Surgeons teaching session: Developing a statewide collaborative in partnership with insurance payers to improve spine surgery outcomes, *Faculty Presenter*, Traverse City, MI, June 2013 (CME Credit awarded)
22. Arbor Pharmaceutical Brain Tumor Symposium: Understanding clinical trial design and implementation, *Faculty Presenter*, Chicago, IL, July 2013
23. CNS Teaching Course: Clinical Practice Guidelines for Low Grade Glioma, *Faculty Presenter*, San Francisco, CA, October 2013 (CME Credit awarded)
24. CNS Teaching Course: Novel Treatments for Brain Metastases, *Course Director and Faculty Presenter*, San Francisco, CA, October 2013 (CME Credit awarded)
25. CNS Technical and Innovation Course: Neurosurgical Innovations in Brain Tumors – A Glimpse into the Future, *Course Co-Director*, San Francisco, CA, October 2013 (CME Credit awarded)
26. Practical START Teaching Course in Stereotactic Radiosurgery for Brain Tumors, *Course Faculty Presenter*, Henry Ford Health System, Detroit, Michigan, March 2015 (50 attendees from around the country)
27. Focused Forward: New Innovations in Brain Tumor Therapy, *Course and Symposium Director and Faculty Presenter*, Henry Ford Health System, Detroit, Michigan, April 2015 (300 attendees from around the world)
28. CNS Resident Teaching Course – Cranial Approaches, *Faculty Presenter*, Turkish Neurosurgical Society Annual Meeting, Antalya, Turkey, April 2015
29. Practical START Teaching Course in Stereotactic Radiosurgery for Brain Tumors, *Course Faculty Presenter*, Henry Ford Health System, Detroit, Michigan, September 2015 (30 attendees from around the country)

STEVEN N. KALKANIS, M.D.

Mentoring

High School Shadowing and Mentoring Program

- 2006 Ashwin Reddy: Advised at Detroit Country Day School
- 2008 Dina Dalaly: Advised at West Bloomfield High School
- 2009 Andrew Pan: Advised at Detroit Country Day School followed by Harvard College
- 2010 Daniel Gold: Advised at Cranbrook followed by University of Michigan
- 2011 David Portney: Advised at Cranbrook followed by University of Michigan
- 2013 Sanjay Reddy: Advised at Andover High School followed by University of Michigan
- 2013 Audrey Fotouhi: Advised at Detroit Country Day School followed by Dartmouth College
- 2013 Alexander Kucy: Advised at Detroit Country Day School followed by Yale
- 2014 Nicholas Zingas: Advised at Rochester High School followed by University of Michigan
- 2015 George Cholack: Advised at Northville High School followed by University of Michigan
- 2016 Lydia Wang: Advised at Detroit Country Day School followed by Harvard University

Pre-Medical Undergraduate College Students

- 1997 Jennifer Gibson: Advised at Harvard College, entered University of Michigan Medical School
- 1997 Sotiri Kyriakopoulos: Advised at Harvard College, entered University of Michigan Medical School
- 1998 Paul Nguyen: Advised at Harvard College, entered Johns Hopkins School of Medicine
- 1998 Jennifer Rhodes: Advised at Harvard College, entered Columbia Medical School
- 1999 Ian Dunn: Advised at Harvard College, entered Harvard Medical School
- 2000 Neda Ratanawongsa: Advised at Harvard College, entered UCSF Medical School
- 2001 Katherine Black: Advised at Harvard College, entered Yale Medical School
- 2002 Alyson Brown: Advised at Princeton, entered Harvard Medical School
- 2003 Yonina Goroff: Advised at Harvard College, entered Harvard Medical School
- 2004 Adam Robin: Advised at Wayne State University, entered University of Michigan Medical School
- 2005 Alexis Smith: Advised at University of Michigan, entered Wayne State University Medical School
- 2012 Ridwan Alam: Advised at Wayne State, entered Johns Hopkins School of Medicine
- 2013 Jasmine Yousif: Advised at University of Michigan, entered University of Michigan Medical School
- 2013 Adriana Saroki: Advised at University of Michigan, entered Dartmouth University Medical School
- 2013 Maria Tecos: Advised at University of Michigan, entered Northwestern Medical School
- 2013 Philip Tangalos: Advised at University of Michigan, entered Wayne State University Medical School
- 2014 Artem Berezovsky: Advised at Case Western (current)
- 2015 Andrew Pan: Advised at Harvard University, entered SUNY-Rochester Medical School
- 2016 George Cholack: Advised at University of Michigan (current)
- 2016 Khalil Chedid: Advised at University of Michigan (current)

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Mentorship, Teaching and Training Continued

Residents and Post-Doctoral Research Fellows

- 2003 Manish Aghi MD PhD: Mass General neurosurgery resident, now attending faculty at UCSF
- 2003 Ekkehard Kasper MD: Mass General neurosurgery resident, now attending faculty at Harvard-BIDMC
- 2003 Ziv Williams MD: Mass General neurosurgery resident, now attending faculty at Mass General
- 2003 Khalid Abbed MD: Mass General neurosurgery resident, now attending faculty at Yale
- 2004 Clark Chen MD PhD: Mass General neurosurgery resident, now attending faculty at UCSD
- 2004 Daniel Cahill MD PhD: Mass General neurosurgery resident, now attending faculty at Mass General
- 2005 Richard Veyna MD: Henry Ford neurosurgery resident, now attending staff at St. John's - Detroit
- 2006 Ali Bydon MD: Henry Ford neurosurgery resident, now attending faculty at Johns Hopkins
- 2007 Paul Pannu MD: Henry Ford neurosurgery resident, now attending staff at Oakwood
- 2008 Hayden Boyce MD: Henry Ford neurosurgery resident, now attending faculty at SUNY-Rochester
- 2009 Mohammad Shukairy MD: Henry Ford neurosurgery resident, now attending staff in Chicago private practice
- 2010 Ian Lee MD: Henry Ford neurosurgery resident, now attending staff at Henry Ford
- 2011 Beejal Amin MD: Henry Ford neurosurgery resident, now attending staff at Loyola
- 2012 Sanjay Patra MD: Henry Ford neurosurgery resident, now attending staff in Grand Rapids, MI private practice
- 2012 Brian Nahed MD: Mass General neurosurgery resident, now attending staff at Mass General
- 2013 Victor Chang MD: Henry Ford neurosurgery resident, spine fellowship UCLA, now at Henry Ford
- 2013 Raphael Yechieli MD: Henry Ford radiation oncology senior resident, now at Univ. of Florida
- 2013 Paul Mazaris MD: Henry Ford neurosurgery chief resident, now at University of Connecticut
- 2013 Y. S. Mohan MD: Henry Ford neurosurgery chief resident, now at Beaumont Hospital
- 2005 – Present: Xin Hong, PhD and Ana deCarvalho, PhD (Henry Ford Hermelin Brain Tumor Center research staff)
- 2014 Mohammed Alsaidi MD: Henry Ford neurosurgery chief resident, now at Oakwood Hospital
- 2014 Kevin Reinard MD: Henry Ford neurosurgery chief resident, followed by skull base fellowship at Swedish
- 2015 Aqueel Pabaney MD: Henry Ford neurosurgery chief resident
- 2015 Adam Robin MD: Henry Ford neurosurgery chief resident, now at Memorial Sloan Kettering

Personal Data

Place of Birth: Detroit, Michigan, USA
Married to Laurel Kalkanis with three children: Nicholas, Connor and Grace