

**Request for a new Neurosurgery Department
at the Michigan State University College of Human Medicine
Submitted October 7, 2022
Updated October 20, 2022
Updated November 22, 2022**

Note: Process for requesting establishment of a new department at MSU:

- Dean first seeks endorsement of the request from the CAC, then Dean takes proposal to the EVP/Provost.
- EVP/Provost will send the request to the Steering Committee to route through academic governance for consideration and a recommendation (e.g., University Committee on Faculty Affairs; University Committee on Graduate Studies).
- EVP/Provost makes decision to support the request or not and confers with President.
- EVP/Provost takes request and recommendation for approval to Board of Trustees.
- Board of Trustees is required to approve the creation of any new department.

Rationale for a new Neurosurgery Department

The College of Human Medicine seeks to create a state-wide MSU Department of Neurosurgery.

Neurosurgery is the discipline that focuses on the diagnosis and treatment of disorders of the brain, spinal cord and peripheral nerves and their supporting vasculature. It is a surgical discipline requiring a significant knowledge of neurology, critical care, trauma care and radiology. In addition, it is a discipline that focuses on a complete system rather than any specific region of the body, and a neurosurgeon may operate on patients of all ages with conditions involving the brain, spine or extremities. Conditions treated include congenital abnormalities, trauma, tumors, vascular anomalies, seizures, infections, and abnormalities of the aging, such as stroke, functional disorders or degenerative diseases of the spine. While treatments may include non-operative management of various conditions, the primary focus of the neurosurgeon is on surgical approaches for the treatment of their patients.

Strengths of the current faculty include technical areas of excellence, regional and national reputation, and quality of care, and elements that respond to MSU's strategic plan particularly [Sustainable Health](#), [DEI](#), and [Discovery](#) pillars.

- Description of Faculty (see attachment 1)
- Publications of department faculty for the last three years (see attachment 2).
- Faculty Awards and Honorifics (see attachment 3)
- Grants (see attachment 4)

The faculty who form the basis of the department are best known for the management of patients with tumors involving the brain and spine. At HFH, this work is supported by the Hermelin Brain Tumor Center's (HBTC) research engine, and both the clinical and research aspects serve as centers of excellence at Henry Ford Hospital. The Skull base, Pituitary and Endoscopy Center was developed in 2017 and is now a major clinical effort. Faculty in the cerebrovascular surgery programs, both open and endovascular, have long served as centers of excellence. Faculty at HFH have a longstanding

reputation in the management of patients with complex arteriovenous malformations and cerebral aneurysms.

The college has an active Division of Neurosurgery in the dean's office which includes faculty based at Ascension Providence Hospital – Southfield. These faculty are already productive in education, research, outreach, and clinical work. Divisions in the dean's office can be created by the college and do not require academic governance action. This unit was created in 2019 and will become part of the proposed new department. It will be important for the new department to support the identity and activity of these successful faculty members and the existing partnership.

More recently, the treatment of patients with cerebral ischemic disorders has become a major part of the cerebrovascular work of faculty who will make up the department. The faculty of the department and the existing division based mostly out of Ascension Providence, engage in a large volume of spinal disorders with a very large registry of patient data available for scholarship activity.

The department is beginning to work closely with the HFH Diversity, Equity, Inclusion and Justice (DEIJ) Committee. Recent initial meetings have set the stage to establish a formal department committee which is anticipated this coming fall.

Alignment with MSU Strategic Plan

Currently the number of medical students at MSU entering neurosurgery is small. However, it is expected that this number will increase with the creation of this department and that the development of this department will advance student success for those with an interest in the field. Neurosurgery is highly competitive and without a department and chair, MSU students have been at a disadvantage compared to students at other Big 10 or R-1 related medical schools, which have neurosurgery departments.

MSU faculty across many colleges are engaged in discovery and scholarship related to neuroscience. At CHM, faculty across radiology, ethics and humanities, cancer, public health, traditional neuroscience, and clinical programs will benefit from collaborations with the faculty of a neurosurgery department. As these collaborations develop, research impact and productivity are expected to go in support of grant and honorific metrics.

Most neurosurgery is quaternary care, and neurosurgical assessment and consultation is an important part of sustainable health for communities across our state. Advancements in imaging, telehealth, and the engagement of MSU and HFH in this department are expected to advance patient and community access to these important services.

Goals of the Neurosurgery Department

(a) Research Mission

Research efforts of faculty currently involve brain tumors, trauma, the cerebrovascular system, spine, epilepsy, functional neurosurgery and pain. In the Hermelin Brain Tumor Center (HBTC) researchers focus on:

- developing fundamental chemical synthesis methods to create biomedical imaging agents (Meser Ali)
- understanding the changes in the brain blood vessel function using animal models of stroke and brain tumors (Tavarekere Nagaraja)
- developing a robust pre-clinical experimental therapeutic program for high-grade gliomas (Ana deCarvalho)
- developing novel integrative analysis tools and methods to understand the link between specific intergenic regions and gene regulation associated with somatic and germline risk elements in cancer (Houtan Noushmehr)
- surveying epigenetic tissue and liquid biopsy markers associated with aggressiveness or invasiveness of endocrine tumors (Ana Castro)
- developing the novel therapeutic treatments for TBI and investigating the molecular mechanisms underlying their therapeutic effects (Ye Xiong)
- investigating the mechanisms of neuronal regeneration after TBI and conducting studies using several novel treatments to improve functional recovery after TBI by promoting neurovascular remodeling in the injured brain (Yanlu Zhang).

The HBTC Biorepository includes ongoing collection of biospecimens clinically, record keeping, live biobank maintenance, and histology. This work is an extension of neurosurgery clinical activities and supports clinical care, clinical trials, and federal and philanthropy funded research projects in neurosurgery. The biobank currently has over 5,000 specimens collected. Collaborations with MSU faculty will support expanded research grant submissions, collaborations both internally and externally, and growth of publications.

Our neurosurgical faculty based at Ascension Providence – Southfield established a Neurosurgical Clinical Research Unit in 2012 to manage their spine surgery outcome registry, which tracks and captures every elective spine surgery patient’s postoperative quality of life and functional outcomes. Using Midas/BACS cloud-based data collection platform and MySQL metadata management system, these faculty have collected over 18,000 unique patients and close to 50,000 unique encounters. Aside from research, the registry supports the neurosurgical quality improvement initiatives. The unit currently employs seven full-time employees.

The Southfield-based faculty also started their first institutional investigator-initiated randomized controlled trial for neurosurgery in 2017, evaluating the effect of ketorolac on posterior minimally invasive transforaminal lumbar interbody fusion. The project won the 2019 Mayfield Clinical Science Award from the joint sections of the spine and peripheral nerves and the 2021 North American Spine Society outstanding paper award for clinical science.

(b) Education mission

The department’s core faculty from HFH, Spectrum, and Ascension Providence have long served as educational sites for medical students, welcoming 3rd and 4th year students for clinical rotations. Faculty in other communities will also be part of the department. In addition, many faculty and residents serve as mentors and research advisors to medical students in all stages of their education, particularly from HFH. The development of the department will solidify the HFH residency as a “home” residency for MSU students interested in a career in neurosurgery joining existing affiliated residencies at Spectrum

and Ascension. The creation of a department and the appointment of a chair will greatly assist these students.

CHM neurosurgery faculty based at Ascension Providence Southfield already train medical students from the Colleges of Human Medicine and Osteopathic Medicine. These students attend cadaveric labs, participate in sub-internship rotations, volunteer at in the clinical research unit, and seek mentorship with our faculty. These medical students also apply for our residency interview. In 2020-2022 AY, we have 18 students participating in these activities.

The neurosurgical residency program at HFH is a two-per-year program for a total complement of 14 residents. The neurosurgical residency program at Spectrum is one resident per year and already affiliated with CHM as is the residency program at Ascension Providence, which has two residents per year. The bulk of the HFH program requirements are fulfilled through rotations at the Henry Ford Hospital and Henry Ford West Bloomfield Hospital, supplemented by outside rotations for pediatric experience. The residents gain a wide breadth of experience across all subspecialties. All our recent graduates have pursued high-level subspecialty fellowships upon graduation. In addition, the department has two fellowship programs: Neuro-oncology and Neuro-endovascular.

(c) Service and outreach mission

The neurosurgery from Detroit faculty already have outreach through a center in Saginaw and, in a collaborative effort across HFH, expect to have additional outreach centers in Monroe, Port Huron, Grayling, Gaylord and Upper Peninsula regions in the coming years.

The Detroit neurosurgeons and neuro-oncologists are members of professional organizations including the Congress of Neurological Surgeons, Society of Neurological Surgeons, American Association of Neurological Surgeons, Michigan Association of Neurological Surgeons, North American Skull Base Society, American Society for Stereotactic Functional Neurosurgery, and Society of Neuro Oncology. These societal meetings provide our team members with platforms to collaborate with other physician-research-scientists and share their portfolio of research and innovation. In 2021, the Henry Ford Neurosurgery team members had 53 publications in peer-review journals plus numerous abstracts and posters at these national meetings. The team is on target in 2022 to increase this publication number with 27 papers in print to date and others accepted awaiting publication dates. Henry Ford Health is also the leading and coordinating center for the Michigan Spine Surgery Improvement Collaborative (MSSIC) allowing multiple healthcare systems in Michigan to partner to improve care outcomes, reduce costs and identify the best practices to improve quality and efficiency.

The faculty are highly involved in governmental policy efforts on a state and federal level. At HFH patients, caregivers and staff participate annually in the National Brain Tumor Society's Head to the Hill event. This three-day event is focused on advocating with political leaders. Participants are encouraged to share their personal stories so these policy makers can understand the unmet needs of the brain tumor community while advocating for the availability of treatments and increased scientific research. The Detroit faculty have been successful advancing Brain Tumor Awareness Month in the state of Michigan and city of Detroit for several years. In 2020, the HFH faculty began recognizing Glioblastoma Awareness Day annually in July.

In 2021, the faculty advocated for the successful US Congressional approval of the Telehealth Modernization Act (H.R. 1332/S. 368), which made access to telehealth services permanent for our patients. Furthermore, the faculty have presented on a variety of topics at the annual American Brain Tumor Association National Conference for Patients and Caregivers which shares the latest advances in brain tumor research, treatment, and care with the national brain tumor community.

(d) Clinical mission

The Neuro-oncology Program at Henry Ford Health has approximately 350 patients with newly diagnosed or recurrent brain tumors which are operated on annually at Henry Ford. Patients with brain tumors are discussed at the weekly multidisciplinary tumor board, which includes members from neurosurgery, neuro-oncology, neuropathology, neuroradiology, radiation oncology, medical oncology, clinical trials and research. There is also a multidisciplinary skull-base center in which Neurosurgery, ENT, Ophthalmology, Radiation Oncology, Endocrinology and Neuroradiology collaborate to treat patients with skull-base pathology.

Patients with spinal tumors are reviewed at a spinal tumor board and treated in a multidisciplinary fashion in collaboration with Neurosurgery, Radiation Oncology, Orthopedic Surgery and Neuroradiology. Henry Ford Health was one of the original developers of spinal radiosurgery and continues to utilize the latest technologies to deliver focused and conformal doses of radiation to the spine for a variety of neoplastic conditions, including primary and metastatic tumors.

Spinal Disorders

The management of spinal disorders will be a major focus of the department across sites, which perform a full range of spine procedures, designed to address a myriad of spine disorders and pathologies ranging from simple to complex reconstructive technologies and involving anterior, lateral and posterior approaches. The Henry Ford spine program is a leader in the field in Minimally Invasive Spine Surgery (MISS), which applies a percutaneous approach to various pathologies of the cervical, thoracic, and lumbar spine for the treatment of trauma, tumors (separation surgery for metastatic spine diseases), and degenerative and spinal deformity etiologies.

Michigan Spine Surgery Improvement Collaborative (MSSIC):

Henry Ford Hospital serves as the coordinating center for MSSIC, a statewide quality improvement collaborative involving orthopedic surgeons and neurosurgeons with the aim of improving the quality of care of spine surgery. MSSIC is funded by Blue Cross Blue Shield of Michigan (BCBSM) as part of their Value Partnerships program. The registry, established in 2014, has grown to encompass nearly 50,000 cases including lumbar and cervical surgeries. Currently, we have 29 participating hospitals, including 185 orthopedic surgeons and neurosurgeons, 50 data abstractors and 26 quality administrative leads. In 2022, MSSIC continues its mission to develop Quality Improvement (QI) initiatives.

Our faculty at Ascension Providence Hospital are already a part of the MSSIC effort and account for approximately 36 percent of inpatient spine and brain patient encounters in the fiscal year 2021, with more than 2,000 neurosurgery procedures per year.

The department will have clinical excellence with nationally leading clinicians in neurosurgery for epilepsy, movement disorders, pain, cerebrovascular procedures, and neurosurgical trauma.

Benefits to Michigan State University

Overall, this new Department of Neurosurgery will strengthen and expand the academic environment of the college and MSU. Addition of this department will allow for curricular expansion of the College of Human Medicine and create additional academic homes for the expanding CHM faculty (both paid and no-pay faculty) across the state of Michigan. The growth of the program and the faculty will bring several opportunities for strengthening and enriching educational and research activities for CHM, including:

- The opportunity to develop new areas of curriculum and offer highly desirable student experiences in disciplines not currently represented in other CHM campuses (e.g., MSU medical student neurosurgery clerkships).
- The ability to establish additional required experiences and competencies that would not be possible without the addition of qualified faculty.
- Strengthened subspecialty research, and clinical programs that will provide the necessary platform for translational and population-based research, as well as support the supply of well-trained physicians and physician scientists to meet future recruitment needs in all our communities across the state of Michigan.

The research focus of the MSU Department of Neurosurgery will be broad in various areas of its core disciplines, and this will provide new and additional research training opportunities for undergraduate, graduate and medical students at MSU. Importantly, faculty who are in the Henry Ford Neurosurgery department are funded by external funding (including NIH) and are involved in 15 grant funded clinical research studies. Addition of the department to MSU will increase NIH funding (to MSU) via:

- Addition to existing NIH funding from these faculty to MSU grant portfolio;
- Increased collaborative research programs with existing MSU faculty leading to an increase in NIH and other external funding.

Together this will contribute to efforts to raise MSU ranking overall. In addition, it will help in achieving MSU's strategic goal for reaching \$1 billion in research expenditures by 2030. Faculty in the (future) Department of Neurosurgery have received several honors and awards, and this will also significantly increase MSU faculty honorifics (another strategic goal for MSU). Lastly, CHM has an active and on-going relationship with several community partners and philanthropists. The addition of MSU neurosurgery will provide expanded opportunities for new funding relationships. Overall, creation of the MSU Department of Neurosurgery to the College of Human Medicine will bring about several important benefits to the university and to the state of Michigan.

Programmatic, operational and financial considerations

Alignment with existing departments/units in CHM and MSU

Addition of this department will provide research and educational collaborative opportunities across the College of Human Medicine and multiple colleges of MSU. There are already existing funding opportunities for collaborative research and education through the Henry Ford-MSU partnership. Faculty from both existing MSU departments and Henry Ford departments will be able to apply for internal and external grant programs collaboratively that will strengthen the grant portfolio of MSU faculty and significantly increase research expenditure.

There are multiple units in the college, and in the university that have faculty and students who do research in the areas of cancer biology, neuroscience, immunity and inflammation, and drug discovery. Addition of this department creates new opportunities and potential collaborations for these faculty and students. There is nothing about the department that would limit the ability of other colleges or departments from hiring faculty in their respective departments and/or research programs.

Department structure

MSU Department of Neurosurgery will be led by a department chair. This may be the same person who is the chair of the Henry Ford Neurosurgery department or may be a different person depending on the outcome of the chair search. At the present time, faculty employed in the Henry Ford Department of Neurosurgery will become part of the MSU Department of Neurosurgery as will members of the existing CHM Division of Neurosurgery based out of Ascension Providence. Neurosurgeons and those in related fields in the college will also be able to join the department.

The addition of this department will be an opportunity for the state's Medicaid uplift. We expect significant funding to be available through this program, and we have pledged to use this money to support research, education and scholarship in the MSU-Henry Ford collaborative efforts.

As an example for the future of this structure, the Henry Ford chair of neurosurgery will be the primary supervisor for these Henry Ford employed faculty for Henry Ford related issues. For MSU related issues, chair of the MSU Department of Neurosurgery will be the administrative leader. We would support these chairs at 5-10% either as dually employed faculty or leased by CHM from Henry Ford or other employers. HFH is using the lease model to support the current position as chair (Dr. Rick Leach) for Ob/Gyn at Henry Ford Health. This chair funding by MSU is essentially facilitating partnership development and we would request access to the "mission-support" funding provided through the partnership Definitive Agreement. Depending on the strategic needs of the department, college and the university, the college may fund a few faculty positions in these departments as MSU employed faculty.

Faculty appointments

Faculty will be appointed in multiple ways. Faculty that are already in the Henry Ford neurosurgery department will be appointed as no-pay faculty in one of the following tracks depending on their role and contribution to the education and research missions of the college: Prefix, non-prefix and research tracks. For these various faculty tracks, we will follow the same process we currently follow in the college. This would be the same for neurosurgery department faculty employed outside of Henry Ford. When funding is available for new MSU-based faculty positions, these will be done using existing faculty hiring processes. In addition to clinical and non-prefixed faculty from Henry Ford Health, there will be clinical and non-prefixed faculty in the discipline joining from other communities, including Southeast

Michigan and Grand Rapids. Most of these faculty are engaged in elective clerkships for MS3 and MS4 students in our eight campuses across the state.

(New paragraph added in response to CAC request at their October 17, 2022 meeting). Upon establishment, new departments may initially not have voting-eligible, full-time faculty sufficient to participate as regular representatives to the CHM College Advisory Council (see CHM Bylaws Section 1.1.5.2.4. and 1.1.5.2.5. with referred definitions 1.1.1.). Departments with no eligible faculty with university level voting rights will send a CAC representative who will be granted voice but no vote, until such a time as they have eligible faculty to serve. It is expected that full-time MSU faculty will be added over time through enhanced Medicaid funding returned to MSU as well as new Henry Ford Health – MSU Health Science Center (HSC) funding. The college expects there will be 20-40 hires through these mechanisms. Priority will be given to addition and retention of at least two eligible faculty with university level voting rights (see CHM Bylaws Section 3.1.2.3.) within each department.

Chair selection

With the creation of the MSU Department of Neurosurgery, the dean will first appoint an interim chair. After initial establishment of the department with faculty appointments, the dean (or designate) will work with the faculty and the interim chair to develop departmental bylaws that will go through appropriate approvals at the college and university levels. Once the bylaws are in place, the dean will work with the department to formulate a search for a founding chair and subsequent chairs using existing university guidelines. Depending on the strategic needs of the department and the faculty some of these searches will be national and some may be internal.

Department operations, governance, bylaws and RPT criteria

The department will operate in a manner consistent with other departments in the College of Human Medicine and will adopt a shared governance model. Shared governance with the existing faculty, staff, and students will follow the MSU Academic Governance policies. The interim chair will work with the dean to appoint a bylaws committee. The bylaws committee will include five faculty members and one outside faculty member with expertise in reviewing bylaws. Bylaws will be voted on and approved by a majority of department faculty before ratification. A scaffolding of the bylaws and major sections have already been identified and minimally will include sections on organization; governance; committees; RPT; grievances and complaints; and faculty (e.g., composition, meetings, appointment, reappointment, promotion, tenure, responsibilities, etc.). Reappointment, promotion, and tenure criteria will align with the College of Human Medicine criteria which are written, well-specified, and available on the [CHM Faculty Affairs website](#). An RPT committee will be established within the Department of Neurosurgery to work with the chair to manage the RPT processes.

Department Finance

Current funding status, allocation, and reserve funds

The college is proposing a series of new departments based on faculty joining MSU and CHM from Henry Ford Health that complement the work of the college and university and highlight unique strengths of the HFH faculty. The health system, college, and partnership will provide support for the faculty and administration of the department. Most support will be in the form of faculty salary, which will come from the medical group within the health system. The Office of Health Sciences has committed financial resources from the overall MSU-HFHS partnership effort to support creation of departments. Discretionary funding will be used to support a small part of the salary and an administrative increment for the chair's MSU employment. As the department integrates into the college, the department will enter the Medicaid uplift program providing additional support for the department and funding additional MSU faculty in the department. The department will accrue reserves and start-up funds as all other departments in the college do. The college currently has a Division of Neurosurgery within the dean's office but most years there is little or no funding provided to the division. The college expects the current division to become a part of the new department, the new department will be charged by the dean with supporting the faculty continuing this successful partnership.

Projected financial needs and how financial obligations of the department, including administrative costs will be met

Projected financial needs are centered around ongoing recruitment and retention of high-caliber faculty to support our education, research, and service missions. The college will direct Medicaid uplift derived from HFH to use in the departments based out of HFH to fund new positions and programs in the departments and college.

The current college allocation and reserve funds more than meet the projected financial needs and financial obligations of the proposed department, including administrative costs. The college and the department expect additional philanthropy as well.

Oversight of the curriculum

The department will participate in the college's educational programs as all other departments do. Electives and rotations in the MD curriculum will be approved and supervised by the CHM MD Curriculum Committee. All other courses and educational programs will be reviewed by the college's Graduate Studies Curriculum Committee. The department's residency and fellowship programs operate with oversight from the departmental residency committees consistent with the ACGME accreditation of Henry Ford Health. The department will have a clerkship committee to oversee its medical student and any other educational programs not a part of the residency programs. For additional information on clerkships and residencies, see "Educational mission" under "Goals of the neurosurgery department".

Evaluation of departmental effectiveness

The current faculty in neurosurgery at HFH has a robust series of effective measures. The department chairperson evaluates all faculty every six months (see Section 3, # 3 below). Additionally, The CEO of the Henry Ford Medical Group, evaluates all aspects of the department yearly. This meeting is attended by the department chairperson and administrator.

The department runs semi-annual reviews of the faculty. During these reviews, academic, operational and clinical productivity are evaluated. Years ago, a former chairman developed a detailed system allotting points to academic and operational activities and they use this system currently.

Academically, the system allots points for oral presentations, abstracts, book chapters, and journal articles; more points are allotted for more prestigious journals, etc. Clinical trials, IRB, and grant involvement are also considered. On the operational wing, committees (local, national and international), new programs and night call activities are allotted points. This point system is combined with RVU productivity to determine overall performance. Consistently, the faculty perform at a high level both academically and clinically. Neurosurgery is recognized as one of the primary academic departments at HFH and has been so for many years.

The residency programs of the department are accredited and undergo formal continuous evaluation. The Henry Ford Hospital Program (# 1602511040) was originally accredited September 1, 1948, and currently holds a "Continued Accreditation" status without citation as of January 10, 2022.

The Neuro-oncology Fellowship holds a Non-Standard Training Designation. It is reviewed annually by the United Council for Neurologic Subspecialties (UCNS) and has remained in good standing with the Henry Ford Health GME since inception. The Neuro-endovascular fellowship also holds a Non-Standard Training Designation. It was established/approved in 2019. It is approved by the Committee on Advanced Subspecialty Training (CAST) under the direction of the Society of Neurological Surgeons. The CAST Fellowship Review Committee conducts an annual review. The program has remained in good standing since inception.

From a teaching perspective, the residents give the faculty members an annual review. Anonymized summary evaluations are then shared with faculty members. In addition, recognition in the form of the Outstanding Teaching Award is given annually by the residents for exceptional teaching by a faculty member during the prior academic year. The faculty are routinely lauded for their commitment to teaching, supporting each resident toward their individual goals, giving actionable and timely feedback, and nurturing graduated responsibilities.

Both faculty and residents constantly look for ways to improve the educational content and experience. To that end, the focus of the current academic year is on adding content regarding healthcare disparities and the business of medicine.

Assurances

For the university and college, the creation of the Department of Neurosurgery will help solidify and expand the scholarly opportunities for students and faculty across the institution. With the addition of the department to MSU, it is expected that the unit will grow, adding to NIH funding in support of AAU metrics and building on the reputation of the existing faculty and programming. The leadership of the college has discussed the creation of the department with related departments and units including meetings with leadership and faculty.

The addition of the Department of Neurosurgery does not limit the scholarly opportunities of others in the university, and this department will not change or limit the activity of faculty interested in the

above-mentioned research areas across the institution. In fact, the success and expansion of this department increases opportunities for all.

Distribution of proposal for endorsement, assurances, or concerns:

Distribution by email:

College of Osteopathic Medicine – Dean Andrea Amalfitano, October 7, 2022 See Attachment 5

Department of Neurology and Ophthalmology (CHM and COM) – Chair David Kaufman, October 7, 2022

Department of Surgery – Interim Chair Sri Kavuturu, October 7, 2022 – Support by Dr. Kavuturu October 10, 2022

College Advisory Council Summary

- Recommendation/endorsement

The CHM CAC unanimously endorsed the proposal for a new Department of Neurosurgery on November 21, 2022

Attachment, Section 1 #2 - Description of Faculty

- i. Number of total faculty: 35
- ii. Number of research faculty: 9
- iii. Number of clinical faculty: 26
- iv. Distribution of rank at Henry Ford/WSU:
 - a. Professor FTA: 2
 - b. Associate Professor FTA: 1
 - c. Clinical Professor: 3
 - d. Clinical Associate Professor: 4
 - e. Adjunct Assoc. Professor: 1
- v. Demographics:
 - a. Gender: Women: 11, Men: 24

Section 1 3a, Attachment 2

Neurosurgery Publications – 2019 - 2022

2019

Asmaro K, Abouelleil M, Haider S, Zakaria HM, Gradinaru C, Mukherjee A, and Lee I. Malignant Transformation of a Filum Terminale Dermoid Tumor into Adenocarcinoma. *World Neurosurg* 2019; Epub ahead of print. PMID: 30872204. [Full Text](#)

Asmaro K, Pawloski J, and Skoch J. Giant Choroid Plexus Papilloma Resection Utilizing a Transcollation System. *Oper Neurosurg (Hagerstown)* 2019; Epub ahead of print. PMID: 31065711. [Request Article](#)

Barthel FP, Johnson KC, Varn FS, Moskalik AD, Tanner G, Kocakavuk E, Anderson KJ, Abiola O, Aldape K, Alfaro KD, Alpar D, Amin SB, Ashley DM, Bandopadhyay P, Barnholtz-Sloan JS, Beroukhim R, Bock C, Brastianos PK, Brat DJ, Brodbelt AR, Bruns AF, Bulsara KR, Chakrabarty A, Chakravarti A, Chuang JH, Claus EB, Cochran EJ, Connelly J, Costello JF, Finocchiaro G, Fletcher MN, French PJ, Gan HK, Gilbert MR, Gould PV, Grimmer MR, Iavarone A, Ismail A, Jenkinson MD, Khasraw M, Kim H, Kouwenhoven MCM, LaViolette PS, Li M, Lichter P, Ligon KL, Lowman AK, **Malta TM**, Mazor T, McDonald KL, Molinaro AM, Nam DH, Nayyar N, Ng HK, Ngan CY, Niclou SP, Niers JM, Noushmehr H, Noorbakhsh J, Ormond DR, Park CK, **Poisson LM**, Rabadan R, Radlwimmer B, Rao G, Reifenberger G, Sa JK, Schuster M, Shaw BL, Short SC, Smitt PAS, Sloan AE, Smits M, Suzuki H, Tabatabai G, Van Meir EG, Watts C, Weller M, Wesseling P, Westerman BA, Widhalm G, Woehrer A, Yung WKA, Zadeh G, Huse JT, De Groot JF, Stead LF, and Verhaak RGW. Longitudinal molecular trajectories of diffuse glioma in adults. *Nature* 2019; Epub ahead of print. PMID: 31748746. [Full Text](#)

Brastianos PK, Galanis E, Butowski N, Chan JW, Dunn IF, Goldbrunner R, Herold-Mende C, Ippen FM, Mawrin C, McDermott MW, Sloan A, **Snyder J**, Tabatabai G, Tatagiba M, Tonn JC, Wen PY, Aldape K, Nassiri F, Zadeh G, Jenkinson MD, and Raleigh DR. Advances in multidisciplinary therapy for meningiomas. *Neuro Oncol* 2019; 21(Supplement_1):i18-i31. PMID: 30649489. [Full Text](#)

Buckley MA, Woods NT, Tyrer JP, Mendoza-Fandino G, Lawrenson K, Hazelett DJ, Najafabadi HS, Gjyshi A, Carvalho RS, Lyra PC, Jr., Coetzee SG, Shen HC, Yang AW, Earp MA, Yoder SJ, Risch H, Chenevix-Trench G, Ramus SJ, Phelan CM, Coetzee GA, **Noushmehr H**, Hughes TR, Sellers TA, Goode EL, Pharoah PD, Gayther SA, and Monteiro ANA. Functional Analysis and Fine Mapping of the 9p22.2 Ovarian Cancer Susceptibility Locus. *Cancer Res* 2019; 79(3):467-481. PMID: 30487138. [Full Text](#)

Caras A, Mugge L, Miller WK, **Mansour TR**, Schroeder J, and Medkour A. Utility and impact of intra-operative imaging for glioma resection on patient outcome and extent of resection: A systematic review and meta-analysis. *World Neurosurg* 2019; Epub ahead of print. PMID: 31639502. [Full Text](#)

Ding JY, Shang SL, Sun ZS, **Asmaro K**, Li WL, Yang Q, Ding YC, Ji XM, and Meng R. Remote ischemic conditioning for the treatment of ischemic moyamoya disease. *CNS Neurosci Ther* 2019; Epub ahead of print. PMID: 31814317. [Full Text](#)

Elzib H, **Pawloski J**, Ding Y, and **Asmaro K**. Antidepressant Pharmacotherapy and Poststroke Motor Rehabilitation: A Review of Neurophysiologic Mechanisms and Clinical Relevance. *Brain Circ* 2019; 5(2):62-67. PMID: 31334358. [Full Text](#)

Gaspar LE, Prabhu RS, Hdeib A, McCracken DJ, Lasker GF, McDermott MW, **Kalkanis SN**, and Olson JJ. Congress of Neurological Surgeons Systematic Review and Evidence-Based Guidelines on the Role of Whole Brain Radiation Therapy in Adults With Newly Diagnosed Metastatic Brain Tumors. *Neurosurgery* 2019; Epub ahead of print. PMID: 30629211. [Full Text](#)

Golub D, Mehan ND, Kwan K, **Salas SJ**, and Schulder M. Supracerebellar Transtentorial Approach for Occipital Meningioma to Maximize Visual Preservation: Technical Note. *Oper Neurosurg (Hagerstown)* 2019; 17(4):E177-e183. PMID: 30566655. [Request Article](#)

Gu S, Zaidi S, Hassan MI, Mohammad T, **Malta TM**, **Noushmehr H**, Nguyen B, Crandall KA, Srivastav J, Obias V, Lin P, Nguyen BN, Yao M, Yao R, King CH, Mazumder R, Mishra B, Rao S, and Mishra L. Mutated CEACAMs Disrupt Transforming Growth Factor beta Signaling and Alter the Intestinal Microbiome to Promote Colorectal Carcinogenesis. *Gastroenterol* 2019; Epub ahead of print. PMID: 31585122. [Full Text](#)

Gusev A, Lawrenson K, Lin X, Lyra PC, Jr., Kar S, Vavra KC, Segato F, Fonseca MAS, Lee JM, Pejovic T, Liu G, Karlan BY, Freedman ML, **Noushmehr H**, Monteiro AN, Pharoah PDP, Pasaniuc B, and Gayther SA. A transcriptome-wide association study of high-grade serous epithelial ovarian cancer identifies new susceptibility genes and splice variants. *Nat Genet* 2019; 51(5):815-823. PMID: 31043753. [Full Text](#)

Hadley MN, and **Walters BC**. The case for the future role of evidence-based medicine in the management of cervical spine injuries, with or without fractures. *J Neurosurg Spine* 2019; 31(4):457-463. PMID: 31574462. [Full Text](#)

Haider SA, **Lim S**, **Kalkanis SN**, and **Lee IY**. The impact of 5-aminolevulinic acid on extent of resection in newly diagnosed high grade gliomas: a systematic review and single institutional experience. *J Neurooncol* 2019; 141(3):507-515. PMID: 30506501. [Full Text](#)

Horta E, Bongiorno C, Ezzeddine M, and Neil EC. Neurotoxicity of antibodies in cancer therapy: A review. *Clin Neurol Neurosurg* 2019; 188:105566. PMID: 31731087. [Full Text](#)

Kim J, Lee J, Feng R, Chartrain A, Sobotka S, Griffiths S, Weiss N, Dangayach N, Bederson J, **Mayer SA**, and Gordon E. Ventricular Catheter Tract Hemorrhage as a Risk Factor for Ventriculostomy-Related Infection. *Oper Neurosurg (Hagerstown)* 2019; Epub ahead of print. PMID: 31294451. [Request Article](#)

Kluger BM, Ney DE, Bagley SJ, Mohile N, Taylor LP, **Walbert T**, and Jones CA. Top Ten Tips Palliative Care Clinicians Should Know When Caring for Patients with Brain Cancer. *J Palliat Med* 2019; Epub ahead of print. PMID: 31613698. [Full Text](#)

Lassman AB, van den Bent MJ, Gan HK, Reardon DA, Kumthekar P, Butowski N, Lwin Z, **Mikkelsen T**, Nabors LB, Papadopoulos KP, Penas-Prado M, Simes J, Wheeler H, Walbert T, Scott AM, Gomez E, Lee HJ, Roberts-Rapp L, Xiong H, Ansell PJ, Bain E, Holen KD, Maag D, and Merrell R. Safety and efficacy of depatuxizumab mafodotin + temozolomide in patients with EGFR-amplified, recurrent glioblastoma: results from an international phase I multicenter trial. *Neuro Oncol* 2019; 21(1):106-114. PMID: 29982805. [Full Text](#)

Lawrenson K, Fonseca MAS, Liu AY, Segato Dezem F, Lee JM, Lin X, Corona RI, Abbasi F, Vavra KC, Dinh HQ, Gill NK, Seo JH, Coetzee S, Lin YG, Pejovic T, Mhaweche-Fauceglia P, Rowat AC, Drapkin R, Karlan BY, Hazelett DJ, Freedman ML, Gayther SA, and **Noushmehr H**. A Study of High-Grade Serous Ovarian Cancer Origins Implicates the SOX18 Transcription Factor in Tumor Development. *Cell Rep* 2019; 29(11):3726-3735.e3724. PMID: 31825847. [Request Article](#)

Lawrenson K, Song F, Hazelett DJ, Kar SP, Tyrer J, Phelan CM, Corona RI, Rodriguez-Malave NI, Seo JH, Adler E, Coetzee SG, Segato F, Fonseca MAS, Amos CI, Carney ME, Chenevix-Trench G, Choi J, Doherty JA, Jia W, Jin GJ, Kim BG, Le ND, Lee J, Li L, Lim BK, Adenan NA, Mizuno M, Park B, Pearce CL, Shan K, Shi Y, Shu XO, Sieh W, Thompson PJ, Wilkens LR, Wei Q, Woo YL, Yan L, Karlan BY, Freedman ML, **Noushmehr H**, Goode EL, Berchuck A, Sellers TA, Teo SH, Zheng W, Matsuo K, Park S, Chen K, Pharoah PDP, Gayther SA, and Goodman MT. Genome-wide association studies identify susceptibility loci for epithelial ovarian cancer in east Asian women. *Gynecol Oncol* 2019; Epub ahead of print. PMID: 30898391. [Full Text](#)

Levy S, Arguello M, Macki M, and Rao SD. Pituitary Dysfunction Among Men Presenting with Hypogonadism. *Curr Urol Rep* 2019; 20(11):78. PMID: 31734886. [Full Text](#)

Li L, Chopp M, Ding G, Davoodi-Bojd E, Li Q, Mahmood A, Xong Y, and Jiang Q. Diffuse White Matter Response in Trauma-Injured Brain to Bone Marrow Stromal Cell Treatment Detected by Diffusional Kurtosis Imaging. *Brain Res* 2019; Epub ahead of print. PMID: 31009610. [Full Text](#)

Lin X, Spindler TJ, de Souza Fonseca MA, Corona RI, Seo JH, Dezem FS, Li L, Lee JM, Long HW, Sellers TA, Karlan BY, **Noushmehr H**, Freedman ML, Gayther SA, and Lawrenson K. Super-Enhancer-Associated LncRNA UCA1 Interacts Directly with AMOT to Activate YAP Target Genes in Epithelial Ovarian Cancer. *iScience* 2019; 17:242-255. PMID: 31307004. [Full Text](#)

Macki M, and Air EL. Commentary: What Is A Case Control Study? *Neurosurgery* 2019; Epub ahead of print. PMID: 31059000. [Full Text](#)

Macki M, Alvi MA, Kerezoudis P, Xiao S, Schultz L, Bazydlo M, Bydon M, Park P, and Chang V. Predictors of patient dissatisfaction at 1 and 2 years after lumbar surgery. *J Neurosurg Spine* 2019; Epub ahead of print. PMID: 31756702. [Full Text](#)

Macki M, Anand SK, Jaratli H, and Dabaja AA. Penile Lymphangioma: review of the literature with a case presentation. *Basic Clin Androl* 2019; 29:1. PMID: 30705756. [Request Article](#)

Macki M, Anand SK, Surapaneni A, Park P, and Chang V. Subsidence Rates After Lateral Lumbar Interbody Fusion: A Systematic Review. *World Neurosurg* 2019; 122:599-606. PMID: 30476670. [Full Text](#)

Macki M, Fakh M, Rubinfeld I, Chang V, and Walters BC. The Impact of Different Postgraduate Year Training in Neurosurgery Residency on 30-Day Postoperative Outcomes. *Neurosurgery* 2019; 84(3):778-787. PMID: 30010937. [Full Text](#)

Macki M, Haider SA, Dakroub B, Anand SK, Fakh M, Elmenini J, Suryadevara R, and Chang V. A Survey of Chemoprophylaxis Techniques in Spine Surgery Among American Neurosurgery Training Programs. *World Neurosurg* 2019; Epub ahead of print. PMID: 31525483. [Full Text](#)

Miller WK, Caras A, **Mansour TR**, Mierzwa A, Mugge L, Qu W, and Schroeder J. Patients with Parkinson's Disease Experience Increased Perioperative Complications Following Cervical Decompression and Fusion: A Retrospective Review of the National Inpatient Sample. *World Neurosurg* 2019; Epub ahead of print. PMID: 31470148. [Full Text](#)

Modh A, Doshi A, **Burmeister C**, **Elshaikh MA**, **Lee I**, and **Shah M**. Disparities in the Use of Single-fraction Stereotactic Radiosurgery for the Treatment of Brain Metastases From Non-small Cell Lung Cancer. *Cureus* 2019; 11(2):e4031. PMID: 31011494. [Request Article](#)

Modi S, Shah K, **Schultz L**, **Tahir R**, **Affan M**, and **Varelas P**. Cost of hospitalization for aneurysmal subarachnoid hemorrhage in the United States. *Clin Neurol Neurosurg* 2019; 182:167-170. PMID: 31151045. [Full Text](#)

Morgoulis D, Berenstein P, **Cazacu S**, Kazimirsky G, Dori A, Barnea ER, and **Brodie C**. sPIF promotes myoblast differentiation and utrophin expression while inhibiting fibrosis in Duchenne muscular dystrophy via the H19/miR-675/let-7 and miR-21 pathways. *Cell Death Dis* 2019; 10(2):82. PMID: 30692507. [Full Text](#)

Mounir M, Lucchetta M, Silva TC, Olsen C, Bontempi G, Chen X, **Noushmehr H**, Colaprico A, and Papaleo E. New functionalities in the TCGAbiolinks package for the study and integration of cancer data from GDC and GTEx. *PLoS Comput Biol* 2019; 15(3):e1006701. PMID: 30835723. [Full Text](#)

Nahed BV, Alvarez-Breckenridge C, Brastianos PK, Shih H, Sloan A, Ammirati M, Kuo JS, Ryken TC, **Kalkanis SN**, and Olson JJ. Congress of Neurological Surgeons Systematic Review and Evidence-Based Guidelines on the Role of Surgery in the Management of Adults With Metastatic Brain Tumors. *Neurosurgery* 2019; Epub ahead of print. PMID: 30629227. [Full Text](#)

Nassiri F, Mamatjan Y, Suppiah S, Badhiwala JH, Mansouri S, Karimi S, Saarela O, **Poisson L**, Gepfner-Tuma I, Schittenhelm J, Ng HK, **Noushmehr H**, Harter P, Baumgarten P, Weller M, Preusser M, Herold-Mende C, Tatagiba M, Tabatabai G, Sahm F, von Deimling A, Zadeh G, and Aldape KD. DNA methylation profiling to predict recurrence risk in meningioma: development and validation of a nomogram to optimize clinical management. *Neuro Oncol* 2019; Epub ahead of print. PMID: 31158293. [Full Text](#)

Noh T, **Griffith B**, **Snyder J**, **Zhou Y**, **Poisson L**, and **Lee I**. Intraclass Correlations of Measured Magnetic Resonance Imaging Volumes of Laser Interstitial Thermal Therapy-Treated High-Grade Gliomas. *Lasers Surg Med* 2019; Epub ahead of print. PMID: 31254282. [Request Article](#)

Noh T, **Zervos TM**, **Chen A**, and **Chedid M**. Treatment of a *Staphylococcus lugdunensis* cervical epidural abscess. *BMJ Case Rep* 2019; 12(3):e227449. PMID: 30898958. [Full Text](#)

Olson JJ, **Kalkanis SN**, and Ryken TC. Congress of Neurological Surgeons Systematic Review and Evidence-Based Guidelines for the Treatment of Adults With Metastatic Brain Tumors: Executive Summary. *Neurosurgery* 2019; Epub ahead of print. PMID: 30629218. [Full Text](#)

Park P, **Nerenz DR**, Aleem IS, **Schultz LR**, **Bazydlo M**, **Xiao S**, **Zakaria HM**, **Schwalb JM**, **Abdulhak MM**, Oppenlander ME, and **Chang VW**. Risk Factors Associated With 90-Day Readmissions After Degenerative Lumbar Fusion: An Examination of the Michigan Spine Surgery Improvement Collaborative (MSSIC) Registry. *Neurosurgery* 2019; 85(3):402-408. PMID: 30113686. [Full Text](#)

Perez FA, Quinet S, Jarvik JG, Nguyen QT, Aghayev E, Jitjai D, Hwang WD, Jarvik ER, Nedeljkovic SS, Avins AL, **Schwalb JM**, Diehn FE, Standaert CJ, **Nerenz DR**, Annaswamy T, Bauer Z, Haynor D, Heagerty PJ, and Friedly JL. Lumbar Spinal Stenosis Severity by CT or MRI Does Not Predict Response to Epidural Corticosteroid versus Lidocaine Injections. *AJNR Am J Neuroradiol* 2019; 40(5):908-915. PMID: 31048295. [Full Text](#)

Rammo R, Ali R, Pabaney A, Seidman M, and **Schwalb J**. Surgical Neuromodulation of Tinnitus: A Review of Current Therapies and Future Applications. *Neuromodulation* 2019; 22(4):380-387. PMID: 30015361. [Full Text](#)

Rammo R, **Scarpace L**, **Nagaraja T**, and **Lee I**. MR-guided laser interstitial thermal therapy in the treatment of recurrent intracranial meningiomas. *Lasers Surg Med* 2019; Epub ahead of print. PMID: 30592538. [Full Text](#)

Ryken TC, Kuo JS, Prabhu RS, Sherman JH, **Kalkanis SN**, and Olson JJ. Congress of Neurological Surgeons Systematic Review and Evidence-Based Guidelines on the Role of Steroids in the Treatment of Adults With Metastatic Brain Tumors. *Neurosurgery* 2019; Epub ahead of print. PMID: 30629207. [Full Text](#)

Schmidt MHH, Broll R, Bruch HP, and Duchrow M. Correction to: The proliferation marker pKi-67 becomes masked to MIB-1 staining after expression of its tandem repeats. *Histochem Cell Biol* 2019; 151(3):275. PMID: 30460406. [Full Text](#)

Schneider RB, Jimenez-Shahed J, Abraham DS, Thibault DP, Mantri S, Fullard M, Burack MA, Chou KL, Spindler M, Jermakowicz WJ, D'Haese PF, York MK, Kirk JC, **Schwalb JM**, Espay AJ, Shih LC, Simon DK, Hunter C, Crispo JAG, and Willis AW. Acute readmission following deep brain stimulation surgery for Parkinson's disease: A nationwide analysis. *Parkinsonism Relat Disord* 2019; Epub ahead of print. PMID: 31866156. [Full Text](#)

Shupak R, Rao G, and **Kalkanis SN**. The CNS Mission and NEUROSURGERY(R) Publications. *Neurosurgery* 2019; 85(4):439-440. PMID: 31529125. [Full Text](#)

Silva TC, Coetzee SG, Gull N, Yao L, Hazelett DJ, **Noushmehr H**, Lin DC, and Berman BP. ELMER v.2: an R/Bioconductor package to reconstruct gene regulatory networks from DNA methylation and transcriptome profiles. *Bioinformatics* 2019; 35(11):1974-1977. PMID: 30364927. [Full Text](#)

Snyder J, **Poisson LM**, **Noushmehr H**, **Castro AV**, **de Carvalho AC**, **Robin A**, **Mukherjee A**, **Lee I**, and **Walbert T**. Clinical and research applications of a brain tumor tissue bank in the age of precision medicine. *Per Med* 2019; Epub ahead of print. PMID: 30816054. [Request Article](#)

Stummer W, Koch R, Valle RD, Roberts DW, Sanai N, **Kalkanis S**, Hadjipanayis CG, and Suero Molina E. Intraoperative Fluorescence Diagnosis in the Brain: A Systematic Review and Suggestions for Future Standards on Reporting Diagnostic Accuracy and Clinical Utility. *Acta Neurochir (Wien)* 2019; Epub ahead of print. PMID: 31363920. [Full Text](#)

Suppiah S, Nassiri F, Bi WL, Dunn IF, Hanemann CO, Horbinski CM, Hashizume R, James CD, Mawrin C, **Noushmehr H**, Perry A, Sahm F, Sloan A, Von Deimling A, Wen PY, Aldape K, and Zadeh G. Molecular and translational advances in meningiomas. *Neuro Oncol* 2019; 21(Supplement_1):i4-i17. PMID: 30649490. [Full Text](#)

Sweet JA, Holanda VM, Rao G, **Kalkanis SN**, Sharan AD, and Benzil DL. Letter: Congress of Neurological Surgeons Female International Think Tank Report: Much Progress, Still Work to Be Done. *Neurosurgery* 2019; 85(3):E599-e606. PMID: 31418029. [Full Text](#)

Tahir RA, Haider S, Kole M, Griffith B, and Marin H. Anterior Cerebral Artery: Variant Anatomy and Pathology. *J Vasc Interv Neurol* 2019; 10(3):16-22. PMID: 31308866. [Request Article](#)

Than KD, Park P, Tran S, Mundis GM, Fu KM, Uribe JS, Okonkwo DO, Nunley PD, Fessler RG, Eastlack RK, Kanter A, Anand N, **LaMarca F**, Passias PG, and Mummaneni PV. Analysis of complications with staged surgery for less invasive treatment of adult spinal deformity. *World Neurosurg* 2019; Epub ahead of print. PMID: 30898739. [Full Text](#)

Thorsson V, Gibbs DL, Brown SD, Wolf D, Bortone DS, Ou Yang TH, Porta-Pardo E, Gao GF, Plaisier CL, Eddy JA, Ziv E, Culhane AC, Paull EO, Sivakumar IKA, Gentles AJ, Malhotra R, Farshidfar F, Colaprico A, Parker JS, Mose LE, Vo NS, Liu J, Liu Y, Rader J, Dhankani V, Reynolds SM, Bowlby R, Califano A, Cherniack AD, Anastassiou D, Bedognetti D, Mokrab Y, Newman AM, Rao A, Chen K, Krasnitz A, Hu H, **Malta TM, Noushmehr H**, Peadarallu CS, Bullman S, Ojesina AI, Lamb A, Zhou W, Shen H, Choueiri TK, Weinstein JN, Guinney J, Saltz J, Holt RA, Rabkin CS, Lazar AJ, Serody JS, Demicco EG, Disis ML, Vincent BG, and Shmulevich I. The Immune Landscape of Cancer. *Immunity* 2019; 51(2):411-412. PMID: 31433971. [Request Article](#)

Victor RR, **Malta TM**, Seki T, Lita A, Dowdy T, Celiku O, Cavazos-Saldana A, Li A, Liu Y, Han S, Zhang W, Song H, Davis D, Lee S, Trepel JB, **Sabedot TS**, Munasinghe J, Yang C, Herold-Mende C, Gilbert MR, Krishna Cherukuri M, **Noushmehr H**, and Larion M. Metabolic Reprogramming Associated with Aggressiveness Occurs in the G-CIMP-High Molecular Subtypes of IDH1mut Lower Grade Gliomas. *Neuro Oncol* 2019; Epub ahead of print. PMID: 31665443. [Full Text](#)

Wartenberg KE, Hwang DY, Haeusler KG, Muehlschlegel S, Sakowitz OW, Madzar D, Hamer HM, Rabinstein AA, Greer DM, Hemphill JC, 3rd, Meixensberger J, and **Varelas PN.** Gap Analysis Regarding Prognostication in Neurocritical Care: A Joint Statement from the German Neurocritical Care Society and the Neurocritical Care Society. *Neurocrit Care* 2019; Epub ahead of print. PMID: 31368059. [Full Text](#)

Williams AM, Denny IS, Bhatti UF, Halaweish I, **Xiong Y**, Chang P, Nikolian VC, Chtraklin K, Brown J, **Zhang Y, Zhang ZG, Chopp M, Buller B**, and Alam HB. Mesenchymal Stem Cell-Derived Exosomes Provide Neuroprotection and Improve Long-Term Neurologic Outcomes in a Swine Model of Traumatic Brain Injury and Hemorrhagic Shock. *J Neurotrauma* 2019; 36(1):54-60. PMID: 29690826. [Full Text](#)

Wu C, Jermakowicz WJ, Chakravorti S, Cajigas I, Sharan AD, Jagid JR, Matias CM, Sperling MR, Buckley R, Ko A, Ojemann JG, Miller JW, Youngerman B, Sheth SA, McKhann GM, Laxton AW, Couture DE, Popli GS, Smith A, Mehta AD, Ho AL, Halpern CH, Englot DJ, Neimat JS, Konrad PE, Neal E, Vale FL, Holloway KL, **Air EL, Schwalb J**, Dawant BM, and D'Haese PF. Effects of surgical targeting in laser interstitial thermal therapy for mesial temporal lobe epilepsy: A multicenter study of 234 patients. *Epilepsia* 2019; Epub ahead of print. PMID: 31112302. [Full Text](#)

Xiong Y, Mahmood A, and Chopp M. Remodeling dendritic spines for treatment of traumatic brain injury. *Neural Regen Res* 2019; 14(9):1477-1480. PMID: 31089035. [Request Article](#)

Yang I, Udawatta M, Prashant GN, Lagman C, Bloch O, Jensen R, Sheehan J, **Kalkanis S**, and Warnick R. Stereotactic Radiosurgery for Neurosurgical Patients: A Historical Review and Current Perspectives. *World Neurosurg* 2019; 122:522-531. PMID: 30399473. [Full Text](#)

Yang I, Udawatta M, Prashant GN, Preet K, Mekonnen M, Duong C, Sheppard JP, Nguyen T, Bloch O, Jensen R, Sheehan J, **Kalkanis S**, and Warnick RE. Commentary: Stereotactic Radiosurgery Training for Neurosurgery Residents: Results of a Survey of Residents, Attendings, and Program Directors by the American Association of Neurological Surgeons/Congress of Neurological Surgeons Section on Tumors. *Neurosurgery* 2019; 84(1):E86-e91. PMID: 30407565. [Full Text](#)

Yarlagadda J, Joshi S, Cerasale MT, **Rana S**, and Heidemann D. The Applicability of New Orleans Criteria for Head Computed Tomography in Inpatient Falls With Injury. *Neurohospitalist* 2019; 9(4):197-202. PMID: 31534608. [Full Text](#)

Yee TJ, Smith BW, Joseph JR, Saadeh YS, Nathan JK, Kahn EN, Khalsa SS, Fearer KJ, Kirsch MJ, **Nerenz DR, Chang V, Schwalb JM, Abdulhak MM**, and Park P. Correlation Between the Oswestry Disability Index and the 4-Item Short Forms for Physical Function and Pain Interference from PROMIS. *J Neurosurg Spine* 2019; Epub ahead of print. PMID: 31398700. [Full Text](#)

Zakaria HM, Bazydlo M, Schultz L, Abdulhak M, Nerenz DR, Chang V, and Schwalb JM. Ambulation on Postoperative Day #0 Is Associated With Decreased Morbidity and Adverse Events After Elective Lumbar Spine Surgery: Analysis From the Michigan Spine Surgery Improvement Collaborative (MSSIC). *Neurosurgery* 2019; Epub ahead of print. PMID: 31832659. [Full Text](#)

Zakaria HM, Bazydlo M, Schultz L, Pahuta MA, Schwalb JM, Park P, Aleem I, Nerenz DR, and Chang V. Adverse events and their risk factors 90 days after cervical spine surgery: analysis from the Michigan Spine Surgery Improvement Collaborative. *J Neurosurg Spine* 2019; Epub ahead of print:1-13. PMID: 30771759. [Full Text](#)

Zakaria HM, Lipphardt M, Bazydlo M, Xiao S, Schultz L, Chedid M, Abdulhak M, Schwalb JM, Nerenz D, Easton R, and Chang V. The preoperative risks and 2-year sequelae of postoperative urinary retention: analysis of the Michigan Spine Surgery Improvement Collaborative (MSSIC). *World Neurosurg* 2019; Epub ahead of print. PMID: 31568914. [Full Text](#)

Zakaria HM, Llaniguez JT, Telemi E, Chuang M, Abouelleil M, Wilkinson B, Chandra A, Boyce-Fappiano D, Elibe E, Schultz L, Siddiqui F, Griffith B, Kalkanis SN, Lee IY, and Chang V. Sarcopenia Predicts Overall Survival in Patients with Lung, Breast, Prostate, or Myeloma Spine Metastases Undergoing Stereotactic Body Radiation Therapy (SBRT), Independent of Histology. *Neurosurgery* 2019; Epub ahead of print. PMID: 31232439. [Full Text](#)

Zakaria HM, Mansour T, Telemi E, Xiao S, Bazydlo M, Schultz L, Nerenz D, Perez-Cruet M, Seyfried D, Aleem IS, Easton R, Schwalb JM, Abdulhak M, and Chang V. Patient Demographic and Surgical Factors Which Affect Completion of Patient-Reported Outcomes (PROs) 90 Days and 1 Year After Spine Surgery: Analysis from the Michigan Spine Surgery Improvement Collaborative (MSSIC). *World Neurosurg* 2019; Epub ahead of print. PMID: 31207366. [Full Text](#)

Zakaria HM, Mansour TR, Telemi E, Asmaro K, Bazydlo M, Schultz L, Nerenz DR, Abdulhak M, Khalil JG, Easton R, Schwalb JM, Park P, and Chang V. The Association of Preoperative Opioid Usage With Patient-Reported Outcomes, Adverse Events, and Return to Work After Lumbar Fusion: Analysis From the Michigan Spine Surgery Improvement Collaborative (MSSIC). *Neurosurgery* 2019; Epub ahead of print. PMID: 31595963. [Full Text](#)

Zakaria HM, Mansour TR, Telemi E, Asmaro K, Macki M, Bazydlo M, Schultz L, Nerenz DR, Abdulhak M, Schwalb JM, Park P, and Chang V. Use of Patient Health Questionnaire-2 Scoring to Predict Patient Satisfaction and Return to Work up to 1 Year After Lumbar Fusion: A 2-Year Analysis from the Michigan Spine Surgery Improvement Collaborative. *J Neurosurg Spine* 2019; Epub ahead of print.:1-8. PMID: 31443085. [Full Text](#)

Zervos T, and Walters BC. Diagnosis of Ventricular Shunt Infection in Children: A Systematic Review. *World Neurosurg* 2019; Epub ahead of print. PMID: 31100520. [Full Text](#)

Zervos TM, Mg TM, Zakaria H, Hlaing K, Aung TH, Myaing W, and Rock J. Surgical Treatment of Intracranial Anterior Ethmoidal Aneurysm: Case Report, Literature Review, and Surgical Video. *World Neurosurg* 2019; 136:1-5. PMID: 31901499. [Full Text](#)

Zervos TM, Scarpace L, Robin AM, Schwalb JM, and Air EL. Adapting to Space Limitations During Prone Real-Time Magnetic Resonance Imaging-Guided Stereotaxic Laser Ablation: Technical Pearls. *Oper Neurosurg (Hagerstown)* 2019; Epub ahead of print. PMID: 31245819. [Request Article](#)

Zhang Y, Chopp M, Rex CS, Simmon VF, Sarraf ST, Zhang ZG, Mahmood A, and Xiong Y. A Small Molecule Spinogenic Compound Enhances Functional Outcome and Dendritic Spine Plasticity in a Rat Model of Traumatic Brain Injury. *J Neurotrauma* 2019; 36(4):589-600. PMID: 30014757. [Full Text](#)

Zhang Y, Chopp M, Zhang Y, Gang Zhang Z, Lu M, Zhang T, Wu KH, Zhang L, Mahmood A, and Xiong Y. Randomized Controlled Trial of Cerebrolysin's Effects on Long-Term Histological Outcomes and Functional Recovery in Rats with Moderate Closed Head Injury. *J Neurosurg* 2019; Epub ahead of print.:1-11. PMID: 31491768. [Full Text](#)

Zhang Y, Chopp M, Zhang ZG, Zhang Y, Zhang L, Lu M, Zhang T, Winter S, Doppler E, Brandstaetter H, Mahmood A, and Xiong Y. Cerebrolysin Reduces Astrogliosis and Axonal Injury and Enhances Neurogenesis in Rats After Closed Head Injury. *Neurorehabil Neural Repair* 2019; 33(1):15-26. PMID: 30499355. [Full Text](#)

Zhou D, Ding J, **Asmaro K**, Pan L, Ya J, Yang Q, Fan C, Ding Y, Ji X, and Meng R. Clinical Characteristics and Neuroimaging Findings in Internal Jugular Venous Outflow Disturbance. *Thromb Haemost* 2019; 119(2):308-318. PMID: 30605919. [Full Text](#)

2020

Afzal M, Alam F, Malik KM, and **Malik GM**. Clinical Context-Aware Biomedical Text Summarization Using Deep Neural Network: Model Development and Validation. *J Med Internet Res* 2020; 22(10):e19810. PMID: 33095174. [Full Text](#)

Alexander C, Caras A, Miller WK, **Tahir R, Mansour TR**, Medhkour A, and **Marin H**. M2 segment thrombectomy is not associated with increased complication risk compared to M1 segment: A meta-analysis of recent literature. *J Stroke Cerebrovasc Dis* 2020; 29(9):105018. PMID: 32807433. [Full Text](#)

Anand SK, and **Macki M**. What have we learned from C5 palsy - A short communication. *J Clin Neurosci* 2020; 81:111-112. PMID: 33222897. [Full Text](#)

Anand SK, **Macki M**, Culver LG, **Wasade VS**, Hendren S, and **Schwalb JM**. Patient navigation in epilepsy care. *Epilepsy Behav* 2020; 113:107530. PMID: 33232897. [Full Text](#)

Ashraf O, Arzumanov G, Luther E, McMahon JT, Malcolm JG, Mansour S, **Lee IY**, Willie JT, Komotar RJ, and Danish SF. Magnetic resonance-guided laser interstitial thermal therapy for posterior fossa neoplasms. *J Neurooncol* 2020; 149(3):533-542. PMID: 33057919. [Full Text](#)

Asmaro K, Rock J, and **Craig J**. Expanded Endonasal Approach for Resection of Extradural Infratemporal Fossa Trigeminal Schwannoma: 2-Dimensional Operative Video. *Oper Neurosurg (Hagerstown)* 2020; 19(4):E396-E397. PMID: 32348506. [Full Text](#)

Azad S, Oravec D, Baumer T, Schildcrout A, White P, Basheer A, Bey MJ, Bartol SW, Chang V, and **Yeni YN**. Dynamic foraminal dimensions during neck motion 6.5 years after fusion and artificial disc replacement. *PLoS One* 2020; 15(8):e0237350. PMID: 32780779. [Full Text](#)

Barzilai O, **Robin AM**, O'Toole JE, and Laufer I. Minimally Invasive Surgery Strategies: Changing the Treatment of Spine Tumors. *Neurosurg Clin N Am* 2020; 31(2):201-209. PMID: 32147011. [Full Text](#)

Benzil DL, Muraszko KM, Soni P, **Air EL**, Orrico KO, and Rutka JT. Toward an understanding of sexual harassment in neurosurgery. *J Neurosurg* 2020; Epub ahead of print. PMID: 33171438. [Full Text](#)

Bergman D, Modh A, Schultz L, Snyder J, Mikkelsen T, Shah M, Ryu S, **Siddiqui MS**, and **Walbert T**. Randomized prospective trial of fractionated stereotactic radiosurgery with chemotherapy versus chemotherapy alone for bevacizumab-resistant high-grade glioma. *J Neurooncol* 2020; 148(2):353-361. PMID: 32444980. [Full Text](#)

Bier A, **Hong X, Cazacu S**, Goldstein H, Rand D, **Xiang C, Jiang W**, Ben-Asher HW, **Attia M**, Brodie A, **She R, Poisson LM**, and Brodie C. miR-504 modulates the stemness and mesenchymal transition of glioma stem cells and their interaction with microglia via delivery by extracellular vesicles. *Cell Death Dis* 2020; 11(10):899. PMID: 33093452. [Full Text](#)

Caras A, Mugge L, Miller WK, **Mansour TR**, Schroeder J, and Medhkour A. Usefulness and Impact of Intraoperative Imaging for Glioma Resection on Patient Outcome and Extent of Resection: A Systematic Review and Meta-Analysis. *World Neurosurg* 2020; 134:98-110. PMID: 31639502. [Full Text](#)

Chaudhry F, Hunt RJ, Hariharan P, Anand SK, Sanjay S, Kjoller EE, Bartlett CM, Johnson KW, Levy PD, Noushmehr H, and Lee IY. Machine Learning Applications in the Neuro ICU: A Solution to Big Data Mayhem? *Front Neurol* 2020; 11:554633. PMID: 33162926. [Full Text](#)

Chen J, Mitra A, Li S, Song S, Nguyen BN, Chen JS, Shin JH, Gough NR, Lin P, Obias V, He AR, Yao Z, **Malta TM, Noushmehr H, Latham PS, Su X, Rashid A, Mishra B, Wu RC, and Mishra L.** Targeting the E3 Ubiquitin Ligase PJA1 Enhances Tumor-Suppressing TGF β Signaling. *Cancer Res* 2020; 80(9):1819-1832. PMID: 32127355. [Full Text](#)

Chhina AK, Loyd GE, Szymanski TJ, Nowak KA, Peruzzi WT, Yeldo NS, Han X, Kerzabi LS, Galusca DM, Cazacu S, Brodie C, and Penning DH. Frequency and Analysis of Unplanned Extubation in Coronavirus Disease 2019 Patients. *Crit Care Explor* 2020; 2(12):e0291. PMID: 33251520. [Full Text](#)

Cloughesy TF, Petrecca K, **Walbert T, Butowski N, Salacz M, Perry J, Damek D, Bota D, Bettegowda C, Zhu JJ, Iwamoto F, Placantonakis D, Kim L, Elder B, Kaptain G, Cachia D, Moshel Y, Brem S, Piccioni D, Landolfi J, Chen CC, Gruber H, Rao A, Hogan D, Accomando W, Ostertag D, Montellano TT, Kheoh T, Kabbinarav F, and Vogelbaum MA.** Effect of Vocimagene Amiretrorepvec in Combination With Flucytosine vs Standard of Care on Survival Following Tumor Resection in Patients With Recurrent High-Grade Glioma: A Randomized Clinical Trial. *JAMA Oncol* 2020; 6(12):1939-1946. PMID: 33119048. [Full Text](#)

Colaprico A, Olsen C, Bailey MH, Odom GJ, Terkelsen T, Silva TC, Olsen AV, Cantini L, Zinovyev A, Barillot E, **Noushmehr H, Bertoli G, Castiglioni I, Cava C, Bontempi G, Chen XS, and Papaleo E.** Interpreting pathways to discover cancer driver genes with Moonlight. *Nat Commun* 2020; 11(1):69. PMID: 31900418. [Full Text](#)

De Bonis P, Musio A, Mongardi L, Lofrese G, **La Marca F, Visani J, Cavallo MA, and Scerrati A.** Transpars approach for L5-S1 foraminal and extra-foraminal lumbar disc herniations: technical note. *J Neurosurg Sci* 2020; Epub ahead of print. PMID: 33297610. [Request Article](#)

Golebiewska A, Hau AC, Oudin A, Stieber D, Yabo YA, Baus V, Barthelemy V, Klein E, Bougnaud S, Keunen O, Wantz M, Michelucci A, Neirinckx V, Muller A, Kaoma T, Nazarov PV, Azuaje F, De Falco A, Flies B, Richart L, Poovathingal S, Arns T, Grzyb K, Mock A, Herold-Mende C, Steino A, Brown D, May P, Miletic H, **Malta TM, Noushmehr H, Kwon YJ, Jahn W, Klink B, Tanner G, Stead LF, Mittelbronn M, Skupin A, Hertel F, Bjerkvig R, and Niclou SP.** Patient-derived organoids and orthotopic xenografts of primary and recurrent gliomas represent relevant patient avatars for precision oncology. *Acta Neuropathol* 2020; 140(6):919-949. PMID: 33009951. [Full Text](#)

Haider SA, Asmaro K, Kalkanis SN, Lee IY, Bazydlo M, Nerenz DR, Salloum RG, Snyder J, and Walbert T. The Economic Impact of Glioma Survivorship: the cost of care from a patient perspective. *Neurology* 2020; 95(11):e1575-e1581. PMID: 32646959. [Full Text](#)

Haider SA, Shank CD, and Walters BC. Commentary: The Role of Stereotactic Radiosurgery in the Management of Brain Metastases From a Health-Economic Perspective: A Systematic Review. *Neurosurgery* 2020; 87(3):E277-E278. PMID: 32320033. [Full Text](#)

Hatcher SE, and Air EL. Catastrophic failure of spinal cord stimulator paddle electrodes in the cervical spine. *Clin Neurol Neurosurg* 2020; 196:106010. PMID: 32563977. [Full Text](#)

Hocker S, Shah S, Vespa P, Provencio JJ, Calvillo E, Olson DM, Venkatasubba Rao CP, Hemphill JC, 3rd, Helbok R, Human T, Kamel H, Madden LK, Nyquist P, Benth O, O'Phelan K, Lewin JJ, 3rd, Alexander S, Ziai W, Chou SH, Rincon F, McNett M, Ko N, Zink B, Rhoney D, Diringner MN, Stevens R, Robertson CS, Sampaio G, Shutter LA, Ling G, **Rehman M**, Mahmoud SH, Yeager S, Livesay S, and Suarez JI. The Future of Neurocritical Care Research: Proceedings and Recommendations from the Fifth Neurocritical Care Research Network Conference. *Neurocrit Care* 2020; 32(1):311-316. PMID: 31264070. [Full Text](#)

Lee EQ, Weller M, Sul J, Bagley SJ, Sahebjam S, van den Bent M, Ahluwalia M, Campian JL, Galanis E, Gilbert MR, Holdhoff M, Lesser GJ, Lieberman FS, Mehta MP, Penas-Prado M, Schreck KC, Strowd RE, Vogelbaum MA, **Walbert T**, Chang SM, Nabors LB, Grossman S, Reardon DA, and Wen PY. Optimizing eligibility criteria and clinical trial conduct to enhance clinical trial participation for primary brain tumor patients. *Neuro Oncol* 2020; 22(5):601-612. PMID: 31974566. [Full Text](#)

Lepard JR, Corley J, Sankey EW, **Prentiss T**, Rocque B, Park KB, **Rock J**, Hlaing K, and Myaing W. Training Neurosurgeons in Myanmar and Surrounding Countries: The Resident Perspective. *World Neurosurg* 2020; 139:75-82. PMID: 32251819. [Full Text](#)

Li L, Chopp M, Ding G, Davoodi-Bojd E, Zhang L, Li Q, Zhang Y, Xiong Y, and Jiang Q. MRI Detection of Impairment of Glymphatic Function in Rat after Mild Traumatic Brain Injury. *Brain Res* 2020; 1747:147062. PMID: 32818526. [Full Text](#)

Li S, Han C, **Asmaro K**, Quan S, Li M, Ren C, Zhang J, Zhao W, Xu J, Liu Z, Zhang P, Zhu L, Ding Y, Wang K, Ji X, and Duan L. Remote Ischemic Conditioning Improves Attention Network Function and Blood Oxygen Levels in Unacclimatized Adults Exposed to High Altitude. *Aging Dis* 2020; 11(4):820-827. PMID: 32765948. [Full Text](#)

Macki M, Mahajan A, Shatz R, **Air EL, Novikova M**, Fakhri M, Elmenini J, **Kaur M, Bouchard KR, Funk BA, and Schwab JM.** Prevalence of Alternative Diagnoses and Implications for Management in Idiopathic Normal Pressure Hydrocephalus Patients. *Neurosurgery* 2020; 87(5):999-1007. PMID: 32472677. [Full Text](#)

Malik KM, Krishnamurthy M, Alam F, **Zakaria H, and Malik G.** Introducing the Rupture Criticality Index to Compare Risk Factor Combinations Associated with Aneurysmal Rupture. *World Neurosurg* 2020; Epub ahead of print. PMID: 33045451. [Full Text](#)

Mohamud AY, Griffith B, Rehman M, Miller D, Chebl A, Patel SC, Howell B, Kole M, and Marin H. Intraluminal Carotid Artery Thrombus in COVID-19: Another Danger of Cytokine Storm? *AJNR Am J Neuroradiol* 2020; 41(9):1677-1682. PMID: 32616585. [Full Text](#)

Muralidharan K, Yekula A, Small JL, Rosh ZS, Kang KM, Wang L, Lau S, Zheng H, Lee H, Bettgowda C, Chicoine MR, **Kalkanis S**, Shankar GM, Nahed BV, Curry WT, Jones PS, Cahill DP, Balaj L, and Carter BS. TERT promoter mutation analysis for blood-based diagnosis and monitoring of gliomas. *Clin Cancer Res* 2020; 27(1):169-178. PMID: 33051308. [Full Text](#)

Nejad-Davarani SP, Zakariaei N, Chen Y, Haacke EM, Hurst NJ, Siddiqui MS, Schultz LR, Snyder JM, Walbert T, and Glide-Hurst C. Rapid Multi-contrast Brain Imaging on a 0.35T MR-linac. *Med Phys* 2020; 47(9):4064-4076. PMID: 32434276. [Full Text](#)

Noh T, **Osman G**, **Chedid M**, and **Hefzy H**. Nitrous oxide-induced demyelination: Clinical presentation, diagnosis and treatment recommendations. *J Neurol Sci* 2020; 414:116817. PMID: 32302804. [Full Text](#)

Noll KR, **Walbert T**, and Wefel JS. Impaired neurocognitive function in glioma patients: from pathophysiology to novel intervention strategies. *Curr Opin Neurol* 2020; 33(6):716-722. PMID: 33009006. [Full Text](#)

Pandey AS, Daou BJ, Tsai JP, Zaidi SF, Salahuddin H, Gemmete JJ, Oliver MJ, Singer J, Elder TA, Mbabuike N, Adel JG, Gujrati Y, Saleemi MA, Siddiqui FM, Elias AE, **Rehman MF**, **Marin H**, **Chebl AB**, **Kole M**, Wilseck JM, Kazmierczak CD, Mick JM, Majjhoo AQ, Naravetla BR, Rayes M, Luqman AW, Richards BF, Kelkar P, Burgess R, Thompson BG, Chaudhary N, Mazaris PA, Qahwash O, Razak MA, and Jumaa MA. Letter: COVID-19 Pandemic-The Bystander Effect on Stroke Care in Michigan. *Neurosurgery* 2020; 87(3):E397-E399. PMID: 32496518. [Full Text](#)

Park P, **Chang V**, Yeh HH, **Schwalb JM**, **Nerenz DR**, **Schultz LR**, **Abdulhak MM**, Easton R, Perez-Cruet M, Kashlan ON, Oppenlander ME, Szerlip NJ, Swong KN, and Aleem IS. Impact of Michigan's new opioid prescribing laws on spine surgery patients: analysis of the Michigan Spine Surgery Improvement Collaborative. *J Neurosurg Spine* 2020; Epub ahead of print. PMID: 33307531. [Full Text](#)

Peereboom DM, Ye X, **Mikkelsen T**, Lesser GJ, Lieberman FS, Robins HI, Ahluwalia MS, Sloan AE, and Grossman SA. A Phase II and Pharmacodynamic Trial of RO4929097 for Patients With Recurrent/Progressive Glioblastoma. *Neurosurgery* 2020; Epub ahead of print. PMID: 33027815. [Full Text](#)

Puduvalli VK, Wu J, Yuan Y, Armstrong TS, Vera E, Wu J, Xu J, Giglio P, Colman H, **Walbert T**, Raizer J, Groves MD, Tran D, Iwamoto F, Avgeropoulos N, Paleologos N, Fink K, Peereboom D, Chamberlain M, Merrell R, Penas Prado M, Yung WKA, and Gilbert MR. A Bayesian Adaptive Randomized Phase II Multicenter Trial of Bevacizumab with or without Vorinostat in Adults with Recurrent Glioblastoma. *Neuro Oncol* 2020; 22(10):1505-1515. PMID: 32166308. [Full Text](#)

Raslan AM, Ben-Haim S, Falowski SM, Machado AG, Miller J, Pilitsis JG, Rosenberg WS, Rosenow JM, Sweet J, Viswanathan A, Winfree CJ, and **Schwalb JM**. Congress of Neurological Surgeons Systematic Review and Evidence-Based Guideline on Neuroablative Procedures for Patients With Cancer Pain. *Neurosurgery* 2020; Epub ahead of print. PMID: 33355345. [Full Text](#)

Redjal N, Nahed BV, Dietrich J, **Kalkanis SN**, and Olson JJ. Congress of neurological surgeons systematic review and evidence-based guidelines update on the role of chemotherapeutic management and antiangiogenic treatment of newly diagnosed glioblastoma in adults. *J Neurooncol* 2020; 150(2):165-213. PMID: 33215343. [Full Text](#)

Rock JP, **Prentiss T**, Mo SM, Myat Hnin Aye NS, **Asmaro K**, Win AT, Phyu AM, Maung TM, Khaing EE, Naung Z, Park KB, Hlaing K, and Myaing W. Traumatic Brain Injury in Myanmar: Preliminary Results and Development of an Adjunct Electronic Medical Record. *World Neurosurg* 2020; 140:e260-e265. PMID: 32413564. [Full Text](#)

Saadmim F, Forhad T, Sikder A, Ghann W, **M MA**, Sither V, Ahammad AJS, Subhan MA, and Uddin J. Enhancing the Performance of Dye Sensitized Solar Cells Using Silver Nanoparticles Modified Photoanode. *Molecules* 2020; 25(17). PMID: 32899213. [Full Text](#)

Schafer E, **Bazydlo M**, **Schultz L**, Park P, **Chang V**, Easton RW, **Schwalb J**, Khalil J, Perez-Cruet M, **Abdulhak M**, and Aleem I. Rates and Risk Factors Associated with 90-day Readmission Following Cervical Spine Fusion Surgery: Analysis of the Michigan Spine Surgery Improvement Collaborative (MSSIC) Registry. *Spine J* 2020; 20(5):708-716. PMID: 31958576. [Full Text](#)

Schwalb JM. Commentary: Percutaneous Trigeminal Stimulation for Intractable Facial Pain: A Case Series. *Neurosurgery* 2020; 87(3):E305. PMID: 32348492. [Full Text](#)

Schwalb JM. Commentary: Impact of Spinal Cord Stimulation on Opioid Dose Reduction: A Nationwide Analysis. *Neurosurgery* 2020; 88(1):E41. PMID: 32888297. [Full Text](#)

Snyder JM, **Pawloski JA**, and **Poisson LM**. Developing Real-world Evidence-Ready Datasets: Time for Clinician Engagement. *Curr Oncol Rep* 2020; 22(5):45. PMID: 32297007. [Full Text](#)

Wang MC, Boop FA, Kondziolka D, Resnick DK, **Kalkanis SN**, Koehnen E, Selden NR, Heilman CB, Valadka AB, Cockroft KM, Wilson JA, Ellenbogen RG, Asher AL, Byrne RW, Camarata PJ, Huang J, Knightly JJ, Levy EI, Lonser RR, Connolly ES, Meyer FB, and Liau LM. Continuous improvement in patient safety and quality in neurological surgery: the American Board of Neurological Surgery in the past, present, and future. *J Neurosurg* 2020; Epub ahead of print. PMID: 33065539. [Full Text](#)

Wasade VS, Viarasilpa T, Balki I, Osman G, Gaddam A, Dharaiya D, Pellumbi N, **Snyder J**, **Walbert T**, Spanaki M, and **Schultz L**. Effect of seizure timing on long-term survival in patients with brain tumor. *Epilepsy Behav* 2020; 111:107307. PMID: 32693378. [Full Text](#)

Ye LF, Reznik E, Korn JM, Lin F, Yang G, Malesky K, Gao H, Loo A, Pagliarini R, **Mikkelsen T**, Lo DC, **deCarvalho AC**, and Stockwell BR. Patient-derived glioblastoma cultures as a tool for small-molecule drug discovery. *Oncotarget* 2020; 11(4):443-451. PMID: 32064048. [Full Text](#)

Yee TJ, Fearer KJ, Oppenlander ME, Kashlan ON, Szerlip N, Buckingham MJ, Swong K, **Chang V**, **Schwalb JM**, and Park P. Correlation Between the Oswestry Disability Index and the North American Spine Surgery Patient Satisfaction Index. *World Neurosurg* 2020; 139:e724-e729. PMID: 32344134. [Full Text](#)

Zakaria HM, Wilkinson BM, Pennington Z, Saadeh YS, Lau D, **Chandra A**, Ahmed AK, **Macki M**, Anand SK, Abouelleil MA, Fateh JA, Rick JW, Morshed RA, Deng H, Chen KY, **Robin A**, **Lee IY**, **Kalkanis S**, Chou D, Park P, Sciubba DM, and **Chang V**. Sarcopenia as a Prognostic Factor for 90-Day and Overall Mortality in Patients Undergoing Spine Surgery for Metastatic Tumors: A Multicenter Retrospective Cohort Study. *Neurosurgery* 2020; 87(5):1025-1036. PMID: 32592483. [Full Text](#)

Zervos TM, **Bazydlo M**, **Tundo K**, **Macki M**, and **Rock J**. Risk Factors Associated With Symptomatic Deep Vein Thrombosis Following Elective Spine Surgery: A Case Control Study. *World Neurosurg* 2020; 144:e460-e465. PMID: 32889183. [Full Text](#)

Zervos TM, Scarpace L, Robin AM, Schwalb JM, and Air EL. Adapting to Space Limitations During Prone Real-Time Magnetic Resonance Imaging-Guided Stereotaxic Laser Ablation: Technical Pearls. *Oper Neurosurg (Hagerstown)* 2020; 18(4):398-402. PMID: 31245819. [Full Text](#)

Zhang Y, Zhang Y, Chopp M, Zhang ZG, Mahmood A, and Xiong Y. Mesenchymal Stem Cell-Derived Exosomes Improve Functional Recovery in Rats After Traumatic Brain Injury: A Dose-Response and Therapeutic Window Study. *Neurorehabil Neural Repair* 2020; 34(7):616-626. PMID: 32462980. [Full Text](#)

2021

Air EL, Orrico KO, Benzil DL, Scarrow AM, Bean JR, Mazzola CA, Liau LM, Rutka JT, and Muraszko KM. Developing a Professionalism and Harassment Policy for Organized Neurosurgery. *Neurosurgery* 2021; 88(5):1038-1039. PMID: 33755153. [Full Text](#)

Asher AL, Khalafallah AM, Mukherjee D, Alvi MA, Yolcu YU, Khan I, Pennings JS, Davidson CA, Archer KR, Moshel YA, Knightly J, Roguski M, Zacharia BE, Harbaugh RE, **Kalkanis SN**, and Bydon M. Launching the Quality Outcomes Database Tumor Registry: rationale, development, and pilot data. *J Neurosurg* 2021; 1-10. Epub ahead of print. PMID: 34359037. [Full Text](#)

Asmaro K, Fadel HA, Haider SA, Pawloski J, Telemi E, Mansour TR, Chandra A, Bazydlo M, Robin AM, Lee IY, Air EL, Rock JP, Kalkanis SN, and Schwalb JM. Reducing Superfluous Opioid Prescribing Practices After Brain Surgery: It Is Time to Talk About Drugs. *Neurosurgery* 2021; 89(1):70-76. PMID: 33862632. [Full Text](#)

Asmaro K, Yoo F, Yassin-Kassab A, Bazydlo M, Robin AM, Rock JP, and Craig JR. Sinonasal Packing is Not a Requisite for Successful Cerebrospinal Fluid Leak Repair. *J Neurol Surg B Skull Base* Epub ahead of print.:9. PMID: Not assigned. [Request Article](#)

Barekattain Y, Ackroyd JJ, Yan VC, Khadka S, Wang L, Chen KC, Poral AH, Tran T, Georgiou DK, Arthur K, Lin YH, Satani N, Ballato ES, Behr EI, **deCarvalho AC**, Verhaak RGW, de Groot J, Huse JT, Asara JM, Kalluri R, and Muller FL. Homozygous MTAP deletion in primary human glioblastoma is not associated with elevation of methylthioadenosine. *Nat Commun* 2021; 12(1):4228. PMID: 34244484. [Full Text](#)

Brodie S, **Lee HK, Jiang W, Cazacu S, Xiang C, Poisson LM, Datta I, Kalkanis S, Ginsberg D, and Brodie C.** Correction: The novel long non-coding RNA TALNEC2, regulates tumor cell growth and the stemness and radiation response of glioma stem cells. *Oncotarget* 2021; 12(26):2546-2547. PMID: 34966487. [Full Text](#)

Chen C, **Lee I, Tatsui C, Elder T, and Sloan AE.** Laser interstitial thermotherapy (LITT) for the treatment of tumors of the brain and spine: a brief review. *J Neurooncol* 2021; 151(3):429-442. PMID: 33611709. [Full Text](#)

Claus CF, Tong D, Lytle E, Bahoura M, Garmo L, Li C, Park P, Carr DA, Easton R, **Abdulhak M, Chang V, Houseman C, Bono P, Richards B, and Soo TM.** Age as a Predictor for Complications and Patient-reported Outcomes in Multilevel Transforaminal Lumbar Interbody Fusions: Analyses From the Michigan Spine Surgery Improvement Collaborative (MSSIC). *Spine (Phila Pa 1976)* 2021; 46(6):356-365. PMID: 33620179. [Full Text](#)

Craig JR, Tataryn RW, Sibley HC, Mason WD, Deuel JA, Loyd GE, Nerenz DR, and Goyal P. Expected Costs of Primary Dental Treatments and Endoscopic Sinus Surgery for Odontogenic Sinusitis. *Laryngoscope* 2021; Epub ahead of print. PMID: 34418111. [Full Text](#)

Datta I, Noushmehr H, Brodie C, and Poisson LM. Expression and regulatory roles of lncRNAs in G-CIMP-low vs G-CIMP-high Glioma: an in-silico analysis. *J Transl Med* 2021; 19(1):182. PMID: 33926464. [Full Text](#)

Dirven L, Vos ME, **Walbert T**, Armstrong TS, Arons D, van den Bent MJ, Blakeley J, Brown PD, Bulbeck H, Chang SM, Coens C, Gilbert MR, Grant R, Jalali R, Leach D, Leeper H, Mendoza T, Nayak L, Oliver K, Reijneveld JC, Le Rhun E, Rubinstein L, Weller M, Wen PY, and Taphoorn MJB. Systematic review on the use of patient-reported outcome measures in brain tumor studies: part of the Response Assessment in Neuro-Oncology Patient-Reported Outcome (RANO-PRO) initiative. *Neurooncol Pract* 2021; 8(4):417-425. PMID: 34277020. [Full Text](#)

Donaldson K, Callahan KE, Gelinne A, Everett W, Ames SE, **Air EL**, and Durham SR. Gender diversity in United States training programs. *J Neurosurg* 2021; 1-6. Epub ahead of print. PMID: 33513578. [Full Text](#)

Gifford L, Johnson CC, Haque N, Passalacqua KD, Swiderek J, and Kalkanis S. COVID-19 in the hotspot of Metropolitan Detroit: A multi-faceted health system experience. *Int J Health Plann Manage* 2021; Epub ahead of print. PMID: 34859491. [Full Text](#)

Hamilton T, Macki M, Oh SY, Bazydlo M, Schultz L, Zakaria HM, Khalil JG, Perez-Cruet M, Aleem I, Park P, Easton R, Nerenz DR, Schwalb J, Abdulhak M, and Chang V. The association of patient education level with outcomes after elective lumbar surgery: a Michigan Spine Surgery Improvement Collaborative study. *J Neurosurg Spine* 2021; 1-9. Epub ahead of print. PMID: 34891131. [Full Text](#)

Hamilton T, Macki M, Zervos TM, and Chang V. Minimally Invasive Techniques for Iliac Bolt Placement: 2-Dimensional Operative Video. *Oper Neurosurg (Hagerstown)* 2021; 20(4):E292. PMID: 33556166. [Full Text](#)

Harbaugh RE, Devin C, Leavy MB, Ghogawala Z, Archer KR, Bydon M, Goertz C, Dinstein D, **Nerenz DR**, Eakin GS, Lavelle W, Shaffer WO, Arnold PM, Washabaugh CH, and Gliklich RE. Harmonized outcome measures for use in degenerative lumbar spondylolisthesis patient registries and clinical practice. *J Neurosurg Spine* 2021; 1-9. Epub ahead of print. PMID: 33740766. [Full Text](#)

Khalifeh JM, **Massie LW**, Dibble CF, Dorward IG, **Macki M**, Khandpur U, **Alshohatee K**, Jain D, **Chang V**, and Ray WZ. Decompression of Lumbar Central Spinal Canal Stenosis Following Minimally Invasive Transforaminal Lumbar Interbody Fusion. *Clin Spine Surg* 2021; 34(8):E439-E449. PMID: 33979102. [Full Text](#)

Kim RB, Scoville JP, Karsy M, **Lim S**, Jensen RL, and Menacho ST. Work relative value units and perioperative outcomes in patients undergoing brain tumor surgery. *Neurosurg Rev* 2021; Epub ahead of print. PMID: 34236568. [Full Text](#)

Lawless MH, Tong D, Claus CF, Hanson C, Li C, Houseman CM, Bono P, Richards BF, Kelkar PS, **Abdulhak MM, Chang V**, Carr DA, Park P, and Soo TM. Age as a Risk Factor for Complications Following Anterior Cervical Discectomy and Fusion: Analysis From the Michigan Spine Surgery Improvement Collaborative (MSSIC). *Spine (Phila Pa 1976)* 2021; Epub ahead of print. PMID: 34392275. [Full Text](#)

Li C, Wang C, Zhang Y, Alsrouji OK, Chebl AB, Ding G, Jiang Q, Mayer SA, Lu M, Kole MK, Marin HL, Zhang L, Chopp M, and Zhang ZG. Cerebral endothelial cell-derived small extracellular vesicles enhance neurovascular function and neurological recovery in rat acute ischemic stroke models of mechanical thrombectomy and embolic stroke treatment with tPA. *J Cereb Blood Flow Metab* 2021; 41(8):2090-2104. PMID: 33557693. [Full Text](#)

Lim S, and Chang V. Commentary: Single-Position Surgery: Prone Lateral Lumbar Interbody Fusion: 2-Dimensional Operative Video. *Oper Neurosurg (Hagerstown)* 2021; 20(5):E373-e375. PMID: 33646295. [Full Text](#)

Lim S, and Chang V. Commentary: Complications Associated with Oblique Lumbar Interbody Fusion at L5-S1: A Systematic Review of the Literature. *Neurosurgery Open* 2021; 2(3). PMID: Not assigned. [Full Text](#)

Lim S, Yeh HH, Macki M, Mansour T, Schultz L, Telemi E, Haider S, Nerenz DR, Schwalb JM, Abdulhak M, Park P, Aleem I, Easton R, Khalil J, Perez-Cruet M, and **Chang V.** Preoperative HbA1c > 8% Is Associated With Poor Outcomes in Lumbar Spine Surgery: A Michigan Spine Surgery Improvement Collaborative Study. *Neurosurgery* 2021; 89(5):819-826. PMID: 34352887. [Full Text](#)

Lim S, Zervos TM, Hamilton T, and Chang V. Minimally Invasive Posterior Cervical Discectomy: 2-Dimensional Operative Video. *Oper Neurosurg (Hagerstown)* 2021; 21(6):E536. PMID: 34498688. [Full Text](#)

Macki M, Anand SK, Hamilton T, Lim S, Mansour T, Bazydlo M, Schultz L, Abdulhak MM, Khalil JG, Park P, Aleem I, Easton R, **Schwalb JM, Nerenz D,** and **Chang V.** Analysis of Factors associated with Return to Work After Lumbar Surgery up to 2-years follow-up: A Michigan Spine Surgery Improvement Collaborative (MSSIC) Study. *Spine (Phila Pa 1976)* 2021; Epub ahead of print. PMID: 34265812. [Full Text](#)

Macki M, Haddad Y, Suryadevara R, Dabaja AL, **Chedid M,** and **Chang V.** Prophylactic Low-Molecular-Weight Heparin Versus Unfractionated Heparin in Spine Surgery (PLUS): A Pilot Matched Cohort Study. *Neurosurgery* 2021; 89(6):1097-1103. PMID: 34634115. [Full Text](#)

Macki M, Hamilton T, Lim S, Mansour TR, Telemi E, Bazydlo M, Schultz L, Nerenz DR, Park P, **Chang V, Schwalb J,** and **Abdulhak MM.** The role of postoperative antibiotic duration on surgical site infection after lumbar surgery. *J Neurosurg Spine* 2021; 1-7. Epub ahead of print. PMID: 34534952. [Full Text](#)

Macki M, Hamilton T, Lim S, Telemi E, Bazydlo M, Nerenz DR, Zakaria HM, Schultz L, Khalil JG, Perez-Cruet MJ, Aleem IS, Park P, **Schwalb JM, Abdulhak MM,** and **Chang V.** Disparities in outcomes after spine surgery: a Michigan Spine Surgery Improvement Collaborative study. *J Neurosurg Spine* 2021; 1-9. Epub ahead of print. PMID: 33962387. [Full Text](#)

Macki M, Pawloski J, Fadel H, Hamilton T, Haider S, Elmenini J, Fakh M, Johnson JL, and **Rock J.** The Effect of Antithrombotics on Hematoma Expansion in Small- to Moderate-Sized Traumatic Intraparenchymal Hemorrhages. *World Neurosurg* 2021; 149:e101-e107. PMID: 33640526. [Full Text](#)

Maragkos GA, Schüpper AJ, Lakomkin N, Sideras P, Price G, Baron R, **Hamilton T, Haider S, Lee IY,** Hadjipanayis CG, and **Robin AM.** Fluorescence-Guided High-Grade Glioma Surgery More Than Four Hours After 5-Aminolevulinic Acid Administration. *Front Neurol* 2021; 12:644804. PMID: 33767664. [Full Text](#)

Mariano ER, Dickerson DM, Szokol JW, Harned M, Mueller JT, Philip BK, Baratta JL, Gulur P, Robles J, Schroeder KM, Wyatt KEK, **Schwalb JM**, Schwenk ES, Wardhan R, Kim TS, Higdon KK, Krishnan DG, Shilling AM, Schwartz G, Wiechmann L, Doan LV, Elkassabany NM, Yang SC, Muse IO, Eloy JD, Mehta V, Shah S, Johnson RL, Englesbe MJ, Kallen A, Mukkamala SB, Walton A, and Buvanendran A. A multisociety organizational consensus process to define guiding principles for acute perioperative pain management. *Reg Anesth Pain Med* 2021; Epub ahead of print. PMID: 34552003. [Full Text](#)

Massie L, Gunaseelan V, Waljee J, Brummett C, and **Schwalb JM**. Relationship between initial opioid prescription size and likelihood of refill after spine surgery. *Spine J* 2021; 21(5):772-778. PMID: 33460812. [Full Text](#)

Miller WK, Becker KN, Caras AJ, **Mansour TR**, Mays MT, Rashid M, and **Schwalb J**. Magnetic resonance-guided focused ultrasound treatment for essential tremor shows sustained efficacy: a meta-analysis. *Neurosurg Rev* 2021; Epub ahead of print. PMID: 33978922. [Full Text](#)

Mohamed GA, Aboul Nour H, Nogueira RG, Mohammaden MH, Haussen DC, Al-Bayati AR, Nguyen TN, Abdalkader M, Kaliaev A, Ma A, Fifi J, Morey J, Yavagal DR, Saini V, Ortega-Gutierrez S, Farooqui M, Zevallos CB, Quispe-Orozco D, **Schultz L, Kole M, Miller D**, Mayer SA, **Marin H**, and **Bou Chebl A**. Repeated Mechanical Endovascular Thrombectomy for Recurrent Large Vessel Occlusion: A Multicenter Experience. *Stroke* 2021; 52(6):1967-1973. PMID: 33910367. [Full Text](#)

Mosella MS, Sabedot TS, Silva TC, **Malta TM**, Segato FD, **Asmaro KP, Wells M, Mukherjee A, Poisson LM, Snyder J, deCarvalho AC, Walbert T, Aho T, Kalkanis S**, Elias PC, Antonini SR, **Rock J, Noushmehr H**, Castro M, and **Castro AV**. DNA Methylation-based Signatures Classify Sporadic Pituitary Tumors According to Clinicopathological Features. *Neuro Oncol* 2021; 23(8):1292-1303. PMID: 33631002. [Full Text](#)

Mummaneni PV, Hussain I, Shaffrey CI, Eastlack RK, Mundis GM, Uribe JS, Fessler RG, Park P, Robinson L, Rivera J, Chou D, Kanter AS, Okonkwo DO, Nunley PD, Wang MY, **La Marca F**, Than KD, and Fu KM. The minimally invasive interbody selection algorithm for spinal deformity. *J Neurosurg Spine* 2021; 1-8. Epub ahead of print. PMID: 33711811. [Full Text](#)

Nagahama Y, **Zervos TM**, Murata KK, Holman L, Karsonovich T, Parker JJ, Chen JS, Phillips HW, Fajardo M, Nariai H, Hussain SA, Porter BE, Grant GA, Ragheb J, Wang S, O'Neill BR, Alexander AL, Bollo RJ, and Fallah A. Real-World Preliminary Experience With Responsive Neurostimulation in Pediatric Epilepsy: A Multicenter Retrospective Observational Study. *Neurosurgery* 2021; 89(6):997-1004. PMID: 34528103. [Full Text](#)

Nagaraja TN, Bartlett S, Farmer KG, Cabral G, Knight RA, Valadie OG, Brown SL, Ewing JR, and Lee IY. Adaptation of laser interstitial thermal therapy for tumor ablation under MRI monitoring in a rat orthotopic model of glioblastoma. *Acta Neurochir (Wien)* 2021; 163(12):3455-3463. PMID: 34554269. [Full Text](#)

Nagaraja TN, Elmghirbi R, Brown SL, Rey JA, **Schultz L, Mukherjee A, Cabral G, Panda S, Lee IY**, Sarntinoranont M, **Keenan KA, Knight RA, and Ewing JR**. Imaging acute effects of bevacizumab on tumor vascular kinetics in a preclinical orthotopic model of U251 glioma. *NMR Biomed* 2021; 34(7):e4516. PMID: 33817893. [Full Text](#)

Nagaraja TN, and **Lee IY**. Cerebral microcirculation in glioblastoma: a major determinant of diagnosis, resection and drug delivery. *Microcirculation* 2021; 28(3):e12679. PMID: 33474805. [Full Text](#)

Nassiri F, Wang JZ, Au K, Barnholtz-Sloan J, Jenkinson MD, Drummond K, **Zhou Y**, **Snyder JM**, Brastianos P, Santarius T, Suppiah S, **Poisson L**, Gaillard F, Rosenthal M, Kaufmann T, Tsang D, Aldape K, and Zadeh G. Consensus core clinical data elements for meningiomas. *Neuro Oncol* 2021; Epub ahead of print. PMID: 34791428. [Full Text](#)

Pawloski JA, **Fadel HA**, **Huang YW**, and **Lee IY**. Genomic Biomarkers of Meningioma: A Focused Review. *Int J Mol Sci* 2021; 22(19). PMID: 34638590. [Full Text](#)

Rahman MM, Alam MM, Alfaifi SYM, Asiri AM, and **Ali MM**. Sensitive Detection of Thiourea Hazardous Toxin with Sandwich-Type Nafion/CuO/ZnO Nanospikes/Glassy Carbon Composite Electrodes. *Polymers (Basel)* 2021; 13(22). PMID: 34833297. [Full Text](#)

Reddy J, Fonseca MAS, Corona RI, Nameki R, Segato Dezem F, Klein IA, Chang H, Chaves-Moreira D, Afeyan LK, **Malta TM**, Lin X, Abbasi F, Font-Tello A, Sabedot T, Cejas P, Rodríguez-Malavé N, Seo JH, Lin DC, Matulonis U, Karlan BY, Gayther SA, Pasaniuc B, Gusev A, **Noushmehr H**, Long H, Freedman ML, Drapkin R, Young RA, Abraham BJ, and Lawrenson K. Predicting master transcription factors from pan-cancer expression data. *Sci Adv* 2021; 7(48). PMID: 34818047. [Full Text](#)

Sabedot T, **Malta T**, **Snyder J**, **Nelson K**, **Wells M**, **deCarvalho A**, **Mukherjee A**, **Chitale D**, **Mosella M**, Sokolov A, **Asmaro K**, **Robin A**, **Rosenblum M**, **Mikkelsen T**, **Rock J**, **Poisson L**, **Lee I**, **Walbert T**, **Kalkanis S**, Iavarone A, **Castro AV**, and **Noushmehr H**. A serum-based DNA methylation assay provides accurate detection of glioma. *Neuro Oncol* 2021; 23(9):1494-1508. PMID: 33560371. [Full Text](#)

Schucht P, **Rock J**, Park KB, Kato Y, Andrews RJ, Germano IM, and Servadei F. Letter: A Neurosurgical Community Under Attack. *World Neurosurg* 2021; 149:313-314. PMID: 33716153. [Full Text](#)

Schupper AJ, Baron RB, Cheung W, Rodriguez J, **Kalkanis SN**, Chohan MO, Andersen BJ, Chamoun R, Nahed BV, Zacharia BE, Kennedy J, Moulding HD, Zucker L, Chicoine MR, Olson JJ, Jensen RL, Sherman JH, Zhang X, Price G, Fowkes M, Germano IM, Carter BS, Hadjipanayis CG, and Yong RL. 5-Aminolevulinic acid for enhanced surgical visualization of high-grade gliomas: a prospective, multicenter study. *J Neurosurg* 2021; 1-10. Epub ahead of print. PMID: 34624862. [Full Text](#)

Siddiqui MS, Jimenez-Shahed J, Mari Z, Walter BL, De Jesus S, Panov F, **Schwalb JM**, York MK, Sarva H, Bertoni JM, Patel N, Zhang L, McInerney J, and Rosenow JM. North American survey on impact of the COVID-19 pandemic shutdown on DBS care. *Parkinsonism Relat Disord* 2021; 92:41-45. PMID: 34688029. [Full Text](#)

Tahir RA, **Affan M**, **Marin H**, **Haider SA**, **Alsrouji OK**, **Ahmad A**, **Chebl AB**, **Katramados A**, **Van Harn M**, and **Kole M**. Quantification of pial collateral pressure in acute large vessel occlusion stroke: basic concept with patient outcomes. *Neuroradiology* 2021; 63(8):1313-1323. PMID: 33507337. [Full Text](#)

Tesileanu CMS, van den Bent MJ, Sanson M, Wick W, Brandes AA, Clement PM, Erridge SC, Vogelbaum MA, Nowak AK, Baurain JF, Mason WP, Wheeler H, Chinot OL, Gill S, Griffin M, Rogers L, Taal W, Rudà R, Weller M, McBain C, van Linde ME, **Sabedot TS**, Hoogstrate Y, von Deimling A, de Heer I, van IWFJ, Brouwer RWW, Aldape K, Jenkins RB, Dubbink HJ, Kros JM, Wesseling P, Cheung KJ, Golfinopoulos V, Baumert BG, Gorlia T, Noushmehr H, and French PJ. Prognostic significance of genome-wide DNA methylation profiles within the randomised, phase 3, EORTC CATNON trial on non-1p/19q deleted anaplastic glioma. *Neuro Oncol* 2021; 23(9):1547-1559. PMID: 33914057. [Full Text](#)

Testini P, Sarva H, **Schwalb J**, Barkan S, and Cabrera LY. Neurosurgeons perspective on the shift towards earlier use of deep brain stimulation for Parkinson disease. *Interdiscip Neurosurg* 2021; 25. PMID: Not assigned. [Full Text](#)

Turfe Z, Saleh N, **George C**, **Rock J**, and **Craig JR**. Cavernous Sinus Syndrome After Barotraumatic Sneeze. *J Neuroophthalmol* 2021; 41(3):e322-e323. PMID: 33734154. [Full Text](#)

Unterman I, Bloch I, **Cazacu S**, Kazimirsky G, Ben-Zeev B, Berman BP, Brodie C, and Tabach Y. Expanding the MECP2 network using comparative genomics reveals potential therapeutic targets for Rett syndrome. *Elife* 2021; 10. PMID: 34355696. [Full Text](#)

Wang DD, **O'Neill WW**, **Zervos MJ**, **McKinnon JE**, **Allard D**, **Alangaden GJ**, **Schultz LR**, **Poisson LM**, **Chu BS**, **Kalkanis SN**, and **Suleyman G**. Association between Implementation of a Universal Face Mask Policy for Healthcare Workers in a Health Care System & SARS-CoV-2 positivity testing rate in Healthcare Workers. *J Occup Environ Med* 2021; 63(6):476-481. PMID: 33596025. [Full Text](#)

Wong QH, Li KK, Wang WW, **Malta TM**, **Noushmehr H**, Grabovska Y, Jones C, Chan AK, Kwan JS, Huang QJ, Wong GC, Li WC, Liu XZ, Chen H, Chan DT, Mao Y, Zhang ZY, Shi ZF, and Ng HK. Molecular landscape of IDH-mutant primary astrocytoma Grade IV/glioblastomas. *Mod Pathol* 2021; 34(7):1245-1260. PMID: 33692446. [Full Text](#)

Zervos TM, **Asmaro K**, and **Air EL**. In Reply: Contemporary Analysis of Minimal Clinically Important Difference in the Neurosurgical Literature. *Neurosurgery* 2021; 89(4):E244. PMID: 34293157. [Full Text](#)

Zhang Y, **Zhang Y**, **Chopp M**, **Pang H**, **Zhang ZG**, **Mahmood A**, and **Xiong Y**. MiR-17-92 Cluster-Enriched Exosomes Derived from Human Bone Marrow Mesenchymal Stromal Cells Improve Tissue and Functional Recovery in Rats after Traumatic Brain Injury. *J Neurotrauma* 2021; 38(11):1535-1550. PMID: 33787364. [Full Text](#)

Zhu Y, Gujar AD, Wong CH, Tjong H, Ngan CY, Gong L, Chen YA, Kim H, Liu J, Li M, Mil-Homens A, Maurya R, Kuhlberg C, Sun F, Yi E, **deCarvalho AC**, Ruan Y, Verhaak RGW, and Wei CL. Oncogenic extrachromosomal DNA functions as mobile enhancers to globally amplify chromosomal transcription. *Cancer Cell* 2021; 39(5):694-707.e697. PMID: 33836152. [Full Text](#)

2022

Aftab K, Aamir FB, Mallick S, Mubarak F, Pope WB, **Mikkelsen T**, **Rock JP**, and Enam SA. Radiomics for precision medicine in glioblastoma. *J Neurooncol* 2022; 156(2):217-231. PMID: 35020109. doi.org/10.1007/s11060-021-03933-1

Air EL. Remove Gender Pay Disparity Excuses. *Health Aff (Millwood)* 2022; 41(4):608. PMID: 35377758. doi.org/10.1377/hlthaff.2021.02028

Alsrouji OK, and Chebl AB. Acute Neurointervention for Ischemic Stroke. *Interv Cardiol Clin* 2022; 11(3):339-347. PMID: 35710287. doi.org/10.1016/j.iccl.2022.03.006

Angappan S, Tabbara AK, **Pawloski J**, Chhina AK, and Galusca D. Enterovirus-Induced Severe Rhabdomyolysis and Acute Fulminant Liver Failure in an Immunocompetent Adult Requiring Liver Transplantation: A Case Report. *Cureus* 2022; 14(4):e24336. PMID: 35607571. doi.org/10.7759/cureus.24336

Asher AL, Khalafallah AM, Mukherjee D, Alvi MA, Yolcu YU, Khan I, Pennings JS, Davidson CA, Archer KR, Moshel YA, Knightly J, Roguski M, Zacharia BE, Harbaugh RE, **Kalkanis SN**, and Bydon M. Launching the Quality Outcomes Database Tumor Registry: rationale, development, and pilot data. *J Neurosurg* 2022; 136(2):369-378. PMID: 34359037. doi.org/10.3171/2021.1.Jns201115

Craig JR, Tataryn RW, Sibley HC, Mason WD, Deuel JA, Loyd GE, **Nerenz DR**, and Goyal P. Expected Costs of Primary Dental Treatments and Endoscopic Sinus Surgery for Odontogenic Sinusitis. *Laryngoscope* 2022; 132(7):1346-1355. PMID: 34418111. doi.org/10.1002/lary.29825

de la Fuente MI, Colman H, Rosenthal M, Van Tine BA, Levacic D, **Walbert T**, Gan HK, Vieito M, Milhem MM, Lipford K, Forsyth S, Guichard SM, Mikhailov Y, Sedkov A, Brevard J, Kelly PF, Mohamed H, and Monga V. Olutasidenib (FT-2102) in patients with relapsed or refractory IDH1-mutant glioma: a multicenter, open-label, phase 1b/2 trial. *Neuro Oncol* 2022. PMID: 35639513. doi.org/10.1093/neuonc/noac139

Deshpande N, **Hamilton T**, and **Chang V**. Commentary: Hounsfield Unit as a Predictor of Adjacent-Level Disease in Lumbar Interbody Fusion Surgery. *Neurosurgery* 2022; 91(2):e59-e60. PMID: 35834324. doi.org/10.1227/neu.0000000000002049

Diaczok B, Nair G, Lin CH, Paxton JH, Abbas A, Barkley G, O'Neil B, O'Neil W, Patel K, Sims M, **Poisson L**, and Sule AA. Evolution of prescribing practices and outcomes in the COVID-19 pandemic in metropolitan areas. *Infez Med* 2022; 30(1):86-95. PMID: 35350268. doi.org/10.53854/liim-3001-10

Dmytriw AA, Ghozy S, Sweid A, Piotin M, Bekelis K, Sourour N, Raz E, Vela-Duarte D, Linfante I, Dabus G, **Kole M**, Martínez-Galdámez M, Nimjee SM, Lopes DK, Hassan AE, Kan P, Ghorbani M, Levitt MR, Escalard S, Missios S, Shapiro M, Clarençon F, Elhorany M, Tahir RA, Youssef PP, Pandey AS, Starke RM, El Naamani K, Abbas R, Mansour OY, Galvan J, Billingsley JT, Mortazavi A, Walker M, Dibas M, Settecase F, Heran MKS, Kuhn AL, Puri AS, Menon BK, Sivakumar S, Mowla A, D'Amato S, Zha AM, Cooke D, Vranic JE, Regenhardt RW, Rabinov JD, Stapleton CJ, Goyal M, Wu H, Cohen J, Turkel-Parella D, Xavier A, Waqas M, Tutino V, Siddiqui A, Gupta G, Nanda A, Khandelwal P, Tiu C, Portela PC, Perez de la Ossa N, Urra X, de Lera M, Arenillas JF, Ribo M, Requena M, Piano M, Pero G, De Sousa K,

Al-Mufti F, Hashim Z, Nayak S, Renieri L, Du R, Aziz-Sultan MA, Liebeskind D, Nogueira RG, Abdalkader M, Nguyen TN, Vigilante N, Siegler JE, Grossberg JA, Saad H, Gooch MR, Herial NA, Rosenwasser RH, Tjoumakaris S, Patel AB, Tiwari A, and Jabbour P. International controlled study of revascularization and outcomes following COVID-positive mechanical thrombectomy. *European Journal of Neurology* 2022. PMID: Not assigned. doi.org/10.1111/ene.15493

Doll KM, Howard AG, Stürmer T, Carey T, Nicholson WK, Carey E, Myers E, **Nerenz D**, and Robinson WR. Development of an algorithm to assess unmeasured symptom severity in gynecologic care. *American Journal of Obstetrics and Gynecology* 2022; 226(3):388.e381-388.e311. PMID: Not assigned. doi.org/10.1016/j.ajog.2021.11.020

Fana M, **Alsrouji O**, and **Rehman M**. Pipeline Embolization Stent for the Treatment of Giant Supraclinoid Aneurysms: A Case Series. *Cureus* 2022; 14(3):e23674. PMID: 35510007. doi.org/10.7759/cureus.23674

Gifford L, Johnson CC, Haque N, Passalacqua KD, Swiderek J, and **Kalkanis S**. COVID-19 in the hotspot of Metropolitan Detroit: A multi-faceted health system experience. *Int J Health Plann Manage* 2022; 37(2):657-672. PMID: 34859491. doi.org/10.1002/hpm.3392

Gummadavelli A, Englot DJ, **Schwalb JM**, Wu C, Gonzalez-Martinez J, Niemat J, and Gerrard JL. ASSFN Position Statement on Deep Brain Stimulation for Medication-Refractory Epilepsy. *Neurosurgery* 2022; 90(5):636-641. PMID: 35271523. doi.org/10.1227/neu.0000000000001923

Haider S, Hamilton TM, Hunt RJ, Lee IY, and Robin AM. Clinically useful tumor fluorescence greater than 24 hours after 5-aminolevulinic acid administration. *Surg Neurol Int* 2022; 13:99. PMID: 35399905. doi.org/10.25259/sni_836_2021

Haider SA, Levy S, **Rock JP**, and Craig JR. Prolactinoma: Medical and Surgical Considerations. *Otolaryngol Clin North Am* 2022; 55(2):305-314. PMID: 35256169. doi.org/10.1016/j.otc.2021.12.005

Hamilton T, and **Chang V**. Commentary: Posterior Cervical Decompression and Fusion With Exoscope: 2-Dimensional Operative Video. *Oper Neurosurg (Hagerstown)* 2022; 22(3):e145-e146. PMID: 35030143. doi.org/10.1227/ons.0000000000000086

Hamilton T, and **Chang V**. Commentary: A Novel Mobile-Device-Based Navigation System for Placement of Posterior Spinal Fixation. *Oper Neurosurg (Hagerstown)* 2022; 22(5):e231-e232. PMID: 35315832. doi.org/10.1227/ons.0000000000000181

Hamilton T, Hadi M, Simo L, and **Chang V**. Commentary: Sacroiliac Joint Fusion Using Robotic Navigation: Technical Note and Case Series. *Oper Neurosurg (Hagerstown)* 2022; 23(3):e209-e210. PMID: 35972120. doi.org/10.1227/ons.0000000000000347

Hamilton T, Macki M, Oh SY, Bazydlo M, Schultz L, Zakaria HM, Khalil JG, Perez-Cruet M, Aleem I, Park P, Easton R, **Nerenz DR, Schwalb J, Abdulhak M**, and **Chang V**. The association of patient education level with outcomes after elective lumbar surgery: a Michigan Spine Surgery Improvement Collaborative study. *Journal of Neurosurgery: Spine* 2022; 36(6):883-891. PMID: Not assigned. doi.org/10.3171/2021.9.SPINE21421

Hamilton TM, Reese JC, and Air EL. Health Care Disparity in Pain. *Neurosurg Clin N Am* 2022; 33(3):251-260. PMID: 35718394. doi.org/10.1016/j.nec.2022.02.003

Herrgott GA, Asmaro KP, Wells M, Sabedot TS, Malta TM, Mosella MS, Nelson K, Scarpace L, Barnholtz-Sloan JS, Sloan AE, Selman WR, **deCarvalho AC, Poisson LM,** Mukherjee A, **Robin AM, Lee IY, Snyder J, Walbert T,** Rosenblum M, **Mikkelsen T,** Bhan A, Craig J, **Kalkanis S, Rock J, Noushmehr H,** and **Castro AV.** Detection of tumor-specific DNA methylation markers in the blood of patients with pituitary neuroendocrine tumors. *Neuro Oncol* 2022; 24(7):1126-1139. PMID: 35212383. doi.org/10.1093/neuonc/noac050

Jabbour P, Dmytriw AA, Sweid A, Piotin M, Bekelis K, Sourour N, Raz E, Linfante I, Dabus G, **Kole M,** Martínez-Galdámez M, Nimjee SM, Lopes DK, Hassan AE, Kan P, Ghorbani M, Levitt MR, Escalard S, Missios S, Shapiro M, Clarençon F, Elhorany M, Vela-Duarte D, Tahir RA, Youssef PP, Pandey AS, Starke RM, El Naamani K, Abbas R, Hammoud B, Mansour OY, Galvan J, Billingsley JT, Mortazavi A, Walker M, Dibas M, Settecase F, Heran MKS, Kuhn AL, Puri AS, Menon BK, Sivakumar S, Mowla A, D'Amato S, Zha AM, Cooke D, Goyal M, Wu H, Cohen J, Turkel-Parrella D, Xavier A, Waqas M, Tutino VM, Siddiqui A, Gupta G, Nanda A, Khandelwal P, Tiu C, Portela PC, Perez de la Ossa N, Urra X, de Lera M, Arenillas JF, Ribo M, Requena M, Piano M, Pero G, De Sousa K, Al-Mufti F, Hashim Z, Nayak S, Renieri L, Aziz-Sultan MA, Nguyen TN, Feineigle P, Patel AB, Siegler JE, Badih K, Grossberg JA, Saad H, Gooch MR, Herial NA, Rosenwasser RH, Tjoumakaris S, and Tiwari A. Characteristics of a COVID-19 Cohort With Large Vessel Occlusion: A Multicenter International Study. *Neurosurgery* 2022; 90(6):725-733. PMID: 35238817. doi.org/10.1227/neu.0000000000001902

Jehangir Q, Lee Y, Latack K, **Poisson L,** Wang DD, Song S, Apala DR, Patel K, Halabi AR, Krishnamoorthy G, and Sule AA. Incidence, Mortality, and Imaging Outcomes of Atrial Arrhythmias in COVID-19. *Am J Cardiol* 2022; 173:64-72. PMID: 35382929. doi.org/10.1016/j.amjcard.2022.02.051

Jehangir Q, Lee Y, Latack K, **Poisson L,** Wang DD, Song S, Apala DR, Patel K, Halabi AR, Krishnamoorthy G, and Sule AA. Data of atrial arrhythmias in hospitalized COVID-19 and influenza patients. *Data Brief* 2022; 42:108177. PMID: 35449710. doi.org/10.1016/j.dib.2022.108177

Kabir MH, Marquez E, Djokoto G, Parker M, Weinstein T, Ghann W, Uddin J, **Ali MM,** Alam MM, Thompson M, Poyraz AS, Msimanga HZ, Rahman MM, Rulison M, and Cramer J. Energy Harvesting by Mesoporous Reduced Graphene Oxide Enhanced the Mediator-Free Glucose-Powered Enzymatic Biofuel Cell for Biomedical Applications. *ACS Appl Mater Interfaces* 2022; 14(21):24229-24244. PMID: 35594363. doi.org/10.1021/acsami.1c25211

Kalkanis SN. Presidential Address to the 2021 Annual Meeting of the Congress of Neurological Surgeons. *Neurosurgery* 2022; 68:1-5. PMID: Not assigned. doi.org/10.1227/NEU.0000000000001881

Lawless MH, Tong D, Claus CF, Hanson C, Li C, Houseman CM, Bono P, Richards BF, Kelkar PS, **Abdulhak MM, Chang V,** Carr DA, Park P, and Soo TM. Age as a Risk Factor for Complications Following Anterior Cervical Discectomy and Fusion: Analysis From the Michigan Spine Surgery Improvement Collaborative (MSSIC). *Spine (Phila Pa 1976)* 2022; 47(4):343-351. PMID: 34392275. doi.org/10.1097/brs.00000000000004200

Lee Y, Jehangir Q, Li P, Gudimella D, Mahale P, Lin CH, Apala DR, Krishnamoorthy G, Halabi AR, Patel K, **Poisson L**, Balijepally V, Sule AA, and Nair GB. Venous thromboembolism in COVID-19 patients and prediction model: a multicenter cohort study. *BMC Infect Dis* 2022; 22(1):462. PMID: 35562677. doi.org/10.1186/s12879-022-07421-3

Lee Y, Jehangir Q, Lin CH, Li P, Sule AA, **Poisson L**, Balijepally V, Halabi AR, Patel K, Krishnamoorthy G, and Nair GB. 3D-PAST: Risk Assessment Model for Predicting Venous Thromboembolism in COVID-19. *J Clin Med* 2022; 11(14). PMID: 35887713. doi.org/10.3390/jcm11143949

Lim S, Bazydlo M, **Macki M**, **Haider S**, **Hamilton T**, **Hunt R**, **Chaker A**, **Kantak P**, Schultz L, **Nerenz D**, **Schwalb JM**, **Abdulhak M**, Park P, Aleem I, Easton R, Khalil JG, Perez-Cruet MJ, and **Chang V**. Validation of the Benefits of Ambulation Within 8 Hours of Elective Cervical and Lumbar Surgery: A Michigan Spine Surgery Improvement Collaborative Study. *Neurosurgery* 2022; 91(3):505-512. PMID: 35550477. doi.org/10.1227/neu.0000000000002032

Lim S, Bazydlo M, **Macki M**, **Haider S**, Schultz L, **Nerenz D**, **Fadel H**, **Pawloski J**, Yeh HH, Park P, Aleem I, Khalil J, Easton R, **Schwalb JM**, **Abdulhak M**, and **Chang V**. A Matched Cohort Analysis of Drain Usage in Elective Anterior Cervical Discectomy and Fusion: A Michigan Spine Surgery Improvement Collaborative (MSSIC) Study. *Spine (Phila Pa 1976)* 2022; 47(3):220-226. PMID: 34516058. doi.org/10.1097/brs.0000000000004169

Liu EM, Shi ZF, Li KK, Malta TM, Chung NY, Chen H, Chan JY, Poon MF, Kwan JS, Chan DT, **Noushmehr H**, Mao Y, and Ng HK. Molecular landscape of IDH-wild type, pTERT-wild type adult glioblastomas. *Brain Pathol* 2022:e13107. PMID: 35815721. doi.org/10.1111/bpa.13107

Lubanska D, Alrashed S, Mason GT, Nadeem F, Awada A, DiPasquale M, Sorge A, Malik A, Kojic M, Soliman MAR, **deCarvalho AC**, Shamisa A, Kulkarni S, Marquardt D, Porter LA, and Rondeau-Gagné S. Impairing proliferation of glioblastoma multiforme with CD44+ selective conjugated polymer nanoparticles. *Sci Rep* 2022; 12(1):12078. PMID: 35840697. doi.org/10.1038/s41598-022-15244-0

Macki M, Anand SK, **Hamilton T**, **Lim S**, **Mansour T**, Bazydlo M, Schultz L, **Abdulhak MM**, Khalil JG, Park P, Aleem I, Easton R, **Schwalb JM**, **Nerenz D**, and **Chang V**. Analysis of Factors Associated with Return-to-Work After Lumbar Surgery up to 2-Years Follow-up: A Michigan Spine Surgery Improvement Collaborative (MSSIC) Study. *Spine (Phila Pa 1976)* 2022; 47(1):49-58. PMID: 34265812. doi.org/10.1097/brs.0000000000004163

Macki M, **Hamilton T**, **Lim S**, **Mansour TR**, **Telemi E**, Bazydlo M, Schultz L, **Nerenz DR**, Park P, **Chang V**, **Schwalb J**, and **Abdulhak MM**. The role of postoperative antibiotic duration on surgical site infection after lumbar surgery. *Journal of Neurosurgery: Spine* 2022; 36(2):254-260. PMID: Not assigned. doi.org/10.3171/2021.4.SPINE201839

Macki M, **Hamilton T**, Massie L, Bazydlo M, Schultz L, **Seyfried D**, Park P, Aleem I, **Abdulhak M**, **Chang VW**, and **Schwalb JM**. Characteristics and outcomes of patients undergoing lumbar spine surgery for axial back pain in the Michigan Spine Surgery Improvement Collaborative. *Spine J* 2022. PMID: 35803577. doi.org/10.1016/j.spinee.2022.06.013

Macki M, and **La Marca F**. Evolution of Complex Spine Surgery in Neurosurgery: From Big to Minimally Invasive Surgery for the Treatment of Spinal Deformity. *Adv Tech Stand Neurosurg* 2022; 45:339-357. PMID: 35976456. doi.org/10.1007/978-3-030-99166-1_11

Mariano ER, Dickerson DM, Szokol JW, Harned M, Mueller JT, Philip BK, Baratta JL, Gulur P, Robles J, Schroeder KM, Wyatt KEK, **Schwalb JM**, Schwenk ES, Wardhan R, Kim TS, Higdon KK, Krishnan DG, Shilling AM, Schwartz G, Wiechmann L, Doan LV, Elkassabany NM, Yang SC, Muse IO, Eloy JD, Mehta V, Shah S, Johnson RL, Englesbe MJ, Kallen A, Mukkamala SB, Walton A, and Buvanendran A. A multisociety organizational consensus process to define guiding principles for acute perioperative pain management. *Reg Anesth Pain Med* 2022; 47(2):118-127. PMID: 34552003. doi.org/10.1136/rapm-2021-103083

Miller WK, Becker KN, Caras AJ, **Mansour TR**, Mays MT, Rashid M, and **Schwalb J**. Magnetic resonance-guided focused ultrasound treatment for essential tremor shows sustained efficacy: a meta-analysis. *Neurosurg Rev* 2022; 45(1):533-544. PMID: 33978922. doi.org/10.1007/s10143-021-01562-w

Monternier PA, Parasar P, Theurey P, Gluais Dagorn P, Kaur N, **Nagaraja TN**, Fouqueray P, Bolze S, Moller DE, Singh J, and Hallakou-Bozec S. Beneficial Effects of the Direct AMP-Kinase Activator PXL770 in In Vitro and In Vivo Models of X-Linked Adrenoleukodystrophy. *J Pharmacol Exp Ther* 2022; 382(2):208-222. PMID: 35764327. doi.org/10.1124/jpet.122.001208

Monternier PA, Singh J, Parasar P, Theurey P, DeWitt S, Jacques V, Klett E, Kaur N, **Nagaraja TN**, Moller DE, and Hallakou-Bozec S. Therapeutic potential of deuterium-stabilized (R)-pioglitazone-PXL065-for X-linked adrenoleukodystrophy. *J Inherit Metab Dis* 2022; 45(4):832-847. PMID: 35510808. doi.org/10.1002/jimd.12510

Nassiri F, Wang JZ, Au K, Barnholtz-Sloan J, Jenkinson MD, Drummond K, Zhou Y, **Snyder JM**, Brastianos P, Santarius T, Suppiah S, **Poisson L**, Gaillard F, Rosenthal M, Kaufmann T, Tsang DS, Aldape K, and Zadeh G. Consensus core clinical data elements for meningiomas (v2021.1). *Neuro Oncol* 2022; 24(5):683-693. PMID: 34791428. doi.org/10.1093/neuonc/noab259

Patel N, Jacobs D, John J, Fayed M, Nerusu L, Tandron M, Dailey W, Ayala R, Sibai N, Forrest P, **Schwalb J**, and Aiyer R. Balloon Kyphoplasty vs Vertebroplasty: A Systematic Review of Height Restoration in Osteoporotic Vertebral Compression Fractures. *J Pain Res* 2022; 15:1233-1245. PMID: 35509620. doi.org/10.2147/jpr.S344191

Plonsker JH, Benzil D, **Air EL**, Woodrow S, Stippler M, and Ben-Haim S. Gender Equality in Neurosurgery and Strategic Goals Toward a More Balanced Workforce. *Neurosurgery* 2022; 90(5):642-647. PMID: 35311744. doi.org/10.1227/neu.0000000000001910

Robin AM, **Pawloski JA**, **Snyder JM**, **Walbert T**, **Rogers L**, **Mikkelsen T**, **Noushmehr H**, **Lee I**, **Rock J**, **Kalkanis SN**, and Rosenblum ML. Neurosurgery's Impact on Neuro-Oncology- "Can We Do Better?"-Lessons Learned Over 50 Years. *Neurosurgery* 2022; 68:17-26. PMID: Not assigned. doi.org/10.1227/NEU.0000000000001879

Schwalb JM. Financial Sustainability of Neuromodulation for Pain. *Neurosurg Clin N Am* 2022; 33(3):281-286. PMID: 35718397. doi.org/10.1016/j.nec.2022.03.001

Shah H, Madni A, Khan MM, Ahmad FU, Jan N, Khan S, Rahim MA, Khan S, **Ali MM**, and Kazi M. pH-Responsive Liposomes of Dioleoyl Phosphatidylethanolamine and Cholesteryl Hemisuccinate for the Enhanced Anticancer Efficacy of Cisplatin. *Pharmaceutics* 2022; 14(1). PMID: 35057025. doi.org/10.3390/pharmaceutics1401012

Stec NE, and **Walbert T**. Neuro-oncology and supportive care: the role of the neurologist. *Neurol Sci* 2022; 43(2):939-950. PMID: 34988720. doi.org/10.1007/s10072-021-05862-3

Tonnu A, **Hunt R**, **Zervos T**, **Hamilton T**, Tyrrell C, and **Robin AM**. Hypertrophic olivary degeneration and palatal myoclonus from a *Streptococcus intermedius* infection of the brain: illustrative case. *J Neurosurg Case Lessons* 2022; 3(24):Case2265. PMID: 35733632. doi.org/10.3171/case2265

Udumula MP, **Poisson LM**, Dutta I, Tiwari N, Kim S, Chinna-Shankar J, Allo G, Sakr S, Hijaz M, Munkarah AR, Giri S, and Rattan R. Divergent Metabolic Effects of Metformin Merge to Enhance Eicosapentaenoic Acid Metabolism and Inhibit Ovarian Cancer In Vivo. *Cancers (Basel)* 2022; 14(6). PMID: 35326656. doi.org/10.3390/cancers14061504

Varn FS, Johnson KC, Martinek J, Huse JT, Nasrallah MP, Wesseling P, Cooper LAD, Malta TM, Wade TE, Sabedot TS, Brat D, Gould PV, Wöehrler A, Aldape K, Ismail A, Sivajothi SK, Barthel FP, Kim H, Kocakavuk E, Ahmed N, White K, Datta I, Moon HE, Pollock S, Goldfarb C, Lee GH, Garofano L, Anderson KJ, Nehar-Belaid D, Barnholtz-Sloan JS, Bakas S, Byrne AT, D'Angelo F, Gan HK, Khasraw M, Migliozi S, Ormond DR, Paek SH, Van Meir EG, Walenkamp AME, Watts C, Weiss T, Weller M, Palucka K, Stead LF, **Poisson LM**, **Noushmehr H**, Iavarone A, and Verhaak RGW. Glioma progression is shaped by genetic evolution and microenvironment interactions. *Cell* 2022; 185(12):2184-2199.e2116. PMID: 35649412. doi.org/10.1016/j.cell.2022.04.038

Walbert T, and Gerstner ER. Reply to Koekkoek et al. concerning SNO and EANO practice guideline update. *Neuro Oncol* 2022; 24(3):501. PMID: 35079807. doi.org/10.1093/neuonc/noac015

Walsh LE, Polacek LC, Panageas K, Reiner A, **Walbert T**, Thomas AA, Buthorn J, Sigler A, Prigerson HG, Applebaum AJ, and Diamond EL. Coping with glioblastoma: prognostic communication and prognostic understanding among patients with recurrent glioblastoma, caregivers, and oncologists. *J Neurooncol* 2022; 158(1):69-79. PMID: 35437688. doi.org/10.1007/s11060-022-04010-x

Wu C, **Schwalb JM**, Rosenow JM, McKhann GM, 2nd, and Neimat JS. The American Society for Stereotactic and Functional Neurosurgery Position Statement on Laser Interstitial Thermal Therapy for the Treatment of Drug-Resistant Epilepsy. *Neurosurgery* 2022; 90(2):155-160. PMID: 34995216. doi.org/10.1227/neu.0000000000001799

Zahoor I, Suhail H, Datta I, Ahmed ME, **Poisson LM**, Waters J, Rashid F, Bin R, Singh J, Cerghet M, Kumar A, Hoda MN, Rattan R, Mangalam AK, and Giri S. Blood-based untargeted metabolomics in relapsing-remitting multiple sclerosis revealed the testable therapeutic target. *Proc Natl Acad Sci U S A* 2022; 119(25):e2123265119. PMID: 35700359. doi.org/10.1073/pnas.2123265119

Zervos TM, Kutschman K, Frisoli T, **Mansour TR**, and **Schwalb JM**. Techniques for management and avoidance of ventriculoatrial shunt disconnection: illustrative cases. *J Neurosurg Case Lessons* 2022; 3(22):Case21654. PMID: 35734610. doi.org/10.3171/case21654

Section 1 3b, Attachment 3

Faculty Awards and Honorifics

(State/Regional/Natl & International Awards, major offices and roles in national organizations)

Meser Ali, PhD

Editorial Boards, *Journal of Nanomedicine and Nanotechnology*, *Frontiers in Pharmacology*, *Journal of Nanomedicine, Nanotechnology and Nanomaterials*, *Journal of Cancer Treatment and Research*

Ellen L. Air, MD

Director, Neurosurgery Residency Program
CNS Executive Committee Member-at-Large (2-yr term)
Co-Chair, 2022 NANS 25th Annual Meeting, Scientific Program
Co-Editor, *CNS Quarterly*
Chair, CNS Physician Leadership Institute
Safety Monitoring Committee, Registry for the Advancement of Deep Brain Stimulation (DBS) in Parkinson's Disease (RAD-PD), Parkinson's Study Group
ASSFN Board of Directors 2018-2022
Chair, ASSFN 2022 Biennial Mtg Scientific Program Committee
CNS Guidelines, Chair, Committee on Spinal Cord Stimulation
Assoc. Ed., Evidence-Based Medicine, Pain, *Neurosurgery*
Editorial Board, Neuromodulatory Interventions (special section, *Frontiers in Pain Res*)
Chair, Women in Neurosurgery Executive Committee
AANS 2022 Annual Meeting Faculty
Epilepsy Foundation of Michigan, Professional Advisory Committee
Parkinson Study Group Functional Neurosurgical Working Group
North American Neuromodulation Society: member of Education Committee, Conflict of Interest Committee, and Research Committee
Co-Chair, Scientific Program for the 2023 NANS 26th Annual Meeting

Dr. Karam Asmaro (resident)

2020 CNS Resident Award. for the abstract titled, "The Pituitary Epigenetic Liquid Biopsy for the Peripheral Detection and Classification of Pituitary Adenomas," (from collaborative research with the Neurosurgery Research OMICs team led by Drs. Ana Valeria Castro and Houtan Noushmehr.) Published, December 2020 issue of *Clinical Neurosurgery*. Presented by Dr. Asmaro, plenary session, CNS Annual Meeting, October 2021, Austin, Texas.

Ana Castro, PhD

Reviewer, *American Journal of the Medical Sciences*, *Cancer Investigation*, *Journal of Acta Neuropathologica Communications*, *Journal of Advances in Medicine and Medical Research*, *Journal of Translational Medicine*, *Laboratory Investigation*, *Medicina*

Victor Chang, MD

Associate Director, Executive Committee, Michigan Spine Surgery Improvement Collaborative (MSSIC)
Surgeon Champion Henry Ford West Bloomfield, MSSIC
AANS/CNS DSPN – SPC Committee
Industry Relations Committee, Society of Minimally Invasive Spine Surgery (SMISS)
Reviewer, *Global Spine Journal*, *Operative Neurosurgery*, *Neurosurgery*, *Neurosurgery Open*, *Spine Journal*, *World Neurosurgery*

Ana deCarvalho, PhD

Reviewer, American Brain Tumor Association (ABTA) 2022 Discovery Grant

Steven Kalkanis, MD

Chair of Neurosurgery, Emeritus

Medical Director of the Henry Ford Cancer Institute

President of the Congress of Neurological Surgeons (CNS), fall 2019. (2020 presidential address was given at the 2021 CNS Annual Meeting, Vision for the Future.)

Chief Executive Officer of the Henry Ford Medical Group

Chief Academic Officer and Senior Vice President of Henry Ford Health System

Max Kole, MD

MICHIGAN Stroke Treatment Improvement Collaborative (MISTIC)

2022 Hour Magazine, Top Doc

Ian Lee, MD

Reviewer, AANS Annual Meeting Abstract

Reviewer, SNO Annual Meeting Abstract

Section Editor, *Frontiers in Neurology, Neurosurgery*

AANS/CNS Tumor Section Membership Sub-Committee

Society for Brain Mapping and Therapeutics Scientific Planning Committee

2022 Hour Magazine, Top Doc

Chandan Mehta, MD

2021 Neurocritical Care Society Annual Meeting Committee

Delegate - Wayne County Medical Society of Southeast Michigan (WCMSSM)

Member - Wayne County Medical Society of Southeast Michigan Board of Directors

Tavarekere Nagaraja, PhD

PhD Advisory Board, West Virginia University

Grand Peer Review Group BRAIN01, American Heart Association

Houtan Noushmehr, PhD

EANO/SNO 2019-2021, Scientific Committee

SNO 2020-2021, Scientific and education day, Chair and Coordinator

International Meningioma Consortium, Project Development

Glioma Longitudinal Analysis (GLASS), Project Development

Reviewer, *Acta Neuropathologica, Annals of Hematology, Bioinformatics, BMC Bioinformatics, Cell, Clinical Epigenetics, Epigenetics, Genes and Cancer, Genetics and Molecular Biology, Molecular Biology, PloS One, PloS Computational Biology*

David Nerenz, PhD

Co-Chair, National Quality Forum Scientific Methods Panel

Health Equity Action Team, CMS Health Care Payment Learning & Action Network

Technical Expert Panel, CMS Hospital Star Rating

Population Health Work Group (Blue Cross Blue Shield of Michigan Collaborative Quality Initiatives Program)

National Quality Forum Disparities, Standing Committee

America's Essential Hospital (AEH), Education Committee

Editorial Boards, *Population Health Management, Medical Care Research and Review, and Health Services Research*

Board of Trustees, Northern Michigan University Foundation

Amad Riad Ramadan, MD

Member, Neurocritical Care Committee, and Membership Committee of the Neurocritical Care Society

Jack Rock, MD

Interim Chair of the Department of Neurosurgery.
Co-director, Surgical Neuro-oncology Clinic
Co-director, Skull Base, Pituitary and Endoscopy Center
Board Member, Foundation for International Education in Neurological Surgery

Norbert Roosen, MD

Reviewer, *Spartan Medical Research Journal*

Jason Schwalb, MD

President, Michigan Parkinson's Foundation
Chair, Professional Advisory Board, Michigan Parkinson's Foundation
President, Michigan Assoc. of Neurological Surgeons
Chair, Clinical Advocacy Committee, ASSFN
Delegate from CNS to the AMA
Co-director, Michigan Spine Surgery Improvement Collaborative (MSSIC)
Chair, Conflict of Interest Committee, ASSFN
Vice Chair, Guidelines Committee, ASSFN
Board of Directors, ASSFN
Steering Committee, Registry for the Advancement of DBS on Parkinson's Disease (RAD-PD)
Chair, Scientific Review Committee, RAD-PD
ASSFN representative, Coding and Reimbursement Committee
Professional Advisor, Epilepsy Foundation of Michigan
Contributing Editor, *Epilepsy Currents*
Associate Editor, *Frontiers in Pain Research, Cancer Pain*
Section Editor, *Pain, Neurosurgery*
Reviewer, *Neurosurgery, Operative Neurosurgery, The Spine Journal*

James M. Snyder, DO

Participant, Common Data Elements Working Group, Epigenetic Working Group, of the Glioma Longitudinal Analysis Consortium
Reviewer, *Frontiers in Oncology, Journal of Neuro-Oncology, Frontiers in Cell and Developmental Biology*
Abstract Review, Society of Neuro-Oncology Meeting

Tobias Walbert, MD

Chair, Guideline Committee, Society of Neuro-Oncology
Scientific Abstract Review, American Academy of Neurology 2021 Annual Meeting, Society of Neuro-Oncology 2021 Annual Meeting
Board member, Head for the Cure Foundation
Scientific Grant Review, The Dutch Cancer Society KWF (Kankerbestrijding)

Ye Xiong, MD, PhD

Reviewer, *Frontiers in Neuroscience, Neurodegeneration*
Scientific Review, Department of Defense Urgent Panel
Scientific Review, French National Research Agency (ANR)
Scientific Review, Pennsylvania Department of Health (PADOH): Final performance reviews for traumatic brain injury grants: PADOH HCI TBI, online meeting

Section 1, #3 c, Attachment 4**Non - Federal**

A10239	Xiong, Ye	Treatment of Traumatic Brain I
A10267	Ali, Meser M.	NPR Ali
A10271	Zhang, Yan Lu	NPR Yanlu Zhang
A30935	Noushmehr, Houtan	Noushmehr Start-Up
A30981	Ali, Meser M.	Proposal Development Ali
A30982	Castro, Anavaleria B	Proposal Development Castro
A20050	Lee, Ian	Physician Scientist Lee
A30988	Lee, Ian	Proposal Development Lee
A68011	Kalkanis, Steven N	Royalty Payments - Bogler
D30522	De Carvalho, Ana Celia V.	Checkpoints in Glioma
E06203	Walbert, Tobias	DCVax-Brain
E11234	Walbert, Tobias	Tg 511-09-01
E13123	Kalkanis, Steven N	Tg 511-13-01
E14195	Chedid, Mokbel K.	cBMA Study
E15191	Walbert, Tobias	CA209-498-0006
E16074	Walbert, Tobias	CA209-548-0035
E16099	Walbert, Tobias	OT-15-001
E17023	Schwalb, Jason	SLATE Study
E17156	Walbert, Tobias	H15-ONC-22
E17206	Walbert, Tobias	BGB-290-104
E17214	Walbert, Tobias	BBI-DSP7888-201G
E18121	Walbert, Tobias	Coping with Glioblastoma
E18167	Walbert, Tobias	GBM-001
E19006	Walbert, Tobias	2102-ONC-102
E19097	Air, Ellen L	RAD-PD
E19147	Schwalb, Jason	QUEST Study
E19179	Walbert, Tobias	MEK-NF-201
E20008	Walbert, Tobias	AG881-C-004
E20178	Walbert, Tobias	OKN-007-IV-RMG-201
E20189	Abdulhak, Muwaffak M.	Anterior Gen Plus Study
E20281	Snyder, James	BED-FLC-312

E20288	Robin,Adam M.	NXDC-MEN-301
E21016	Walbert,Tobias	DB102-01
E21036	Chedid,Mokbel K.	The PROOF Study
E21053	Schwalb,Jason	The RESET-RA Study
E21167	Lee,Ian	NIP-GBMFTP-01
E21181	Lee,Ian	14379-201
E22028	Walbert,Tobias	FCN-159-002
E22095	Snyder,James	ERAS-801-01
E22105	Robin,Adam M.	STaRT
E70033	Kalkanis,Steven N	DF/HCC 06-377
E70046	Kalkanis,Steven N	NHFHS 09-08
E70057	Walbert,Tobias	BTTC11-01
E70078	Snyder,James	FORWARD
F11026	Nerenz,David R.	MSSIC
F11122	Nagaraja,Tavarekere N.	Tumor Vascular Normalization
F11145	Nerenz,David R.	CHSR_340B Health
F20515	Malik,Ghaus M.	Cerebrovascular Surg Research
F60666	Noushmehr,Houtan	HBTC Liquid Biopsy Initiative
H10021	Kalkanis,Steven N	Neurosurgery Res,ED, Gen Fund
H10060	Kalkanis,Steven N	The David Hermelin Brain Tumor
H10145	Kalkanis,Steven N	JFCC Cancer Fund
H10157	Yacobucci,Karen D.	JFCC Outreach
H10175	Kalkanis,Steven N	Harris Neuro Clinical Trials
H10177	Kalkanis,Steven N	Neuro Innovation Fund
H10178	Kalkanis,Steven N	Neuro Rehab Fund
H10180	Kalkanis,Steven N	Neuro Infrastructure Fund
H10181	Kalkanis,Steven N	Berman Fund for Neuroscience
H10207	Kalkanis,Steven N	GOC patient & research fund
H10212	Kalkanis,Steven N	Rosenblum Neurosciences Research
H10221	Rock,Jack P.	Myanmar Neuroscience Project
H10224	Kalkanis,Steven N	Jeffries Precision Medicine Fund
H10242	Walbert,Tobias	Head for the Cure
H10251	Ali,Meser M.	BIRDS MRI
H10302	Walbert,Tobias	Virus therapy for Astrocytomas
H10316	Scarpace,Lisa M.	GOC - HBTC Patient Assistance

H10331	De Carvalho,Ana Celia V.	Demchik Fund for Avatar Models
H10335	Air,Ellen L	Walters MD Resident Award
H10345	Castro,Anavaleria B	Epigenomic profiling diseases
H10346	Noushmehr,Houtan	Epigenetic landscape of CNS
H10348	Kalkanis,Steven N	Jeffries Center Precision Med
H10349	Rock,Jack P.	Skull-Base & Pituitary Fund
H10357	Ali,Meser M.	DDS to overcome BBB&res in GBM
H60097	Bissell,Christopher B.	WB Canc Ctr Resource Library
H60098	Nelson,Danielle E	Josephine Ford Operating Fund
H60158	Malik,Ghaus M.	Malik - Education Fund
H60168	Abdulhak,Muwaffak M.	Neuroscience Spine Research
J80002	Nagaraja,Tavarekere N.	Anesthesiology Development
J90034	Kalkanis,Steven N	Vlasic Chair-Neurosurgery
J90057	Kalkanis,Steven N	Dept of Neuro Surg
J90072	Seyfried,Donald M	John G. Piccinini Endow Fund
J90077	Munkarah,Adnan R	Josephine Ford Chair in Cancer
J90092	Malik,Ghaus M.	The John R. Davis Chair for Ne
J90121	Kalkanis,Steven N	Rosenblum Endow Chair in Neuro
J90125	Kalkanis,Steven N	HBTC Endowment
J90130	Kalkanis,Steven N	Brigitte Harris Hope Endowment
J90133	Kalkanis,Steven N	Precision Medicine Endowment
J90134	Kalkanis,Steven N	Harris Legacy Endow for Neuros
J90135	Kwon,David	Harris Pancreatic Cancer Endow
J90141	Abdulhak,Muwaffak M.	Chair Surg Spine Innov - Endow
J90143	Van Tassel,Madelyn Verlin	Pancreatic Admin Dir Endowment
J90144	Kwon,David	Pancreatic Directors Endowment
J90206	Munkarah,Adnan R	Josephine Ford Cancer Endowmen

J90210	Kalkanis, Steven N	Herrick Scientific Fund
J90216	Chedid, Mokbel K.	HFWBH Berger Spine Endowment
M10121	Kalkanis, Steven N	JFCC - D Capital Bldg Fund
M60224	Kalkanis, Steven N	Pierson Oncology Fund
M70046	Kalkanis, Steven N	JFCC Capital & Equipment Fund
<u>Federal</u>		
B11162	Xiong, Ye	Therapeutics in TBI
B11197	Zhang, Yan Lu	TBI Vepoloxamer Extracell pH mapping in GBM
B40724	Ali, Meser M.	Amplification in Glioblastoma
B70111	De Carvalho, Ana Celia V.	Therapeutic Use of Bryostatin1
B40750	Nagaraja, Tavarekere N.	Calpastatin Peptide-Based Adult Brain Tumor Consortium
B40795	Seyfried, Donald M	BMX-MBM-001
B45166	Walbert, Tobias	TOPS
B45243	Walbert, Tobias	
B45268	Walbert, Tobias	

STAFF

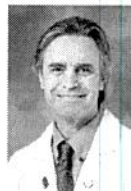
HENRY FORD HEALTH SCIENCES CENTER, DEPARTMENT OF NEUROLOGICAL SURGERY



STEVEN N. KALKANIS, MD
CEO, Henry Ford Medical Group
Chief Academic Officer, HFHS
Chair Emeritus, Neurosurgery



GHAUS M. MALIK, MD
Executive Vice Chair, Department of
Neurosurgery; Senior Staff Neurosurgeon;
Director, Cerebrovascular Surgery Program,
Neuroscience Institute; John R. Davis,
Endowed Chair in Neurological Surgery



JACK P. ROCK, MD
Interim Chair, Neurosurgery
Senior Staff Neurosurgeon
Vice Chair – Education
Co-Director of Skullbase, Pituitary and
Endoscopy Center



ELLEN L. AIR, MD, PhD
Program Director, Neurosurgery Residency
Program
Senior Staff Neurosurgeon
Co-Director, Functional Neurosurgery Program
Interim Division Head, Movement Disorders,
Neurology

SENIOR STAFF



MUWAFFAK ABDULHAK, MD
Senior Staff Neurosurgeon
Director, Neurosurgery Spine Program
Co-Director, HFMG Spine Council



MESER ALI, PHD
Director, Cellular and Molecular Imaging Laboratory



AZAM BASHEER, MD
Adjunct Neurosurgeon
Allegiance Health



CHAYA BRODIE, PHD
Director, Basic and Translational Research, Hermelin
Brain Tumor Center
Director, Laboratory of Cancer Signal Transduction



ANAVALERIA CASTRO, PHD
Assistant Scientist
Genomics and Epigenomics Computational
Laboratory



VICTOR CHANG, MD
Senior Staff Neurosurgeon
Henry Ford West Bloomfield Hospital
Co-Director, Spine Biomotion Laboratory



MOKBEL CHEDID, MD
Senior Staff Neurosurgeon;
Service Chief for West Bloomfield Hospital; Director,
Spine Surgery, Henry Ford West Bloomfield Hospital;
Co-Director, Complex Spine Program, Henry Ford
Hospital



JOHN J. CORRIGAN, MD
Section Head, Neuroradiology



FLORENCE DALLO, PHD
Director, Clinical Research



ANA C. DECARVALHO, PHD
Associate Scientist
Director, Laboratory of Molecular Therapeutics



BRENT GRIFFITH, MD
Division Head, Neuroradiology



MAX KOLE, MD
Senior Staff Neurosurgeon
Neurosurgery Director of Endovascular Therapy;
Departments of Neurosurgery and Diagnostic
Radiology
Director, Cerebrovascular and Endovascular Program
Fellowship



FRANK LAMARCA, MD
Adjunct Neurosurgeon
Allegiance Health



IAN LEE, MD
Senior Staff Neurosurgeon
Co-Director, Hermelin Brain Tumor Center
Co-Director, iMRI, Brain and Spine Metastatic
Program, Director,
Spinal Neuro-oncology



ASIM MAHMOOD, MD
Senior Staff Neurosurgeon
Director, Neurotrauma Program



HORIA MARIN, MD
Adjunct Neuroradiologist
Department of Diagnostic Radiology
Section Head, Neurointerventional Radiology



CHANDAN B. MEHTA, MD
Director, Neuro ICU
Departments of Neurology and Neurosurgery



TOM MIKKELSEN, MD
Director, Applebaum Laboratory; Departments of
Neurosurgery and Neurology Research Chair in
Neuro-Oncology Research



LYNN MUBITA, MD
Senior Staff Neurosurgeon



TAVAREKERE NAGARAJA, PHD, FAHA
Director, Glioma Biology Laboratory



DAVID NERENZ, PHD
Director Emeritus, Center for Health Policy and Health
Services Research
Associate Director of MSSIC, Department of
Neurosurgery



HOUTAN NOUSHMEHR, PhD
Director, Genomics and Epigenomics Computational
Laboratory



LAILA POISSON, PHD
Associate Scientist
Public Health Sciences



AHMAD RIAD RAMADAN, MD
Intensive Care Unit
Departments of Neurology and Neurosurgery



MOHAMMAD REHMAN, MD
Senior Staff, Departments of Neurology
and Neurosurgery
Neuro ICU



ADAM ROBIN, MD
Senior Staff Neurosurgeon



LISA ROGERS, DO
Senior Staff
Departments of Neurology and Neurosurgery



NORBERT ROOSEN, MD
Senior Staff Neurosurgeon,
Neurosurgery Associates - Wyandotte



MARK L. ROSENBLUM, MD
Chair Emeritus



JASON SCHWALB, MD
Senior Staff Neurosurgeon
Surgical Director, Movement Disorders and
Comprehensive Epilepsy Centers
Associate Program Director, Neurosurgery Residency
Clinical Professor of Neurosurgery
Wayne State University
Henry Ford West Bloomfield Hospital Site Director



DONALD M. SEYFRIED, MD
Senior Staff Neurosurgeon
Henry Ford West Bloomfield Hospital



JAMES M. SNYDER, DO
Staff Neuro-Oncologist; Director, Statewide Physician
Outreach for the Hermelin Brain Tumor Center;
Physician Liaison Officer for the Henry Ford Cancer
Institute



TOBIAS WALBERT, MD, PHD, MPH
Co-Director, Hermelin Brain Tumor Center
Senior Staff, Departments of Neurosurgery
and Neurology



YE XIONG, MD, MS, PHD
Director, Laboratory of Cerebral Injury



RITU ZACHARIAS, MD
Senior Staff Physiatrist, Department of Neurosurgery;
Division Head of Physical Medicine and Rehabilitation



YANLU ZHANG, PHD
Assistant Scientist
Laboratory of Cerebral Injury

Attachment 5

CHM Assurances in Response to Dean Amalfitano's Concerns
Submitted to CAC October 17, 2022

On Friday, October 14, Dean Amalfitano sent the email copied below in response to the CHM submissions for Departments of Neurosurgery and Urology. To help clarify our response to the questions, we have inserted bold numbers before the questions. Our responses follow the email.

"Afternoon Aron, Nara, Carol, and members of the CHM CAC. I have also cc'ed Dr. David Kaufman, Asst.VP of Clinical Affairs in the Office of Health Sciences, as there are clinical implications related to the new department request(s) , as noted below.

We again appreciate the opportunity to participate in the "assurances" portion of your processes. We have had several questions and suggestions generally arise in regard to the proposed departments, which I've again pasted below for your team's consideration.

[1] Questions as to adding these departments (some of which are clearly duplicative of existing depts/divisions-with vague plans as to how to reconcile these duplications in the future) will create confusion as to which departments are East Lansing based, vs Providence based, vs HF based, and where faculty will be residing primarily, in particular when initially responding to job postings etc. **[2]** This also touches on referral pattern confusion, for example if we have Neurosurgeons/Spine Surgeons in the COM Osteopathic Surgical and Orthopedic Specialties depts at MSU-HCI in East Lansing, yet there is another "Neurosurg" dept, practicing in South East Michigan, and another at Providence Hospital as well.

[Variation for the urology proposal also emailed on October 14, "This also touches on referral pattern confusion, for example if we have Urologists in the COM Osteopathic Surgical Specialties dept at MSU-HCI in East Lansing, yet there is another Urology dept, practicing in South East Michigan."]

[Variation for the Dermatology proposal emailed by Dean Amalfitano on September 19, 2022, "Morning Aron, and members of the CHM CAC.

We appreciate the opportunity to participate in the "assurances" portion of your processes. We have had several questions and suggestions generally arise in regard to the proposed 4 new departments, which I've basically pasted below for your team's consideration. Thank you. AA

This also touches on referral pattern confusion, for example if we have ENT's at MSU-HCI in East Lansing, yet there is another ENT dept, practicing in South East Michigan."]

[3] Will any research done by the no-cost faculty becoming part of these depts., be attributed to MSU generally, MSU CHM or strictly to the jointly funded Health Sciences Center at Henry Ford?. **[4]** Will future investments in research faculty be shared across colleges, should they reside in a HF located dept?

[5] In line with the above, a general theme is questioning why these departments, and the faculty assigned to them, could not be shared between the medical schools, just as several other departments already are. We note that in the creation of the most recent dept on the MSU East Lansing campus., the Dept. of Orthopedics, this premise was highly desired by both colleges, and indeed the current Dept of Orthopedics is shared between COM and CHM.

[6] Is there a mechanism or plan for clinically active HF faculty to also be appointed through the MSU HCI?

[7] We are concerned with the lack of acknowledgement of COM education or role in some of these proposed new departments. For example, it is critical that the new Urology dept. chair recognize two completely different educational approaches in CHM and COM and joint appointments might be considered to recognize these dichotomies, especially as both COM and CHM students are being trained currently at Henry Ford System hospitals.

Thank you for your thoughtful consideration of these comments and questions.

AA”

The College of Human Medicine responds:

As to [1]

It is true that we have some existing divisions (e.g., Neurosurgery *division which is not a department*). Divisions are constructs of the dean’s office and are not recognized by the university. Our proposal here is to create statewide departments, as all CHM departments are. In general, if there are existing divisions, structurally these will be incorporated into the appropriate departments either as a sub-entity or as a merger (depending on faculty needs and wishes). It is true that some departments have more faculty based in East Lansing (e.g., Medicine) or Grand Rapids (e.g., Pediatrics and Emergency Medicine), but that does not define the department, and faculty from all over the state can be in the department. It is also true that the collaborations in each department can be complex, but all departments in the university that engage with the community deal with complexity at some level. The college does not specify where faculty have to live as long as they can fulfill their role. Also note, we are purposely not creating duplicative departments.

As to [2]

Inclusion in MSU HealthCare, Inc. practices (and referrals to MSU physicians) is a separate issue than membership in a department. In this sense, these new departments will be the same as existing departments that include non-HCI faculty, including non-prefix faculty, from Flint, Grand Rapids, Detroit, the Upper Peninsula, or other communities across Michigan. Clinical integration partnerships between MSU and hospital systems, including joint ventures in radiology, or non-clinical relationships, including a statewide residency consortium, create more areas for confusion than these departments will. As a particular example, the neurosurgeons based at Ascension Providence are faculty for both CHM and COM, yet both colleges have decided that any confusion clinically is tolerable given the benefits to students.

As to [3]

The creation of this department will not change the eventual attribution of research funding. As a matter separate from the creation of these departments, we believe MSU, the Health Science Center, applicable college and department will all have attribution, but that system has not been implemented.

As to [4]

Investments from the college to departments will continue as they have for all departments, whether they are joint or in a single college. The attribution and indirect costs follow the appointments and investments as they do now, regardless of the geographical location of the department. For example, for departments located in Grand Rapids and Flint and invested in by CHM- research attribution and indirect costs will flow through CHM. Similarly, for departments located in East Lansing and jointly invested by COM- research attribution and indirect costs flow through the respective college in which the faculty is appointed. CHM has no interest in overturning the current system.

As to [5]

Neither the College of Human Medicine nor the collaborating physicians at Henry Ford Health envision these as joint departments. Some joint departments have been successful, but they are more difficult to administer. The orthopedics department is an interesting example, because administration of that unit has been a challenge and not an experience to be replicated. As in all of our departments, we will welcome faculty from other departments and colleges who are interested in secondary appointments in the new departments.

As to [6]

As of October 16, 2022, there is no pathway for Henry Ford Medical Group faculty to be appointed in MSU HealthCare, Inc., and any decisions to create such a pathway are separate from the department decisions. This is analogous to the CHM Emergency Medicine department created a decade ago; faculty employed by ECS are not “appointed” or credentialed in MSU HCI.

As to [7]

We expect the new department will only increase options available to COM students. The college and the new department are open to cross-listing classes as happens now across the university, and we will ensure the courses of the new department will be available to medical students regardless of college. Finally, there is nothing in the creation of the department that disturbs the existing curricular courses used by COM students. In fact, these additional departments enhance research, educational and clinical opportunities for COM students.