Weill Cornell Medicine
Brain & Spine Center

News and Updates From Weill Cornell Medicine Neurological Surgery **Fall 2020**

A MESSAGE FROM THE CHAIR

Philip E. Stieg, PhD, MD

The "worst-case scenario" that our emergency planning committee considered back in late February and early March seemed nearly unthinkable at the time: schools closed, mass transit shut down, the city and state on near-total lockdown. As those unthinkables started to fall like dominoes, we were very glad to have our contingency plans in place. As terrible as the pandemic became in the spring, we were always prepared.

Even as our entire hospital system focused on treating patients affected by the virus, we in Neurological Surgery were always thinking about our surgical patients. Which ones needed surgery immediately, or very soon, due to urgent conditions? Who could wait until the worst of the pandemic had passed? In every instance we weighed the risk of deferring care against the risk of bringing people out of the safety of their homes for treatment. The health and safety of our patients and staff are always paramount, and they drive every decision we make.

As the summer unfolded, the news in New York became more and more promising. There were fewer cases of the virus, a lower transmission rate, better testing. New Yorkers who had lived through the frightening spring seemed to have learned valuable lessons about wearing masks, keeping their distance, and maintaining strict hygiene practices.

Slowly and carefully, New York has emerged from the protective cocoon that enveloped us earlier this year. Patients who had deferred care are able to get the treatment they needed. That care looks a little different, as our practice has instituted new procedures to keep everyone safe. We have implemented no-wait appointments, contactless check-in, and scrupulous disinfecting and cleaning procedures, along with safe distancing at entrances and elevators. For those who do not require an in-person appointment, we offer video visits that allow patients to consult with faculty from the comfort and safety of home. As altered as the procedures may be, the end result is always the same: expert, compassionate, timely care, delivered safely.

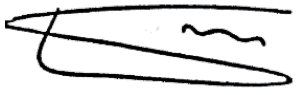
We know the danger is not behind us, and that we must continue to be vigilant. That's why all those practices are now part of our everyday routine, our new normal. We are relieved to be able to provide prompt, effective, and safe care for all our patients.

As we head into fall, we are confident that we will continue to provide the very best of care, safely, to all who need us. We are delighted to share with you this special issue of our newsletter, which celebrates some of the extraordinary accomplishments of our department over the past six months.

Some you've probably seen on the news, as our clinical staff took on difficult new assignments in Covid-19 units, caring for the sickest of patients under extremely trying conditions. Others you probably haven't: the researchers who kept their projects viable even as labs were shut down, and the administrative staff that kept the department running smoothly from home offices and dining room tables as they converted overnight into an efficient and dedicated remote workforce. Making appointments and handling insurance issues, getting the bills paid, and keeping the lines of communication open—they are all vital components of keeping our department functioning, and they all kept going over these once-unthinkable months.

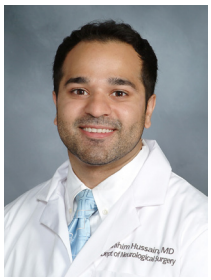
I could not be more proud of this team, which stayed the course through this terrible storm. Enjoy the read!

Yours in good health,



Tales From the Pandemic

Redeployed to the Covid-19 Front Lines



Dr. Ibrahim Hussain was just three months away from completing his seven-year neurosurgery residency program when the pandemic swept into New York. "Redeployed to the front lines" was the military metaphor for what happened next. Dr. Hussain wrote on our web site about his experience as a doctor and neurosurgeon, and as a husband and father, coping with the most serious public health crisis in a century.

A Celebration of Teamwork

Suzan Wollard is the head of neurosurgery physician assistants at NewYork-Presbyterian/Weill Cornell Medical Center. She first developed an appreciation for the looming pandemic through her fifth-grader's schoolwork, then met the crisis up close and personal at work. Suze wrote about the amazing teamwork that pulled everyone through the worst of the crisis in the spring.

Read both stories at **weillcornellbrainandspine.org/blog**

Our Commitment to Education Goes Virtual

The pandemic put only a small dent in our spring 2020 educational schedule. Although we were unable to host our usual roster of courses in person, our CME team did a quick pivot to move courses online. We also started several series of webinars to keep connected with our patients and referring doctors even while we kept our distance.

Minimally Invasive Cranial Neurosurgery: Recent Technical Advances

Unable to conduct the hands-on lab portion of this annual CME, directors Theodore Schwartz, MD, and Mark Souweidane, MD, hosted a robust online event that covered the latest in endoscopy, endonasal approaches, and other minimally invasive cranial procedures. See our schedule of fall CME courses on page 7, or visit neurosurgery.weill.cornell.edu/education

Spine Time

Patients and doctors alike attend these engaging new online webinars on all aspects of back and neck conditions. Visit **spinewebinar.org** to sign up for these ongoing sessions, held on alternate Wednesdays at 5 pm.

Virtual Brain

Department chair Dr. Philip E. Stieg hosts these monthly webinars, each of which focuses on a single condition in depth. Visit **virtual-brain.org** to register for upcoming sessions.

IT'S A NO-BRAINER: NEUROSURGERY HONORS TEAM MEMBERS WHO GO THE EXTRA MILE

The Neurosurgery Outstanding Service Award spotlights members of the department who go above and beyond their assigned duties. The award recognizes those who exemplify the core values of the department, including collegiality/teamwork, compassion, perseverance/commitment, and leadership.

Shortly before the pandemic struck, **Harry Linen** was recognized for his work as administrative assistant to the chair, Dr. Philip Stieg. Harry was nominated by his co-workers, who wrote that "Harry is always a team player" and "For us in the administrative team, Harry exemplifies leadership by being a positive team player. I admire his work ethic and communication style." Congratulations to Harry for displaying excellence in the core values of the department.

SPECIAL COVID-19 AWARDS

We wish we could bestow 150 of these awards, given how many individuals went above and beyond, but we singled out three whose efforts stood out in these extraordinary months.

John Bennett, Practice Specialist at the Weill Cornell Medicine Center for Comprehensive Spine Care. As if managing an interdisciplinary care center through a global pandemic wouldn't be difficult enough in any case, it was made especially challenging due to the absence of a Practice Manager. We were in process filling that position when the pandemic hit, and John stepped up to get the job done.

Alvin Quitiquit, Administrative Assistant. During the worst of the Covid-19 pandemic, with many administrative staffers gone full-time remote, Alvin reported to the office every Monday to oversee our weekly Neurovascular Conference. Alvin also volunteered to address on-site issues for remote team members, making it possible to keep our workforce safe.

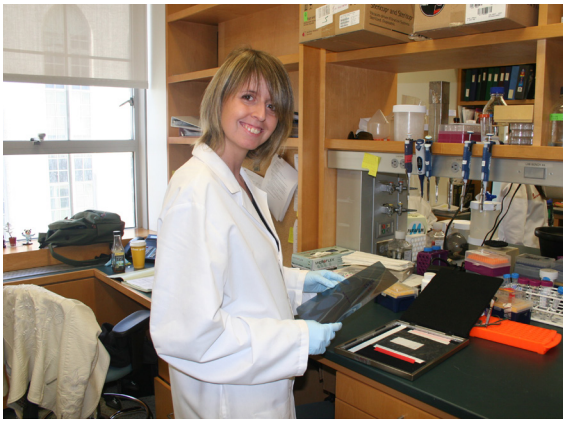
Natalie Perez, Surgical Coordinator. Natalie assumed the role of a lead surgical coordinator during a staffing shortage during the pandemic. In addition to managing the surgical scheduling of one of our neurosurgeons, she covered several additional providers and trained new hires.

Our winners removed their masks only briefly for these photos!

Research Interrupted, But Not Stopped

Laboratory research was put on hold in March to help stem the tide of the pandemic that was just beginning to engulf New York. At Weill Cornell Medicine Neurosurgery, that threatened to halt ongoing investigations into brain tumors, movement disorders, epilepsy, and more. With just a few days' notice to vacate the lab, our research teams found ways to protect their work and keep the momentum going even while they were away from the lab.

***Carolina Cocito, PhD,** the Ty Louis Campbell Research Fellow in the Children's Brain Tumor Project laboratory, who studies the role of the immune system in the progression of invasive brain tumors, shared her story about how the project's important work continued even with the lab on hold.*



The work of our lab relies on the use of genetically engineered and orthotopic mouse models of brain tumors and on the generation, maintenance, and characterization of cell lines for *in vitro* studies. Many of the cell lines are patient-derived, donated by patients and families after biopsies or, sadly, autopsies. You cannot imagine anything more precious to us than these cell lines.

The week of the shutdown was very upsetting for us all, mostly because we didn't have a clear idea of when we would be able to come back and resume our experiments. We froze most of the cell lines that were in culture at the time of the shutdown and we worked closely with our animal facility to develop a plan for the animals in our colony.

Although the team could not come in to work, we were able to define a rotation schedule so we could monitor the animals and collect some tissue for future analyses. The same schedule allowed us to continue day-to-day lab management such as monitoring equipment and managing deliveries. We met virtually at least once a week with the PIs and with the rest of the group to discuss our progress and to talk about new interesting findings in the field. We were extremely connected, which was very useful both from a psychological and collaborative point of view.

After an initial period of incertitude, I started to appreciate how productive my time at home could be. As a matter of fact, during those days I had the time to analyze my most recent data, generate figures for a manuscript, finalize some of my projects, study, and plan my experiments in detail. My colleagues and I all found ways to use our time productively so we could ramp up again quickly when it was safe to return.

Now that we researchers are back in the lab, I definitely feel the pressure to catch up—but at the same time I have a lot of new projects and ideas to work on.

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*How do we keep vital investigations going even when labs were shut? That was the question on the mind of researchers everywhere in March as they prepared to suspend operations. **Roberta Marongiu, PhD,** assistant professor of neuroscience in Dr. Kaplitt's molecular biology laboratory, who conducts research on Parkinson's disease and other movement disorders, shares her perspective on how the temporary shutdown affected the daily work of this dedicated lab team.*

The Covid-19 pandemic struck scientists around the world and dramatically shook our ability to perform daily research activities. In mid-March we had approximately two weeks to decide how to downsize our research to only those essential projects that could not be stopped without drastically jeopardizing our investigations. Under the decisive leadership of Dr. Kaplitt, we immediately started meeting to plan workflow and schedule structure.

Given these unprecedented circumstances, the shutdown compromised the collection of data from *in vitro* and *in vivo* experiments. This in turn delayed the submission for publication of important results as well as the submission of research proposals in accordance with grant deadlines. Needless to say we went through some rough times, concerned about what would become of our experiments, animals, projects, manuscripts and grants, and, ultimately, our jobs. The scientific community, however, which is used to working under stressful circumstances while meeting tight deadlines, proved to be resilient during these very difficult times.

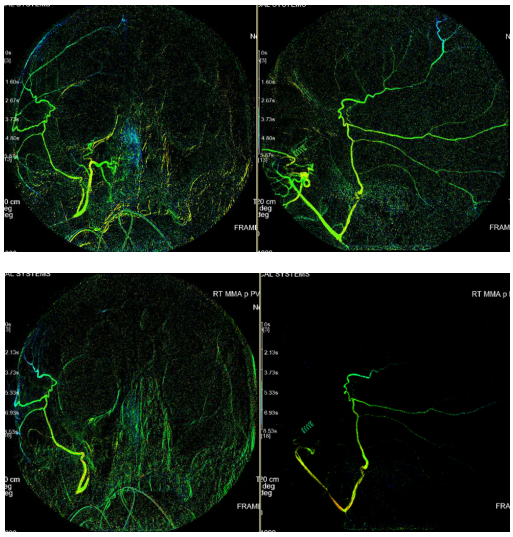
As a contingency, our focus was predominantly diverted to working remotely from home. We concentrated our efforts on the analysis of previously collected data, literature searches, and scientific writing. Through 10 weeks of sheltering in place, we were able to perform experiments that allowed us to keep our essential projects going as strategically planned, even if only at a minimum. We were able to maintain our mouse colonies, thanks to the efforts of the Weill Cornell Research Animal Resource Center (RARC) team.

This pandemic greatly affected our ability to meet our research goals for the year 2020 and possibly 2021. Nevertheless, we worked relentlessly to maintain maximum productivity.

Dr. Knopman to Lead National Multicenter Clinical Trial for Subdural Hematoma Embolization

Dr. Jared Knopman, who has been a pioneer in the use of middle meningeal artery embolization for subdural hematomas, will lead a new FDA-approved clinical trial of the procedure. The clinical trial, called Embolization of the Middle Meningeal Artery With Onyx Liquid Embolic System for Subacute and Chronic Subdural Hematoma (EMBOLISE), is based on the groundbreaking work Dr. Knopman has done performing embolization for subdural hematomas.

Subdural hematomas are a common injury in the elderly, who can develop these brain bleeds after even minor injuries. In a patient with a subdural hematoma, blood pools under the dura (the protective covering over the brain), putting pressure on the brain. The traditional solution had been open surgery, in which a portion of the skull was removed and the dura opened, to allow a neurosurgeon to drain the hematoma. Many older patients, however, are not good candidates for surgery, as the surgical risks outweigh the potential benefit. The patients most vulnerable to these hematomas, then, were also the least able to benefit from surgical repair.



Reconstructed angiograms of a patient who received embolization of the middle meningeal artery; before embolization (top) and after embolization (bottom)

The minimally invasive embolization technique, which can stop the bleeding from the inside, requires no opening in the skull or dura. A neurosurgeon trained in interventional radiological techniques threads a tiny catheter from an incision in the thigh up to the site of the hematoma, then cuts off its blood supply by infusing a "glue" made of polyvinyl alcohol particles. Dr. Knopman published a case report of the first 60 patients treated using the embolization technique in December 2019 and has treated a total of more than 300 patients to date; the 91% long-term success rate paved the way for FDA approval of this national randomized trial.

The trial is sponsored by Medtronic, the manufacturer of the Onyx polymer that will be used to stop the bleeding. More about the clinical trial can be found on **clinicaltrials.gov.**

Meet Our Growing Team

The pandemic may have slowed the pace of life a bit, but it didn't slow our growth. We remain committed to growth, especially at our regional centers. Meet the latest members of the Weill Cornell Medicine Brain and Spine Center:

Dr. Louis Chang joined the neurosurgery team at NewYork-Presbyterian Brooklyn Methodist Hospital in March. Dr. Chang is a board-certified neurosurgeon specializing in conditions and disorders of the spine. After graduating from Dartmouth College with a degree in chemistry, Dr. Chang received his MD from the State University of New York Downstate College of Medicine, then completed his residency in neurosurgery at the University of Maryland Medical Center in Baltimore. He also completed an advanced clinical fellowship in Minimally Invasive Spine and Navigation under Dr. Roger Härtl. Prior to joining Weill Cornell Medicine, Dr. Chang was Chief of Minimally Invasive Spine Surgery at Medstar Franklin Square Medical Center in Baltimore and Clinical Assistant Professor in Neurosurgery at Georgetown University Medical Center.

In August, we welcomed a new Chief of Neurosurgery at NewYork-Presbyterian Queens. **Dr. John Park** is a board-certified neurosurgeon with particular expertise in the treatment of brain and spinal tumors and degenerative disorders of the cervical and lumbar spine. Dr. Park received his undergraduate degree, *magna cum laude* with honors, from Brown University and earned his MD and PhD degrees at Harvard Medical School. He completed his residency training at Harvard at Brigham and Women's Hospital and Children's Hospital and completed a research fellowship at Dana Farber Cancer Institute. He received advanced spine training at Cleveland Clinic. Dr. Park has a national reputation for the surgical treatment of low-grade gliomas and recurrent malignant gliomas and has served as the principal neurosurgeon for patients enrolled in NCI trials for malignant gliomas.

Dr. K. Daniel Riew joined our faculty in September, bringing new orthopedic expertise to our team. Dr. Riew is internationally recognized as an expert in cervical spine disorders, and has performed more surgical procedures on the cervical spine than almost any other surgeon in the world. Dr. Riew received his undergraduate degree from Harvard and his MD from Case Western Reserve School of Medicine. He completed his first residency, in medicine, at NewYork-Presbyterian/Weill Cornell Medical Center, then a second residency in orthopedic surgery at George Washington University Hospital. He has also completed research fellowship training in cardiology and biomechanics and a clinical fellowship in spine surgery. He comes to us from NewYork-Presbyterian Och Spine Hospital/Columbia University Irving Medical Center, where he was Director of Cervical Spine Surgery and co-chief of the Spine Division of the Department of Orthopedic Surgery.

Faculty Promotions

Dr. Rohan Ramakrishna has been named Chief of Neurosurgery at NewYork-Presbyterian Brooklyn Methodist Hospital. In addition to his role as director of the Brain Metastases Program at Weill Cornell Medicine and co-director of the William Rhodes and Louise Tilzer-Rhodes Center for Glioblastoma at NewYork-Presbyterian, Dr. Ramakrishna will now head up the growing neurosurgery department in Brooklyn. Dr. Ramakrishna, who joined Weill Cornell Medicine in 2014, has distinguished himself as a pioneer in brain tumor surgery and neuro-oncology. He recently published a new text on brain metastases, *Central Nervous System Metastases,* which provides comprehensive information on the medical and surgical management of brain and spine metastases.

Dr. Kai-Ming Fu has been named Chief of Neurosurgery at NewYork-Presbyterian Lower Manhattan. His specialty is advanced surgical procedures for spinal deformity, reconstruction, and oncology; sacroiliac joint conditions; and low back pain, especially pain caused by previously undetected and under-diagnosed conditions. Dr. Fu, who joined Weill Cornell Medicine in 2011, adds leadership at Lower Manhattan to his existing roles as director of neurotrauma and co-director of the Spinal Deformity and Scoliosis Program at Weill Cornell Medicine. His work has been featured in the *Journal of Neurosurgery Spine, Spine Deformity, Spinal News,* and *Orthopedics Today.*

Dr. Stieg Named Hariri Professor

The Board of Overseers of Weill Cornell Medicine appointed Neurosurgeon-in-Chief Philip E. Stieg, PhD, MD, as the first Margaret and Robert J. Hariri, MD '87, PhD '87 Professor of Neurological Surgery. The endowed fellowship was made possible through a $3 million gift from Dr. Robert Hariri (MD '87, PhD '87) and his wife, Margaret.

Dr. Hariri earned his degrees at the Tri-Institutional MD-PhD Program at Weill Cornell before joining the faculty of the Department of Neurological Surgery, where he forged a lifelong friendship with and admiration for Dr. Stieg. Dr. Hariri went on to create a neurosurgical device company, then became an innovator in the new field of regenerative medicine. He founded and led Celgene Cellular Therapeutics and Human Longevity before founding his current company, Celularity, which develops cellular therapies developed from placental stem cells.

The endowment will support continued groundbreaking research in the Department of Neurological Surgery at Weill Cornell Medicine.

Notable Publications

Our faculty and residents publish well over 100 peer-reviewed papers every year; weighted for program size we are second in the U.S. for academic output. Here are just a few recent examples:

New England Journal of Medicine
Personalized iPSC-Derived Dopamine Progenitor Cells for Parkinson's Disease.
Schweitzer JS, Song B, Herrington TM, Park TY, Lee N, Ko S, Jeon J, Cha Y, Kim K, Li Q, Henchcliffe C, Kaplitt M, Neff C, Rapalino O, Seo H, Lee IH, Kim J, Kim T, Petsko GA, Ritz J, Cohen BM, Kong SW, Leblanc P, Carter BS, Kim KS. 2020 May 14;382(20):1926-1932.


BRIEF REPORT

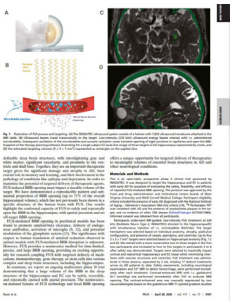
Personalized iPSC-Derived Dopamine Progenitor Cells for Parkinson's Disease

Science Advances
PET, image-guided HDAC inhibition of pediatric diffuse midline glioma improves survival in murine models.
Tosi U, Kommidi H, Adeuyan O, Guo H, Maachani UB, Chen N, Su T, Zhang G, Pisapia DJ, Dahmane N, Ting R, Souweidane MM. 2020 Jul 24;6(30):eabb4105.

Neuro-oncology Advances
Missing diversity in brain tumor trials.
Taha B, Winston G, Tosi U, Hartley B, Hoffman C, Dahmane N, Mason CE, Greenfield JP. 2020 May 13;2(1):vdaa059.

Journal of Neuro-oncology
Inpatient and outpatient case prioritization for patients with neuro-oncologic disease amid the COVID-19 pandemic: general guidance for neuro-oncology practitioners from the AANS/CNS Tumor Section and Society for Neuro-Oncology.
Ramakrishna R, Zadeh G, Sheehan JP, Aghi MK. 2020 May; 147(3):525-529.

Proceedings of the National Academy of Sciences
Noninvasive hippocampal blood-brain barrier opening in Alzheimer's disease with focused ultrasound.
Rezai AR, Ranjan M, D'Haese PF, Haut MW, Carpenter J, Najib U, Mehta RI, Chazen JL, Zibly Z, Yates JR, Hodder SL, Kaplitt M. Proc U S A. 2020 Apr 28;117(17):9180-9182.



Clinical Cancer Research
Molecular Engineering of Ultrasmall Silica Nanoparticle-Drug Conjugates as Lung Cancer Therapeutics.
Madajewski B, Chen F, Yoo B, Turker MZ, Ma K, Zhang L, Chen PM, Juthani R, Aragon-Sanabria V, Gonen M, Rudin CM, Wiesner U, Bradbury MS, Brennan C. 2020 Jul 28.

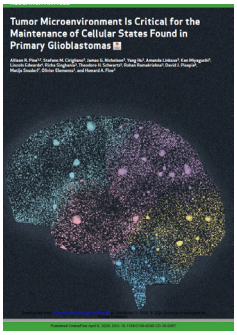
Neurosurgery
Predictors of Outcomes After Focused Ultrasound Thalamotomy.

Continued on next page >

Notable Publications *(continued)*

Krishna V, Sammartino F, Cosgrove R, Ghanouni P, Schwartz M, Gwinn R, Eisenberg H, Fishman P, Chang JW, Taira T, Kaplitt M, Rezai A, Rumià J, Gedroyc W, Igase K, Kishima H, Yamada K, Ohnishi H, Halpern C. 2020 Aug 1;87(2):229-237.

Cancer Discovery



Tumor Microenvironment Is Critical for the Maintenance of Cellular States Found in Primary Glioblastomas
Pine AR, Cirigliano SM, Nicholson JG, Hu Y, Linkous A, Miyaguchi K, Edwards L, Singhania R, Schwartz TH, Ramakrishna R, Pisapia DJ, Snuderl M, Elemento O, Fine HA. 2020 Jul;10(7):964-979.

Oncotarget

Efficacy of osimertinib against EGFRvIII+ glioblastoma
Chagoya G, Kwatra SG, Nanni CW, Roberts CM, Phillips SM, Nullmeyergh S, Gilmore SP, Spasojevic I, Corcoran DL, Young CC, Ballman KV, Ramakrishna R, Cross DA, Markert JM, Lim M, Gilbert MR, Lesser GJ, Kwatra MM. 2020 Jun 2;11(22):2074-2082.

Journal of Neurosurgery

- **Radiographic and clinical outcomes using intraoperative magnetic resonance imaging for transsphenoidal resection of pituitary adenomas.**
  Juthani RG, Reiner AS, Patel AR, Cowan A, Roguski M, Panageas KS, Geer EB, Karimi S, Cohen MA, Tabar V. 2020 Jul 3:1-12.
- **Extent of resection, molecular signature, and survival in 1p19q-codeleted gliomas.**
  Garton ALA, Kinslow CJ, Rae AI, Mehta A, Pannullo SC, Magge RS, Ramakrishna R, McKhann GM, Sisti MB, Bruce JN, Canoll P, Cheng SK, Sonabend AM, Wang TJC. 2020 May 8:1-11.

World Neurosurgery

Medical Student Concerns Relating to Neurosurgery Education During COVID-19
Sergio W. Guadix, Graham M. Winston, John K. Chae, Arsalan Haghdel, Justin Chen, Iyan Younus, Ryan Radwanski, Jeffrey P. Greenfield, and Susan C. Pannullo 2020 Jul; 139: e836–e847.

From the Annals of Weill Cornell Neurological Surgery

- **Foundations of the Diagnosis and Surgical Treatment of Epilepsy**
  Ibrahim Hussain, Gary Kocharian, Umberto Tosi, Theodore H. Schwartz, Caitlin E. Hoffman July 2020 Pages 750-761
- **Challenges of Epilepsy Surgery**
  Claudia M. Kuzan-Fischer, Whitney E. Parker, Theodore H. Schwartz, Caitlin E. Hoffman July 2020 Pages 762-774
- **Innovations in the Neurosurgical Management of Epilepsy**
  Caitlin E. Hoffman, Whitney E. Parker, Benjamin I. Rapoport, Mingrui Zhao, Theodore H. Schwartz July 2020 Pages 775-788

Neuroimaging

The Prognostic Value of MRI Subventricular Zone Involvement and Tumor Genetics in Lower Grade Gliomas.
Chiang GC, Pisapia DJ, Liechty B, Magge R, Ramakrishna R, Knisely J, Schwartz TH, Fine HA, Kovanlikaya I. 2020 Jul 28.

Cleft Palate Craniofacial Journal

Impact of a Multidisciplinary Craniofacial Clinic for Patients With Craniofacial Syndromes on Patient Satisfaction and Outcome.
Hoffman C, Yuan M, Boyke A, Perera I, Rabbin-Birnbaum C, O'Connor A, Souweidane M, Imahiyerobo T. 2020 Aug 27:1055665620948767.

Acta Neurochirurgica

The slope of the learning curve in 600 consecutive endoscopic transsphenoidal pituitary surgeries
Younus I, Gerges MM, Uribe-Cardenas R, Morgenstern P, Kacker A, Tabaee A, Anand VK, Schwartz TH. 2020 Jul 1.

Interdisciplinary Neurosurgery

An investigation of Cogmed working memory training for neurological surgery patients
Taylor A. Liberta, Michiru Kagiwada, Kaylee Ho, Jessica Spat-Lemus, Gerald Voelbel, Aviva Kohn, Kenneth Perrine, Lawrence Josephs, Erin A. McLean, Amanda Sacks-Zimmerman Volume 21, September 2020, 100786

Global Spine Journal

- **The 6 T's of Minimally Invasive Spine Surgery**
  Härtl R. 2020 Apr;10(2 Suppl):5S-7S.
- **Operative Treatment of Traumatic Spinal Injuries in Tanzania: Surgical Management, Neurologic Outcomes, and Time to Surgery**
  Magogo J, Lazaro A, Mango M, Zuckerman SL, Leidinger A, Msuya S, Rutabasibwa N, Shabani HK, Härtl R. 2020 Jan 21:2192568219894956.

Journal of Clinical Imaging

Somatostatin receptor-2 negative meningioma: pathologic correlation and imaging implications
Roytman M, Pisapia DJ, Liechty B, Lin E, Skafida M, Magge RS, Osborne JR, Pannullo SC, Knisely JPS, Ramakrishna R, Ivanidze 2020 Oct;66:18-22.

Clinical Imaging

Improved targeting of the globus pallidus interna using quantitative susceptibility mapping prior to MR-guided focused ultrasound ablation in Parkinson's disease
Ebani EJ, Kaplitt MG, Wang Y, Nguyen TD, Askin G, Chazen JL. 2020 Jun 15;68:94-98.

Spinal Cord Series and Cases

Pressure ulcers after traumatic spinal injury in East Africa: risk factors, illustrative case, and low-cost protocol for prevention and treatment
Lessing NL, Mwesige S, Lazaro A, Cheserem BJ, Zuckerman SL, Leidinger A, Rutabasibwa N, Shabani HK, Mangat HS, Härtl R. 2020 Jun 15;6(1):48.

Plastic Reconstructive Surgery

Muscle Flap Closure Following Complex Spine Surgery: A Decade of Experience
Wright MA, Weinstein AL, Bernstein JL, Franck P, Lara DO, Samadi A, Cohen LE, Härtl R, Baaj AA, Spector JA. 2020 Aug 19.

NewYork-Presbyterian Weill Cornell Medicine

Cerebrovascular Surgery
Aneurysms, AVMs, carotid occlusive disease
Dr. Philip E. Stieg, Chairman 212-746-4684
Dr. Jared Knopman 212-746-5149

Brain Tumor Surgery
Benign and malignant tumors in adults and children
Dr. Philip E. Stieg, Chairman 212-746-4684
Dr. Theodore H. Schwartz 212-746-5620
Dr. Babacar Cisse 646-962-3389
Dr. Mark Souweidane 212-746-2363 (pediatric)
Dr. Jeffrey Greenfield 212-746-2363 (pediatric)
Dr. Caitlin Hoffman 212-746-2363 (pediatric)

Epilepsy Surgery
Curative and palliative surgical approaches to epilepsy
Dr. Theodore H. Schwartz 212-746-5620
Dr. Caitlin Hoffman 212-746-2363 (pediatric)

Interventional Neuroradiology
Minimally invasive image-guided diagnosis and treatment
Dr. Y. Pierre Gobin 212-746-4998
Dr. Srikanth Boddu 212-746-2821
Dr. Jared Knopman 212-746-5149

Stereotactic and Functional Neurosurgery
Parkinson's disease, essential tremor, and pain
Dr. Michael Kaplitt 212-746-4966

Neuro-oncology
Comprehensive treatment options for cancers of the brain and spine
Dr. Howard Fine 212-746-2596
Dr. Susan Pannullo 212-746-2438
Dr. Rajiv Magge 646-962-2185
Dr. Babacar Cisse 646-962-3389

Neuropsychology
Testing, imaging, psychotherapy, and cognitive remediation
Kenneth Perrine, PhD 212-746-2197
Amanda Sacks-Zimmerman, PhD 212-746-3356
Jessica Spat-Lemus, PhD 646-962-3336 (pediatric)

Pediatric Neurosurgery
Treatment of the full spectrum of CNS conditions in children
Dr. Mark Souweidane 212-746-2363
Dr. Jeffrey Greenfield 212-746-2363
Dr. Caitlin Hoffman 212-746-2363

Pituitary Tumors/Neuroendocrinology
Endoscopic approaches to anterior skull base surgery
Dr. Theodore H. Schwartz 212-746-5620
Dr. Babacar Cisse 646-962-3389
Dr. Jeffrey Greenfield 212-746-2363 (pediatric)
Dr. Georgiana Dobri 646-962-3556 (neuroendocrinology)

Spinal Surgery
Comprehensive care for spine conditions and injuries
Dr. Roger Härtl 212-746-2152
Dr. Eric Elowitz 212-746-2870
Dr. Kai-Ming Fu 212-746-2260
Dr. Daniel Riew 212-746-1164
Dr. Michael Virk 646-962-3388

Stereotactic Radiosurgery
Noninvasive treatments for brain tumors and other conditions
Dr. Susan Pannullo 212-746-2438

NewYork-Presbyterian Lower Manhattan
646-962-5115
Dr. Kai-Ming Fu, Chief of Neurosurgery, NYP Lower Manhattan
Minimally invasive and complex spine, spinal deformity, and neurotrauma

Dr. Michael Virk, minimally invasive and complex spine

NewYork-Presbyterian Queens
718-670-1837
Dr. John Park, Chief of Neurosurgery, NYP Queens
Brain tumors, neuro-oncology, spine surgery

Dr. Ning Lin, cerebrovascular surgery
Dr. Srikanth Boddu, interventional neuroradiology
Dr. Rupa Gopalan Juthani, brain and spine tumors
Dr. Caitlin Hoffman (pediatic) 212-746-2363

NewYork-Presbyterian Brooklyn Methodist
718-780-3070
Dr. Rohan Ramakrishna, Chief of Neurosurgery, NYP Brooklyn Methodist
Brain tumors, neuro-oncology, stereotactic neurosurgery

Dr. Martin Zonenshayn, movement disorders and peripheral nerve
Dr. Michael Ayad, cerebrovascular surgery
Dr. Louis Chang, minimally invasive and complex spine
Dr. Caitlin Hoffman (pediatic) 212-746-2363

Upcoming CME Courses

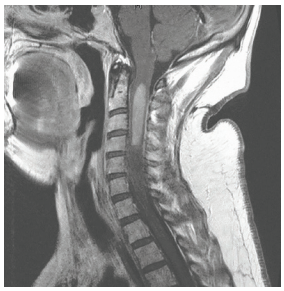
September 25, 2020

Recognition and Management of Common Neurosurgical Conditions in the Pediatric Practice

This course is designed to teach or refresh pediatricians and nurse practitioners about disorders that need further evaluation by a pediatric neurosurgeon (including brain tumors; seizures; and inborn brain, spine, and skull abnormalities) in the midst of a busy practice, as well as how to triage, when to image, and when to send a child to an emergency room.
More information at pediatricbrainandspine.org

October 22, 2020

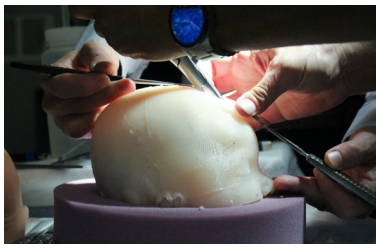
Spine Tumor Seminar 2020



Specialists share state-of-the-art treatment paradigms for patients with metastatic and primary tumors of the spinal cord and column. We will cover the surgical and non-surgical options and feature experts in neurological surgery, neuro-oncology, medical and radiation oncology, neuroradiology, and pain anesthesia.
More information at spineseminar.org

November 7, 2020

Endoscopic and Open Surgical Approaches for Craniosynostosis



For neurosurgeons and plastic surgeons: A detailed course in advanced surgical treatments—both open and endoscopic—for craniosynostosis. Course will include 4.5 hours of didactic sessions plus a three-hour surgical demonstration module performed on unique 3D-printed models of actual patients.
Latest information and registration at cranio-course.org

December 10, 11, 12, 2020

14th New York City Spinal MIS, Endoscopy, Robotics, 3D Navigation, and Augmented Reality Symposium: Case-Based and Global

Weill Cornell Medicine NewYork-Presbyterian
NYC MISS 2020

This year's NYC-MISS course is all virtual, so geography is no longer an obstacle. Join spine experts from around the globe to learn and debate the latest techniques and trends in robotics, navigation, and minimal access approaches, plus a Saturday session filled with livestreamed surgical demonstrations. **More information at nyc-miss.org**

Visit: weillcornellbrainandspine.org/continuing-medical-education

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