Weill Cornell Medicine
Neurological Surgery

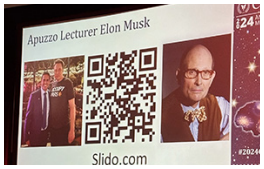
News and Updates From Weill Cornell Medicine Neurological Surgery **FALL 2024**

A MESSAGE FROM THE CHAIR

Philip E. Stieg, PhD, MD

As I write this, I'm headed back to New York after attending the annual meeting of the Congress of Neurological Surgeons. CNS is one of the largest, most important professional conferences of the year for neurosurgeons, and I always come back inspired. This year I find myself thinking about the spirit of innovation—the drive that developed neurosurgery throughout the twentieth century, exponentially so over the past 20 years.

Innovation is driven by scientific curiosity, by the refusal to accept the status quo, and by those "aha!" moments when new ideas are born. Innovation sparks progress, and I am truly humbled to work with a group of clinicians, researchers, and educators who continue to innovate in neurosurgery.

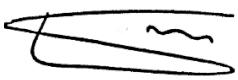


At the CNS meeting, I listened to Elon Musk deliver the Michael L.J. Apuzzo Lecture on Creativity and Innovation, focused on the emerging field of brain-computer interfaces. Several members of the Weill Cornell faculty have a book in production now on this topic, advised by Dr. Apuzzo himself. Mike Apuzzo has been a champion of innovation and creativity for decades, and I am so glad to count him among our department's esteemed advisors.

Innovation here, however, is not limited to brain-computer interfaces. Many of our spine faculty members are working with emerging VR and AR applications in the operating room, and are at the forefront of spatial computing technology in surgery. At CNS, I was proud to listen to one of our residents, Dr. Umberto Tosi, present his abstract on a novel monoclonal antibody designed to disrupt the growth of high-grade gliomas. Back at home, one of our epilepsy researchers, Dr. James Niemeyer, was named a Young Investigator for his work into seizure propagation. See page 2 of this newsletter for more on these two awards.

Across the board, in every subspeciality within neurosurgery, Weill Cornell faculty continue to push the boundaries, searching for new answers for Parkinson's and Alzheimer's diseases, brain tumors, stroke, spinal deformity and degeneration, and more. See the story at right about Dr. Kaplitt's continued advancement in focused ultrasound technology, and please be sure to visit **neurosurgery.weill.cornell.edu** for academic news from our faculty, and **neurosurgery.weillcornell.org** for clinical advances and patient news. Find us on social media, on YouTube, and in your podcast player, where we continue the quest for the "aha" moments that drive us every day.

Yours in good health,



Dr. Kaplitt Publishes in *JAMA Neurology* on Second-Side FUS for Tremor

Dr. Michael Kaplitt has not slowed down since pioneering the use of high-intensity focused ultrasound (FUS) for the treatment of essential tremor. Since the procedure was approved by the FDA in 2016, Dr. Kaplitt has performed it hundreds of times, restoring function to patients' dominant hand. This summer, in a paper published in the Journal of the American Medical Association (*JAMA Neurology*), he and 14 co-authors announced more good news. The results of their clinical trial of MR-guided FUS in patients previously treated for essential tremor show second-side treatment to be safe and effective. In an accompanying editorial, the 73% improvement in functional disability scores was noted as being remarkable, with the authors commenting that the best results could be expected when the procedure is conducted by highly experienced providers.

"We knew there was strong demand for the procedure on the dominant side, since the improvement in quality of life is so dramatic," said Dr. Kaplitt, who was the lead author of the study. "Patients who had not been able to hold a pen or a glass, sometimes for decades, could walk out of the hospital after just a few hours with the use of their dominant hand restored. But many patients have tremor in both hands and some have voice or head tremors, and these are usually not improved by a single-side treatment. In a world where holding a cellphone with one hand and touching the screen with the other is part of everyday life, the need for tremor control in both hands is essential."

Dr. Kaplitt helped to design and lead the clinical trial testing the safety and efficacy of the procedure on the second side, which took place at seven academic medical centers in the United States. The resulting paper, "Safety and Efficacy of Staged, Bilateral Focused Ultrasound Thalamotomy in Essential Tremor," reports on 51 patients who participated in the trial between July 2020 and October 2021. The results reported in this study were previously presented to the FDA and led to an additional approval of this procedure on the second side over one year ago, so this treatment is now available to any tremor patient.

"The quality-of-life improvement in patients having the second-side treatment is extremely gratifying," said Dr. Kaplitt. "While every procedure that changes the brain can have some risks, the low frequency of even relatively mild adverse events in a noninvasive procedure that can be done in just a few hours, with such dramatic and immediate results, and which allows patients to return home the same day, is quite remarkable."

Co-authors include many distinguished researchers and clinicians who have been leading the way on focused ultrasound applications. For more information, visit **neurosurgery.weill.cornell.edu.**

FACULTY NEWS

Dr. Bender Promoted to Professor

H. Allison Bender, PhD, ABPP, has been promoted to Professor of Neuropsychology in Neurological Surgery and Attending Psychologist at NewYork-Presbyterian Hospital/ Weill Cornell Medical Center. Dr. Bender, Director of Neuropsychology within Neurological Surgery, is board-certified in Clinical Neuropsychology; she specializes in evaluating patients to determine if they are candidates for neurosurgery; conducting intraoperative testing of patients during awake craniotomies; and cognitive remediation for patients after treatment.

Dr. Boddu Named Director of Neurointervention at NYP Queens

Srikanth Boddu, MD, has been promoted to Associate Professor of Radiology in Neurological Surgery and named Director of Neurointervention at NewYork-Presbyterian Queens. Dr. Boddu, a leader in venous sinus stenting for pulsatile tinnitus and idiopathic intracranial hypertension, also specializes in acute stroke, aneurysms, AVMs, fistulae, carotid stenosis, tumor embolization, vertebral compression fractures, vertebral metastasis, and intra-arterial chemotherapy. He sees patients at NYP Queens and Weill Cornell Medical Center.

Dr. Greenfield to Lead Residency Program

Jeffrey Greenfield, MD, PhD, has been named residency director for the Department of Neurological Surgery. Dr. Greenfield takes the reins from Dr. Michael Kaplitt, who steered the program through more than a decade of enormous growth and challenges. As Dr. Kaplitt remains focused on clinical and research work, Dr. Greenfield will assume responsibility for developing the training curriculum for our residents as well as cultivating a network of resident alumni to tap for advice and mentorship.

Coming Events

OCTOBER 25, 2024

Spine Tumor Seminar

Directed by Michael Virk, MD, PhD; Kai-Ming Fu, MD, PhD; Galal Elsayed, MD, and Paul Pagnini, MD

Specialists in neurological surgery, neuro-oncology, medical and radiation oncology, neuroradiology, and pain anesthesia will share state-of-the-art treatment paradigms for patients with primary and metastatic spinal tumors. Registration open now at **bit.ly/spinetumor2024**.

NOVEMBER 13-14, 2024

2024 Stroke & Neurocritical Care Symposium

Directed by Ning Lin, MD, and Baxter Allen, MD

This hybrid course (in-person and online) offers physicians, trainees, APPs, and medical students the latest advancements in medical and surgical treatments for neurological diseases, with a focus on stroke, a leading cause of morbidity and mortality. Visit **nypqcme.org**

DECEMBER 13-14, 2024

18th Annual Course: NYC-MISS 2024

Directed by Roger Härtl, MD, and Luiz Pimenta, MD, PhD

Spine surgeons travel from around the world to take part in this annual course in leading-edge navigation and minimal-access surgical techniques. Hands-on training on cadavers and high-tech simulation models, plus VR training. Registration now open at **nyc-miss.org**.

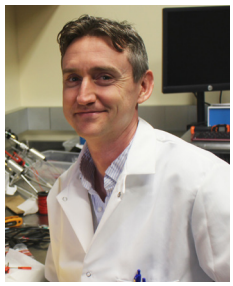
NYC MISS 2024
Och Spine at NewYork-Presbyterian/Weill Cornell Medical Center

Weill Cornell Medicine to Host Peds Section

In December, pediatric neurosurgeons from across the United States will meet at the Sheraton New York Times Square Hotel for the annual AANS/ CNS Section on Pediatric Neurological Surgery. Hosted by NewYork-Presbyterian, NYU Langone, and Mount Sinai, the meeting will run from Dec. 12-15. More information: **pedsneurosurgery.org**

AWARDS AND HONORS

Dr. Niemeyer Wins Young Investigator Award



James Niemeyer, PhD, has been honored with a 2024 Young Investigator Award from the American Epilepsy Society. Dr. Niemeyer won for his project titled "Mesoscale excitatory and inhibitory mapping of node recruitment in focal neocortical epilepsy." The award recognizes 20 young investigators conducting basic, translational, or clinical epilepsy research. Dr. Niemeyer will present his winning abstract at the AES meeting in December.

Andrew Yang Awarded Medical Student Fellowship in Socioeconomic Research

Congratulations to third-year medical student Andrew Yang, whose research has been awarded a 2024 grant from the Council of State Neurosurgical Societies (CSNS)/ CNS Foundation. The CSNS Medical Student Fellowship in Socioeconomic Research is awarded to a medical student conducting research on a socioeconomic issue impacting neurosurgical practice. Andrew is conducting research into disparities in industry funding for neurosurgeons; he will present his findings at the CSNS annual meeting in Boston next spring.

Dr. Tosi Wins KLS Martin Tumor Award

Fifth-year resident Umberto Tosi, MD, has been honored with the 2024 KLS Martin Tumor Award by the Congress of Neurological Surgeons. Dr. Tosi's winning abstract, which he presented at the CNS meeting in Houston, describes the development of a novel monoclonal antibody (1H5) to inhibit a protein responsible for the growth of high-grade glioma.

Dr. Park, Dr. Härtl, and Dr. Riew Among Best Spine Surgeons in the United States for 2024

In a new national ranking released by *Newsweek* and Statista, John Park, MD, PhD; Roger Härtl, MD; and Daniel Riew, MD, were named to the list of America's Best Spine Surgeons 2024. Dr. Park is chief of neurosurgery at Och Spine at NewYork-Presbyterian Queens; Dr. Härtl and Dr. Riew are part of Och Spine at NewYork-Presbyterian/Weill Cornell Medical Center at the 59th Street spine center. All are Castle Connolly Top Doctors; Dr. Park is the only Queens neurosurgeon on that list.

YouTube **Follow WeillCornellNeurosurgery on YouTube**

RECENT PUBLICATIONS OF NOTE

Bilateral Focused Ultrasound Treatment for Essential Tremor
Kaplitt MG, Krishna V, Eisenberg HM, Elias WJ, Ghanouni P, Baltuch GH, Rezai A, Halpern CH, Dalm B, Fishman PS, Buch VP, Moosa S, Sarva H, Murray AM. "Safety and Efficacy of Staged, Bilateral Focused Ultrasound Thalamotomy in Essential Tremor: An Open-Label Clinical Trial." *JAMA Neurol.* 2024 Sep 1;81(9):939-946. doi: 10.1001/jamaneurol.2024.2295. PMID: 39073822; PMCID: PMC11287440.

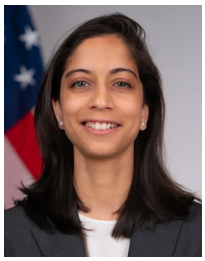
Virtual T'ai Chi, Qigong Program Shown to Ease Back Pain
Yang, Yang et al. "A Tai Chi and Qigong Mind-Body Program for Low Back Pain: A Virtually Delivered Randomized Control Trial." *North American Spine Society Journal (NASSJ)*, Volume 0, Issue 0, 100557

Women in Spine Surgery
Bratescu RA, Berger J, Härtl R. "Where are the women in spine surgery? A demographic study of the range of gender disparity in academic spine hospitals in the United States." *Spine J.* 2024 Aug 21:S1529-9430(24)00939-2. doi: 10.1016/j.spinee.2024.08.014. Epub ahead of print. PMID: 39154946.

LGBTQ+ in Surgery
Foresi B, Galbraith L, Uzoukwu C, Ezeudu C, Najafali D, Pannullo S. "Assessment of LGBTQ+ Diversity, Equity, and Inclusion in Subspecialty Surgery Literature: A Scoping Review." *World Neurosurg.* 2024 Jul 24;190:297-307. doi: 10.1016/j.wneu.2024.07.139. Epub ahead of print. PMID: 39059720.

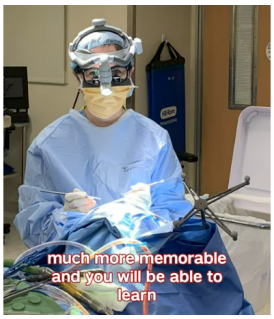
Innovations in CSF Leak Treatment
Zappi K, Giantini-Larsen A, Yan J, Konate M, Garton ALA, Knopman J, Stieg PE, Salama G, Park JK. "Innovations in the Treatment of Spinal Cerebrospinal Fluid Leaks." *World Neurosurg.* 2024 Jul;187:304-312. doi: 10.1016/j.wneu.2024.03.112. PMID: 38970201.

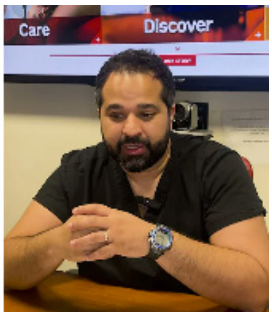
RESIDENT NEWS



Nalini Tata, MD, has been selected as a member of the 2024-2025 class of White House Fellows. This highly competitive, nonpartisan program brings together accomplished young professionals from business, government, academia, nonprofits, medicine, and the armed forces to work with top-ranking administration officials in preparation for a life of public service and leadership. Dr. Tata, who in addition to her MD also holds a Master in Public Policy from the Harvard Kennedy School of Government, will be working with the White House Office of Cabinet Affairs.

VIDEO ADVICE FOR RESIDENCY CANDIDATES





We recently introduced a new resource for residency candidates, just in time for interview season. In a series of video reels on YouTube, Instagram, Facebook, Twitter, and LinkedIn, our faculty members and residents offer an inside look at neurosurgery. Topics include **The Path to Residency** (advice on preparing for interviews and evaluating programs), **Resident Life** (an inside look at what it's like to be a neurosurgeon in training), and **Inside Neurosurgery** (candid feedback from faculty members on life in this field).

Check out dozens of videos posted so far, and look for many more later this fall, when we'll introduce more reels on **Neurosurgical Conditions** (for patients and families looking for easy-to-understand information to get them started on a difficult journey) and **Brain Health** (advice for keeping your brain in shape as you age).

IT'S A NO-BRAINER: EMPLOYEE RECOGNITION AWARD

The Neurosurgery Outstanding Service Award spotlights members of the department who exemplify our core values. The winner for Q3 is Nadia Wassermann, RN, who works with all of our patients.

Nadia Wassermann, RN, with Dr. Stieg

"Nadia is a caring and meticulous nurse who is able to take on many hats and adapt to different situations," said one the colleagues who nominated her. "She works well with others and takes initiative to learn and build relationships."

Another colleague praised Nadia for "going above and beyond for not only her patients, but her coworkers." Even when she has a full workload of her own, they said, Nadia is always willing to jump in and help when it gets busy. "Her positive attitude helps everyone around her get through the day," they said. "The department is a brighter place because she is here!"

Congratulations, Nadia! Visit **neurosurgery.weillcornell.org/nominate** for more about Nadia and previous winners and to nominate the next one.

Introducing the Global Neurosurgery Roundtable: Innovations and Insights from Africa

We are proud to be hosting a new monthly webinar series that brings together neurosurgeons and other experts in global health from around the world to learn, network, and share ideas. The series, which is held on the third Thursday of the month at 10 a.m. Eastern Time, made its debut in September with an introductory talk by Dr. Roger Härtl. Upcoming episodes will feature Dr. Halinder Mangat, Dr. Hamisi Shabani, Dr. Beverly Cheserem, and Dr. Magalie Cadieux, among others.

Registration is free and is available at **tanzanianeurosurgery.org**

FACULTY DIRECTORY

Brain Tumor Surgery
Benign and malignant tumors in adults
Philip E. Stieg, PhD, MD 212-746-4684
Theodore H. Schwartz, MD 212-746-5620

Pediatric brain tumors
Mark Souweidane, MD 212-746-2363
Jeffrey Greenfield, MD, PhD 212-746-2363
Caitlin Hoffman, MD 212-746-2363

Cerebrovascular Surgery
Aneurysms, AVMs, carotid occlusive disease
Philip E. Stieg, PhD, MD 212-746-4684
Jared Knopman, MD 212-746-5149
Justin Schwarz, MD 212-746-2821

CSF Leak Repair
Multidisciplinary management of cranial and spinal CSF leaks
John Park, MD, PhD 718-670-1837
Jeffrey Greenfield, MD, PhD 212-746-2363 (pediatric)

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

Interventional Neuroradiology
Minimally invasive image-guided diagnosis and treatment
Jared Knopman, MD 212-746-5149
Y. Pierre Gobin, MD 212-746-4998
Srikanth Boddu, MS, MRCS, FRCR, MD 212-746-2821
Justin Schwarz, MD 212-746-2821

Neuro-oncology
Comprehensive treatment options for cancers of the brain and spine
Susan Pannullo, MD 212-746-2438
Howard Fine, MD 212-746-2596
Rajiv Magge, MD 646-962-2185
Husain Danish, MD 212-746-6575

Neuropsychology
Testing, psychotherapy, and cognitive remediation
H. Allison Bender, PhD, ABPP 212-746-2197
Amanda Sacks-Zimmerman, PhD, ABPP 212-746-3356

Pediatric Neurosurgery
Treatment of the full spectrum of CNS conditions in children
Mark Souweidane, MD 212-746-2363
Jeffrey Greenfield, MD, PhD 212-746-2363
Caitlin Hoffman, MD 212-746-2363
Neil Feldstein, MD 212-305-1396 (Columbia campus)
Taemin Oh, MD 212-305-1396 (Columbia campus)

Pituitary Tumors/Neuroendocrinology
Endoscopic approaches to anterior skull base surgery
Theodore H. Schwartz, MD 212-746-5620
Rohan Ramakrishna, MD 212-746-1996
Jeffrey Greenfield, MD, PhD 212-746-2363 (pediatric)
Georgiana Dobri, MD 646-962-3556 (neuroendocrinology)

Stereotactic/Functional Neurosurgery
Parkinson's disease, essential tremor, and pain
Michael Kaplitt, MD, PhD 212-746-4966

Stereotactic Radiosurgery
Noninvasive treatments for brain tumors and other conditions
Philip E. Stieg, PhD, MD 212-746-4684
Michael Kaplitt, MD, PhD 212-746-4966
Susan Pannullo, MD 212-746-2438
Rohan Ramakrishna, MD 212-746-1996

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Roger Härtl, MD, Director of Spinal Surgery
Kai-Ming Fu, MD, PhD
Ibrahim Hussain, MD, PhD
Paul Park, MD, MMS
Daniel Riew, MD
Michael Virk, MD, PhD

In addition to our campus on the Upper East Side, we now offer our world-class neurosurgical services in Lower Manhattan, Queens, and Brooklyn. Patients come from around the globe for our experience and skill—and now you can visit us closer to home.

NewYork-Presbyterian Lower Manhattan
Call for appointment: 646-962-5115
Minimally invasive and complex spine

Kai-Ming Fu, MD, PhD, Chief of Neurosurgery

NewYork-Presbyterian Queens
Call for appointment: 718-670-1837

John Park, MD, PhD, Chief of Neurosurgery
Brain tumors, neuro-oncology, spine, stereotactic radiosurgery
Ning Lin, MD *Cerebrovascular surgery*
Srikanth Boddu, MS, MRCS, FRCR, MD *Interventional neuroradiology*
Caitlin Hoffman, MD *Pediatric neurosurgery* (212-746-2363)

Och Spine at NewYork-Presbyterian Queens
Endoscopic, minimally invasive, and complex spine
Galal Elsayed, MD

NewYork-Presbyterian Brooklyn Methodist
Call for appointment: 718-780-3070

Rohan Ramakrishna, MD, Chief of Neurosurgery
Brain tumors, neuro-oncology, stereotactic radiosurgery
Michael Ayad, MD, PhD *Cerebrovascular surgery*
Justin Schwarz, MD *Cerebrovascular surgery*
Martin Zonenshayn, MD *Movement disorders, peripheral nerve conditions*

Minimally invasive and complex spine
Osama Kashlan, MD, MPH
Paul Park, MD, MMS

Pediatric neurosurgery (212-746-2363)
Mark Souweidane, MD
Caitlin Hoffman, MD

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