



A MESSAGE FROM THE CHAIR

Philip E. Stieg, PhD, MD

Dear Friends and Colleagues,

Spring is a time for renewal for everyone, and it's an especially refreshing time in medicine. Every March we get to meet our new residents, the soon-to-be medical school graduates who are about to embark on their journey of neurosurgical training. Nothing gives me more satisfaction each year than welcoming our new residents (except perhaps the pride I feel as I send our residency graduates out into their new professional lives), and I look forward to spending the next seven years helping them become the next generation of leaders in neurosurgery. See page 4 of this newsletter to meet our incoming residents, Alexandra Giantini Larsen and Andrew Garton.



This year spring also brought with it the commercial availability of DBS for epilepsy (see news at right), several prestigious awards given to our faculty and fellows (page 3), and an expanded presence in Brooklyn (page 4). We are looking forward to a full roster of spring CME courses and to welcoming our special Grand Rounds speaker, Dr. David Acosta, to kick off Diversity Week later this month (page 2).

I am also proud to announce the launch of my new podcast, *This Is Your Brain With Dr. Phil Stieg*. The podcast is a way for me to bring the fascinating conversations I have with colleagues and patients to a wide audience. I look forward to continuing these conversations, and I invite your feedback. See page 3 for more information about the podcast.

Finally, with warm weather comes the return to sports for many young (and not-so-young) athletes, and along with that the risk of head injuries. Our multidisciplinary Concussion and Brain Injury Clinic is an excellent resource for worried patients and their parents and provides expert advice and treatment options (see page 3 for leadership news from the Concussion Clinic, and visit concussion.weillcornell.org for more information).

Happy Spring!

Yours in good health,

Phil Stieg

Deep Brain Stimulation for Epilepsy

After more than a decade of testing, an advanced procedure for epilepsy is now available to patients whose seizures have not been successfully managed with medication. Deep brain stimulation (DBS), which has been effective for Parkinson's disease and other movement disorders, was approved in 2018 by the Food and Drug Administration for medication-resistant epilepsy after a seven-year-long clinical trial. It is now commercially available in the United States in select locations, including the Weill Cornell Medicine Brain and Spine Center.

Dr. Michael Kaplitt, whose work throughout the clinical trial helped win FDA approval, was the first surgeon in New York to perform deep brain stimulation for epilepsy. The multi-center clinical trial, called Stimulation of the Anterior Nucleus of the Thalamus for Epilepsy (SANTE), tested the new device in more than 100 people over seven years; the median reduction in seizures was 75 percent. Study results were published in the journal *Epilepsia* ("Electrical stimulation of the anterior nucleus of thalamus for treatment of refractory epilepsy") in 2010, reporting successful results from the first two years; a 2015 paper published in *Neurology* at five years concluded that "long-term follow-up of ANT [anterior nucleus of the thalamus] deep brain stimulation showed sustained efficacy and safety in a treatment-resistant population," and in 2018 the FDA approved the device for use in the United States. In early 2019 the device became commercially available, and the first insurance companies began providing coverage for the procedure.

"It's extremely gratifying to see this procedure become available to patients," says Dr. Kaplitt. "I was part of the study group for so many years, and I had become convinced that this was an effective way to help patients control seizures." Dr. Kaplitt was the first in the world to test gene therapy for Parkinson's disease and in 2017 became the first neurosurgeon in New York to use focused ultrasound to treat essential tremor.

"I was honored to participate in the FDA meeting that led to the approval of the device for epilepsy," he says, "and I am pleased that this FDA approval now allows us to provide a minimally invasive intervention to lessen seizures and vastly improve quality of life in patients with epilepsy."

The technology, made by Medtronic, consists of the same DBS device currently used for movement disorders plus an external patient programmer that patients can use to control the stimulation. The device is implanted in the chest below the collar bone and delivers electrical stimulation over tiny wires to the ANT, interrupting the propagation of seizures. (The electrodes can be directed to very specific points in the brain; different parts of the brain can be stimulated to relieve the symptoms of Parkinson's disease, essential tremor, and now epilepsy.)

Deep brain stimulation now joins other minimally invasive neurosurgical options for patients with epilepsy that does not respond to medication. Weill Cornell Medicine is one of the few places in the United States to offer a wide range of options for patients with epilepsy, including traditional neurosurgery, laser surgery, and neurostimulation therapy—which includes vagal nerve stimulation (VNS), responsive neurostimulation (RNS), and now deep brain stimulation (DBS). For more information about DBS for epilepsy, please contact Dr. Kaplitt's office (212-746-4966).

Global Neurosurgery

We were so proud to host “Global Neurosurgery 2019: A Practical Symposium” in January. This sold-out meeting connected neurosurgeons, other physicians, and health policy leaders to identify population-based needs in different regions and assess current successes and continued barriers. The assembled leaders in global neurosurgery used these experiences and perspectives to begin formulating a strategy for improving global health and developing metrics to assess success.



Clockwise from above left: Walter Jean, MD, delivered his presentation about neurosurgery in Vietnam via live stream from Hanoi; Drs. Caitlin Hoffman and Roger Härtl co-directed the meeting; some of the distinguished faculty members who came from around the globe to be a part of this meeting.

Upcoming Courses

April 18, 2019

Spine Tumor Seminar

Directed by Dr. Ali Baaj and Dr. Susan Pannullo

State-of-the-art treatment paradigms for patients with primary or metastatic spinal tumors, including surgical and non-surgical options

May 9, 2019 NEW FOR 2019! Brain Metastases Symposium

Directed by Dr. Rohan Ramakrishna

A comprehensive overview of metastatic CNS disease for the physician and support staff, including novel approaches to longstanding problems in the era of immunotherapy and stereotactic radiation

May 31, 2019

Neurotrauma Update 2019:

Minimizing Chronic Effects of Acute Neurological Trauma

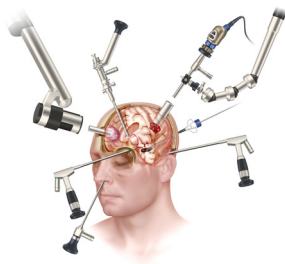
Directed by Kai-Ming Fu, MD, PhD, and Amanda Fazio, MSN, FNP-BC

A framework for updating practitioners in the current standard of care for patients with traumatic neurological injuries. This year's focus is on the long-term effects of traumatic injuries.

June 7–8, 2019 EXPANDED FOR 2019!

Minimally Invasive Cranial Neurosurgery: Recent Technical Advances with Hands-On Symposium
Directed by Dr. Theodore Schwartz and Dr. Mark Souweidane

Lectures and cadaver training on endoscopic endonasal techniques and a wide variety of other advanced intracranial approaches



For more information about courses, visit
weillcornellbrainandspine.org/continuing-medical-education

COMING THIS FALL

The following courses have not yet been approved for CME credit; please visit weillcornellbrainandspine.org for updates.

September

Neurosurgery and Beyond: Addressing the Neurocognitive, Behavioral, and Emotional Needs of Our Patients

An interdisciplinary exploration of the complex interplay between the physical, emotional, and cognitive aspects of neurosurgical conditions

October

3rd Annual Weill Cornell Medicine Pituitary Symposium

A comprehensive overview and discussion of the evaluation; management; and medical, surgical, and radiation treatments of pituitary disorders

November

Endoscopic and Open Surgical Approaches for Craniosynostosis: A Hands-On Practical Course

A combination of classroom instruction and hands-on practice using state-of-the-art 3D-printed models created from scans of actual patients

December NYC-MISS 2019

2019 13th Annual New York City Minimally Invasive Spine, Robotics and 3D Navigation Symposium: Case-Based and Hands-On

Neurosurgeons and orthopedic spine surgeons from around the world assemble here each December to learn, network, and debate latest technologies for minimal-access spine surgery.

Diversity Week Grand Rounds

David A. Acosta, MD

Chief Diversity and Inclusion Officer
American Association of Medical Colleges

Monday, April 22, 7:30 am

Belfer Research Building, 302 C/D

Residents and students are invited to coffee with Dr. Acosta in the Starr 651 conference room immediately following Grand Rounds. Please RSVP to:

neurosurgery-rsvp@med.cornell.edu

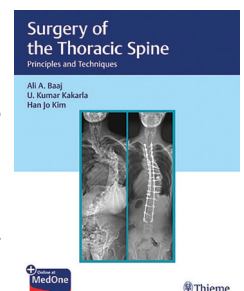
Our weekly Grand Rounds series features speakers from a wide range of institutions and disciplines. See the full calendar at weillcornellbrainandspine.org/grand-rounds



Now in Bookstores

Surgery of the Thoracic Spine: Principles and Techniques

Dr. Ali A. Baaj and co-editors Kumar Kakarla, MD (Barrow), and Han Jo Kim, MD (HSS) published this comprehensive text, which includes an overview of the thoracic region and its unique role in pulmonary function, along with in-depth reviews of advanced surgical practices, including neuromonitoring and intraoperative navigation. Surgical options for different types of scoliosis are covered in depth.



Awards, Grants, and Honors

Young Investigator Award

Dr. Rupa Gopalan Juthani was named winner of the 2019 American Brain Tumor Association's Young Investigator Award. The award will be presented at the 2019 American Association of Neurological Surgeons (AANS) Annual Scientific Meeting in San Diego, California, to be held from April 13–17.

Dr. Juthani's abstract, "Targeted Ultra-Small Nanoparticles as a Multi-Modal Platform for Enhanced Drug Delivery to Primary and Metastatic Brain Tumors," earned her this distinction. Her abstract tackles the difficulties of treating malignant brain tumors due to the blood brain barrier. It investigates the use of ultra-small silica nanoparticles containing Cy5 fluorescent dye (C'dots) as a vehicle for enhanced drug delivery through the central nervous system. Her team's findings conclusively showed that C'dots presented a viable and attractive platform for delivering drugs through the central nervous system.

Charlie Kuntz Scholar Award

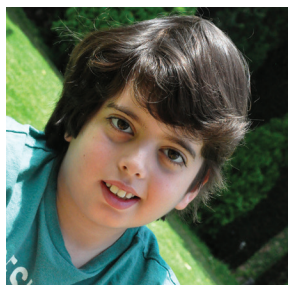
Dr. Sertac Kirnaz, a fellow on Dr. Roger Härtl's spine team, has been awarded a 2019 Charlie Kuntz Scholar Award for his abstract, "Retrospective Review of Immediate Restoration of Lordosis in Single-level Minimally Invasive Transforaminal Lumbar Interbody Fusion (MI-TLIF): A combination of Static and Expandable Interbody Cages." The Kuntz Award, given by the Joint Section on Disorders of the Spine and Peripheral Nerves (DSPN) of the Congress of Neurological Surgeons (CNS), is awarded every year to neurosurgical residents or fellows who author outstanding abstracts detailing a laboratory or clinical investigation into spinal disorders.



Dr. Roger Härtl and his research fellow Dr. Sertac Kirnaz

Children's Brain Tumor Project Secures \$1 Million Grant

Dr. Jeffrey Greenfield, co-founder of the Weill Cornell Medicine Children's Brain Tumor Project, was recently awarded a \$1.08 million grant from the Patrick Bayly Marsano Foundation. The gift will fund a two-year initiative to expand the lab's cellular and molecular precision medicine approach to pediatric brain tumor therapy, with a goal of establishing safe, curative patient-specific therapies for devastating pediatric brain tumors, including gliomatosis cerebri, which claimed young Patrick's life.



Patrick Bayly Marsano was just 10 years old when he succumbed to the deadly brain tumor gliomatosis cerebri.

Clinicians, computational biologists, neuroscientists, immunologists, biochemists, and stem cell biologists will work together to conduct next-generation sequencing on every pediatric brain tumor resected at Weill Cornell Medicine—an anticipated 50 to 80 children. They will identify new mutations specific to the cell population and to the patient, and create cell repositories and mouse models to test different targeted therapeutics. Following a comprehensive review of the genetics, cell biology and pharmacogenomics of patient-specific tumors, a customized therapeutic regimen will be determined for each patient.

Brain tumors are the most common tumors found in children, and the most fatal. The Children's Brain Tumor Project aims to improve the outcome for children with brain tumors by advancing translational and clinical research that focuses on targeted therapy, effective drug delivery, and low treatment-related toxicity.

For more information, visit childrensbraintumorproject.org

This Is Your Brain Podcast

Dr. Philip Stieg has launched a new podcast called *This Is Your Brain With Dr. Phil Stieg*. Weekly episodes will delve into the mysteries and new discoveries about how the brain works, what can go wrong with it, and the most effective ways to keep it healthy.



On the show, Dr. Stieg talks with leading medical experts in brain science as well as patients who share their stories of recovery. These conversations reveal both the medical science and the personal challenges of a wide variety of brain issues, including the emotional and physical impact of being diagnosed with a brain disorder. They provide a view into how patients forge ahead through the grueling path to healing—often coming to grips with a new sense of self—and how doctors and surgeons can help guide them along the path to recovery.

The initial episodes are a two-part conversation with Alissa Rubin, the *New York Times* journalist who suffered devastating injuries in a helicopter crash in 2013 while on assignment in Afghanistan. Ms. Rubin and Dr. Stieg discuss not only the accident and her physical recovery, but also the emotional and cognitive implications of traumatic brain injuries. Future episodes will cover many aspects of the brain, including concussion, sleep apnea, anxiety, nutrition, addiction, and sex. In one upcoming episode Dr. Stieg will even cover miraculous awakenings from coma—and how to define what "awake" really means.

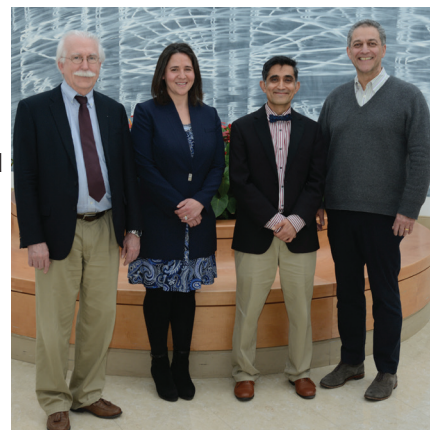
This Is Your Brain With Dr. Phil Stieg brings a down-to-earth approach to these conversations about the complicated human brain in all its wonder, and promises to help listeners make the best decisions about their brain health.

This Is Your Brain With Dr. Phil Stieg is now available in the iTunes store, Google Play, and Spotify, as well as on drphilstieg.com.

Concussion Leadership

Dr. Nitin Sethi was named Director of the Weill Cornell Medicine Concussion and Brain Injury Clinic, where he will head up an outstanding multidisciplinary team that takes a neurological approach to a neurological injury.

(Although that sounds self-evident, not every concussion treatment center does.) The team consists of specially trained neuropsychologists, neurotrauma specialists, and neurologists—both adult and pediatric. Dr. Sethi is a board-certified neurologist who is a concussion consultant with the NFL and is the Chief Medical Officer of the New York State Athletic Commission, which oversees combative sports and professional wrestling. The other leaders of the concussion team include neuropsychologists Kenneth Perrine and Amanda Sacks-Zimmerman and child neurology specialist Barry Kosofsky. Visit concussion.weillcornell.org for more information.



Left to right: Kenneth Perrine, PhD, ABPP-CN, Amanda Sacks-Zimmerman, PhD, ABPP-CN, Nitin Sethi, MD, and Barry Kosofsky, MD

NEWYORK-PRESBYTERIAN WEILL CORNELL MEDICINE

Cerebrovascular Surgery

Aneurysms, AVMs, carotid occlusive disease

Dr. Philip E. Stieg 212-746-4684

Dr. Jared Knopman 212-746-5149

Brain Tumor Surgery

Benign and malignant tumors in adults and children

Dr. Philip E. Stieg 212-746-4684

Dr. Rohan Ramakrishna 212-746-1996

Dr. Theodore 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. Michael Kaplitt 212-746-4966

Dr. Caitlin Hoffman 212-746-2363 (pediatric)

Interventional Neuroradiology

Minimally invasive image-guided diagnosis and treatment

Dr. Y. Pierre Gobin 212-746-4998

Dr. Athos Patsalides 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

Dr. Rohan Ramakrishna 212-746-1996

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. Rohan Ramakrishna 212-746-1996

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. Ali Baaj 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

Dr. Rohan Ramakrishna 212-746-1996

NEWYORK-PRESBYTERIAN LOWER MANHATTAN

Dr. Samuel Kim 646-962-5115

NEWYORK-PRESBYTERIAN QUEENS

Dr. Jaime Nieto 718-670-1837

Dr. Ning Lin 718-670-1837

Dr. Srikanth Boddu 718-303-3739

Dr. Rupa Gopalan Juthani 718-670-1837

NEWYORK-PRESBYTERIAN BROOKLYN METHODIST

Dr. Martin Zonenshayn 718-246-8660

Dr. Michael Ayad 718-780-3070

Dr. George Selas 718-780-3000

Welcome to New Faculty at NYP Brooklyn Methodist

We are proud to welcome three outstanding neurosurgeons to our faculty as we continue our integration with NewYork-Presbyterian Brooklyn Methodist Hospital.

Dr. Martin Zonenshayn

Dr. Zonenshayn, chief of the neurosurgery division at NewYork-Presbyterian Brooklyn Methodist Hospital, is a board-certified neurosurgeon with expertise in a wide range of disorders of the central nervous system. Dr. Zonenshayn specializes in brain and spine tumors, stereotactic and functional surgery, and degenerative spine conditions. He has been included in lists of Top Doctors in the New York Metro Area as well as in *New York* magazine's list of Top Doctors in New York.



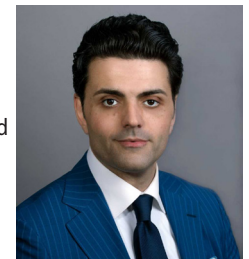
Dr. Michael Ayad

Dr. Ayad is Director of Cerebrovascular and Endovascular Neurosurgery at NYP Brooklyn Methodist. He is board-certified in neurosurgery and holds two U.S. patents for devices used in the operating room. His expertise includes aneurysms, AVMs, carotid artery disease, Moyamoya disease, spinal vascular disorders, and other cerebrovascular diseases, as well as endovascular treatment of acute stroke.



Dr. George Selas

Dr. Selas is an award-winning neurosurgeon with advanced training in both neurocritical care and neurointerventional procedures to treat cerebrovascular disorders, including stroke, aneurysms, and arterious malformations (AVMs). He specializes in minimally invasive procedures, including intracranial stents, embolization, and other neuro-interventional techniques.

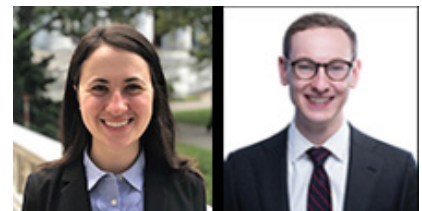


For information about these doctors, please visit brooklyndoctors.nyp.org, or call 718-780-5176 to make an appointment.

Match Day 2019

New Residents in Neurological Surgery

The results of the 2019 National Residency Match were announced on March 15, and we were delighted to learn that Alexandra Giantini Larsen of Harvard Medical School and Andrew Garton of Columbia University Vagelos College of Physicians and Surgeons will be joining our neurosurgery residency program in June. Both of our new residents have distinguished themselves as future clinician-scientist leaders and impressed us with their skills, academic accomplishments, and maturity. We are so excited to have the opportunity to train these two outstanding young physicians.



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