

news & views

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Karsten Moran

A Hospital on the Rise

Thanks to a Sleek New Elevator Tower, Patient-Centered Care Soars to New Heights

As the doors open smoothly, passengers step into a spacious elevator cab whose terrazzo floor matches that of the lobby. Calmly and silently, the cab glides upward, its glass wall revealing a vista that includes the East River and the Lower Manhattan skyline. Above the doors, a digital screen displays the date, time, and destination information. Seconds later, the cab eases to a stop as a recorded voice softly announces the floor. The doors open once again, revealing a large, sunny lounge that affords sweeping views of the campus and beyond.

It's the kind of sleek, scenic ride you might expect in a five-star hotel, but the location is NYU Langone Medical Center's Tisch Hospital. When University Hospital opened 50 years ago this year—it was renamed Tisch Hospital in 1989 in honor of longtime benefactors Laurence A. and Preston Robert Tisch and

their families—it was a state-of-the-art facility whose elevators easily accommodated patients, visitors, and staff. But the flow of pedestrian traffic then was but a fraction of what this bustling Medical Center witnesses today. Just ask anyone who has spent long minutes waiting to board one of the original elevators. The hospital's four new high-tech elevators, made possible by another generous gift from the Tisch family and opened to the public on April 16, are more than a welcome relief—they're an affirmation of NYU Langone's commitment to creating a world-class environment for patients and visitors.

"I can't overstate the importance of these new elevators to Tisch Hospital," says Bernard Birnbaum, MD, vice dean and chief of hospital operations. "They're a game changer. Now, everyone—our clinicians, our staff, and our visitors—can

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Outside Bellevue Hospital Center, Dr. Fritz Francois shares his insights with medical students.

Breathing Life into Dreams

For Dr. Fritz Francois, Recipient of New York University's Distinguished Teaching Medal, the Greatest Sources of Inspiration Are the Past and the Future

Between cycling 50 miles and running 20 miles per week, Fritz Francois, MD, chief of medicine, Tisch Hospital, is forever finding new paths and discovering unexpected intersections. That's also what he hopes to accomplish with his research, which focuses on a curious nexus: stomach flora, obesity, and gastrointestinal disease. A critical link in this investigative chain is *Helicobacter pylori* (*H. pylori*), a bacterium present in the stomachs of about half the world's population. A double-edged sword, *H. pylori* is strongly linked to peptic ulcers and stomach cancer, but it also protects against acid reflux disease, esophageal cancer, childhood asthma, and possibly even obesity. Dr. Francois believes that understanding the relationship between *H. pylori* and its human hosts could shape the diagnosis and treatment of digestive tract diseases and obesity.

"Obesity is a form of malnutrition that disproportionately impacts minority populations. It puts you at risk for colon cancer and other serious illnesses,"

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From the Dean & CEO

Tuesday, April 16, was just like any other day at NYU Langone Medical Center, except that it marked the dawn of a new era for Tisch Hospital, our flagship clinical facility. As the sun rose that bright spring morning, it glinted off the glass walls of a new elevator tower: a soaring 18-floor addition that represents, both literally and figuratively, a hospital on the rise. Only six months after our campus was severely damaged by Hurricane Sandy, this sleek structure has, with little fanfare, come to symbolize our indomitable spirit, our ambitious agenda, and our dedication to world-class, patient-centered care.

For all their beauty and novelty, these high-speed, state-of-the-art elevators serve a vital purpose. Members of our hospital staff enjoy a level of speed, comfort, and service they never dreamed possible, and they're almost giddy with delight. But just

as important, these new elevators revolutionize access to Tisch Hospital and enhance convenience for our patients and visitors, whom they were primarily designed to serve. When visiting a loved one in the hospital, delays can be agony. When a patient is looking forward to receiving visitors, waiting can be downright unhealthy. Thankfully, those days are over.

Robert I. Grossman, MD



Karsten Moran

Make Me a Match

Just as they have every third week in March since 1952, graduating medical students around the country joined their classmates on March 15—Match Day—to learn where they'll spend the next three to seven years of residency training. At NYU School of Medicine, members of the class of 2013 started gathering outside Farkas Auditorium at about 11:30 a.m. When the clock struck 12:00 noon, the envelopes were handed out, and emotions tumbled out. While some students hugged and cried, others texted their family and friends with the news. The National Resident Matching Program uses a computer algorithm to produce favorable results for applicants, aligning their preferences with those of residency programs. Of this year's 168 graduates from the School of Medicine, 84% matched to schools and hospitals ranked in the top 50 by *U.S. News & World Report*. The most popular specialties were internal medicine, pediatrics, diagnostic radiology, general surgery, emergency medicine, anesthesiology, and dermatology. Fifty-one students will remain at NYU Langone for their residencies.



House Majority Leader Eric Cantor Visits NYU Langone to Survey Damage Caused by Hurricane Sandy



John Abbott

In late March, House Majority Leader Eric Cantor (R-Va) met with Dean and CEO Robert I. Grossman, MD, during a visit to NYU Langone Medical Center. Cantor came to NYU Langone to tour the more than \$1 billion worth of damage inflicted by Hurricane Sandy. He has been instrumental in getting Congress to approve some \$60 billion in aid for the region, including more than \$100 million in research funding from the National Institutes of Health.



Getty Images

Bikers Learn the Ins and Outs of Safety on the Road

Whether you're a weekend athlete or a serious racer, said Claudette Lajam, MD, assistant professor of orthopedic surgery, "you've probably experienced some type of bike-related injury." Dr. Lajam was addressing dozens of bikers who gathered at NYU Langone Medical Center's Center for Musculoskeletal Care (CMC) in mid-March for a seminar titled "Bike Smart! Injury Prevention and Management." A team physician for USA Cycling, she explained that the good news is that "most injuries can be minimized and better managed." She began with tips on basic prevention. "Practice handling skills. Keep your bike tuned and fitted." Then the talk—and the PowerPoint slides—got more graphic: broken bones; three degrees of road rash; outcomes from a FOOSH (fall on outstretched hand). Dr. Lajam offset each mishap with invaluable advice: Decrease hip flexion, for example, with a "forward seat, raised handlebars, and a shortened stem." She also expanded on what she calls the "pain generator," which indicates that an injury may not be where the pain is felt. "If the symptoms don't make sense," she warned, "check other parts of your body."

Another speaker, James Koo, DPT, a physical therapy supervisor at CMC, addressed prevention and rehabilitation management of common overuse injuries caused by improper bike fit, improper gear selection, overtraining and undertraining, improper nutrition and hydration, and extreme environments, such as heat and hills. "Cycling is a repetitive activity," he noted. "Do the math. There are 5,400 revolutions per leg in one hour of continuous pedaling at a cadence of 90 revolutions per minute." He emphasized that correcting the biomechanical faults for each pedal stroke will reduce the overall joint and muscle stress or strain for the rider.

Sharon Brind, who commutes 14 miles round-trip by bike from her home in Brooklyn to Manhattan on most weekdays, attended the seminar with her husband, who had recently been injured in a fall. Has seeing all of these graphic reminders made him want to get back in the saddle? He shrugs, but his wife is adamant. "He'll be back," she says. "We'll both be riding together—more safely and more knowledgeable."

All in a Half-Day's Work



John Abbott

Dr. John Carucci removes a cancerous lesion (left) and, with one of his fellows, examines the tissue sample—stained to highlight cancer cells—under a microscope (above).

For Dr. John Carucci, “Curing” Common Skin Cancers in One Extended Office Visit Is a Specialty in and of Itself

When Beatrice Parker (not her real name), 49, had successful kidney transplant surgery in 1986, she had no idea she'd be swapping one serious problem for another. The immunosuppressant drugs she took to prevent organ rejection increased her vulnerability to squamous cell carcinoma, a common skin cancer. The first lesion emerged on the side of her nose seven years later. Since then, dozens more have appeared on her scalp, eyelids, ear, shoulders, hands, and legs. If there's any good news in Parker's endless ordeal, it's been Mohs micrographic surgery, a procedure that maximizes cure rate while minimizing scarring and disfigurement by preserving the greatest possible amount of healthy tissue.

“Surgery is never a pleasant experience to go through, but at least Mohs is less invasive, and I know there won't be a recurrence in the same place,” says Parker, who has been treated by John Carucci, MD, PhD, associate professor of dermatology and chief of Mohs micrographic and dermatologic surgery in the

Ronald O. Perelman Department of Dermatology at NYU Langone Medical Center.

More than 2 million Americans will be diagnosed with the disease this year, according to the Skin Cancer Foundation, and 40 to 50% of adults are afflicted by skin cancer at least once. Those statistics help to explain the growing popularity of Mohs surgery—for physicians and patients alike. Developed in the 1930s by Dr. Frederic Mohs, a general surgeon at the University of Wisconsin, the procedure did not gain widespread public attention until 1985, when President Ronald Reagan had a skin cancer removed from his nose using this technique. Though it has evolved over the years into a more refined procedure, Mohs has remained faithful to its elegantly simple principle: remove layers of skin in stages, examining each one under a microscope until the tissue is free of discernible cancer cells. With a “cure” rate of 99% for basal cell and squamous cell carcinoma, the two most prevalent skin cancers, Mohs is

considered one of the great contributions to the field of dermatologic surgery.

Dr. Carucci is among the nation's leading Mohs practitioners, treating more than 1,000 outpatients annually. To watch him in action is to appreciate the diverse and intricate skill sets a Mohs specialist must not only master, but seamlessly toggle between.

First is surgery. Based on a presurgical visit and his well-honed observational skills, Dr. Carucci sizes up the clinical boundaries of the patient's tumor. After injecting a local anesthetic, he excises the lesion and a small band of surrounding tissue with a sharp-bladed instrument known as a curette. If he suspects the skin cancer is thin and noninvasive, he scrapes off a layer of epidermis, and the site will heal like a bruise.

Second is mapmaking. Dr. Carucci cuts the specimen horizontally into wafer-thin slices and color-codes them with dyes. Each color corresponds to a section of a map he draws to scale, labeling the sections by location. If more of the tumor needs to be removed, this reference map will guide him to the precise location.

Third is pathology. Dr. Carucci places the tissue, which has been further stained to highlight cancer cells, under a microscope. “The big advantage of Mohs is that you can see the entirety of the margins and know immediately whether cancer cells are present,” explains Dr. Carucci. “If they are, we know we have to incrementally remove more tissue.” About 40% of Mohs surgeries are completed with only one excision; the rest require multiple excisions until the margins are free of any visible cancer cells. Once the margins are clear, Dr. Carucci performs another surgery to repair the wound and ensure optimal cosmetic results.

Dr. Carucci's patients must be prepared to spend up to five hours in his office. Still, for patients like Beatrice Parker, that's a small price to pay compared to more traditional procedures, which may require waits of a week or more to get results back from a pathology lab. “The beauty of Mohs surgery is that it's all done in the same place, on the same day,” she notes. “I get closure when I leave the doctor's office, and that gives me a tremendous sense of relief.”

A Hospital on the Rise *(continued from page 1)*

walk into the lobby knowing that they'll find an elevator ready to take them promptly where they need to go.”

A centerpiece of NYU Langone's ongoing Campus Transformation, the 18-story elevator tower serves floors 1, 2, and 9 through 17 (access to the 8th floor will become available in late summer). The number of public elevator cabs serving patient floors has doubled, from four to eight, but given that the new cabs have a larger capacity, a top speed of 700 feet per minute, and computer-controlled responsiveness, they are expected to significantly more than double Tisch's total lift capacity.

The tower is located outside the original building envelope on the perimeter of Tisch Courtyard, an arrangement that creates a wide swath of additional two-story-high space in the lobby. The tower's exterior is faced with glass panels of varying opacity to create dramatic effects, whether one is riding inside one of the cars or gazing at the tower from the outside. Soon to come is a meditation room off the main lobby, as well as a landscaped courtyard.

“This project is a triumph of design, and pivotal to our Campus Transformation,” says Vicki Match Suna, AIA, vice dean and senior vice president of NYU Langone's Department of Real Estate Development and Facilities. “The tower dramatically increases service capacity and cuts wait times. But it also provides a new front door to the hospital—a gracious entrance on the first floor and welcoming spaces on the patient floors, transforming the user experience.”

Logistically and mechanically, the project was among the most complicated to be undertaken by Real Estate Development and Facilities. To begin with, the foundational bedrock was as deep as 110 feet in some spots. Erecting an 18-story tower within the confines of a courtyard surrounded by four buildings and connecting it to a fully functioning, 24-hour-a-day acute care facility posed numerous challenges. To transport equipment and supplies from First Avenue into the courtyard, some of the floor-to-ceiling windows of the Skirball lobby—actually hinged doors—were swung

open between 11:00 p.m. and 6:00 a.m. three or four nights each week. With one crane mounted on top of another to overcome the tight space, materials were elevated to higher levels.

An all-important goal was to minimize disturbances to Tisch's patient and procedure rooms, some located just a few feet away from construction, as well as the residents of Lipton Hall. To reduce noise, vibration, and inconvenience, the elevator tower was built as a free-standing structure and then connected to Tisch Hospital. In recent months, after the elevator banks had been erected and fully enclosed, the final phase was completed: The former exterior wall of Tisch was removed and the tower was joined to the hospital by new entrances. On the 8th, 11th, 14th, and 17th floors, giant steel clamps bond the underlying girders of the two structures together in a powerful grip, as strong and enduring as the future they share.

STEVEN AND ALEXANDRA COHEN
Veterans Center for the Study
of Post-Traumatic Stress
and Traumatic Brain Injury

The Invisible Scars of War

A \$17 Million Gift from the Steven A. and Alexandra M. Cohen Foundation Helps Veterans to Heal from the Deepest Wounds of All

When army private Sam Barnes (not his real name) returned home from his second tour in Iraq, life had changed. He had changed. He felt irritable, anxious, and depressed. He found himself drinking more and socializing less. He rationalized the headaches and nightmares. Plenty of veterans had them, he thought. But while his buddies had gotten better, he was getting worse. He wondered why, after two years since his last deployment, every day felt harder than the next.

Barnes' doctors struggled to find an answer. Was it clinical depression? Post-traumatic stress disorder (PTSD), the chronic, disabling anxiety that can plague trauma victims with flashbacks, emotional instability, and suicidal urges? Barnes had experienced them all. Or was it a mild traumatic brain injury (TBI)? During combat, Barnes had developed classic symptoms, such as memory loss and dizziness, after an improvised explosive device blew him back into the side of a Humvee and briefly knocked him unconscious. Or was it all of the above?

"Diagnosis is difficult because so many of the symptoms of PTSD, TBI, and depression overlap," says Charles Marmar, MD, the Lucius N. Littauer Professor of Psychiatry and chair of the Department of Psychiatry at NYU Langone Medical Center, and a nationally recognized expert on trauma and stress among veterans who serves as a consultant to the US military. "Regrettably,

there are no objective laboratory tests to confirm the diagnosis of any psychiatric illness, including PTSD, TBI, and depression."

Among the 1.7 million men and women who have served in the wars in Iraq and Afghanistan, an estimated 20% have PTSD and an additional 10% have TBI. While the Department of Defense and the Veterans Administration have expanded resources and access to treatment, returning veterans are reluctant to seek help because of the stigma of mental illness. Many of these men and women continue to suffer in silence. More soldiers committed suicide in 2012 than were killed in combat in Afghanistan that year. Moreover, claims for service-related disability are seriously backlogged, in part because there is no laboratory test for confirming a diagnosis of PTSD or TBI.

Now, thanks to a \$17 million gift from the Steven A. and Alexandra M. Cohen Foundation—thought to be the largest private donation for research on war zone-related PTSD and TBI ever made—Dr. Marmar and his team are embarking on a landmark five-year project to help heal these invisible scars. Dean and CEO Robert I. Grossman, MD, a leading expert in brain imaging of TBI, is a senior adviser to the project. The research will be conducted by a multidisciplinary team representing psychiatry, rehabilitation medicine, radiology, and neurosurgery. Retired

Breathing Life into Dreams *(continued from page 1)*

explains Dr. Francois, whose own family has been impacted by colon cancer. "Population differences in the prevalence and outcome of various diseases, such as esophageal and colon cancer, are well documented globally. But many of the contributing factors to these diseases can be modified."

For that reason, Dr. Francois has developed a deep interest in addressing health disparities. He designed and directs the Health Disparities Concentration at NYU School of Medicine, the first of its kind to be offered by the School. He was inspired to create the program, in part, by the events he witnessed in January 2010, when he led a multidisciplinary relief team of physicians, surgeons, and nurses from NYU Langone Medical Center to his homeland, Haiti, in the aftermath of a devastating earthquake.

Dr. Francois also has a passion for teaching, and to his students and colleagues alike, it shows. "Dr. Francois redefines the definition of a leader, a role model, and a mentor," says one of his students. "Fritz is fantastic," says another. Ditto, said New York University, which, in April, honored him with its highest award for teaching: the Distinguished Teaching Medal. Dr. Francois is the 10th member of our faculty to be so hailed.

The University awards the medal annually to faculty members who have demonstrated their excellence as educators over a sustained period of time and who have contributed significantly to the intellectual life of the University through their teaching.

As one of Dr. Francois' colleagues noted in his nomination letter, "Fritz was a star right from the start." As an undergraduate philosophy major at NYU, he was named a Larry Silverstein Academic Achievement Scholar and served as class commencement speaker. At NYU School of Medicine, he earned numerous distinctions, including selection as chief resident in medicine. Remaining at NYU Langone Medical Center for his training in gastroenterology, he served as assistant program director for the residency program in medicine and earned a master's degree in clinical investigation.

Appointed to the faculty of NYU School of Medicine as an assistant professor of medicine in 2004, Dr. Francois was elected to the Alpha Omega Alpha medical honor society. He also teaches in the course on migration and health in the Master of Public Health program at NYU's Steinhardt School of Culture, Education, and Human Development, and in the course on family practice law at NYU School of Law. A molecular epidemiologist, Dr.

Dr. Charles Marmar, chair of the Department of Psychiatry.

Admiral Michael Mullen, who served as chairman of the Joint Chiefs of Staff, will chair the external advisory board.

As part of the newly established Steven and Alexandra Cohen Veterans Center for the Study of Post-Traumatic Stress and Traumatic Brain Injury, the researchers aim to identify physiological flags—so called "biomarkers"—for PTSD, TBI, and depression, and advance the development of objective, reliable tests for each condition. "If you're having chest pain, you can be screened for protein markers of heart muscle damage, which are released into the blood during a heart attack," notes Dr. Marmar. "We intend to build a similar set of blood tests for brain-specific proteins that serve as diagnostic markers of brain changes resulting from PTSD and TBI."

The study, one of the largest of its kind ever conducted, includes 1,500 veterans divided into five groups: those with PTSD, those with TBI, those with both disorders, those with depression but not PTSD or TBI, and those who exhibit no symptoms of any mental disorder. "Most studies in this area have used small samples," explains Dr. Marmar. "We will be studying 300 subjects in each category." Building on promising pilot research, the investigators are examining dozens of biomarkers of PTSD, TBI, and depression, including, among others, hormone levels, genetic markers, structural and functional changes in the brain, serum proteins that reflect brain function, even the physical properties of speech. "It's a rare opportunity to do in-depth research on a wide range of candidate markers," adds Dr. Marmar.

The majority of people who experience trauma and repeated exposure to stress—soldiers, firefighters, police officers, and others—never develop PTSD. Some people develop symptoms but recover within days to several weeks, while others take months to get better. Dr. Marmar and his team are largely focused on a fourth group, which includes soldiers such as Barnes, who develop chronic symptoms that get worse over time. "We don't fully understand why some people develop PTSD and recover, and others become progressively disabled," Dr. Marmar concedes.

The researchers hope that will change with the insights this large study is expected to yield. Armed with objective, reliable tests, clinicians will be able to intervene before symptoms become disabling or perhaps even before they develop. "We want to make it possible to diagnose early, treat aggressively, and prevent the domino effects of chronic PTSD and TBI, which include secondary depression, alcohol and drug use, family turmoil, cardiovascular and neurological diseases, and most tragically, a staggering suicide rate."

For Dr. Marmar and his team, the ability to provide our servicemen and -women with state-of-the-art care is more than just a professional duty. It's a civic responsibility. "They serve us," he says, "and we *will* serve them."

Francois has enjoyed a rare luxury for any researcher: continuous funding. He has garnered a National Cancer Institute Rising Star Research Award, an Emerging Leader in Gastroenterology Award, and a Robert Wood Johnson Foundation Clinical Investigator Award.

Dr. Francois attributes his achievements largely to his parents, Jean-Bellegarde, a janitor, and Mercelone, a homemaker—both Haitian immigrants. His father retired from his job as a janitor at the World Trade Center two years before 9/11. "No matter how hard I work," says Dr. Francois, "I can't possibly work as hard as my parents did to help me get here."

During his days as chief resident, Dr. Francois founded an organization to foster diversity and cultural awareness at NYU School of Medicine. He now serves as associate dean of academic affairs and diversity. The first physician known by name—Imhotep, who served the second king of Egypt's third dynasty—was a black man. Yet, today in America, few black males pursue careers in medicine, and the number applying to medical school has been declining. "I began my journey in a place with many disparities and little chance for development," Dr. Francois recalls. "To breathe life into dreams through education—what greater joy can there be?"

Romancing the Stones

A Kidney Stone Almost Certainly Won't Kill You, but the Agonizing Pain Can Seem Unbearable. Fortunately, More Treatments Than Ever Are Available to Those in Distress.

The only good thing that ever came from having a kidney stone, victims might admit, is the colorful tale of woe they get to tell for the rest of their lives—entertaining to listeners, perhaps, but amusing to the patient only in retrospect. The drama stems from the fact that passing a kidney stone is considered one of the most excruciating kinds of pain we can be made to suffer—comparable to childbirth and gunshot wounds. When asked to rate the pain on a scale of 1 to 10, explains Ojas Shah, MD, associate professor of urology and director of NYU Langone Medical Center's Endourology and Stone Disease Program, "practically everyone says 11."

For Bartolomeo Oliva, 39, the pain was not only unbearable, but unrelenting. In his mid-20s he learned that he was a "producer"—his metabolism continually churns out stones. Since the 1990s, he has had between 30 and 40 procedures to clear them from his body. In 2010, however, in spite of all these treatments, he learned that his right kidney was filled with so many stones that the organ itself might have to be removed.

Reviewing Oliva's medical history, Dr. Shah empathized with his new patient. "He'd had these surgeries over and over, and they hadn't been able to clear out his stones." While Oliva's case was unusual, his ailment was not. Between 8 and 10% of the American population—more men than women, more Caucasians and Asians than other races—make kidney stones. The incidence of renal calculi, as kidney stones are termed, has been on the rise since the 1970s, partly the result, says Dr. Shah, of a diet increasingly rich in salt and animal protein.

Stones are formed from material kidneys filter through the urine. The most common are made from calcium (calcium oxalate or calcium phosphate). Next most common are those made of uric acid, which frequently strike the obese, those with diabetes, and people with high lipids or high blood pressure. Just as obesity and

diabetes have been on the rise, so has the incidence of uric acid stones. As agonizing and traumatizing as they are, kidney stones are not usually life threatening. But if they lead to urinary tract infections, they can damage or even destroy the kidneys or cause a life-threatening condition secondary to urosepsis (a severe infection starting in the urinary tract).

There was a time when a sufferer had only two choices, each seemingly worse than the other: ride out the pain and wait for the stone to pass, or if the stone was too large, have surgery that required a huge incision in the back, abdomen, or flank. Thankfully, today there are more options.

For some patients, Dr. Shah tries medical expulsion therapy: pain medication coupled with an alpha blocker to dilate the ureter (the narrow tube connecting the kidney to the bladder) and make it easier for a hard, jagged stone to wend its way into the bladder. If that strategy fails, 70% of the time Dr. Shah performs ureteroscopy. Threading a fiber-optic scope into the urethra and up through the ureter, he can extract the stone with a tiny basket. For larger stones, a laser can be used through the scope to shatter the stone into smaller pieces that can be extracted or can pass on their own. Another noninvasive option is shock-wave lithotripsy, in which focused sound waves break the stone into fragments small enough to pass.

In Oliva's case, the only option was percutaneous kidney surgery. Dr. Shah made a small hole in his back, inserted a hollow tube into the kidney, and removed the stones through the tube after fragmenting them. After two surgeries, 95% of the stones were removed, saving the kidney and restoring its functionality.

To slow the recurrence rate, Dr. Shah advised Oliva to drink at least three liters of fluid daily, cut back on salty foods and animal protein, and increase the amount of calcium-rich foods to two to three servings per day,



Dr. Ojas Shah displays the multiple kidney stones found in his patient, Bartolomeo Oliva, whom he describes as a "producer."

which, ironically, actually helps prevent the formation of calcium stones. Oliva also takes potassium citrate, which attaches to calcium in the urine and helps prevent crystals, the building blocks of stones, from forming.

To his delight, Oliva was free of stone episodes for a year after surgery. While his body continues to produce stones, they are fewer, smaller, and more easily removed by ureteroscopy. His new diet has even had an unexpected benefit. "I'm off my blood pressure medication," Oliva marvels. "I feel pretty good."

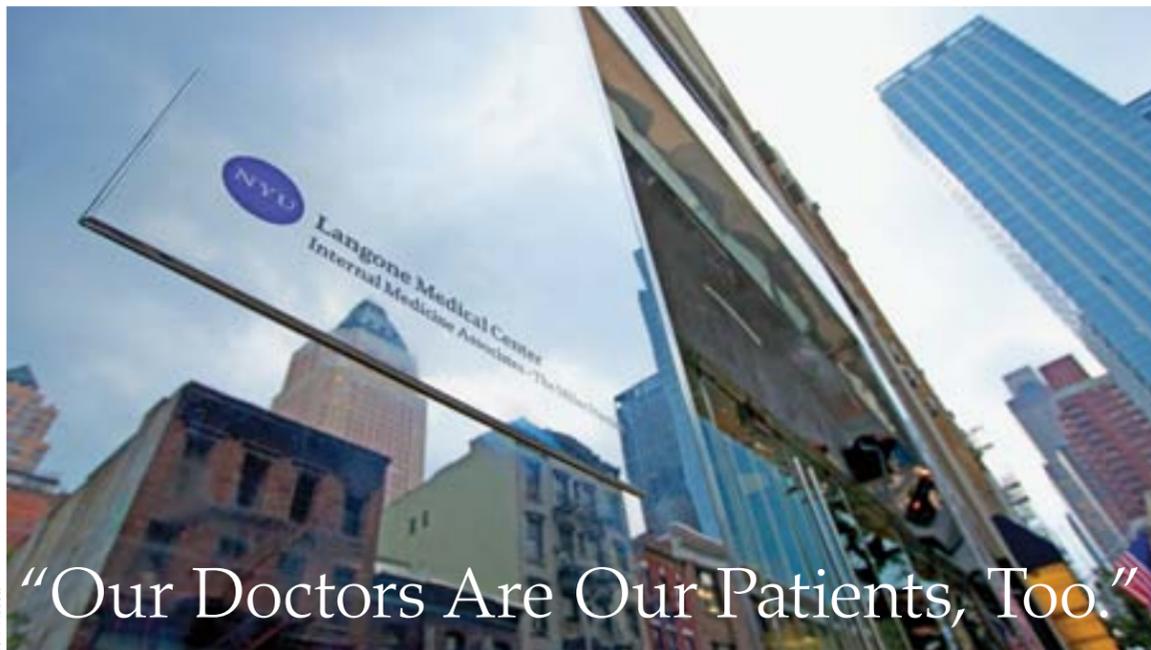
medicine, as an example. "Dr. Minkowitz takes a call every day at 6:00 p.m. from a 94-year-old patient who is not always able to come into the office but gives her updates on his dietary habits, his regularity, and even his problems with his landlord."

Fran Feil is another fan. "I would follow Dr. Minkowitz anywhere," she says, praising her patience and commitment. "And I did." Dr. Minkowitz ran a Lower East Side annex of St. Vincent's Hospital until both closed their doors in 2010. The warm, energetic, highly regarded internist and pulmonologist had her pick of jobs in the New York metropolitan area. "I liked the concept of NYU Langone's ambulatory care sites," says Dr. Minkowitz, "and the Miller Practice seemed like the best fit for me and, especially, my patients. It had the clout of NYU Langone, but it also seemed very nurturing and intimate. Also, this neighborhood reminded me of the Lower East Side, and I knew that my patients would fit right in with the diversity here."

Internist David Valentine, MD, clinical instructor in medicine, took a more circuitous, but equally fortuitous, route to Miller. "I was feeling unfulfilled at this corporate, sterile Upper East Side practice," he explains. "While doing my online banking one night, I saw an ad for the Miller Practice. I liked the low-key vibe of the place, plus the NYU Langone connection. Then I recognized the name of a fellow physician I knew. A few weeks later, I had a new job. This place has been just as good as advertised."

Dr. Minkowitz excuses herself from the shared homey office with photos of her 23-year-old cat, Spooky, and two dogs, Sunshine and Cloudy. She has an appointment with Dr. Balzora. "I'm getting a procedure here tomorrow morning," says Dr. Minkowitz. "That's probably the best advertisement: 'Our doctors are our patients, too.'"

For more information or to make an appointment, call 646-754-2100.



"Our Doctors Are Our Patients, Too."

For Patients and Physicians Alike, NYU Langone's Miller Practice Is As Good As Advertised

Fran Feil was asked to arrive about one hour before her 10:30 a.m. appointment for a colonoscopy at NYU Internal Medical Associates Miller Practice, part of NYU Langone Medical Center's ever-expanding network of ambulatory care centers. She filled out a few forms, met with the anesthesiologist, and then with her gastroenterologist, Sophie Balzora, MD, clinical instructor in medicine, who walked her into the procedure room—and through the procedure. "About 40 minutes later," says Feil, a flight attendant, "I asked the nurse why they hadn't started yet." The nurse smiled and said, "You just woke up. We're finished." Feil looked at the clock, which read 10:28 a.m.

"We usually don't get you out before your scheduled appointment time," says Cynthia Koubek, practice administrator, "but we do think of Miller as a very

efficient place that combines the intimacy of a family practice with first-rate personnel, services, and technology." Located in a gentrified pocket of Hell's Kitchen near the Theater District, the original four-internist family practice on the seventh floor of a West 52nd Street prewar high-rise merged with NYU Langone in 2010. The Miller Practice, as it is known, has since added more than a dozen exam rooms, echocardiogram and image-reading services, and a new sixth floor, which feels like the miniward of a hospital, complete with a nurse's station, procedure rooms, and recovery rooms.

"Our most important resource," says Koubek, "is our top-flight physicians, a team of 15 primary care doctors and specialists. Our physicians go the extra mile." She cites Susan Minkowitz, MD, clinical instructor in

A Stimulating Idea to Ease the Tremors of Parkinson's

When he took his medications for Parkinson's disease, Maran Sady's hands stopped shaking enough so that he could handle his carpentry tools. Yet, the drugs made him so drowsy that he sometimes fell asleep in midsentence at construction sites or at home with his wife. "It was like narcolepsy," says Sady, 51, who was diagnosed three years ago.

That medication-induced sleepiness nearly killed Sady on a stretch of rural road near his Connecticut home in December 2011. When he nodded off, his pickup truck veered off the road and bounced over a stump. Awakened by the impact, Sady gripped the wheel in terror and crashed into a tree.

The accident tore ligaments in Sady's left shoulder and sent him, eventually, to see Alon Mogilner, MD, PhD, director of the Center for Neuromodulation at NYU Langone Medical Center. Dr. Mogilner specializes in deep brain stimulation (DBS), an electrical impulse treatment for Parkinson's symptoms used since 1997 on those who can't tolerate or benefit from medication. More than half a million Americans suffer from Parkinson's, which typically strikes after age 50. The brain cells that produce the neurotransmitter dopamine start to die inexplicably, and without sufficient dopamine, brain signals can become abnormal and chaotic, leading to uncontrollable muscle movement and rigidity.

Dr. Mogilner determined that Sady's symptoms could be treated by DBS of the subthalamic nucleus (STN), a region of the brain typically affected by Parkinson's. Electrodes implanted into his STN in both hemispheres could "override" the chaotic signals. "It provides a kind of white noise," says Dr. Mogilner, "sending a different, continuous signal, instead of the abnormal one, and the symptoms get better."

While "not keen to have my head drilled into," says Sady, he knew DBS had worked for his aunt. "It had to be better than another accident," he reasoned.

Last September, Dr. Mogilner made two dime-size holes in Sady's skull and inserted the electrodes three inches into his brain. "He turned up the voltage," remembers Sady, who remained awake during surgery to ensure that the placement of the electrodes was correct. "I felt tingling in my arm, and the tremor went away." A week later, Dr. Mogilner implanted pulse generators—similar to pacemakers—under the skin on both sides of his chest.

The electrodes were permanently activated in October, after Dr. Mogilner and Michael Pourfar, MD, assistant professor of neurosurgery and neurology, and codirector of the center, found the best electrical settings to eliminate Sady's tremors without any significant side effects. Sady gladly stopped his medications and, within days, found himself well rested even with fewer hours of sleep.

"For the most part, the tremors are gone," says Sady. On the job, he handles tools with no problem. His golf buddies marvel at his new steadiness and energy. "I used to feel like a fish out of water, with my hands and head flapping around, and it made me self-conscious," he confides. "Now, I can go a day without even thinking about Parkinson's."



Study Examines Role of Medication in Parkinson's Patients Who Exhibit Compulsive Behavior

Early one morning several years ago, Keith Perkins found his wife, Roberta, 70, outside trimming vines in a nightgown and baseball cap. His wife had become increasingly compulsive about tidying in recent months. "Everything had to be just so," Roberta recalls. In 2007, she had been diagnosed with Parkinson's disease, a degenerative neurological condition that impairs balance and muscle control, and Keith figured his wife's odd urge to clean was just her way of coping with the disease. So he shrugged his shoulders and went back to bed.

But it wasn't the disease. Roberta was later diagnosed with another condition: impulse control disorder (ICD), a frequently overlooked side effect of a class of Parkinson's medications known as dopamine agonists. ICDs associated with dopamine agonists include compulsive shopping, gambling, eating, sex, and other reward-seeking behaviors. "It can be devastating," says Melissa Nirenberg, MD, PhD, associate professor of neurology in the Parkinson's and Movement Disorders Center at NYU Langone Medical Center, where she now treats Roberta. "Patients have lost their entire life savings from gambling or risked divorce because of abnormal sexual behaviors."

More than 1.5 million Americans suffer from Parkinson's, whose cause remains a mystery. It progresses by damaging a small region of the brain that produces a potent chemical called dopamine. Without dopamine, brain cells lose their ability to coordinate muscle movements, resulting in classic symptoms, such as hand tremors and muscle rigidity. Dopamine agonists—the most commonly prescribed medications in this class are Mirapex (pramipexole), Requip (ropinirole), and Neupro (rotigotine)—boost depleted levels of dopamine to help ease symptoms. But there's a catch. Because dopamine also regulates healthy pleasure-seeking behaviors, such as eating and sex, dopamine agonists can sometimes send such behaviors into overdrive.

According to a study by Dr. Nirenberg recently published in the journal *Movement Disorders*, about one in five patients taking dopamine agonists develops ICD. The study, the first clinical investigation of ICD in Parkinson's patients, tracked 46 volunteers over the course of four years, before and after they started dopamine-agonist therapy. Dr. Nirenberg found that 17% of participants engaged in compulsive behaviors. Moreover, patients with a history of smoking and caffeine use were more likely to develop ICDs than those without it. "Some people have a genetic predisposition to addictive behaviors that may make them more vulnerable to ICDs," explains Dr. Nirenberg. "Physicians may want to think twice about prescribing these medications to patients with high-risk backgrounds."

The most important modifiable risk factor for ICDs, the study found, was medication dosage. The higher the dose of dopamine agonist, the more likely patients were to develop compulsive behaviors. As for Roberta, her compulsion to clean has all but disappeared now that Dr. Nirenberg has reduced her daily dose of Mirapex and augmented her regimen with a different class of medication to improve her balance and coordination. "The vines are a mess," admits Roberta, adding with a laugh, "You're welcome to come over and trim them."



For Those with Chronic Pelvic Pain, Rusk Offers Hope

Richard Slade (not his real name) began feeling a sharp pain in his testicles while exercising on the rowing machine. "It disappeared when I stopped," he recalls, "so I thought my shorts were too tight, or I was just getting older." Then one day, after several hours of tennis, the father of two ended up in the emergency room of his local hospital in agony. It was the start of a year-long odyssey that led him to a dozen medical specialists, none of whom could pinpoint the source of his pain. "It radiated down my leg into the arch of my foot," he says. "I couldn't even mow the lawn—and forget about playing with my kids."

Slade was considering a medical leave of absence from his job when he came across an online posting about a patient with similar symptoms who had benefited from physical therapy. At Slade's request, his primary care physician referred him to NYU Langone Medical Center's Rusk Rehabilitation, where the women's and men's health outpatient physical therapy unit is staffed with specially trained physical therapists who treat men and women with pelvic floor disorders, including pelvic pain, and bowel and bladder dysfunction. At that time, Slade was in constant pain, taking eight prescription pain medications a day.

During the internal exam the physical therapist performed to assess Slade's pelvic floor muscles, he noticed that the right side of his anal canal was sensitive to the point of being painful. Laurie Kilmartin, DPT, the clinical specialist in charge of the unit, finds that pelvic floor muscle tightness and spasm are frequently a source of pelvic pain, a potentially debilitating condition that affects both men and women. With other common causes of pelvic pain ruled out by Slade's physicians, his therapist

began working on the affected tissue to release trigger points. Doing so would enable tight muscles to relax and lengthen to their normal state. She also performed deep-tissue massage techniques on Slade's fascia, the connective tissue surrounding the muscles, and prescribed stretching exercises.

Within a year, Slade was pain free, but he was still heavily medicated. So he and his therapist agreed to take a break while he weaned himself down to half his previous dosage. At that point, some underlying pain that the drugs had been masking returned, so Slade returned to physical therapy. The therapist utilized manual techniques, this time including the fascia around the colon—a technique known as visceral manipulation—and prescribed additional stretching and relaxation exercises. Having detected a discrepancy in the length of his legs, she also had Slade fitted for orthotics, with a lift on one side to help equalize the height of his pelvis.

Today, Slade's pain is nearly gone. Equally important, he's off painkillers. "My therapist told me that she would stick with me until my pain was resolved—and she did," he says. "As far as I'm concerned, she saved my life."



Illustrations by Wes Bedrosian

Joshua Bright



An Intimate Dance

A Day in the Life of Occupational Therapist Elizabeth Kloczko

As a classically trained ballet dancer, Elizabeth Kloczko, OT, a senior occupational therapist at NYU Langone Medical Center's Rusk Rehabilitation, sees every encounter with a patient as a kind of intimate dance. Whether their patients suffer from brain injury, multiple sclerosis, Parkinson's disease, amputation, stroke, or spinal cord injury, Kloczko and her fellow OTs must tease out movements that only moments earlier would have seemed unthinkable, negotiating inch by inch through pain, frustration, and occasional despair. Occupational therapists assess and treat impairments to a variety of skills—physical, cognitive and perceptual, visual, psychological, and sensory—evaluate home accessibility and recommend modifications to improve it, and address seating and mobility issues. On a typical day, Kloczko treats six patients, seeking to restore the skills required for daily living, along with more challenging activities like cooking, cleaning, driving, shopping, and working. With her encouragement, large struggles become small triumphs.

9:35 a.m. "Push, push, push!" Kloczko urges Tijuana Bruton, a makeup artist from the Bronx who has been battling lupus for nine years. Bruton, her left arm limp, pushes her hands against a set of pipes shaped into a rectangle. "Go, go, go!" cheers Kloczko. "Good, good, good!" Now, she ups the ante. With her right hand, Bruton must lift a shampoo bottle out to the side while her left hand pushes against the pipes—multitasking. "I'm making your brain work harder," explains Kloczko. "Squeeze, squeeze, squeeze! Tighter, tighter, tighter!" The process is called motor retraining. Bruton leans forward, widens her eyes, and exhales deeply. "Wow, that was a lot," she says. "The feeling is finally coming back.

A month ago I was unable to dress myself. Now I can put on a shirt. Elizabeth gives me that extra push I need."

10:30 a.m. Dr. Wilma Watts, a podiatric surgeon with a rare spinal cord injury, inserts small white pegs into narrow slits with her left hand, a test of fine motor control. Kloczko stays silent because Dr. Watts motivates herself. As a surgeon, she expects her hands to embody fine motor control at its finest. Kloczko brings over a blob of hard green putty. Dr. Watts digs into it with her fingertips to pry loose tiny plastic beads. "I just have to keep digging," she says. "I have to be able to hold my surgical instruments securely." For the next hour, she visualizes the parallel between her exercises and her surgical

Elizabeth Kloczko, OT, a senior occupational therapist at Rusk Rehabilitation, sees every encounter with a patient as a kind of intimate dance.

actions. As she ties shoelaces on her sneakers, another drill, she points out, "When I do this, I think about suturing." Kloczko offers feedback sporadically, always positive. Only recently, Dr. Watts has resumed brushing her own teeth and combing her own hair. "My brain is starting to remember what my hands used to do," she says. She can now draw a line straight enough to apply eyeliner. "Given my life in surgery," she says, "it's extremely important for me to be able to draw a straight line."

11:20 a.m. "I'm having an off day," Polly Rogers, a painter and photographer with a spinal cord injury, warns Kloczko from her wheelchair, barely audible. "Feeling a little feeble." Kloczko promises to "go gentle." Over the next hour, she puts Rogers through her paces. Rogers slowly pumps her arms out in front of her, as if rowing. Kloczko counts off the reps, coaxing her along in a voice softly singsong and solicitous. Rogers leans forward, straining to raise her hand and touch fingers with Kloczko as if for a high five. Rogers purses her lips in evident discomfort. "That's OK," says Kloczko, "I got you, my love." She calls for a rest break—the third so far. "I feel better," says Rogers, her voice noticeably stronger. "It's because I'm actually moving all my muscles. Otherwise, I would sit too much in this stupid wheelchair." Just when she seems ready to call it a day, she looks at Kloczko and says, "OK, so what's next?"

1:00 p.m. Dr. Jean Gallien, a retired physician who suffered a stroke, stands in front of a mirror, pushing his right arm out against the pipe structure, grimacing and trembling from the effort. Kloczko pastes two electrodes onto his right triceps. Wired to an electrical stimulator, they transmit impulses to the nerves. The muscle fibers in his triceps twitch visibly. She asks him to try to move his right arm, but he shakes his head no. "Come on, you can do it," she says. So he does, looking to Kloczko for some reinforcement. "Yes!" she says. "Wow! There you go." Dr. Gallien peeks at his watch, and Kloczko pouts at the gesture, miming a hurt expression. With her hands on his hips and her foot serving as a brace between his feet, she helps him maneuver himself back into his wheelchair. Standing chest to chest, they're practically performing a duet. As Dr. Gallien leaves, he flashes Kloczko an A-OK.

KiDS of NYU Langone Springfling

At this year's Springfling, held at The Plaza on April 10, children ran the show. Two sixth-grade emcees led a program full of heart, honoring Joseph McCarthy, MD, the Helen L. Kimmel Professor of Reconstructive Plastic Surgery, renowned for his leadership in pediatric craniofacial surgery. Patients and parents shared stories of remarkable resilience and compassionate care. Alice Tisch, chair of KiDS of NYU Langone and an NYU Langone trustee, and Trudy Elbaum Gottesman, vice chair of KiDS of NYU Langone, cochaired the event, along with William Constantine, also a Medical Center trustee. The gala raised nearly \$1 million for transformations in children's healthcare services at NYU Langone.



Robert Gottesman; Dr. Catherine Manno, the Pat and John Rosenwald Professor of Pediatrics and chair of the Department of Pediatrics; Trudy Elbaum Gottesman, vice chair of KiDS of NYU Langone; and Michael Weaver, treasurer of KiDS of NYU Langone.



Dr. Robert I. Grossman, the Saul J. Farber Dean and CEO; Alice Tisch, chair of KiDS of NYU Langone; and Dr. Joseph McCarthy, the Helen L. Kimmel Professor of Reconstructive Plastic Surgery.



First row: Jacob, Magda, and Nathaniel Newman and patient speaker Jamie Verdi; second row: Susan Epply, Taylor Holman, and speaker Russel Newman.

All photos by Jay Brady

news & views

Inside This Issue



A Hospital on the Rise The hospital's four new elevators, made possible by another generous gift from the Tisch family and opened to the public on April 16, are more than a welcome relief—they're an affirmation of NYU Langone's commitment to creating a world-class environment for patients and visitors. [page 1](#)



All in a Half-Day's Work More than 2 million Americans will be diagnosed with skin cancer this year, and 40 to 50% of adults are afflicted by skin cancer at least once in their lifetime. Those statistics help to explain the growing popularity of Mohs surgery—for physicians and patients alike. [page 3](#)



The Invisible Scars of War Thanks to a \$17 million gift from the Steven A. and Alexandra M. Cohen Foundation, perhaps the largest private donation to study PTSD, Dr. Charles Marmar and his research team are embarking on a landmark five-year project to transform the diagnosis and treatment of war's invisible scars. [page 4](#)



Romancing the Stones There was a time when a kidney stone sufferer had only two choices, one seemingly worse than the other: ride out the pain and wait for the stone to pass or, if the stone was too large, have surgery requiring a huge incision in the back, abdomen, or flank. Thankfully, today there are more options. [page 5](#)

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A Hospital on the Rise (continued from page 1)

