

news&views

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Two Major Gifts Will Enhance Medical Center's Programs in Cancer and Emergency Medicine

Gift of Over \$50 Million from Laura and Isaac Perlmutter to Advance Cancer Research and Treatment

NYU Cancer Institute and Its Programs and Facilities to Be Renamed the Laura and Isaac Perlmutter Cancer Center at NYU Langone

NYU Langone Medical Center has received a gift of more than \$50 million from Laura and Isaac Perlmutter and the Laura and Isaac Perlmutter Foundation, Inc., to advance cancer research and treatment. The NYU Cancer Institute's adult cancer services, as well as its numerous research programs and facilities, are being renamed the Laura and Isaac Perlmutter Cancer Center at NYU Langone.

The donation, part of a larger, long-term commitment by the Perlmutters to NYU Langone, will enhance cancer research, education, and patient care, with the goal of achieving better outcomes for adult patients. (Cancer services for children are funded separately by other benefactors.) It will allow us to seamlessly integrate our programs in cancer care, research, and education across all disciplines, regardless of their physical locations in our growing care network. It will also ensure that all facilities embraced by the new Perlmutter Cancer Center will have the dynamic infrastructure needed to strengthen the bridges between our scientists and clinicians. Equally important, this support will help to attract and retain nationally



The gift from Laura and Isaac Perlmutter will enhance cancer research, education, and patient care at NYU Langone, with the goal of achieving better outcomes for adult patients.

recognized faculty members, both physicians and laboratory scientists; improve prevention, diagnosis, and treatment; and train the next generation of leaders in this field at NYU School of Medicine.

As one of only 68 National Cancer Institute (NCI)-designated cancer centers in the US, NYU Langone meets rigorous criteria for world-class, state-of-the-art programs in multidisciplinary cancer research. The clinicians and researchers of the Perlmutter Cancer Center will strive to deepen our understanding of how cancer develops, progresses, and sometimes eludes currently available treatments.

Laura Perlmutter has been a member of the NYU Langone community for more than 30 years, starting as a volunteer in the Women's Auxiliary in Tisch Hospital's gift shop, and later becoming president of the auxiliary from 1985 to 1992. She has been a member of the Medical Center's board of trustees since 1985 and a member of the Cancer Advisory Board since 2005. Isaac Perlmutter is the chair of Marvel Entertainment, one of the world's foremost character-based entertainment companies. Until that company's acquisition by The Walt Disney Company in 2009, he was Marvel's chief executive officer and its largest

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With 22,000 square feet of space, the new Ronald O. Perelman Center for Emergency Services will more than triple the size of the former Emergency Department.

Ronald O. Perelman Center for Emergency Services to Open in Spring, Thanks to \$50 Million Gift

The State-of-the-Art Facility within Tisch Hospital Will Help Meet New York City's Growing Need for Emergency Medical Care

Ronald O. Perelman, a longtime trustee and benefactor of NYU Langone Medical Center, has donated \$50 million to create the Ronald O. Perelman Center for Emergency Services. Scheduled to be completed in April 2014, the state-of-the-art emergency care center will be located within Tisch Hospital, with its main entrance at 570 First Avenue at 33rd Street. The 22,000-square-foot Perelman Center will more than triple the size of the former Emergency Department (ED), which remains closed due to damages sustained during Hurricane Sandy. In the aftermath of the storm, NYU Langone immediately established an urgent care center to help address the community's need for emergency services.

The new Ronald O. Perelman Center for Emergency Services is part of NYU Langone's sweeping campus transformation, designed to modernize its facilities in order to more efficiently and effectively meet the demands of today's complex healthcare delivery system. NYU Langone had long planned to expand its emergency services, spurred by the growing number of patients who have come to rely on the hospital over the years. Before Hurricane Sandy, Tisch's ED treated about 50,000 patients annually. Though New York City Fire Department 911 ambulance service has not yet returned, the urgent care center's patient volume currently approaches the ED's previous daily patient visits, signaling that the expanded capacity of the new facility will serve a critical and growing need.

The Ronald O. Perelman Center for Emergency Services will include a separate, dedicated entrance for adult walk-in and ambulance patients; an area solely dedicated to pediatric emergency services, the KiDS of NYU Pediatric Emergency Care Center; treatment rooms that allow for flexibility of use, improved patient privacy and infection control, and enhanced visibility and contact between caregivers and patients; and advanced imaging equipment to assist the diagnostic process.

Ronald O. Perelman is chairman and chief executive officer of MacAndrews & Forbes Holdings Inc., one of the country's largest privately held businesses, which includes Revlon. He has been deeply committed to NYU Langone for three decades and has previously provided the Ronald O. Perelman

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Karsten Moran

An Apprenticeship Like No Other

For Physicians-in-Training, a Residency Is One Part Journey, One Part Transformation

Each May, NYU School of Medicine's newly minted graduates gather to take the Hippocratic Oath and receive their diplomas. On this momentous day, years in the making, they earn the right to call themselves "doctor of medicine." But as most physicians would tell you, it's the specialty phase of training—the residency—that truly transforms the recipient of an MD degree into a bona fide physician.

"I remember thinking at various times early in my residency that I was beginning to get a handle on being a doctor," says Stacey Gunn, MD ('10), who recently completed a three-year residency in medicine at NYU Langone Medical Center. "Then, the next day, I would see something totally new, and all of that confidence would get deflated. Again and again, I would realize I had so much more to learn."

Dr. Gunn's experience was by design. NYU Langone's residency program in medicine is built on the principle of "progressive autonomy"—trainees are given more and more responsibility as they master the various skills of clinical care. "We want residents to be in the front seat of clinical decision making. But because this is a process of learning and growth, they're not just given the keys to the car," says Patrick Cocks, MD, the Abraham Sunshine Assistant Professor of Clinical Medicine and director of the Department of Medicine's residency program, the largest of 20 at NYU Langone.

First-year residents (historically called "interns") carry out most of the day-to-day tasks of doctoring, examining patients and ensuring that tests are performed and results retrieved, among other essential duties. In the second year, responsibilities steadily mount, as residents start to focus on the bigger clinical picture. As team leaders, they oversee the care of more than a dozen patients at a time, in consultation with senior colleagues. The responsibilities continue to accrue in year three, when residents serve stints as "medical consults," triaging patients admitted from the Emergency Department and consulting on cases from other services. Residencies range in length from three to seven years, depending on the specialty.

If these life-and-death responsibilities weighed on Dr. Gunn's shoulders as she neared the end of her training, it didn't show. On Tisch Hospital's 17th floor, she led a platoon of medical students, interns, residents, and other personnel on early-morning rounds with the demeanor and surety of a seasoned pro. First up was a young paraplegic, paralyzed by a gunshot wound, with skin ulcers penetrating all the way down to the bone. Down the hall were a young woman with an unexplained seizure disorder, an elderly woman with painfully swollen legs, and an elderly man with congestive heart failure—a typical mix of highly acute, clinically complex cases that residents see every day at Tisch Hospital or NYU Langone's other teaching affiliates, Bellevue Hospital Center and the Manhattan VA Medical Center.

In each patient room, a medical student or resident would present the case to the team, stimulating a detailed discussion, which would spill out into the hallways, of clinical findings, treatment strategies, and

recent scientific studies. An attending physician was always nearby, ready to add the kind of perspective that can only come from having spent years or decades in the trenches.

"Rounds are the heart and soul of the residency," explains David Stern, MD, PhD, professor of medicine, vice chair for education and academic affairs, and chief of medicine at the Manhattan VA. "It's such a successful training model—having young physicians serve as apprentices alongside seasoned physicians—that I can't imagine this method of learning ever going away. It certainly can't be replaced by books or computers."

As Dr. Gunn's entourage made its way through the bustling hallways, it was joined by a pharmacist, librarian, and patient experience specialist—all relative newcomers to the clinical team—each contributing to the discussion. "There has been a push in recent years to form multidisciplinary teams, which has benefited our

"Rounds are the heart and soul of the residency," explains David Stern, MD, PhD, professor of medicine, vice chair for education and academic affairs, and chief of medicine at the Manhattan VA.

learners as well as our patients," says Dr. Cocks, who did his residency at NYU Langone in the early 2000s.

Over the past three years, Dr. Gunn has tended to several thousand patients: immigrants from Asia and Africa, veterans of the wars in Afghanistan, Vietnam, and Iraq, and New Yorkers from every rung of the socioeconomic ladder, with just about every ailment known to modern medicine. "A doctor who trains in this context," notes Dr. Stern, "really has

seen it all and dealt with it all, coming out of it incredibly competent."

The experience is exhilarating and exhausting. "It can be stressful, working 12 to 13 hours a day, six days week," Dr. Gunn admits. "You miss a lot of things, like your friends' weddings." Still, she wouldn't have it any other way. "Without that intensity," she adds, "your training suffers."

Dr. Stern agrees: "In teaching medical students, we talk a lot about evidence-based medicine—that is, providing treatment based on data. That's all well and good, but diagnostic and treatment decisions are also based on knowing how to interview a patient, how to sort through myriad clinical information, and other skills that can only come from countless hours of firsthand observation and hands-on experience." This one-of-a-kind experience is in such demand that each year NYU Langone receives about 5,000 applications for 65 training spots in medicine.

For Dr. Gunn, the effort appears to have paid off. "Toward the end of my residency, I found myself leading rounds and quoting the latest scientific literature as if all that were second nature," she says. "'Wow!' I thought, 'now I'm a doctor.' "

Unsure where she ultimately wants to work, Dr. Gunn is spending her first postresidency year taking temporary assignments at hospitals around the country, a practice known as locum tenens (Latin for "placeholder"). "The most striking thing about becoming an attending was how seamless the transition from residency was," says Dr. Gunn. "I had always heard that NYU Langone's residents were well trained, but it wasn't until I was practicing on my own that I realized how true that really is. We're instilled with a sense of confidence and competence in our clinical skills that allows us to thrive wherever we decide to practice."



Karsten Moran

NYU Langone's residency program in medicine is built on the principle of "progressive autonomy"—trainees are given more and more responsibility as they master the various skills of clinical care. Dr. Stacey Gunn (center), who recently completed a three-year residency in medicine, rounds with residents at Tisch Hospital.

A Visceral Bond

On Valentine's Day Last Year, Bryan Li Gave His Wife, Francine Meng, the Greatest Gift of All

Lovers commonly pledge their hearts, with maybe a bouquet of flowers or a box of chocolates, on Valentine's Day. But when Bryan Li and Francine Meng came out of surgery at NYU Langone Medical Center on February 14, 2013, their bond was considerably more visceral. Li's gift to his wife was the better part of his own liver.

The timing was, admittedly, a coincidence. It was the first date available at NYU Langone's Mary Lea Johnson Richards Transplantation Center, which, like Tisch Hospital itself, had been closed for two months after Hurricane Sandy. The day was less than romantic in the traditional sense—not only no candlelight dinner, but the couple recuperated from their grueling operations in separate rooms.

"It was more than two days before we even saw each other," says Meng, 39.

"And there weren't any hugs and kisses at that point either," adds Li, 33. "We still couldn't move. The happiness was internal."

Their joy was buoyed by the reassurances of hospital staff that both had come through with flying colors. Without Li's donation, Meng's cancerous liver would have killed her. In about nine months, Li's divided liver would regenerate into two whole, healthy livers, one in each person.

NYU Langone has been performing live liver transplants since the late 1990s, averaging about one per month. Compared to live kidney donations, the procedure is relatively rare, explains Lewis Teperman, MD, associate professor of surgery and director of transplantation, in part because of its complexity. "You have two kidneys, and you only need one," he points out, "but with the liver, you're dividing one organ in half." NYU Langone has been very successful with its live liver donors, but the donor mortality rate—1 in 200 versus 1 in 6,000 to 7,000 for a kidney donation—speaks to the gravity of the surgery. Yet for many patients, a live liver donation is the only option, given the long waiting list for a cadaver liver.

Too long, in Meng's case. Growing up with hepatitis B (passed on from her mother's blood), Meng was at high risk for liver cancer. When an MRI confirmed an aggressive tumor measuring six centimeters in diameter on December 12, 2012, time was running out. "I knew right away that I wanted to give her my liver," says Li. "Dr. Teperman explained the risks, but I had



John Abbott

After learning that their blood types were just as compatible as their personalities, Francine Meng received a live liver transplant from her husband, Bryan Li, on Valentine's Day, 2013.

no second thoughts. My only worry was that I wouldn't be compatible."

In the medical sense, that is. Meng and Li, both Canadian citizens, met in Toronto eight years ago through family friends. They soon fell in love and were married in 2008. "They are a really beautiful couple," says Dr. Teperman.

As luck would have it, their blood types were just as compatible as their personalities. Other tests determined that his liver was also the right size and shape. (Meng and Li are both tall and slim.) Psychological tests—standard

When Li awoke, he recalls, "I wanted to ask how Francine was, but I still had a tube in my mouth, and I couldn't speak. But I could move my hands, so I drew an F. They said she had come through the operation fine. That was all I cared about, so I drifted off."

procedure with live donations—confirmed that Li, an attorney at a Manhattan law firm, was not donating under duress. All systems were go, but Meng was worried—about Li, but also their 15-month-old son, Justin. "I was so scared," she recalls. "I thought, 'I don't want Justin to lose both his mother and his father.' So I said no."

Dr. Teperman understood her concerns, which help explain why husband-wife live liver donations are uncommon. "More typically, we see daughters giving

livers to their mother or father," he says. "With two parents, you do worry about child-care complications. But it is a myth that blood relatives make better donors. In some cases, a disease will come back faster if the donor is related." At any rate, other options were slim: both of Meng's siblings also had hepatitis B, which is endemic in her native China. With Li's parents offering to care for Justin during recovery, Meng finally agreed.

The day-long procedure began at 6:15 a.m., when a 12-person team of surgeons, anesthesiologists, residents, and nurses, led by Dr. Teperman, removed the right lobe of Li's liver (which represents about 60% of the organ). Five hours later, Dr. Teperman carried the lifesaving lobe into another OR, where a separate team had removed Meng's cancerous liver. Eight hours later, the transplant was complete.

When Li awoke, he recalls, "I wanted to ask how Francine was, but I still had a tube in my mouth, and I couldn't speak. But I could move my hands, so I drew an F. They said she had come through the operation fine. That was all I cared about, so I drifted off."

Likewise for Meng. "When I woke up, I was so worried about Bryan, but the transplant team was great," she says. "They kept patting me, saying, 'Don't worry. Bryan is doing fine.'"

After a week in the hospital, the couple recovered rapidly at home. Other than their matching wishbone-shaped scars, Li says they haven't really changed. "Our marriage was strong before, and it's strong now. But Francine does owe me. I figure I'm never doing dishes for the rest of my life."

Gift for Emergency Medicine (continued from page 1)

Gift for Cancer (continued from page 1)

stockholder. He was recently named to the Medical Center's board of trustees. Prior to their current pledge, the Perlmutters contributed over \$8 million in support of NYU Langone, including funding for the Laura and Isaac Perlmutter Gynecological Cancer Care Center.

"This is a truly transformative gift that will have a catalytic effect on enhancing our research and clinical programs," says William Carroll, MD, the Julie and Edward J. Minskoff Professor of Pediatrics, professor of pathology, and director of the Perlmutter Cancer Center. (Dr. Carroll will be stepping down as director to focus more fully on his clinical and laboratory research in childhood leukemia. A nationwide search for his successor is under way.) This gift is expected to catapult the Medical Center's cancer programs into the forefront of oncology, accelerating our investments and recruitments in areas such as stem cell/immunotherapy, cancer genetics and epigenetics, imaging, community outreach, and supportive oncology. "Laurie is one of the founding members of our Cancer Advisory Board," adds Dr. Carroll. "Anyone who knows Ike knows that he doesn't invest in something that isn't going to pay off. Their investment in us is a validation of our strategy—and a remarkable vote of confidence in our future."

Among the new programs at the Perlmutter Cancer Center that will be created or enriched by this extra-

dinary gift are the Center for Advanced Diagnostics; the Cancer Screening Center; the Brain Tumor Center, a preeminent treatment and research center composed of a world-class multidisciplinary team of experts; and the Integrative and Supportive Oncology Program, the fourth pillar of care alongside surgery, chemotherapy, and radiation therapy.

"Relationships are what set our Cancer Center apart. We build them, sustain and strengthen them, and this remarkable community provides the personal care and extraordinary commitment that remains the core of our center," says Lori Fink, chair of the Cancer Advisory Board and a Medical Center trustee. (Her husband, Laurence Fink, is the vice chair of the Medical Center's board of trustees.) "Through my work with Laurie and Ike on the advisory board, I've learned how much it means to them to give back to an institution they consider to be part of their own family."

"We are longtime supporters of NYU Langone," says Laura Perlmutter, "but the transformation of the Medical Center under the leadership of Dean Grossman, Ken Langone, and Larry Fink drove us to consider a much more significant level of support. Larry, and particularly Lori, made us realize how a gift such as ours could catalyze even more dramatic results for the Perlmutter Cancer Center and the research community at large."

Fund to support biomolecular medicine at NYU School of Medicine. The Ronald O. Perelman Department of Dermatology was the first academic department at

NYU Langone to be endowed.

"I am very proud of my long association with the Medical Center," says Ronald O. Perelman. "The need for a state-of-the-art emergency center is of paramount

The 22,000-square-foot Perelman Center will more than triple the size of the former Emergency Department, which remains closed due to damages sustained during Hurricane Sandy.

importance to the people of the City of New York, and I look forward to this facility playing a crucial role in emergency patient care."

Ronald O. Perelman has committed to the so-called Giving Pledge, a promise by some of the world's wealthiest individuals to donate most of their riches to philanthropy.

The Start of Something Big

Not Many Researchers Can Say They've Made Seminal Contributions, Garnered Top Honors in Their Field, and Coined a Scientific Term, but Dr. Eric Simon Is One of Them.

Much of what we know about how morphine, heroin, and other opioids affect the brain, we owe to Eric Simon, PhD, professor of psychiatry, and biochemistry and molecular pharmacology at NYU Langone Medical Center. He electrified the fledgling field of neuroscience in 1973 with the discovery of receptors that bind opioid drugs, a finding that catalyzed an exhilarating new era in the research on addiction and pain management. Their presence suggested that the body must be capable of producing its own version of morphine, natural chemicals that block pain and produce feelings of euphoria. When researchers identified these chemicals in 1975, Dr. Simon dubbed them "endorphins" (from "endogenous morphine"), a term that quickly entered the general lexicon.

At 89, Dr. Simon has garnered numerous awards and accolades, including three of the highest honors in the field of addiction research. "Aside from the Nobel Prize, just about every other honor has been bestowed upon him," said Charles Marmar, MD, the Lucius N. Littauer Professor of Psychiatry and chair of the Department of Psychiatry, as he introduced Dr. Simon last October to a standing-room-only audience at the Joan and Joel Smilow Research Center, where Dr. Simon chronicled his 40-year history of opioid research.

It's a story that really begins in Dr. Simon's lab, just shortly after he joined the faculty of NYU School of Medicine as an assistant professor of medicine in 1959. A star recruit of Lewis Thomas, MD—then chair of the Department of Medicine and later dean of NYU School of Medicine and president of Memorial Sloan Kettering Cancer Center—Dr. Simon turned to his new boss for advice on how to direct his search for research support. Dr. Thomas suggested he apply for a New York City public health grant newly created to keep young, talented researchers in the city. "He thought if I could do science that might help the city, that would increase my chances of getting the grant," recalls Dr. Simon.

Where to start? Pollution, crime, infectious diseases—there was no shortage of public health problems in New York in the early 1960s. But one threat stood out: heroin addiction. At the time, it was a full-blown epidemic, and almost nothing was known about why it was so devilishly addictive. "All we knew was that it was hard to quit," says Dr. Simon. "The body somehow adapted to

it to the point where people couldn't live without it." He was fascinated by how that adaptation might take shape on a biochemical level.

Many of his colleagues thought the idea of looking to chemistry for answers to the mysteries of addiction was foolish. Addiction was still widely viewed as a character flaw, a moral defect best treated with prayer, prison, or a stint in a mental asylum. "They said addiction research just wasn't ready for biochemistry," says Dr. Simon. "I said, 'Well, maybe we can get it ready.'"

And that's just what he did. Dr. Simon was awarded the grant, which paid for his salary, and New York City continued to award him the grant for the next 15 years. An organic chemist by training, he taught himself neuroscience along the way, auditing classes in his spare time. His research soon caught the attention of the National Institute on Drug Abuse (NIDA), and today, he is the researcher who has been continually funded the longest by that agency.

Over the course of his distinguished career, Dr. Simon has authored nearly 300 peer-reviewed papers and reviews, many considered citation classics. His scientific achievements, in collaboration with his colleagues and students, include a long string of firsts—among them, the first to map opioid receptors in the human central nervous system, the first to isolate and purify active opioid receptors from a mammalian brain, and the first to discover an opioid receptor in the retina. "Dr. Simon is one of the great leaders in the fields of neuroscience and addiction," said Dr. Marmar. "No one is more distinguished."

In a special issue of the journal *Neurochemical Research* dedicated to Dr. Simon in 1996, the pioneering neuroscientist Huda Akil, PhD, professor of neurosciences at the University of Michigan and former president of the Society for Neuroscience, paid tribute not just to Dr. Simon's scientific contributions, but also to his gifts as a teacher, mentor, and friend. "As one scans his biography, one is struck by the number of his coauthors who themselves have risen to prominence," Dr. Akil wrote. "This says a great deal about Eric Simon the man, who is truly as warm, kind, and supportive as he appears to be at first blush."

Dr. Simon learned the value of family and service early on. He fled Nazi Germany with his parents at age 14.



John Abbott

In 1975, researchers identified natural chemicals that block pain and produce feelings of euphoria. Dr. Eric Simon (above) dubbed them "endorphins" (shown in background is a micrograph of an endorphin crystal), a term that quickly entered the general lexicon.

They settled in Cleveland, Ohio, and worked hard to make a living. His father, a grain merchant in Germany, reinvented himself to run a lighting business. He was successful enough to send his son to college. After Dr. Simon earned his bachelor's degree in chemistry from Case Western Reserve in 1944, he was immediately drafted into the US Army. His first assignment after basic training, he would later learn, was the Manhattan Project, which produced the first atomic bombs during World War II, but the military reconsidered in light of his German heritage. When World War II ended, Dr. Simon immediately dove back into science, moving to Chicago with his wife, Irene, to earn a master's degree and a PhD in organic chemistry from the University of Chicago, and then to New York City for postdoctoral work in biochemistry at Columbia University. But it was NYU School of Medicine that he would ultimately call home. "I'm sincerely grateful to have settled in such a supportive and intellectually challenging environment," Dr. Simon says.

Dr. Simon's dedication to research has neither waivered nor waned. He closed his lab four years ago, at 85, but remains a vibrant member of the neuroscience community. He lectures frequently and often lends insight to his fellow researchers at the Medical Center who are picking up the mantle of addiction research. "It's really become an exciting field," notes Dr. Simon. "It was wonderful to be in at the start of it all."

When Depression Is Not Depression

To Render an Accurate Diagnosis, NYU Langone's Treatment-Resistant Depression Program Leaves No Stone Unturned

Steve Taylor proved to be as much a victim of medical myopia as he was of the depression that robbed him of his energy, spirit, and interest in simple things that once gave him pleasure, like going out to dinner with his wife. After a year on antidepressants left him feeling emptier than ever, Taylor (not his real name) consulted Norman Sussman, MD, professor of psychiatry, at NYU Langone Medical Center. Searching for hidden clues that can open a new window on a patient's condition, Dr. Sussman made a startling but all too familiar discovery. Taylor had been misdiagnosed, and the medications he was taking were actually making his depression worse.

"Oftentimes doctors don't think out of the box," notes Dr. Sussman, director of NYU Langone's treatment-resistant depression program. "If they have a patient with depression, they typically prescribe an antidepressant. If that doesn't work, they start parading them down a route of very similar drugs. Our job, essentially, is to determine whether these depressed patients have been properly diagnosed, and to make sure treatments that might be helpful to them have not been overlooked."

In Taylor's case, Dr. Sussman traced his condition to bipolar disorder, also known as manic-depressive illness because of its cyclical mood swings from severe highs (mania) to crashing lows (depression). Taylor's symp-

toms, however, were subtler than most and easy to miss. Dr. Sussman, a leading expert in psychopharmacology, determined that while the patient had periods where he "felt grandiose, showed poor impulse control, and needed less sleep," he was not manic or psychotic in the classic sense. Because bipolar disease had been overlooked, Taylor was being treated with a combination of antidepressants, shown to be ineffective in some cases or to exacerbate mood swings in others. In place of the "cocktail" therapy Taylor had been on for depression, Dr. Sussman substituted a mood stabilizer and an off-label drug that had proven successful with other patients. Before long, Taylor's mood, energy, and overall sense of well-being showed a dramatic improvement.

"Our drug-resistant depression program doesn't necessarily provide treatment that patients can't get elsewhere," observes David Ginsberg, MD, clinical associate professor of psychiatry and vice chair for clinical affairs in the Department of Psychiatry. "What we do provide is a thorough assessment of the patient's condition, which means taking the time to compile a detailed history, conduct clinical interviews, and gather information which, in other settings, might be overlooked. We then rely on the tremendous experience and expertise of physicians like Dr. Sussman to put all the pieces together."

Some 20 million Americans are believed to suffer from clinical depression, and as many as one-third of patients are treatment resistant—that is, they don't respond to conventional drug therapy. In many cases, the culprit is a misdiagnosis. Patients with thyroid or rheumatoid disorders, for example, can manifest depressive symptoms long before they show physical abnormalities. In other cases, patients with depression don't get better because they're "overdosing" on medications.

"The great irony," says Dr. Sussman, "is that the more resistant you are to treatment, the more medicines you wind up taking, and these drugs themselves may be the source of problems involving memory, concentration, and sexual dysfunction. That's why we discontinue medicines as often as we add them to a patient's regimen."

Therein lies perhaps the greatest benefit of the treatment-resistant depression program: its specialists are comfortable with therapies and approaches that psychiatrists in community settings are often not. These include off-label drugs normally used for such disorders as epilepsy and Parkinson's disease.

"We're confident in our diagnostic skills and comfortable going where others in our field won't," explains Dr. Sussman. "That's why patients with unsolved problems often turn to university-based hospitals."

Man on a Mission

Dr. Francis Arena, Says One of His Cancer Patients, "Is the Kind of Man You Follow into Battle"

Francis Arena, MD, clinical associate professor of medicine, recalls that he was 12 years old when he decided that one day he would help his uncle Jim fight cancer. "Our family lived in Williamsburg, Brooklyn, above my uncle's medical practice," he says. "Uncle Jim was the GP for the neighborhood, and I'd often sit on the stoop and wave to his patients. I remember this pretty young girl who got paler and paler with each visit until she stopped coming. 'She passed away,' my uncle said. 'Leukemia. A disease for which we have no treatment.'"

Today, Dr. Arena, three other oncologists, and a social worker care for patients at NYU Langone Arena Oncology, part of the Laura and Isaac Perlmutter Cancer Center, as well as the Medical Center's growing network of ambulatory care centers. In his homey corner office in Lake Success, New York, Dr. Arena's eyes reddens and tear up at the memory of the child his uncle couldn't save. "Medical oncology was not a subspecialty yet," he explains. "A few decades later, we would be able to cure 70% of kids with that same disease. I've been on a mission to help my uncle do what he couldn't do back then."

Dr. Arena beams when he speaks of the Medical Center's expansion of clinical services on Long Island, including the new state-of-the-art infusion center with a dedicated pharmacy, adjacent to Arena Oncology. "It's what I dreamed of as a boy and a young physician," says Dr. Arena with a catch in his throat. "Uncle Jim would be amazed at the advances in cancer treatment, not just in chemotherapy and targeted protocols, but in delivery systems."

Going back 32 years, Dr. Arena recalls his first case as assistant chair of medicine at Memorial Sloan Kettering Cancer Center. "She was a woman from Queens with young children," he says. "Her colon cancer had spread to a liver that looked like Swiss cheese, and doctors had given her no more than six months to live. I explained the prognosis and options, including



John Abbott

"Emotional support and stability from family and friends are essential to recovery," insists Dr. Frank Arena, shown with one of his patients.

hospice care, and asked her: 'What do you want?' She said: 'We're not giving up. Do what you have to do.' I promised to do everything possible and asked her to do something for me: spend some quality time at home. I felt—and still feel—that emotional support and stability from family and friends are essential to recovery."

That philosophy was ahead of its time when Dr. Arena started his private practice in 1984, making it clear to each of his patients that they should not spend a night in the hospital unless it was absolutely necessary. "That's a guiding principle of our ambulatory care centers," he explains. "Now that we're part of NYU Langone, supported by one of the world's great academic medical centers, our team can serve thousands of patients a year through a multimember practice. I'm proud to say that the woman who, 32 years ago, everyone thought had only six months left is still one of them."

"Dr. Arena and his colleagues have been of great service to the greater Long Island area for many years," notes William Carroll, MD, the Julie and Edward J. Minskoff Professor of Pediatrics, professor of pathology, and director of the National Cancer Institute (NCI)-designated Perlmutter Cancer Center. "One of the reasons this is such a good fit is because they share our commitment to bringing the latest advances in cancer prevention, treatment, and care to patients and their families. This also extends our impact to yet another community."

Back in his office, Dr. Arena picks up a framed photo of a young couple with a baby. "That young man, Larry Werther, caught a tough break," he explains, "but he fought like a champ. When things looked dark, Larry asked me: 'Will I be around to see my kids grow up?' At the time, he had no children."

Werther, now 30, tells the rest of the story. "In November 2007, right after Julia and I got married, I felt a bulge in one of my lymph nodes. I was told that I had an aggressive form of intermediate-grade non-Hodgkin's lymphoma. Dr. Arena was the second oncologist we met with. We liked him from the start. He was honest, confident, even funny. This was the kind of man you follow into battle. We started with six rounds of four-week cycles of chemo. At the beginning of the fourth cycle, Dr. Arena walks over and gives me a fist bump. 'You're gonna be fine,' he said."

A year after Werther's treatment ended, he and his wife sat in Dr. Arena's office with an incredible gift: Damian Francis Werther. Against the odds, the couple had their first child.

"We're people of faith," says Werther, "and Damian is the patron saint of physicians. We also wanted to cover the bases, so his middle name is Francis—after the physician who is our patron saint."

Dr. Arena is too choked up to speak. But a few seconds later, his eyes still red, he says in a firm voice: "And that's why I do what I do."

Where Men's Health Is the Specialty

Like NYU Langone's Existing Counterpart for Women, the New Preston Robert Tisch Center for Men's Health Provides Comprehensive Care in an Elegant, Convenient Setting



Dr. Steven Lamm, medical director of the Preston Robert Tisch Center for Men's Health, with a patient.

Blame it on machismo, social conditioning, or something in the DNA, but when it comes to their health, many men are notoriously and dangerously neglectful. A persistent ache or pain? Just grin and bear it. Time for an annual checkup? Put it off until there's more time. Physicians lament that some men take better care of their cars than their own bodies. On average, men die 5.4 years younger than women.

"Part of it is the manly ideal, part of it is fear factor," explains Steven Lamm, MD, clinical assistant professor of medicine. "They're afraid the doctor will find something wrong that restricts their work or activities." The conse-

quence, he adds, is that men—especially those who don't have a partner to coax or cajole them to visit the doctor—tend to get "lost" in the healthcare system after their pediatric years. During middle age, fully a quarter of them start accumulating metabolic baggage: obesity, high blood pressure, and elevated blood sugar and cholesterol, putting them at risk for cardiovascular disease and diabetes.

Champion of preventive medicine that he is (for many years, Dr. Lamm has shared his expertise on TV newscasts and talk shows, including ABC's *The View*, where he's a regular guest), he sees his latest role—medical director of the Preston Robert Tisch Center for Men's Health at NYU Langone Medical Center—as both an opportunity and a challenge. "We're seeing a growing number of younger and middle-aged men who aren't waiting until they get sick to see a doctor," observes Dr. Lamm. "Our center allows them to stay at the top of their game."

If the tremendous success of NYU Langone's Joan H. Tisch Center for Women's Health is any indication, its male counterpart, which opened in January, should find a very receptive audience. The Center for Women's Health, which started seeing patients in September 2011 on Manhattan's Upper East Side, provides a full spectrum of clinical services to some 200 patients daily within a warm, modern setting. The Preston Robert Tisch Center for Men's Health, located at 555 Madison Avenue between 55th and 56th Streets, also doesn't lack for ambience or amenities. Occupying the building's entire second floor, the center is honeycombed with examination and consultation rooms, as well as areas for noninvasive testing. In its services, design, and decor, the center brings personalized medicine to a new level of

sophistication and intimacy. "Men can see their internist, receive physical therapy, radiology testing, or have cosmetic surgery in one visit—all within an executive-type setting that's close to their Midtown office," says Jennifer Savitzky, the center's administrative director.

"Most men's centers are euphemisms for urology practices," points out Andrew Brotman, MD, senior vice president and vice dean for clinical affairs and strategy, chief clinical officer, and professor of psychiatry. "As we did for women's health, we decided to look at men's health more globally, focusing on both routine acute care and prevention while catering to the types of problems and issues that are most important to men." Accordingly, 15 distinguished specialists are housed under one roof, including experts in internal medicine, cardiology, gastroenterology, urology, endocrinology, neurology, dermatology, pulmonary medicine, orthopaedics/sports medicine, and mental health.

"We see the center as a magnet for men who are interested in maintaining good health," says Herbert Lepor, MD, the Martin Spatz Chair of the Department of Urology and professor of urology, and biochemistry and molecular pharmacology. "Busy men can have a general assessment, for example, and be quickly and efficiently referred to a urologist or cardiologist, if needed."

Dr. Lamm emphasizes that the center benefits from the full resources of the Medical Center. "This means we'll be able to refer our more complex cases to departments and services that only a tertiary care institution like NYU Langone can support," he explains. "Our goal is not just to provide the most advanced treatment for diseases that target men, but to prevent these conditions."

Relief at Last for "Asthma of the Nose"

Bruce Jordan, 75, would be the last person to smell gas from an unlit stove burner. With his nose and sinuses stuffy year round, he often awoke during the night, unable to breathe when his mouth closed. Diagnosed in the 1980s with chronic rhinosinusitis (CRS), a persistent inflammation of the sinus and nasal membrane linings that affects between 40 and 60 million Americans, Jordan hoped his condition would improve after two endoscopic sinus surgeries, a strict diet, and a daily nasal rinse. But as he approached retirement, his sinus infections grew more frequent. On the last day of a vacation in Switzerland in 2007, he woke up with a 104-degree fever. Recognizing the all-too-familiar pain around his nose, Jordan took antibiotics and boarded his flight home to New York.

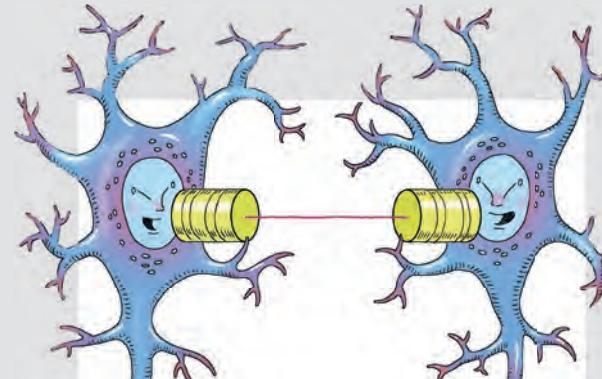
Eight days later, he lay in the critical care unit of NYU Langone Medical Center's Tisch Hospital, tethered to machines, unable to move. Bacteria that had flourished in the moist confines of his sinus cavities had migrated to his lungs, causing pneumonia so severe that a portion of one of his left lower lobes had necrosed. Surgery to remove the dead tissue saved his life but left him weakened, scared, and determined to gain control over his sinuses. But how? "Haven't I tried everything?" he asked.

Probably not, replied Richard Lebowitz, MD, associate professor of otolaryngology. Clinicians sometimes fail to appreciate differences among types of CRS, explains Dr. Lebowitz, and may mistakenly assume that surgery—or more recently, efforts to reduce certain fungi—would benefit everyone with CRS. "I say, let's stop arguing whether CRS is A, B, or C," insists Dr. Lebowitz. "CRS is all those things, and it's different for each patient."

A CT scan showed Jordan's eight sinus cavities filled with a dense allergic substance called mucin, indicating that he suffered from allergic CRS, or what Dr. Lebowitz explained to him was "asthma of the nose." (More than 50% of patients with moderate to severe asthma, like Jordan, also suffer from CRS.) Both the bronchospasms of traditional asthma and the inflammation of allergic CRS are triggered by a hyperreactivity to stimuli, such as allergens or rapid changes in humidity or temperature. "The asthma analogy helps patients understand what we are dealing with," he says.

With help from an allergist and a pulmonologist, Dr. Lebowitz adopted a plan to calm Jordan's sinuses by reducing the levels of damaging proteins, namely leukotrienes and cytokines. Large doses of the steroid prednisone, gradually tapered down to a safe daily dosage, helped tame the inflammation. The removal of portions of Jordan's ethmoid bone during earlier surgeries created an opening into his sinuses wide enough for Dr. Lebowitz to enter with an endoscope. Using a topical anesthetic, he removed the mucin during office visits.

To Jordan's relief, after some adjustments Dr. Lebowitz's approach worked. He suffered his last sinus infection four years ago and now sleeps soundly during his frequent trips overseas. "I feel great," he says. "It's hard to believe that after all these years, my sinuses are now clear."



By Eavesdropping on Neurons, Researchers Hope to Develop "Neuroprostheses"

Robert Froemke, PhD, is a careful listener. He has to be to hear the nearly imperceptible sounds of individual brain cells hard at work. His "stethoscope" is a tiny electrode that registers and records a neuron's volley of electrical impulses as it communicates with other brain cells.

For Dr. Froemke, assistant professor of otolaryngology, and neuroscience and physiology at NYU Langone Medical Center, cracking the brain's electrical Morse code is the key to developing sophisticated "neuroprostheses," or brain implants, that can patch over faulty or missing electrical signals and help the brain regain command of the body. Just as prosthetic legs help restore mobility to amputees, Dr. Froemke and his collaborators hope to build prostheses that can harness electrical signals in the brain to help restore hearing, vision, movement, and cognitive function.

It's an audacious goal—just the sort New York University had in mind when it created the NYU Grand Challenge competition in 2012. Dr. Froemke and his colleagues were one of two teams selected from 32 applicants to receive a \$250,000 prize. The seed money will help fund the researchers over the next two years as they strive to build a new generation of wireless brain implants for a variety of medical conditions, ranging from autism to quadriplegia. "The potential is quite astounding," says Dr. Froemke.

"NYU's faculty and alumni have helped create some of the world's most important technological breakthroughs, from the creation of the telegraph to the treatment for polio," notes Paul Horn, NYU's senior vice provost for research. "The Grand Challenge demonstrates that the university remains at the forefront of technology and supports research that can capture the public imagination and benefit all mankind."

The brain is dauntingly complex to study. It consists of 80 billion neurons, each one firing 200 times a second. Building a device to mimic it demands interdisciplinary expertise. "You need engineers to figure out how to transfer massive amounts of data to a computer for processing," explains Dr. Froemke. That's where Jonathan Viventi, PhD, assistant professor of electrical and computer engineering at NYU Polytechnic School of Engineering, comes in. You also need neuroscientists who know what to do with all those signals. "How does the brain do what it does? How does it enable us to stand up, move across the room, or make sense of all the crazy sounds coming at us?" asks Dr. Froemke. "Figuring it all out is a huge scientific challenge."

To help piece the puzzle together, Dr. Froemke is collaborating with Michael Long, DPhil, assistant professor of otolaryngology, and neuroscience and physiology, at NYU School of Medicine; Dan Sanes, PhD, professor of neural science at the Center for Neural Science at NYU; and Bijan Pesaran, PhD, assistant professor of neural science at the Center for Neural Science. In Dr. Froemke's lab, where he studies the brains of rodents, progress has been swift. He's already increased the number of brain cells he can record from only a handful to 100—the more data, the better the prosthesis—and he's on pace to record more than 1,000 brain cells by the end of the grant. Says Dr. Froemke: "We have a moral obligation to work as quickly as we can to get the technology out of the lab and into the clinic."

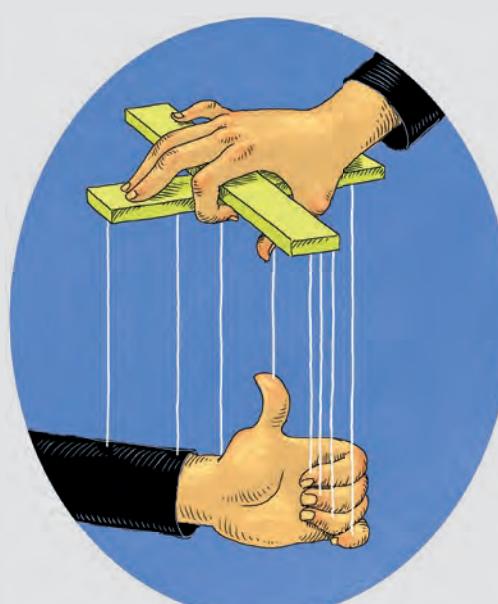
Helping the Left Hand to Know What the Right Hand Is Doing—and Vice Versa

For stroke survivors, regaining as much mobility as possible is the goal, but an even more daunting challenge is recovering dexterity—the fine muscle control that allows someone to grasp a paper cup or crack an egg. "These everyday tasks aren't easy," notes Preeti Raghavan, MD, assistant professor of rehabilitation medicine at NYU Langone Medical Center. "They require a balanced application of force. Use too little, and the foam cup or egg will slip through your fingers. Use too much, and you'll crush the delicate object."

Figuring out what's involved in precise motor control and developing effective and efficient new therapies to aid its recovery are the focus of NYU Langone's Motor Recovery Laboratory. "There's a pressing need for better understanding and better treatments," says Dr. Raghavan, the lab's director. "More than half of all stroke survivors with weakness on one side have a persistent deficit of the hand that reduces their quality of life. It's a growing problem, as ever more people in our aging population are afflicted by strokes."

Why is recovery so poor? "For one thing, the hand just doesn't get much attention early on," explains Dr. Raghavan. "The emphasis in rehabilitation is getting patients back to independence as quickly as possible." Since stroke typically paralyzes one side of the

body, people can usually manage with one hand. But as the person continues to use only the functional hand, the weak hand and brain areas that control it atrophy. Finally, current treatment is limited. It can help the patient recover broad movement and may get muscles to work again, but dexterity is a highly complex process.



"It's an integration of sensory information—from the eyes, from touch, from feeling where your arm, hand, and fingers are in space—with movement," says Dr. Raghavan. In other words, your brain processes lots of the data about an object (its location, size, shape, texture, and weight) and tells you how to shape your hand and fingers and how much force (strength and speed) to use to grasp it and pick it up. When a foam cup or egg slips or smashes, it's not just because of physical weakness, but also because the brain's information gathering and processing are impaired.

In the lab, Dr. Raghavan and her team are experimenting with various ways to redress deficits in how sensory and motor information come together. Their most innovative approach, recently awarded a five-year \$3.4 million research grant from the National Institutes of Health, is to use the good hand to teach the bad one. "It's a strategy that taps into the redundancy and connectivity of both hemispheres of the brain. Our hypothesis is that a patient who practices manipulating an object with their functioning hand—actually feeling the movement—can supply the critical information needed for the affected hand to perform the same action." Preliminary studies are promising. Says Dr. Raghavan: "We want to capitalize on everything the intact brain can do."

My Most Memorable Case

By H. Leon Pachter, MD, the George David Stewart Professor of Surgery and Chair of the Department of Surgery

In my 38 years as a surgeon at NYU Langone Medical Center, including 22 years as chief of trauma surgery at Bellevue Hospital Center, I've operated on thousands of patients. Some are memorable because they were famous, such as actors, singers, politicians, and royalty. Some because they were infamous, such as drug dealers who would shoot each other at such close range that the contents of their pockets would end up in their abdomens. But my most memorable patient never made headlines. She came to me 15 years ago, after being stunned by a cancer diagnosis that she never should have faced. I'll always remember that young woman from Russia, who had lived near the Ukrainian city of Chernobyl, site of the worst nuclear power plant accident in history. In April 1986, a nuclear reactor melted down. Nearly 4,000 deaths have been attributed to the catastrophe.

My patient—let's call her Sophia—had emigrated to the United States when she was 15. She was 28 when I met her. Sophia was a cheerful, winsome medical technician with her whole life ahead of her. When she came to me, she had been diagnosed with anemia, and someone that young shouldn't be anemic. A colonoscopy came back negative, but an upper endoscopy showed multiple cancers of the stomach. She'd probably had cancer for at least two years—multiple small cancers, six or seven of them. Their location was such that I would have to remove her entire stomach. Her chances of survival after five years were 15% or less. It was a bad prognosis—really bad. All the markers indicated that she was not going to make it. When I told her, Sophia broke down, crying. She thought her life was over.

She said, "I came from Russia, from Chernobyl, for a new start, and I'm starting my new life here by ending my life."

Many people who had lived near Chernobyl suffered from thyroid cancer. I'd treated some of them. Cancers of the stomach made sense, too. I can't prove it, but Sophia's cancer was probably caused by radiation from the nuclear disaster.

With seven people on my team, I operated on her for five hours, performing a total gastrectomy. I had to be very careful. If you leave any part of the tumor-bearing organ behind, you might as well not have operated at all. The retained tumor in such a patient renders that patient with little or no chance of survival.

Ironically, I used an instrument invented in Russia—a staple machine—to connect the esophagus to the small intestine with metal staples after the stomach was removed. The Russians invented it, but it was perfected in this country. Sophia's small intestine would



you would not treat the patient with chemotherapy. That's the plan we adopted. Today, she would have had an endoscopic ultrasound to evaluate the depth of penetration of the tumor. Depending on how deep it was, medical treatment might have been initiated before surgery.

Sophia recovered well. I moved on to other cases and later became chair of the Department of Surgery, passing my experience along to scores of young surgeons. Over the years, I thought of Sophia now and then, hoping she was still alive, even

though I knew deep down that the odds of that were not in her favor. That's the nature of the disease. It's insidious. It destroys everything in its path, even in an otherwise healthy 28-year-old.

Several years after I operated on Sophia, I received a card in my office at NYU Langone. I still remember the day. It was a Tuesday in April 2003. It was from Sophia.

It showed a picture of a newborn boy—7 pounds, 3 ounces, 20 inches—and it read: "There are no words that can describe how thankful I am to you for saving my life, and giving me a possibility to create a new life."

I graduated from NYU School of Medicine in 1971, and I've spent my entire career here. I've operated on victims of the drug wars, the rap feuds, the Mafia battles. I've performed intricate surgeries on patients with late-stage pancreatic cancer and little hope, and watched them pull through and survive for years. On 9/11, I waited at Bellevue with a huge surgical team for survivors who never came. In China, I learned techniques to salvage severely damaged livers and spleens, two of the most commonly injured organs of trauma victims. Bellevue has performed more suture repairs of the spleen than any other hospital in the world and has cut the mortality rate for complex liver injuries from 100% to 7%. I once repaired the liver of a young woman who was the first person to survive having part of her liver torn off a main blood vessel.

But Sophia stays with me. When I read her card, tears came to my eyes, as I thought of that vibrant young woman with a death sentence, changing the diapers of her infant son.

Dear Dr. Pachter,
I am one of your former patients.
On March 10, 1999 you successfully
performed a total gastrectomy
to treat a stomach cancer that
I had. I was only 28 old back
then.
There are no words that can
describe how thankful I am to you
for saving my life and giving
me a possibility to create a
new life.

serve as a new stomach. It works all the time—somehow the body adapts to it. The small intestine stretches out, and after six months, you can't tell the difference, in terms of how you digest food.

At that time, the thinking was that if you removed the entire stomach and no lymph nodes were left behind that were positive for cancer, as was the case with Sophia,

a solution that was as simple as it was stunning: a new pair of shoulders.

Thanks to its ball-and-socket configuration and elaborate system of supporting muscles, the shoulder joint is the most mobile in the body. For Ellman, however, her shoulders no longer felt like marvels of nature's handiwork. By April 2010, she had been coping with her debilitating disease for nearly a decade. Arthritis had relentlessly attacked the cartilage—first in her right shoulder, then in her left—to the point where she could not lift either hand above her waist. Everyday tasks were agonizing. Washing her hair in the morning was an ordeal, and she could no longer hug family and friends. "That was the worst," says Ellman, "because I'm a very demonstrative person."

Cortisone treatments, minor shoulder surgery, and physical therapy brought only short-term relief. She relied on sheer willpower to override the pain during the day, and hydrocodone to hold it at bay at night so she could sleep. "After a while, I just gave up," she admits. "I assumed this was something I just had to live with."

Some 700,000 Americans have knee and hip replacements every year, but only about 30,000 to 40,000 have shoulder replacements. The procedure has been used effectively for arthritic shoulders since the 1970s, explains Dr. Kwon, who performs between 50 and 60 of them each year. "Unfortunately," he says, "there are people who need replacements but may not realize that this option is available until they see an orthopaedist."

Dr. Kwon scheduled Ellman's first surgery for May 2010 and the second in August of that year—three months apart to give the first shoulder

some time to recover. Even before she went into the OR, Dr. Kwon was thinking ahead to Ellman's recovery. "Some patients you have to push to do the physical therapy," he says. "Then there are those who, if you tell them to do 10 repetitions, think, 'Well, then I'm going to do 20 because that's twice as good!'" Faye Ellman was in the latter category. She was highly motivated and very active, still working, hauling heavy bags of photographic equipment on her 5-foot 2-inch frame.

Dr. Kwon planned to perform the standard replacement procedure: removing the humeral head (the ball-shaped knob of bone at the end of her upper arm) and replacing it with a polished metal ball attached to a pointed metal stem. In addition, he would also smooth out her damaged glenoid (the socket for the humeral head) and anchor a plastic socket in that space.

But he wanted to give her an advantage. Ordinarily, he would cut away muscle tissue to get at the shoulder, so Ellman would have to keep her arm in a sling for four to six weeks to let it heal. However, Dr. Kwon had recently returned from a medical orientation trip to France, where he was invited to observe a new method pioneered there. Instead of cutting muscle, the French surgeons pried apart the tissue and worked through the space created. Patients shed their slings within days and started therapy sooner.

Ellman became the first patient to have this technique performed at NYU Langone. Her sling was off in two days. Two weeks later, she was in physical therapy. After the second shoulder was done, she was in therapy within a matter of days. "It's a kind of miracle," she marvels.

Ellman has full mobility in both arms and no longer takes pain medication to sleep. Best of all, she can hug again. "I hug anyone who enjoys it: my teenage daughter, her friends, my husband, and yes, indeed, Dr. Kwon."

Free to Hug Again

With Open Arms and New Shoulders, Faye Ellman Embraces a Marvel of Orthopaedic Technology

Faye Ellman's symptoms were easy enough to describe: crippling pain in both shoulders. Diagnosis: advanced osteoarthritis. Effective treatment: none. Or so the 58-year-old photojournalist thought before she met Young Kwon, MD, PhD, associate professor of orthopaedic surgery at NYU Langone Medical Center's Hospital for Joint Diseases. Dr. Kwon offered

Dr. Young Kwon and his patient, Faye Ellman, who received two new shoulders in surgeries scheduled three months apart.



John Abbott

news & views

Inside This Issue



The Start of Something Big Dr. Eric Simon electrified the fledgling field of neuroscience in 1973 with the discovery of receptors that bind opioid drugs, a finding that catalyzed a new era in the research on addiction and pain management. He dubbed them "endorphins," a term that quickly entered the general lexicon. [page 4](#)



Where Men's Health Is the Specialty When it comes to their health, many men are notoriously and dangerously neglectful. The mission of the Preston Robert Tisch Center for Men's Health in Midtown Manhattan, NYU Langone's newest ambulatory care center, is to provide a remedy for that condition. [page 5](#)



A Man on a Mission Dr. Francis Arena, says one of his cancer patients, is "the kind of man you follow into battle." Dr. Arena, three other oncologists, and a social worker care for patients at NYU Langone Arena Oncology, part of the Laura and Isaac Perlmutter Cancer Center. [page 5](#)



My Most Memorable Case A victim of the worst nuclear power plant accident in history, at Chernobyl in 1986, survives advanced stomach cancer and raises a family—and thanks the surgeon who saved her life: Dr. H. Leon Pachter, the George David Stewart Professor of Surgery and chair of the Department of Surgery. [page 7](#)

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Music That Heals

One minute before noon on a chilly Thursday in December, graceful glissandos fill the air in the lobby of Tisch Hospital at NYU Langone Medical Center. One takes the form of a kinetic abstract sculpture suspended from the ceiling with hundreds of small, connected acrylic squares, each designed to move independently in midair. The sculpture moves based on warmth from the sun, the flow of heating or air conditioning units, and even people sitting underneath it or walking by, making *Glissando* a constantly evolving reflection of its environment. Its artists, Tim Prentice and David Colbert, define it as "a series of rapidly ascending or descending notes on the musical scale."

Which brings us to the second glissando, an ethereal cascade of notes wafting from the balcony, where flutist Joseph Trent and harpist Margery Fitts delight passersby—patients, employees, visitors—with soothing melodies. Every Monday from 12:00 to 1:30 p.m., one or two musicians perform classical music as part of the weekly Susan V. Rohan Concert Series, arranged by the Therapeutic

Recreation, Child Life, and Creative Arts Therapies Department, which partners with an organization called Music That Heals.

The series is designed to promote an environment that enhances healing. Indeed, as one patient is wheeled by, his eyes glisten at the recognition of a favorite Mendelssohn piece. A quartet of student nurses huddle on a bench, their eyes closed, as the magic of Mozart transports them. A middle-aged couple, anxiously awaiting the conclusion to their daughter's three-hour jaw surgery, finds a few minutes of solace in a Schubert sonata.

The interplay between harp and flute seems to make the sculpture—at least, those squares closest to the balcony—swirl and sway in time to the music. In the chair nearest to the musicians, Charles Langs, MD, clinical associate professor of medicine, has the best seat in the house. An amateur pianist, he makes it a point to find time in his busy schedule to catch each performance. "I'm like the baseball fan who gets to lean on the batting cage," he says, "watching the major leaguers take their swings."

