news&views

JANUARY/FEBRUARY 2013 A PUBLICATION FOR THE NYU LANGONE MEDICAL CENTER COMMUNITY

NYU Langone MEDICAL CENTER

Welcome Back!

Patients, Staff, and Visitors Return after a Two-Month Absence Caused by Hurricane Sandy

All photos: Joshua Bright

"It's great to be back home," said Steven Hofstetter, MD, associate professor of surgery and surgeon-in-chief of Tisch Hospital. "Everyone has tears in their eyes." Thursday, December 27, was a long-anticipated day at NYU Langone Medical Center. Two months (59 days, to be precise) after the impact of Hurricane Sandy caused two unprecedented events—the evacuation of 322 patients on October 29 and the closure of the Medical Center for two months—Tisch Hospital and other major clinical units reopened. As of mid-January, the vast majority of inpatient services have been up and running, and patients once again have access to the full spectrum of resources and services offered by the Medical Center.

As surgeons and construction workers crisscrossed the campus on December 27, masks dangling from their necks, greeters sporting violet scarves and big buttons that read "Ask me!" helped patients and visitors get oriented. Nurses happily hurried about, some waiting for patients scheduled for anything from sinus procedures to open-heart surgery. Some 55 operations were performed that day.

"I've had procedures done here before and have been very happy," said Tom Curtin, a computer executive, as he was prepped for gallbladder surgery. "So I had no problem waiting an extra few weeks to have the thing out. Everything's very top-notch here—very professional. Every person I met today told me their name and explained their role. Here, everybody cares." Down the hall, Kelly McConville, a college freshman from Long Island, who was born at NYU Langone, waited nervously for a similar procedure. "I'm honored to have surgery here," she said. Her mother, Alice, has worked in Tisch Hospital's postanesthesia care unit (PACU) for a quarter of a century.

(continued on page 7)

Top: Nancy Marini, RN, senior nurse clinician, embraced one of her colleagues in the same day admit unit, one of several surgical units that reopened on December 27, two months after Hurricane Sandy forced the entire Medical Center to shut down. Bottom, left to right: Dr. Leon Pachter, chair of the Department of Surgery, explained to reporters that some 55 operations were performed the day NYU Langone reopened. Linda McFie of hospitality services was one of more than 20 greeters stationed throughout the Medical Center who helped patients and visitors get oriented when NYU Langone reopened on December 27. Dean and CEO Robert I. Grossman, MD; Chairman of the Board of Trustees Kenneth G. Langone; and Sen. Charles Schumer, D-NY, shared the podium at a press conference held the morning Tisch Hospital reopened.

From the Dean & CEO

Hurricane Sandy brought many losses to NYU Langone Medical Center, but it also taught us some lessons. For me, perhaps the biggest one is that as proud as I've always been of the people who staff this great institution, I now have even more reasons to feel that way.

In the midst of the storm, some 1,000 of our medical and professional personnel—including nurses, physicians, fellows, residents, medical students, and therapists, along with administrative and support staff—safely and swiftly evacuated 322 patients under truly dire conditions. That no harm came to a single patient during this incredibly complex undertaking is a shining tribute to their skill, dedication, and resourcefulness. Despite the fact that 15 million gallons of water flooded underground areas, causing devastating damage to our infrastructure, our incomparable Real Estate, Development + Facilities team pulled out all the stops, and then some, to restore most clinical services within two months. Meanwhile, an Employee Relief Fund, a grassroots effort born of compassion, camaraderie, and a true sense of community, has raised nearly $450,000 to aid employees impacted by the storm.

As much as we keep striving to become world-class, I am reminded at times like this that we already are.

Bob

Robert I. Grossman, MD

Karsten Moran

NIH Director Dr. Francis Collins Visits NYU Langone after Hurricane Sandy

During a recent visit to NYU Langone, Dr. Francis Collins, director of the National Institutes of Health (center), expressed his agency's commitment to helping the Medical Center recover from what he called the "historic" damage Hurricane Sandy inflicted on the work of many of our investigators. During their tour of research facilities hit hard by the storm, Dr. Collins and Dr. Dafna Bar-Sagi, PhD, senior vice president and vice dean for science (left), visited the laboratory of Sergei Koralov, PhD, assistant professor of pathology (right), who studies the link between chronic inflammation, autoimmunity, and cancer.

Home Is Where the Heart Is

A Conversation about the Employee Relief Fund with Nancy Sanchez, Senior Vice President and Vice Dean for Human Resources and Organizational Development and Learning, and Kelly Wickers, Chair of the Employee Relief Committee

How did the relief fund to help employees impacted by Hurricane Sandy take shape?

KW: People wanted to do something to help their fellow employees, but they didn't know what to do. They needed some sort of vehicle.

NS: We could have collected donations, such as clothes, or we could have collected money. Logistically, because of the state of the institution, collecting money was going to be easier than stacking up clothes and toys.

KW: Other hospitals held fundraising parties or concerts. We took a grassroots approach—employees helping employees.

From donation to disbursement, how did the process work?

KW: We created an application for employees to explain what they needed, whether it was money to pay insurance premiums or contractors for home repair.

NS: We have about 1,600 employees who live in the areas impacted by Sandy—Staten Island, the Rockaways, coastal New Jersey, the South Shore of Long Island, even Brooklyn. About 100 have come forward.

KW: One of our employees with an autistic child lived in an apartment that was flooded and was also about to be foreclosed on. We helped that family move to another apartment, but we couldn't solve all their problems. Autistic children need routine. I felt her anguish. It touched me personally because I have a disabled child. I know how devastating those steps backward can be.

How were the applications screened?

KW: Applicants were required to provide proof of hardship and loss. If they purchased appliances or had repairs made to their home, they had to furnish receipts for those expenses. If they lost personal items, such as clothing, we asked them to itemize and estimate the replacement value. We took everything at face value. We needed enough information to substantiate the claim and satisfy any legal requirements, but we were also very sensitive to the fact that these people were going through a lot. They didn't need us nitpicking. In many cases, employees submitted pictures, and those pictures really told the tale.

Maria Rabinky

How many employees applied for aid, and how much money was awarded?

KW: As of mid-January, we had 124 applicants, and 114 of them had received or will be getting relief. We have 10 more that are pending. I reached out to every single applicant.

NS: We've collected close to $450,000.

What was the average size of these awards?

NS: The largest was $3,000, initially. We have since gone back and given those who were hardest hit another award. They will receive a total of $11,000, and if we can provide further relief after all applicants have been addressed, we absolutely will.

KW: One person said, "We've applied to every relief effort, and so far NYU Langone is the only one that helped us." They were so thankful.

How many employees contributed to the fund, and on average, how much did they donate?

KW: So far, more than 800 employees have contributed to the fund, with gifts ranging from $10 to $10,000.

NS: Our employees are very generous and very loyal. Here, people treat each other like family.

KW: That generosity ranged from an entry-level clerical employee all the way up to top leadership. It wasn't about the haves and the have-nots. It was a true community effort. We also received strong support from some trustees and corporations.

NS: I gave twice.

KW: I gave three times.

Were some people too proud to come forward?

NS: Yes, that's why we guaranteed anonymity. Some people were reluctant to apply, in some cases because they were embarrassed and in other cases because they felt that others were in greater need. We reached out to everybody we heard was feeling that way, and strongly encouraged those folks to apply, and they did. You really get a flavor for their circumstances from the applications—single moms, single dads, people taking care of elderly parents or disabled spouses. You get a picture of not only the physical devastation, but also the emotional devastation of having to worry about others.

How were privacy and confidentiality ensured?

NS: A multidisciplinary committee of employees—from the academic side to the research side, the patient care side, and the corporate side—reviewed every application. Everyone understood that these employees had a right to privacy and confidentiality, and we didn't allow any paper to leave the room.

Can you recall any dramatic or touching stories about an employee whose family was helped by the fund?

KW: One family that was forced to leave their home in Far Rockaway spent three weeks in a FEMA shelter.

NS: Their apartment was completely flooded. They walked out with nothing but the clothes on their backs. Eventually, we found an apartment for them and helped with the security deposit.

What did people say when they realized they were getting a check?

KW: Overwhelming gratitude. I'm going to get choked up here. . . . The award recipients were saying, "Thank you, Kelly." But it wasn't me. It was our employees who were doing this.

NS: One recipient said, "It's wonderful to work for an organization that had the forethought and initiative to set up this fund. Having spent 25 years in healthcare, I can say that NYU Langone is head and shoulders above all others." Another said, "The way things have gone, NYU Langone is the only place I've gotten true help from."

The Patient's Private Eye

Dr. David Naidich, professor of radiology and medicine, is one of 106 diagnostic radiologists at NYU Langone.

A Day in the Life of Dr. David Naidich, Thoracic Radiologist

7:30 a.m.
David Naidich, MD, professor of radiology and medicine, takes a seat at the weekly multidisciplinary lung cancer clinical conference. Pulmonologists, thoracic surgeons, oncologists, nuclear medicine specialists, pathologists, and radiation therapists gaze intently at the image of a lung flashed on a large screen. "Here, the radiologist plays a crucial role," says Dr. Naidich, whose subspecialty is thoracic radiology. "Orchestrating the amount of expertise brought together for each patient is a challenge, but it's an extraordinary process that maximizes patient care."

8:05 a.m.
"I'm asking the opinion of this erudite court," says Stuart Garay, MD, clinical professor of medicine, as he presents a case and invites suggestions for treatment. Dr. Naidich, one of 106 diagnostic radiologists at NYU Langone, notes: "This is an ideal setting for how medicine should be practiced. It allows everyone to learn the perspective of other disciplines by looking at similar problems. It's greater than the sum of the parts."

8:50 a.m.
Dr. Naidich enters "Chest Central," two windowless rooms lit only by the cool glow of computer screens. Each computer is loaded with a new picture-archiving and communications system. "It's a way of taking data from any radiological procedure and storing the images so that you can examine them simultaneously and compare them over several years," Dr. Naidich explains. "The system allows us to dictate the case," he says, picking up a microphone. His workstation is customized to recognize his speech. "That dictation becomes part of the record. Then, it's connected to all the other information systems—pathology, lab reports from medical floors, etc.—so that caregivers can pull in data from any of the other systems."

10:35 a.m.– 12:50 p.m.
Clicking from one image to another, Dr. Naidich methodically works his way through the cases flooding in. On an average day, he'll read 40 to 50 chest X-rays and 20 to 25 CT scans. "Oncology accounts for only 40% of my cases," he notes. "There are *thousands* of lung diseases. Here, it's easy to lose sense of the outside world. Thankfully, my office has windows."

1:00 p.m.
"I spend almost half my time focused on academic pursuits," says Dr. Naidich, as he heads into his office for a conference call. His bookcases are crammed with volumes he either wrote or co-authored: *High-Resolution CT of the Lung, Radiology of AIDS, Computed Tomography of the Thorax,* as well as editions in Spanish, Portuguese, and Chinese. Lectures take him all over the world. "I'm going to India, Oman, South Africa, Germany, and Florida," he reports, "all within a year."

2:00 p.m.
On his way back to the reading room, Dr. Naidich points out the only diploma hanging in his office—his father's. "My father was a radiologist. My uncle was a math teacher, but his two sons are radiologists. One of their daughters became a radiologist. My brother is a lawyer, but his son is a radiologist. My brother-in-law is a radiologist—that's how I met my wife. I have a second cousin who is also a radiologist here." NYU Langone is a family tradition. "Everyone trained here at one point."

2:15 p.m.
As Dr. Naidich pulls his chair up to his workstation, a resident slides into the copilot's seat. "It's easy to look at the patient as a kidney or a lung, instead of as a whole," acknowledges Dr. Naidich. "I like a resident to sit next to me and look at the case globally, develop a gestalt, and then drill down into the details. That's how I learned to prioritize what's important." Dr. Naidich enjoys passing down the art as well as the science of reading films. Are nodules spiraled like a galaxy, diffusely coalescent like ground glass, or clustered in a characteristic tree-in-bud pattern? "The artistry," he explains, "is being able to discern and interpret patterns of diseases that constantly evolve."

3:05 p.m.
Katherine Hochman, MD, assistant professor of medicine and director of NYU Langone's hospitalist program, walks in with X-rays of a patient with pneumonia. "Would you mind looking at this?" she asks Dr. Naidich, the "doctor's doctor." He slides the CD into a computer, which automatically supplies the patient's medical history. "For me, the best case is when I interpret, get the follow-up, and learn something new," says Dr. Naidich. "I've always enjoyed puzzling through things. Realizing that you have to think differently about something—that's a great feeling." The patient's detective turns back to the screen, searching for the next set of clues.

All photos: Joshua Bright

Joshua Bright

Trained in both physical therapy and t'ai chi, Peter Walter (foreground) is ideally suited to teach classes in this ancient Chinese martial art.

Slow and Steady Wins the Race

To Help Patients Regain Their Sense of Balance, Rusk Turns to an Ancient Chinese Martial Art

"Every time I crossed a street, I'd have a vision of myself falling in front of a turning car," says Ron Spitzer, referring to the early period in his rehabilitation after a stroke that left him, at 53, with limited use of his left arm and leg. For a man who had braved New York City traffic daily, biking between his Downtown apartment and Midtown job as a sound engineer, this newfound fear was especially demoralizing. Yet, having taken a few falls at home, he knew the danger was real.

Among adults 65 and older, falls are the leading cause of injury-related hospitalization and death. A growing number of physicians believe that one of the best preventive measures is the practice of t'ai chi ch'uan, an ancient Chinese martial art characterized by slow, steady, continuous movements. An expanding body of research attests to its benefits to cardiovascular health, strength, flexibility, and balance. Studies show that elderly patients with Parkinson's disease and other disorders that impair balance have a reduced risk of falling after a period of regular t'ai chi practice. Recognizing the virtues of t'ai chi, Rusk Rehabilitation at NYU Langone Medical Center has been offering 6- to 12-week group classes for patients since 2008. Many participants are referred by Rusk's Vestibular Rehabilitation Unit, established 20 years ago as the New York metropolitan area's only program dedicated to treating problems of balance, vertigo, and dizziness.

Ron Spitzer's physician, Jung Ahn, MD, clinical professor of rehabilitation medicine, is one of many healthcare professionals who see t'ai chi's potential for his patients. "Any condition that weakens the bones and muscles, or that causes a change in posture, gait, or balance, elevates the risk of falling," he explains. "It can take months, if not years, of physical therapy to regain muscle strength and coordination. During that time, our main goal is to help patients learn to move around safely."

One risk factor that's often overlooked is the *fear* of falling. "Once you've had a fall, your confidence level drops," says Marilyn Lopez, RN, NP, a veteran geriatric nurse practitioner. "Decreased confidence leads people to limit activity. Eventually, they become weaker and less stable on their feet, increasing the likelihood of another fall."

Spitzer saw that his fear was making him tentative, but he couldn't risk losing the sense of independence that came with being able to leave his apartment and go for a walk. He rallied through three years of physical therapy, slowly regaining strength. But he says the t'ai chi classes at Rusk, led by Peter Walter, a senior physical therapy assistant, were what truly helped him to find his footing.

The program, developed and led by Walter and physical therapist David Malamut, is designed around seven or so movements involving weight shifting, trunk rotation, and coordinated arm movements—all essential components of balance. "We've had patients recovering from joint replacements, spinal cord injury or surgery, stroke, and even traumatic brain injuries," explains Walter, "so I've tailored the exercises to people with varied disabilities." Once they get clearance from their physician, patients can participate, as long as they're able to stand or sit independently and follow instructions.

Alex Moroz, MD, director of Rusk's Integrative Musculoskeletal Medicine Program and director of residency training and medical education in the Department of Rehabilitation Medicine, has been practicing t'ai chi since 1991, and he refers a steady stream of patients to Walter's classes. "The level of balance activity in a commercial t'ai chi class would be too high for our patients," he explains. "But with Peter's background in physical therapy *and* t'ai chi, they can get the benefits safely."

In t'ai chi, progress is often measured in inches. "It has a cumulative effect that comes over time," explains Dr. Moroz. "I tell patients, 'You'll see no change for six months or a year. But I promise that in a year or two, you'll feel a *big* difference.' "

With a full year of practice behind him, Ron Spitzer now sees improvement from class to class. "I'll be doing a sequence that I've done many times," he says, "and suddenly I can do an aspect of it noticeably better. In those moments, I really feel the elegance. It's subtle but profound. I walk as much as I can every day, and since I've been doing t'ai chi—even when I'm in the thick of New York City's frenzied activity—I no longer worry about falling."

"Those Men Saved My Life"

Thanks to NYU Langone's Expertise in Vascular and Interventional Radiology, a Man Is Reunited with His Family

The last thing Michael Srubinski remembers of the events that nearly took his life was watching a late-night Yankees game on TV, when blood began shooting from his mouth. Early the next morning, his wife and son discovered his near-lifeless body and frantically summoned help. He was rushed by ambulance to a hospital near his home in West Islip, NY. Doctors there minced no words with family members: there was nothing they could do to save the life of the 46-year-old husband and father of three. Diagnosed with gastroesophageal bleeding, Srubinski was transported the next day to NYU Langone Medical Center's Tisch Hospital, where hepatologists and interventional radiologists had a tiny miracle up their sleeve.

To relieve pressure within the liver and stop bleeding from the veins, they considered a procedure called a transjugular intrahepatic portosystemic shunt (TIPS). NYU Langone's team of interventional radiologists, which specializes in the use of image-guided minimally invasive procedures, performs more than 70 TIPS procedures each year. A stent, or shunt, is placed through the liver, creating a partial bypass from the vein going to and the vein coming from the liver. But Srubinski's case was particularly challenging because his condition was so critical. "He was brought in with massive bleeding and in kidney failure," recalls Samuel Sigal, MD, associate professor of medicine and surgery, co-director of transplant hepatology, and clinical director of hepatology. "He was facing an almost certain death." Dr. Sigal conferred with Hearns Charles, MD, assistant professor of radiology and acting section chief of vascular and interventional radiology. They reached the same conclusion: TIPS was the only card they had to play.

Imaging confirmed that Srubinski had cirrhosis of the liver and portal hypertension, conditions that are linked. In cirrhosis, scar tissue blocks the flow of blood through the liver, thus elevating pressure within the portal vein, which carries blood from the intestines to the liver for filtration. As a result, blood is detoured to abnormal veins that have a propensity to bleed, leading to potentially life-threatening hemorrhage.

Once in the vascular interventional radiology suite, the right internal jugular vein in Srubinski's neck became the entry point for the battle to save his life. With the help of fluoroscopic (X-ray) guidance, Dr. Charles and his team used a catheter to gain access to the right hepatic vein. A long needle was then used to create a pathway through the liver and into the portal vein. After the track was dilated with an angioplasty balloon catheter, a stent was inserted. By the time the two-hour procedure was over, Srubinski had a new vascular channel to carry blood from the inflow portal to the outflow hepatic veins. His diseased liver had been effectively bypassed, the elevated blood pressure in the portal vein was decreased, and the abnormal veins were closed.

Vascular interventional radiologists have helped change the landscape of medicine over the past 40 years, and NYU Langone has led the way in areas such as endovascular grafting for abdominal aneurysm repair, instrumentation for arterial and venous angioplasty and stenting, and diagnosis and embolization techniques to treat abnormal bleeding and tumors. "TIPS has virtually replaced the surgical method of creating a shunt, which had a mortality rate of up to 16%," notes Dr. Charles. "We're able to control the bleeding more than 90% of the time, and the mortality rate has been reduced to less than 2%."

After his six-week hospitalization in the summer of 2010, Michael Srubinski returned to his wife and three sons. "I'm happy to say that my health now is manageable," chirps the hedge fund manager. "I'm back at work, and if you met me on the street, you'd never know I'd been sick. For that, I can thank Dr. Charles and Dr. Sigal. Those men saved my life."

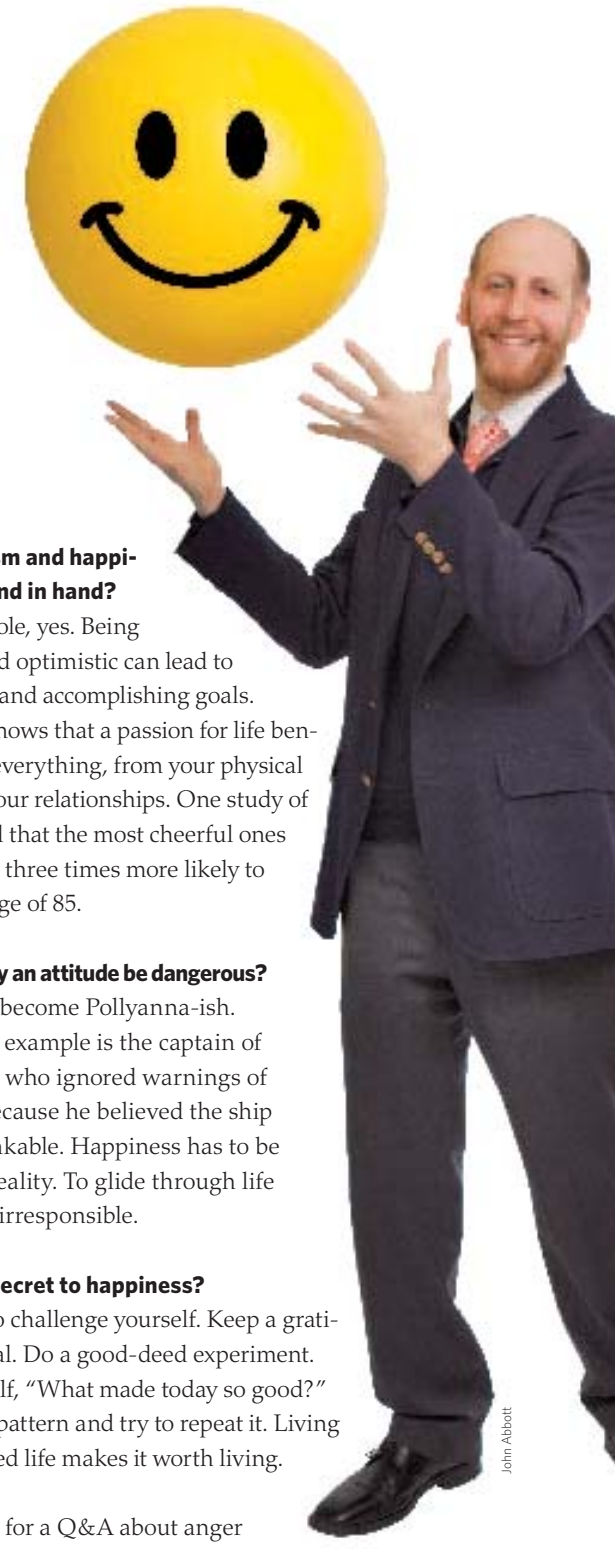
Flanked by his life-saving team at NYU Langone, Dr. Hearns Charles and Dr. Samuel Sigal, Michael Srubinski enjoys a new lease on life.

Karsten Moran

Let the Sunshine In

Q&A with Dr. Alan Schlechter about the Science of Happiness

If ever a concept defied definition, seemed immune to scientific scrutiny, it is happiness—unless, of course, you're Alan Schlecter, MD, clinical assistant professor of child and adolescent psychiatry at NYU Langone Medical Center. He teaches a course titled "The Science of Happiness" to New York University undergraduates minoring in child and adolescent mental health studies, the first program of its kind in the country. Quick of smile, with a playful spirit—he shares an office with stuffed bears—Dr. Schlechter seems temperamentally well suited to impart lessons about the growing research behind the spreading of sunshine.



John Abbott

Is there a happiness gene?
Originally I thought someone was innately either an optimist or a pessimist, and research supports that. A landmark study of twins suggests that about 50% of our satisfaction with our lives has a basis in genetics. But you can increase your level of optimism. You can influence your own happiness, actually adjust it. We may have a greater capacity to make ourselves feel positive than negative. But it can take a lot of effort.

Can the study of happiness really be called a science?
It's a science in its infancy and an imperfect one, but a science nonetheless. If we can measure the characteristics of depression, we can do the same with happiness. For example, studies show that doing an exercise to practice gratitude can make you feel better about yourself. But the research shows only correlation rather than direct causation.

It's such a curious course. How did it come about?
Two colleagues and I had the same idea: to teach mental health rather than mental illness. Originally, the course was to be called "The Study of You." But it's good we renamed it. Most of the students who are asked why they take the class say, "I love the title."

What do you hope to accomplish?
We ship kids off to college, these extremely stressful environments, and say, "Go ahead, function." This is really a guide to maintaining mental health in college. But it's also intended to inspire students, mostly aspiring psychologists and medical students, to go into child and adolescent psychiatry. Young people are the most underserved population in medicine. We have about 8,000 such specialists in this country, but we need at least 30,000. My long-term fantasy is to better establish the field of preventive mental health. We already know how to prevent obesity and hypertension. But I would love for us to gather evidence that it's also possible to prevent anxiety and depression.

How do you make such an abstract topic concrete?
We cover positive psychology, cognitive therapy, the stigma of mental illness, but we also ask students to study themselves and reflect on the challenges they face. We look at how to set meaningful goals, explore why we seek pleasure and thrills, and discuss the value of relationships, sleep, exercise, and eating right. I get great feedback. If students are anxious or depressed, they realize it more readily than they did before. Everyone does a community service project. One group decided to give anyone who smiled a free hug.

Does teaching this course make you feel happy?
It makes me feel *really* happy, happier than ever. I'm blessed to do this, and gratitude is a good indicator of how happy you are. But then, I'm a grateful person by nature and come from a tradition of grateful people. My grandfather felt that any meal he ate was the best ever.

What's the biggest myth about happiness?
The self-help movement created this notion that if you're feeling down and just smile, you'll feel better. But now we realize that if you do that, you're just disconnecting from what you're actually feeling.

Do optimism and happiness go hand in hand?
On the whole, yes. Being positive and optimistic can lead to aiming for and accomplishing goals. Research shows that a passion for life benefits most everything, from your physical health to your relationships. One study of nuns found that the most cheerful ones were about three times more likely to reach the age of 85.

Can too rosy an attitude be dangerous?
You might become Pollyanna-ish. The classic example is the captain of the *Titanic*, who ignored warnings of icebergs because he believed the ship to be unsinkable. Happiness has to be rooted in reality. To glide through life carefree is irresponsible.

Is there a secret to happiness?
You have to challenge yourself. Keep a gratitude journal. Do a good-deed experiment. Ask yourself, "What made today so good?" Look for a pattern and try to repeat it. Living an examined life makes it worth living.

Web Extra: for a Q&A about anger management with Isaac Herschkopf, MD, clinical instructor in psychiatry, see "Everyone's Dirty Little Secret" at www.newsandviews-digital.com.

A Trailblazer Called Trinity

At NYU Langone's First Ambulatory Care Site, Turn-of-the-Century Grandeur Meets State-of-the-Art Care

"Trinity Center at NYU Langone Medical Center is just about the perfect healthcare facility," says Lowell Chase, a beaming 35-year-old lawyer. He checks off his criteria: "*Great location in the heart of the Financial District*—it's a five-minute walk from our Downtown offices. I'm in and out during my lunch break. *Family friendly*—my wife, who hates going to doctors, loves the scale and the intimacy. *One-stop shopping*—we can see several physicians on the same floor in one day.

"*Oh, and another thing*: they helped save my life."

Ira Schulman, MD, clinical associate professor of medicine and Trinity's medical director, responds modestly to his patient's comments. "During a routine physical, it was discovered that Lowell had a bicuspid aortic valve—with two cusps instead of three. My colleague, Aubrey Galloway, MD, the Seymour Cohn Professor of Cardiothoracic Surgery and chair of the Department of Cardiothoracic Surgery, performed the successful surgery."

Dr. Schulman is justifiably proud of Trinity's distinction as the first satellite in NYU Langone's expanding constellation of ambulatory care centers throughout the New York metropolitan area. "We're also one of the only true startups," he adds. "In 2008, we opened our doors to these gorgeous, custom-designed offices with a handpicked dream team of six highly regarded, well-established specialists from the neighborhood."

Trinity's location at 111 Broadway, which spans the block from Pine to Thames Streets and east to Trinity Place, was chosen for strategic reasons. Commerce crackles throughout the Wall Street area, and the pace is frenetic. The practice has tapped into that energy by partnering with nearby financial giants, such as JP Morgan.

"More than 20% of our practice is made up of new residents—young people who are looking for a historic setting with a modern vibe," says Dr. Schulman, whose staff has expanded to 27 physicians in 11 specialties, in addition to primary care. "When I walk home at night, men and women in briefcases depart, and families with strollers appear."

The neighborhood component—an amalgam of quaint and cutting-edge—is essential to the success of NYU Langone's ambulatory care centers. Trinity's home, for example, is a 21-story landmark building erected in 1905. Its intricately detailed towers, gables, and gargoyles were carved out of the limestone façade to mirror the neo-Gothic style of neighboring Trinity Church. The neighborhood's rich history looms large outside the bank of windows that run along the north side of the floor, affording a view of the soaring spires of Trinity Church and its adjoining bucolic cemetery, where Robert Fulton, Alexander Hamilton, and other notables were laid to rest.

But in Trinity Center's elegant second-floor offices, the ambience is unmistakably modern and high-tech. An airy waiting room with marble floors and leather chairs and couches gives access to comfortable exam rooms, two procedure suites, and advanced technology. Through PatientSecure, a new patient identification system, busy businessmen and -women can check in simply by placing the palm of their hand over an electronic scanner that identifies them from their unique vein pattern. "Through NYULangoneHealth, an online portal," explains Bryan Maguire, Trinity's site director, "patients can confidentially view lab results, request prescription refills, schedule appointments, and e-mail their physicians."

Yet, the heart of any medical practice is the relationship between physician and patient. "Six months after my heart surgery," recalls Lowell Chase, "I competed in the 2011 Wall Street 5k Run and averaged eight-minute miles." Reminded of his patient's remarkable performance, Dr. Schulman lights up his cozy office with a smile. Given Chase's close call, that's an outcome Dr. Schulman might characterize as—to borrow a term from his patient—just about perfect.

For more information or to make an appointment, call 212-263-9700.

John Abbott

Overturning the Conventional Method for Irradiating Breast Cancer

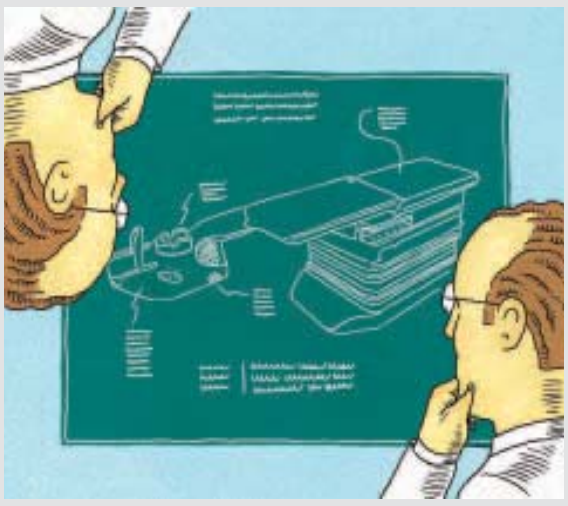
For decades, women with breast cancer have undergone radiation treatment as an adjunct to surgery and chemotherapy, and for decades, they have typically received it in a supine position: lying on their backs, with their arms raised above their heads to expose the breast tissue to beams of radiation. But this position commonly exposes part of the heart and lung tissue to radiation damage. Over time, women who have had radiation treatment for breast cancer are at significantly higher risk for developing—and even dying from—cardiovascular disease than women who have not. They're also at greater risk for developing lung cancer.

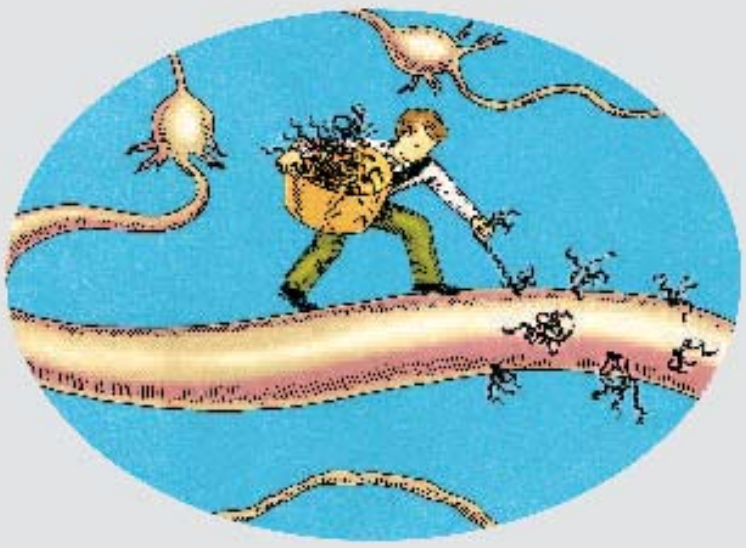
Now, researchers at NYU Langone Medical Center have demonstrated that exposing heart and lung tissue to such radiation can be nearly eliminated with one simple twist: turning the patient onto her stomach. Silvia Formenti, MD, the Sandra and Edward H. Meyer Professor of Radiation Oncology and chair of the Department of Radiation Oncology, has been studying this technique—known as prone breast radiotherapy—for more than a dozen years. "As soon as a woman lies on her stomach," she says, "you see immediately that there is much less volume of lung and heart tissue exposed."

But it's not as easy as just having the patient turn over. Dr. Formenti has spent nearly a decade working with colleagues, both physicists and radiation therapists, to develop the right technique, reproduce the exact positioning of patients, and fine-tune the design for a table with an opening that allows the breasts to fall below the support surface.

In a letter published in the September 5, 2012, issue of the *Journal of the American Medical Association*, Dr. Formenti reported the results of a study that confirmed the superiority of a prone approach. In a series of 400 patients—200 with cancer in the right breast and 200 with cancer in the left—the prone position significantly reduced lung volume exposed to radiation for all patients, and significantly reduced heart exposure for most patients with left breast cancer. Women with right breast cancer had 86.2% less lung tissue exposed to radiation in the prone position, and those with left breast cancer had 91.1% less. Left breast cancer patients had an 85.7% reduction in the volume of the heart in the field of radiation when prone compared to supine. The technique was applicable regardless of the size of the woman's breasts.

For most of her patients, Dr. Formenti combines the prone approach with an accelerated treatment schedule: 15 doses over three weeks, plus a boost of radiation aimed precisely at the site where the tumor was removed. "We have a 1.4 % local [in the breast] recurrence rate five years after treatment, which is currently the lowest of any medical center in the country," she notes. Dr. Formenti hopes that this technique will soon become the standard of care. "Manufacturers and institutions have taken notice," she says. "We've created a wave that I think will transform radiation therapy for breast cancer."





To Thwart Alzheimer's, Researchers Aim to Conquer a Second Villain

In the brains of people afflicted with Alzheimer's disease, the protein amyloid beta accumulates in clumps, and another protein, called tau, forms tangles. Researchers have long hoped that attacking amyloid beta would help prevent the disease, but clinical trials have dashed these hopes. Still, the idea that our immune systems can be used to combat proteins launched within our own bodies remains compelling.

Research from NYU Langone Medical Center now suggests that preventing the spread of tau through immunotherapy may provide a new target for fighting Alzheimer's. Einar Sigurdsson, PhD, associate professor of physiology and neuroscience, and psychiatry, has developed an immunological approach that uses the body's antibody-producing capability to home in on the portion of the abnormal tau that differs from normal tau. Studies in mice show that these antibodies can then clear the toxic tau aggregates within neurons or prevent their spread from one neuron to another so that they cannot accumulate and destroy neural pathways that store memory.

Dr. Sigurdsson has teamed up with Youssef Zaim Wadghiri, PhD, assistant professor of radiology, to conduct the first imaging studies of abnormal tau in real time as it is wreaking its damage. Their research, presented at the Alzheimer's Association meeting in Vancouver, BC, last July, provides some of the first persuasive evidence from the laboratory that tau immunotherapy, at least in mice, can prevent the devastating loss of neural networks that ravages both memories and lives in Alzheimer's patients.

Using an innovative form of magnetic resonance imaging (MRI), a noninvasive technique, the research team followed what happens in the brains of mice that have been bred to contain an abnormal form of the human tau protein. (Dr. Wadghiri is a pioneer in administering an ion of the metal manganese to enhance MRI brain images in mice, just as some patients are administered a contrast agent before having an MRI.) Initial experiments traced the progress of abnormal tau as it made its way through the mouse brain and correlated that to functional impairment of neuronal cells in the mice.

The researchers, whose work is supported by a generous grant from the Alzheimer's Association and the Irma T. Hirschl Trust, showed that as tau accumulates, neurons are less able to transport messages. Taking the idea further, they started treating mice with immunotherapy at about two to three months old and then measured how well their brains transported messages at six to seven months old. The researchers found that these animals had healthier neurons over time than those that were not immunized, suggesting that immunotherapy might be a feasible approach to treating Alzheimer's.

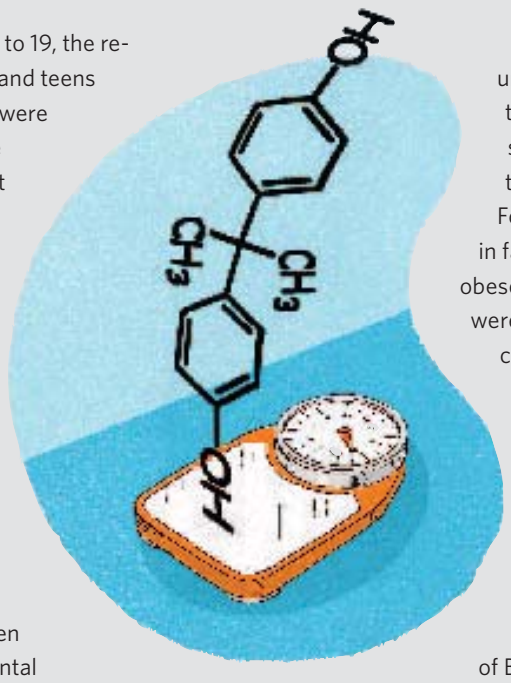
Exploring the Link between BPA and Childhood Obesity

As a pediatric resident, Leonardo Trasande, MD, associate professor of pediatrics, environmental medicine, and population health, learned about the impact of cigarette smoke and lead on children's health. His coursework, however, made no mention of bisphenol A, or BPA, an industrial chemical used to harden plastics and protect canned goods from corrosion. Why would it? BPA in consumer goods was widely considered safe.

A lot has changed in two decades. Dr. Trasande is part of a growing chorus of researchers who believe that BPA may in fact pose health risks when it leaches from packaging and mixes with food and beverages. The chemical made headlines this summer when the Food and Drug Administration banned its use in sippy cups and baby bottles. In animal studies, BPA has been linked to breast and prostate cancer, early-onset puberty, developmental disabilities, and metabolic disorders. At least one study in adults has shown that BPA increases the risk of obesity.

But until now, no one has explored the potential role of BPA in childhood obesity, an epidemic that affects 12.5 million children in the US. Last September, Dr. Trasande and his research team at NYU School of Medicine published an article in the *Journal of the American Medical Association* that documented for the first time an association between BPA and obesity in children. Looking at BPA levels in the urine samples of nearly 3,000 people ages 6 to 19, the researchers found that children and teens with the highest levels of BPA were more than twice as likely to be obese as those with the lowest levels of BPA. "Clearly, unhealthy diet and lack of physical exercise are the leading causes of obesity," says Dr. Trasande. "Yet increasingly, there is evidence to suggest that BPA also plays a role, especially in children."

BPA belongs to a class of chemicals that mimic estrogen, a hormone naturally present in both men and women that helps regulate developmental and reproductive functions in the body. Evidence suggests that BPA consumed through food and drink may upset the body's delicate hormonal balance that governs a healthy metabolism. "BPA produces the molecular hallmarks of obesity," explains Dr. Trasande. "It can make fat cells bigger and disrupt the balance of estrogen and testosterone in our bodies, which can influence weight gain."



Illustrations by Wes Bedrosian

But the presence of BPA in urine alone does not prove that the chemical contributes to obesity. The science is still uncertain, acknowledges Dr. Trasande. For instance, BPA can accumulate in fat cells, so it's possible that the obese children surveyed in his study were storing and secreting more of the chemical. This would suggest that the higher levels of BPA in the urine were the result of obesity, rather than the cause. The researchers also found that the association between BPA and obesity was only statistically significant among white children and teens; higher levels of BPA among other racial populations did not seem to influence obesity. Dr. Trasande emphasizes that further study is needed to explain this discrepancy.

What is clear is that the underlying causes of childhood obesity are far more complex than previously thought. "This study," he notes, "points to the need for a broader perspective in thinking about obesity among children."

Karsten Cullers

After minimally invasive surgery on his knee, Tom Ciccone is back in action—and out of pain for the first time since he was 10.

Making a Broken Body Whole Again

Thanks to Minimally Invasive Surgical Techniques, Many Orthopaedic Procedures Have Become More Routine and Less Risky

It's the time of day when most New Yorkers are just getting settled behind their desks, but at NYU Langone Medical Center's Outpatient Surgery Center on East 38th Street, Andrew Rokito, MD, is well into his second surgery of the day. Dr. Rokito, assistant professor of orthopaedic surgery and chief of the Division of Shoulder and Elbow Surgery, comes to this state-of-the-art fix-it shop for the human frame, if you will, to ply his trade. Using his expertise in minimally invasive surgical techniques, he makes broken bodies whole again. Today, Dr. Rokito is in OR #4, mending a shoulder. "Torn rotator cuff," he says. After years of manual labor, he explains, the man's left shoulder is simply worn out.

With a deftness that comes from endless practice, Dr. Rokito inserts long, slender instruments through small punctures called portals that allow access deep within the joint. One of these portals permits a tiny camera, a periscope of sorts, to accurately survey the terrain, mapped only by an X-ray and MRI scan. Off to one side, a clear plastic bag of saline solution feeds a constant flow to the shoulder. This expands the area around the joint like a water balloon, giving the surgical team room to maneuver while purging any blood that might cloud the camera's vision.

The damaged tissue looks like the frayed end of a white rope. Skimming it away with a shaver, Dr. Rokito explains how far shoulder surgery has come in recent years. To get this deep in the joint once required aggressive, invasive work. "It meant cutting through muscle," he explains, as he smooths out a bone spur. "This meant more postoperative pain, a slower recovery, and a long wait for the muscle to heal before starting physical therapy. Now, we don't have that wait, and there are fewer complications." Dr. Rokito nods in the direction of the anesthesiologist. "Another thing: we use a regional nerve block. This diminishes the postoperative pain for up to several hours and speeds up recovery."

After placing four holes in the bone, Dr. Rokito inserts anchors, tapping them into place with a small hammer. Then, he begins to elegantly stitch the shoulder solidly in place. On a high-definition monitor that serves as the surgeon's window into the joint, the crisscrossing sky-blue sutures show up as crisp lines against the white tissue, like ribbon wrapped around a present. "Some of these suturing techniques were adapted from fishermen's knots," he explains, tugging the last suture tight. Minutes later, he's done. The patient will be home by afternoon and will start therapy in a matter of days.

In another OR just around the corner, Robert Meislin, MD, assistant professor of orthopaedic surgery, and sports medicine/arthroscopy specialist, has just finished a case of his own. Nodding in the direction of a young man about to be taken to the postanesthesia care unit, he sums up the patient's story succinctly: "Lacrosse player. Dislocated shoulder." Surgery for a dislocated shoulder? "He dislocated it at least 12 times," explains Dr. Meislin, shaking his head in empathy. "I dislocated mine as a teenager," he recalls, wincing at the memory, "so I know what it's like." About half of Dr. Meislin's operations are on shoulders, the other half on knees, but almost all are performed with minimally invasive techniques.

One of his most gratifying outcomes is that of Tom Ciccone, an engineering student at SUNY Binghamton. When Ciccone was 10 years old, his left knee would throb after a day of playing outdoors. "Growing pains," doctors told his parents. But the pain never went away. Two surgeries as a teenager did not improve matters. "Tom had osteochondritis dissecans," explains Dr. Meislin, "a rare condition in which an articular cartilage, along with some underlying bone, breaks off from the knee bone. He proposed repairing the void with an articular cartilage graft, performed through small incisions in the knee. "At first I wanted no part of it," Ciccone admits, but he was in such agony that his parents convinced him. "For the first time since I was 10," he rejoices, "I'm not in pain."

As he tells the story, Dr. Meislin shows by his crinkling eyes that he's smiling behind his mask. "I love doing this stuff," he says, backing out the door on his way to the next case.

Welcome Back! *(continued from page 1)*

"This hospital is roaring back," announced Sen. Charles Schumer, D-NY, who has helped secure nearly $150 million of federal aid to repair our facilities and also helped usher through the Senate a $60.4 billion aid package for the region. "When we toured this hospital six weeks ago, destruction was everywhere," Sen. Schumer noted, describing the conditions he and Craig Fugate, administrator of the Federal Emergency Management Administration (FEMA), witnessed shortly after the storm.

Some 15 million gallons of water had overflowed the banks of the East River that night and flooded the Medical Center's underground areas. It was the worst catastrophe in NYU Langone's history, inflicting more than $1 billion worth of damage on its infrastructure. In addition to extensive damage to mechanical, electrical, HVAC (heating, ventilation, and air conditioning), and plumbing systems, several pieces of state-of-the-art equipment were lost, including four MRIs, two multidetector CT systems, two linear accelerators used for radiation therapy, and a Gamma Knife used for noninvasive treatment of brain tumors. A key component of the hospital's ability to resume inpatient services was the recent installation of a mobile MRI in the courtyard *(see page 8)*.

"NYU Langone alone lost more than most cities lose when they face a natural disaster," noted Sen. Schumer. "I've been a patient here. I know not only the skill but the love that goes into everything. The reopening of NYU Langone, a driving force in New York's economy, marks a milestone in the recovery process and means that thousands of New Yorkers can return to the work they love. I think it's a little bit of a miracle on 34th Street that this happened so quickly." By December 27, about 75% of the hospital's services were up and running. By the end of January, the remaining services were available.

Welcoming Sen. Schumer to the event were Robert I. Grossman, MD, dean and CEO of NYU Langone Medical Center, and Kenneth G. Langone, chairman of the Medical Center's Board of Trustees. "I was a patient in the hospital that night," Langone recalled. "I'll tell you what was great about that night. To watch the passionate effort of all these dedicated people, to make sure not just that they got these patients out safely, but that they got them to the right hospital, and the right service for whatever their medical needs were . . . all I can say is, it was one of the greatest examples I'll ever witness of a person helping another person."

> *"Hurricane Sandy truly showed who New York's heroes really are," said Dean Grossman.*

"Hurricane Sandy truly showed who New York's heroes really are," said Dean Grossman, "with our staff here and our city and state's first responders risking all to help bring hundreds of patients to safety. We are grateful to all those who helped us achieve a timely and safe reopening of our facilities, including Senators Schumer and Gillibrand; Representatives Maloney, King, Lowey, and Crowley; Governor Cuomo; Mayor Bloomberg; and the State Departments of Health and Homeland Security. Most important, we want to thank our patients for their continued support and for not losing faith that we truly would be back—stronger than ever."

To provide urgently needed care to the community while NYU Langone's new Emergency Department is under construction, an Urgent Care Center has been established, with a triage and treatment area located on the ground floor of the Schwartz Health Care Center and a larger treatment and observation area located on 16 West in Tisch Hospital. Emergency medicine and other specialists will be available 24/7 to treat all adult and pediatric walk-in patients who require immediate care.

On the sixth floor, Nadia Sohan, RN, a nurse manager of the PACU, said of her 90-person staff: "We're all happy to be here, and we're all happy to be with each other again." When a patient arrived after open-heart surgery, the intensivist on duty, Luciano Lemos-Filho, MD, assistant professor of surgery and medicine, checked his vital signs and then stepped away for a moment to reflect on the significance of the day. "The last time I was here, we were evacuating patients attached to heart valve pumps, patients on ventilators, patients who were actively bleeding. The mood today? Jubilant! It's like the first day of school after summer recess."

"You don't know what you'll miss until it's taken away from you," said H. Leon Pachter, MD, the George David Stewart Professor of Surgery and chair of the Department of Surgery. "Returning is more than an event—it's a reconnection with a renowned institution we all cherish and feel privileged to work at. After such a prolonged absence, it's overwhelming to realize how true it is that there's no place like home."

news&views

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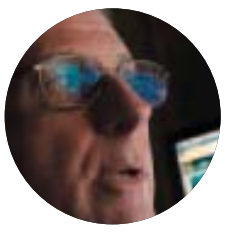

news & views is published bimonthly for NYU Langone Medical Center by the Office of Communications and Public Affairs. Readers are invited to submit letters to the editor, comments, and story ideas to thomas.ranieri@nyumc.org.

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A Lobby Big Enough to Drive a Tractor-Trailer Through

And what a trailer it was: 54 feet long, 8.5 feet wide, and 13.5 feet tall, weighing more than 40 tons. Its cargo was a Siemens 1.5-Tesla MRI. The mobile, self-contained system, fully enclosed and shielded to prevent interference from nearby magnetic equipment, plays a pivotal role in the reopening of NYU Langone Medical Center's Tisch Hospital in the aftermath of Hurricane Sandy. Located in the courtyard between Alumni Hall and the Skirball Institute of Biomolecular Medicine, and housed in a custom-made shelter, it will provide diagnostic imaging for inpatients until a new system is installed in a permanent location on a higher floor less vulnerable to flooding.

Preparations for its delivery took several days. A section of the concrete-and-granite knee-wall that runs along the Skirball driveway had to be chopped out. A wooden bed of 12-foot-long, 18-inch-square wooden beams had to be laid down to disperse the weight. More than 60 metal plates, each 1.5 inches thick, were set in place along the path to provide traction and prevent sinkage. The soaring windows on both sides of the Skirball lobby—actually doors on hinges—had to be flung wide open.

The trailer was driven 630 miles from its previous leaseholder, a community hospital in Chelsea, Michigan. It arrived at NYU Langone shortly after midnight on Friday, December 14. With the precision, speed, and poise of a surgeon, an expert driver eased the massive vehicle through one side of the lobby and out the other, with only six inches to spare on either side of his rig.

John Abbott