

News & Views

WHERE PATIENT CARE,
SCIENTIFIC RESEARCH, AND
MEDICAL EDUCATION MEET

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SUMMER 2015



Nathaniel Daly, now nearly three years old, and his mom, Jennifer (foreground), have a follow-up visit with pediatric cardiologist Dr. Achiau Ludomirsky.

Photographer: Karsten Moran

Mending a Baby's Broken Heart

A Cardiologist with a Plan Offers Hope to a Mother and Child

Jennifer Daly was nearly full-term when diagnostic scans revealed that her unborn baby had an underdeveloped right ventricle, the heart chamber that pumps blood to the lungs for oxygenation. He was able to thrive within the womb, where the mother oxygenates the fetus's blood, but to survive on his own, he would need a series of three risky open-heart surgeries staged over the first two years of life. Doctors at another hospital suggested that it might

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Mending a Baby's Broken Heart

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be more merciful to let nature take its course, resulting in death within days of birth. But [Achiau Ludomirsky, MD](#), the Andrall E. Pearson Professor of Pediatric Cardiology and director of the Division of Pediatric Cardiology at NYU Langone Medical Center, saw nothing but hope. Having successfully treated many similar cases by teaming up with a cardiac surgeon, he was certain that this newborn could be saved.

Trusting her maternal instincts, Jennifer Daly embraced Dr. Ludomirsky's confidence and optimism, and arranged to have her delivery at NYU Langone's Tisch Hospital.

the last seven years at NYU Langone. Over that time, they've become an impressive team, handling hundreds of complex pediatric cardiac cases annually with a success rate second to none. In fact, every child they've treated together over the last year has survived. "We're two completely different personalities, but between us, there's total trust," says Dr. Ludomirsky. "If he's confident in a clinical decision, there's no second-guessing it. That trust works both ways."

Daly was understandably anxious about what lay ahead, especially when Nathaniel needed an emergency operation to clear scar tissue from his pulmonary artery. With that complication out of the way, Dr. Mosca could start the repairs. "Fortunately, my family was very supportive," says Daly, "and Dr. Mosca was so calming and so positive."

Several months after his final operation, Nathaniel, now almost three, is thriving. "He was pretty active before his last surgery, but he didn't have the breath to match what he wanted to do," recalls his mom. "Now, his energy level is crazy. It's a nice problem to have."

"Is he going to be an Olympic athlete?" says Dr. Ludomirsky. "Absolutely not. But he can play recreational sports and have a completely normal life."

Today, Jennifer Daly's days are largely consumed by parenting, but she also finds time to serve as a member of the Family Advisory Council and as a parent counselor for the [Sala Institute for Child and Family Centered Care](#) within NYU Langone's Hassenfeld Children's Hospital. "When I was pregnant, I connected on Facebook with a parent who had been through an experience like mine. It had a huge impact on me," says Daly. "Now, I'm giving back." ■

CONTACT: To find a physician at NYU Langone who treats pediatric cardiac conditions, call 212-263-5989.



Dr. Achiau Ludomirsky (left) has worked with Dr. Ralph Mosca (right) on and off since 1992, including the last seven years at NYU Langone. They've become an impressive team, handling hundreds of complex pediatric cardiac cases annually with a success rate second to none.

Photographer: Karsten Moran

Trusting her maternal instincts, Daly, 24, embraced Dr. Ludomirsky's confidence and optimism, and arranged to have her delivery at NYU Langone's Tisch Hospital. But two weeks before her mid-November 2012 due date, Hurricane Sandy bore down on New York City, forcing the indefinite closure of Tisch Hospital. Daly was referred to another local hospital that could safely usher her newborn into the world and perform the first lifesaving operation, implanting a temporary artificial shunt that would send blood to his lungs. The operation was a success, and baby Nathaniel was sent home nine days later.

Daly brought her son back to NYU Langone for the next two surgeries, in which the heart's major vessels would be rerouted so that the

single healthy ventricle could do the job of two. "You can't do a complete correction all at once," explains Dr. Ludomirsky. "The pulmonary arteries and lungs need time to adapt to the new, increased blood flow."

Such repairs are highly complex, but Dr. Ludomirsky was confident that that challenge could be met by his colleague in the Department of Cardiothoracic Surgery, [Ralph Mosca, MD](#), the George E. Reed Professor of Cardiac Surgery and director of the Division of Pediatric and Adult Congenital Cardiac Surgery. "With his exceptional skills, I knew when I first met him that he would become one of the world's top pediatric cardiac surgeons," says Dr. Ludomirsky, who has worked with Dr. Mosca on and off since 1992, including

Newcomer on the North Shore

A Prominent Multispecialty Practice on Long Island Becomes NYU Langone's Largest Ambulatory Care Center



Illustrator: Josie Portillo

Huntington Medical Group, one of Long Island's largest multispecialty practices, has joined NYU Langone Medical Center's ever-expanding network of ambulatory care centers and will now be called [NYU Langone Huntington Medical Group](#). The practice has been a prominent fixture in Suffolk County since its founding in the 1950s and now serves some 1,000 patients each day, making it the largest of NYU Langone's ambulatory care centers.

With 41 physicians representing 21 medical specialties, NYU Langone Huntington Medical Group is known for offering patients comprehensive, personalized healthcare

21
Medical
Specialties

41
Physicians

2
Locations:
Huntington Station
and Commack

under one unified system. "This standard of care will not only remain unchanged," says its medical director, Raman Bhasin, MD, "but as a result of the partnership with NYU Langone, it will become strengthened and further enhanced."

Located in Huntington Station on the north shore of Long Island, some 40 miles from Manhattan, NYU Langone Huntington Medical Group has a satellite office in Commack, 7 miles away. Pediatric services are available seven days a week, and many other medical services offer evening appointments. ■

At NYU Langone Huntington Medical Group, Specialties Are a Specialty



Photographer: John Abbott

NYU Langone Huntington offers full-service medical care, including the following specialties:

Cardiology	Obstetrics and gynecology	Podiatry
Dermatology	Oncology	Psychology
Family practice	Ophthalmology	Pulmonology
Gastroenterology	Orthopaedics	Radiology
Hematology	Otolaryngology	Sports medicine
Internal medicine	Pain management	Surgery
Neurology	Pediatrics	Urology

CONTACT: NYU Langone Huntington Medical Group—Huntington Station
180 East Pulaski Road, Huntington Station, NY 11746.
Phone: 631-425-2121. Web: nyulangone.org/huntington.

CONTACT: NYU Langone Huntington Medical Group—Commack
2171 Jericho Turnpike, #202, Commack, NY 11725.
Phone: 631-499-8181.

Dr. Bret Rudy Appointed NYU Lutheran’s Corporate Chief Medical Officer

Vice Chair of Pediatrics Tapped for Senior Leadership Post



Dr. Bret Rudy

Bret Rudy, MD, has been appointed corporate chief medical officer of NYU Lutheran Medical Center, NYU Langone Medical Center’s newest affiliate. A member of the senior leadership team, Dr. Rudy will be responsible for enhancing the already exceptional quality of care provided by NYU Lutheran, an acute care teaching hospital in southwest Brooklyn’s Sunset Park neighborhood.

The focus of Dr. Rudy’s new role will be patient outcomes, community health, and the use of proven best practices. Previously, as vice chair of NYU Langone’s Department of Pediatrics, he helped staff achieve the highest standards of safety and accountability. “Becoming number one in quality care did not happen overnight for NYU Langone,” Dr. Rudy explains. “It took a collaboration of departments using quality methodologies to not only improve care, but to show metrics.”

Within the Department of Pediatrics, Dr. Rudy led the expansion of quality initiatives and developed new clinical programs, introducing pediatric hospitalists and the pediatric transport program, a key to providing care across NYU Langone’s expanding network. He also aided in the recent expansion of pediatric subspecialty services at NYU Lutheran, a highly successful clinical collaboration. ■

CONTACT: To learn more about NYU Lutheran Medical Center, call 718-630-7000 or visit nyulangone.org/nyulutheran.

NYU Lutheran’s Pediatric and Cardiac Services Expanded

In the first phase of ongoing efforts to expand and enhance high-quality healthcare in communities throughout the metropolitan area, NYU Langone Medical Center and its newest affiliate, NYU Lutheran Medical Center, have launched two major clinical initiatives—one in pediatrics and another in cardiology.

Pediatrics

NYU Lutheran now offers a broad array of pediatric specialty services at its main campus in

Sunset Park and affords patients access to complex subspecialty care at NYU Langone, if needed. NYU Langone specialists have joined NYU Lutheran’s long-established, community-based primary pediatric care programs to broaden its reach in addressing growing and emergent healthcare needs in such areas as obesity, diabetes, and asthma. New specialty services include cardiology, endocrinology, gastroenterology, nephrology, pulmonology, and rehabilitation medicine. These services build upon NYU Lutheran’s distinguished

pediatric programs, including the largest school-based health center program in New York State and a Pediatric Epilepsy Center of Excellence. NYU Lutheran’s Pediatric Emergency Department is now staffed 24/7 by specialists in pediatric emergency medicine.

Cardiology

NYU Langone now serves as the New York State–designated cardiac surgery center for the NYU Lutheran May Ellen and Gerald Ritter Cardiac Catheterization Laboratory, providing support for

the laboratory’s complex interventional cardiology and cardiac surgery cases. This support includes the establishment of joint quality standards, shared clinical guidelines, and formal protocols for the transfer of NYU Lutheran patients to NYU Langone if they require cardiac surgery or complex cardiac interventions. This is the first phase of NYU Langone’s plan to expand the capacity of the catheterization laboratory. The current laboratory will be renovated and a second one will be created.

Is Gluten the Villain We Think It Is?

One-Third of Americans Say They Are Trying to Avoid Gluten. But Not So Fast . . .

Perhaps no dietary ingredient has been more vilified in recent years than gluten, a group of indigestible proteins found in wheat, rye, barley, and triticale, a hybrid of wheat and rye.

Gluten is commonly blamed for a host of ailments, from bloating and gassiness to fatigue and headaches. But is it truly the culprit? [Dr. Sophie Balzora](#), a gastroenterologist at NYU Langone Medical Center, addresses a few common misconceptions.

Gluten is inherently unhealthy.

FALSE. About one-third of Americans say that due to health concerns, they want to reduce the amount of gluten they consume, or eliminate it altogether. But Dr. Balzora believes that many people may be needlessly restricting their diet. “People are more health conscious today,” she notes, “and somehow that health consciousness has translated into the idea that gluten is unhealthy, which is something we’re trying to debunk.” In fact, gluten-containing whole grains provide a valuable source of fiber, B-vitamins, and minerals, while many gluten-free products lack such nutrients.

People who suspect they may have a gluten-related disorder should eliminate gluten from their diet before seeing their doctor.

FALSE. Eliminating gluten may not only strip your diet of valuable nutrients, but also hinder the accuracy of tests for celiac disease, a serious autoimmune condition in which gluten signals the body to attack the lining of the small intestine. Celiac disease affects about 1 in 141 people in the US. If left untreated, it can lead to serious health problems like nutritional and vitamin deficiencies, osteoporosis, infertility, and even lymphoma of the small intestine in severe cases. “If someone suspects he or she has a gluten-related condition, the first thing we must do is rule out celiac disease with a blood test for certain antibodies,” explains Dr. Balzora. Unfortunately, adhering to a gluten-free diet prior to testing can render these tests unreliable, which is why it’s best to see a doctor before eliminating gluten from your diet. A confirmed diagnosis is important, because people with celiac disease need to know definitively that they will need to avoid all gluten in their diet for the rest of their lives. These individuals should also be assessed for vitamin deficiencies and other celiac-related health issues. Depending on your symptoms, a doctor may also want to test for a wheat allergy, a condition in



Gluten Be Gone

If you suffer from celiac disease, eating even a morsel of food that contains gluten can damage the lining of your small intestines. Here are some tips on how to go gluten-free:

- Scrutinize food labels for gluten-containing grains. Avoid wheat-based ingredients. Gluten can also lurk in medications (as a binder), pickles (if processed with malt vinegar), soy sauce, and licorice.
- Shop for healthy alternatives: beans, fruits, vegetables, dairy, nuts, and gluten-free grains like rice and quinoa.
- Eat a balanced diet. A diet overly reliant on gluten-free packaged food can deliver too much fat and sugar and too little fiber, calcium, and iron.
- Beware of commercially processed oats, which may be processed on machinery used for gluten-containing grains.

which exposure to wheat causes allergic symptoms like hives, wheezing, and even anaphylaxis.

Gluten sensitivity is synonymous with celiac disease.

FALSE. Not everyone with gluten sensitivity has celiac disease. Recent studies suggest that some people may suffer from a condition called nonceliac gluten sensitivity (NCGS). Unlike those with celiac disease, however, people who have NCGS do not necessarily need to stick to a strict 100% gluten-free diet. “Tolerance varies,” explains Dr. Balzora. “Conversely, in celiac disease, even the smallest amount of gluten will cause damage over the long run.”

Celiac disease is overdiagnosed.

FALSE. In the US, an estimated 83% of people who suffer from celiac disease are undiagnosed or misdiagnosed. While celiac disease is four times more prevalent today than in the 1950s, the increase is simply too large to attribute to diagnostic trends alone, says Dr. Balzora. “It’s something we’re looking out for more today.” There are many theories about why celiac disease is on the rise. It could stem from changes in the way grains are grown or the ubiquity of gluten in today’s foods (*see box*). The only thing that’s known for certain is the serious toll gluten takes on the lining of the small intestine in people with celiac disease. “It’s crucial to impart to patients with celiac disease that the mainstay of treatment is a lifelong, strict gluten-free diet,” says Dr. Balzora. “Strict avoidance of gluten allows the small intestine to heal and alleviates symptoms.” ■

CONTACT: To find a physician who treats gluten allergy or celiac disease, call NYU Langone’s Physician Referral Service at 888-769-8633.

Sleep Apnea: the Not-So-Silent Saboteur

*Preventing, Diagnosing,
and Treating an Increasingly
Common Condition*

“

What's that horrible noise?" Kathy Mone would wonder each time she was roused in the middle of the night by a roar. The source of the seismic snores, however, was not her husband, Larry, but Kathy herself. So much for the stereotype of the woman elbowing her partner during the night to make him stop snoring. Mone, 57, suffers from [obstructive sleep apnea](#), a condition in which breathing becomes interrupted for 10 seconds or more, at least five times per hour.

Fragmented slumber—resulting from totally or partially obstructed airflow—deprives the body of oxygen and deep restorative sleep and leaves people drowsy during the day, dulling their concentration, slowing their reflexes, increasing the risk of accidents, and putting cumulative stress on the body’s metabolism and cardiovascular system. If the blockages cause a drop in the body’s oxygen level, left untreated, moderate to severe sleep apnea can, over time, lead to hypertension, heart disease, diabetes, stroke, even death.

“We used to think of sleep apnea as very rare,” says pulmonologist [David Rapoport, MD](#), director of NYU Langone Medical Center’s Sleep Disorders Program. “But today it is unfortunately common, affecting an estimated 4 to 9% of American adults in its more severe form and perhaps 20% in the milder form. The risk rises with age and obesity, and we have a rapidly growing segment of the population that is aging, and we have an obesity epidemic.”

Why Breathing Stops

“Evolution set up the problem,” explains otolaryngologist [Kenneth Schneider, MD](#). “The muscles of the upper throat serve two opposing purposes. They have to stay rigid to maintain the airway open, and they have to be compliant to propel food into the esophagus.” During sleep, muscles naturally relax. If they slacken too much, the upper airway passages collapse; the tongue and other structures block the airway.

Other factors can contribute to sleep apnea. Obesity, for unexplained reasons, can cause a loss of muscle tone. Variations in anatomy, such as a long palate or uvula, large tonsils, or a bulky tongue, make people with poor muscle tone more susceptible to the disorder.

The lack of adequate oxygen or cessation of breathing eventually registers in the brain, which signals the body to wake up, just enough to open the air passage. This stop-start cycle can recur hundreds of times through the night, although people typically have no recollection of these episodes. They go back and forth from deep to light sleep, without ever fully waking, and unless they have an alert bed partner, they often remain unaware that they have a problem at all.

It’s a Woman’s Problem, Too

“Sleep apnea is generally associated with men, but postmenopausal women are just as prone to the condition as men the same age,” notes pulmonologist and sleep specialist [Omar Burschtin, MD](#). “What puts older women at increased risk is the loss of estrogen, a hormone that protects muscle tone. When its level drops, muscles

Telltale Signs

- Loud snoring
- Gasping, snorting, or choking during sleep
- Restless, agitated sleep
- Certain types of insomnia, depression, and anxiety

- A headache upon awakening
- Daytime drowsiness
- Impaired concentration or memory
- Loss of libido

A combination of these symptoms is enough to raise suspicion of sleep apnea, but a definitive diagnosis can only be made by wearing sensors that record breathing, respiratory effort, oxygen saturation, blood pressure, heart rate, and other measures during sleep. This is usually done in a sleep lab, but sometimes a patient may be sent home with a portable recording device.

become lax.” Sleep apnea is significantly underdiagnosed among these women. “Women and doctors alike need to stop thinking of apnea as primarily a man’s problem.”

Getting a Good Night’s Sleep

In mild cases, sleep apnea can be addressed with modifications of behavior, such as sleeping on your side or with your head elevated, avoiding alcohol or anxiety medications near bedtime, and maintaining normal weight. Doctors may refer the patient to a dentist who specializes in making mouth guards that advance the jaw forward to keep the air passages open. For severe cases, surgery may be advisable to correct anatomical variations.

The one surefire therapy is a continuous positive airway pressure, or CPAP, machine. A plastic mask is worn over the nose or both the nose and mouth, and it is connected by a flexible tube to a bedside air pump that sends a steady stream of air into the upper air passages and throat to keep the airway open. When used properly, the device is 100% effective, but some patients fail to comply because they find the mask uncomfortable.

Prevention Is the Best Medicine

- ▶ Maintain a normal weight.
- ▶ Avoid alcohol at least four hours before sleep.
- ▶ Don’t drink coffee or other caffeinated beverages after lunchtime.
- ▶ Change your sleeping position if a sleep study finds you have mild apnea.
- ▶ Consult a specialist for chronic nasal congestion and allergies if you have symptoms of sleep apnea.

“We used to think of sleep apnea as very rare,” says pulmonologist [David Rapoport, MD](#), director of NYU Langone Medical Center’s Sleep Disorders Program. “But today it is unfortunately common, affecting an estimated 4 to 9% of American adults in its more severe form and perhaps 20% in the milder form.”

CONTACT: To find a physician who treats sleep apnea, call NYU Langone’s Physician Referral Service at 888-769-8633. Or visit nyulangone.org/sleepapnea.

When Men Get Depressed

Statistics indicating that fewer men than women suffer from [depression](#) may be misleading. But experts say this much is certain: many men aren't getting the help they need.

Half as many men report being depressed as women (about 1 in 16 men versus 1 in 8 women), according to the National Alliance of Mental Illness. But that discrepancy may be because many men see the condition as a sign of emotional weakness, which makes them less likely to tell anyone, seek help, or be diagnosed and treated. "Primary care physicians miss depression more than 50% of the time," explains [Steven Lamm, MD](#), medical director of the Preston Robert Tisch Center for Men's Health at NYU Langone Medical Center.

Getting Diagnosed

Major depressive disorder (also known as unipolar depression) is a serious disease, which can affect every aspect of a man's life. But depression can result from other conditions as well, including bipolar disorder, schizophrenia, substance abuse, even PTSD. It may also point to another medical issue (such as, rarely, a brain tumor), an undiagnosed attention deficit disorder, or side effects from medication. Because early diagnosis and treatment are crucial, physicians at the Center for Men's Health routinely screen patients for signs of the disorder.

"Our specialists understand that depression can manifest itself in their area of expertise," Dr. Lamm explains. "Cardiologists, for example, know that it can lead to chest pain and shortness of breath." During office visits, doctors watch for telltale signs, such as being unsociable or unkempt, and take a thorough history, noting possible triggers, such as a divorce or losing a job. If they suspect clinical depression, they'll suggest a consultation with a psychiatrist.

"I spend a lot of time explaining to men that depression is a biochemical disorder," says psychiatrist [Norman Sussman, MD](#), who works closely with physicians at the center. "There may be circumstances that trigger it, but there's a genetic predisposition. It's not a reflection of their character or strength."

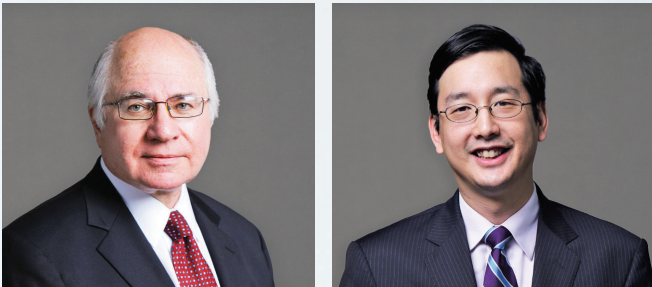
Talk Therapy

Studies show that cognitive behavioral therapy (CBT) is an effective treatment for many men. In CBT, the therapist helps the patient restructure negative thinking patterns and change behaviors that may be contributing to his depression. During therapy sessions, a man works with an NYU Langone therapist to learn how thoughts, feelings, and behaviors influence one another. The therapist explains how to test the reality of thoughts and perceptions and to manage symptoms. Dr. Lamm emphasizes that when a man is grappling with depression, overcoming the shame associated with the disorder is key to getting well. "I tell men, 'You can't just will yourself out of being depressed.'" Treatment with CBT typically lasts for 12 to 16 weeks, or longer in persistent cases. Doctors may prescribe cognitive behavioral therapy alone or in combination with medication.

WARNING SIGNS OF DEPRESSION IN MEN

When men are depressed, they often exhibit symptoms different from those of women:

- Rather than appearing sad, men may become irritable, angry, or aggressive.
- They may focus on physical symptoms, such as headaches, back pain, digestive problems, erectile dysfunction, chest pain, and shortness of breath.
- Men are more likely to self-medicate with alcohol or drugs.
- They may also try to escape from their feelings and isolate themselves by working long hours or watching endless sports on TV.



Psychiatrists Dr. Norman Sussman and Dr. Patrick Ying employ different approaches, though both are highly effective, to treating patients with severe depression: medication and electroconvulsive therapy, respectively.

- Men are more likely to indulge in risky behavior, such as reckless driving.
- While men may not attempt suicide as often as women, if they do, they’re four times more likely to succeed.

Medication

The most common medications used to treat depression are called selective serotonin reuptake inhibitors, or SSRIs. They increase levels of the brain chemical serotonin, which regulates mood, appetite, and sleep. It can take up to 12 weeks for SSRIs to take full effect.

If the patient’s symptoms don’t respond to an SSRI, the doctor may recommend a medication from a class of antidepressants called serotonin-norepinephrine reuptake inhibitors, or SNRIs. These medications may be helpful for people with depression-related fatigue or pain. SNRIs appear to improve communication between nerve cells by making more of the chemicals serotonin and norepinephrine available in the brain, helping to boost the patient’s mood.

When devising a treatment plan, Dr. Sussman takes many factors into account. For example, SSRIs can lead to sexual dysfunction, cause weight gain, and elevate blood sugar levels. Other medications don’t have those side effects but may cause urinary issues for patients with a prostate problem. “It’s important to pick a drug based on the patient’s total health,” he stresses.

Depression is often a chronic condition that must be managed over a lifetime. People on medication typically meet with their psychiatrist regularly to discuss any side effects and review how well the medication is working.

Electroconvulsive Therapy

For men who have treatment-resistant depression, or depression so severe that they may be in imminent danger of suicide, electroconvulsive therapy (ECT) may be a lifesaving option. The procedure as it’s performed today bears little resemblance to the crude “shock treatments” that were commonplace in the therapy’s infancy or as portrayed in movies such as *One Flew over the Cuckoo’s Nest*.

“This treatment has become safer, with fewer side effects,” explains psychiatrist Patrick Ying, MD, director of the ECT program at the Medical Center. An estimated 1 million patients worldwide undergo the procedure each year. ECT works by triggering a controlled seizure of the entire brain. Although the mechanism is not fully understood, this neural storm causes biochemical changes that can radically improve a patient’s mood. Patients are given a muscle relaxant and general anesthesia to protect them from anxiety and discomfort.

Over the past 15 years, refinements—using ultrabrief pulses of electricity, for example, and stimulating only the right side of the brain—have reduced the temporary confusion and memory

loss associated with the procedure. Although special precautions may be necessary for some patients, such as those with cardiac arrhythmias or brain tumors, the risk of serious complications is generally low.

Studies show that nearly 80% of patients with severe depression experience complete remission with ECT. Moreover, patients who receive ECT often achieve near-total remission within two to four weeks, while those on medication typically experience only partial improvement after six to eight weeks.

Most people are able to return to work after the initial course of therapy (generally 6 to 12 treatments, administered two or three times a week). But because the effects of ECT can wear off quickly, patients usually continue taking medication, and some may have follow-up sessions about once a month. Treatment may need to continue indefinitely.

“ECT is not a cure,” says Dr. Ying. “It doesn’t mean your depression is gone forever. You still need to do some kind of maintenance. But for many, this is the thing that gets them better when nothing else has worked.” ■

CONTACT: To find a physician who treats depression, call NYU Langone’s Physician Referral Service at 888-769-8633. Or visit nyulangone.org/mooddisorders.

Lung Cancer Screening: Medicare Paves the Way

Expanded Coverage Will Help Prevent the Leading Cause of Cancer Deaths in the US



Photographer: Bud Glick

It's hard to imagine that there could be any good news about lung cancer, but there is. The deadliest cancer in the US, it claims the lives of some 160,000 people each year, nearly all of them smokers. This staggering toll (more deaths than can be attributed to breast, colon, and pancreatic cancers combined) is due, in part, to how hard it is to catch the disease in its earliest stages. Until recently, the only accepted technique for detecting lung cancer was a chest X-ray, which often misses tumors until they're too advanced for curative treatment. But thanks to advances in screening methods and changes in insurance coverage, the outlook for many patients may soon improve.

In 2011, the National Lung Screening Trial published a groundbreaking study of high-risk individuals, showing that low-dose CT scans of the lungs revealed far more cancers than X-rays, decreasing deaths by 20%. The US Preventative Services Task Force subsequently endorsed the technique for adults 55 and older with a history of heavy smoking. Most private insurance companies would be required to cover CT screenings for such patients under the Affordable Care Act, beginning in 2015. Then, in February of this year, the Centers for Medicare & Medicaid Services announced that Medicare recipients would receive coverage for the procedure (which can cost up to \$400), greatly enlarging the pool of potential beneficiaries.

Some details of both the ACA and Medicare plans are still

Dr. Georgeann McGuinness, senior vice chair of the Department of Radiology, views CT scans of the lung. NYU Langone's Lung Cancer Screening Program is a collaborative clinical service staffed by physicians from the Divisions of Pulmonary, Critical Care, and Sleep Medicine, the Departments of Cardiothoracic Surgery, Radiology, and Population Health, and the Laura and Isaac Perlmutter Cancer Center.

CONTACT: For more information about NYU Langone's Lung Cancer Screening Program and to find out if you or a loved one qualifies for insurance coverage, call 212-263-6103 or 855-NYU-LUNG. Or visit nyulangone.org/lungscreening.

being worked out, but generally speaking, eligibility is open to patients between 55 and 77 years old, with a smoking history of at least 30 "pack-years" (the number of packs per day multiplied by the number of years the person has smoked). If the patient is not currently a smoker, he or she must have quit within the past 15 years. Excluded from this group are people who might also be at higher risk because of family history or occupational exposures to other cancer-causing chemicals, such as asbestos.

Despite its advantages as a diagnostic tool, CT screening isn't foolproof. "Almost half of all scans come back with abnormal findings, but most are false positives—mainly nodules that do not prove to be cancers," explains [Georgeann McGuinness, MD](#), senior vice chair of the Department of Radiology at NYU Langone Medical Center. These results still necessitate follow-up—either more scanning or biopsies—which entail their own risks and may produce anxiety in some patients. That's why Medicare patients seeking a screening are required to have a written order from a healthcare provider, which must be secured during a counseling session on the procedure's risks and benefits.

NYU Langone radiologists pioneered CT screening for lung cancer in the 1990s and continue to be at the forefront of research. "We've reached a great place compared to 10 years ago," notes Dr. McGuinness, "because we know, based on the data, that this method is valid. It saves lives." ■

Innovations in Clinical Care

A Surprising Remedy for “Strawberry Marks”

Propranolol, a drug used to control heart disease and high blood pressure in adults, has revolutionized the way dermatologists treat hemangiomas, the puffy red skin growths that appear in up to 5% of infants.

Infantile hemangiomas, are not usually dangerous and generally go away on their own. In the past, doctors tried shrinking them with corticosteroids or zapping them with lasers, but the former may cause long-term side effects, and the latter does not affect deep lesions. Now, a surprising new treatment has proven to be faster, safer, and more effective.

Pediatric dermatologist [Seth Orlow, MD, PhD](#), reduces the benign growths with propranolol, a drug used to control heart disease and high blood pressure in adults. “This



medication, a beta-blocker, has revolutionized the way we treat hemangiomas,” explains Dr. Orlow, the Samuel Weinberg Professor of Pediatric Dermatology and chairman of the Ronald O. Perelman Department of Dermatology at NYU Langone Medical Center.

“Parents have told me they see a difference after just days of treatment.”

Hemangiomas—sometimes called strawberry marks for their distinctive color—occur when blood-vessel cells proliferate for unknown reasons, creating a cluster of new microscopic vessels. A growth can appear as a red bulge on the skin or, if it’s located deeper under the skin, as a bluish lump. A hemangioma typically shows up shortly after birth as a red dot or small bruise on the head, face, or neck. It grows rapidly during the first four to six months, then shrinks and fades over the next five years or so. In most cases, the growth is painless and benign, but a hemangioma located near the nose or mouth may hinder breathing while one near an eye may affect vision.

Propranolol, administered in liquid form, may be used in children who are at least five weeks old. How the medication works is unclear, but it is known to constrict blood vessels, so this may slow blood flow within the growth. It also seems to keep the growth from proliferating, perhaps by killing off the cells that cause it. Side effects are uncommon, short-term, and relatively manageable. ■

A Device That Helps Make Breast Cancer Surgery More Precise

Thanks to a new device that detects electromagnetic differences between breast cancer cells and normal breast tissue, surgeons can now get a more accurate assessment while they operate, sparing many women with early-stage breast cancer from additional surgeries.



Dr. Freya Schnabel, director of breast surgery at NYU Langone.

NYU Langone Medical Center was the first hospital in the tri-state area to use MarginProbe®, and our physician-researchers were part of a pivotal study of over 600 women that led to its approval by the FDA.

Whenever a breast cancer surgeon performs a lumpectomy, there’s always a lingering concern: Has enough surrounding tissue been removed to ensure that no malignant cells remain? Though surgeons have some tools to guide them, the only way to know for certain is for a pathologist to examine the margins, or edges, of

the excised tumor following surgery. But thanks to a new device called MarginProbe®, which detects electromagnetic differences between breast cancer cells and normal breast tissue, surgeons can now get a more accurate assessment while they operate, sparing many women with early-stage breast cancer from additional surgeries.

NYU Langone Medical Center was the first hospital in the tri-state area to use MarginProbe, and our physician-researchers were part of a pivotal study of over 600 women that led to its approval by the FDA. The results showed that MarginProbe was up to three times as effective in finding additional cancer on the margins of tumorous tissue as traditional methods, such as inspecting and imaging the tissue. It’s an advance that could benefit the more than 170,000 women who undergo a lumpectomy each year. “In about 20% of cases, surgeons find that they have to reoperate to remove additional tissue,” notes lead author [Freya Schnabel, MD](#), director of breast surgery at NYU Langone’s [Laura and Isaac Perlmutter Cancer Center](#). “We felt we could and should do better for our patients.”

Re-excision surgery is frustrating and stressful for the patient, Dr. Schnabel explains, and it may delay necessary follow-up treatments like radiation and chemotherapy. An additional operation can also result in negative cosmetic effects. “MarginProbe is a major advance,” says Dr. Schnabel, because doctors and patients alike can feel more confident that only one surgery will be necessary. ■

“If You Don’t Have a Doctor Who Inspires You, Find One Who Does”

Brian Dunleavy Did, and Now He’s Running Races Despite Having Cerebral Palsy

Until three years ago, Brian Dunleavy (wearing bib #320 in the photo), a 46-year-old man with cerebral palsy, never could have imagined himself running races, let alone setting a personal best. But that’s just what he did in a 5K run held last year in Manhattan. When he was a child, his parents took him to doctor after doctor, but the message was always the same. “They said there was nothing they could do for me,” says Dunleavy. Cerebral palsy, a neurological disorder often caused by a type of brain injury that occurs within the womb, afflicts some 800,000 Americans. In Dunleavy’s case, it left the right side of his body weak. Fearing injury, he avoided activities that might challenge his unsteady balance and poor coordination. “I just assumed that certain sports were off the table,” he says.

A back injury several years ago led Dunleavy to rehab specialist [Jaime Levine, DO](#), at NYU Langone Medical Center’s [Rusk Rehabilitation](#). “Dr. Levine told me I was capable of much more than I thought,” he recalls. With physical therapy and the right attitude, she assured him, he could do just about anything—run, hike, even mountain-climb. Dunleavy began to see his condition in a whole new light. “It’s common for doctors who don’t specialize in caring for patients with cerebral palsy to overlook the fact that there’s always a way to help a patient improve their quality of life,” says Dr. Levine. “I saw tremendous room for improvement. Brian has a physical difference, but he’s not disabled. He’s a fully functional, independent, industrious person, and he was highly motivated to improve himself physically.”

As Dr. Levine promised, the right side of Dunleavy’s body grew stronger after twice-weekly sessions of physical therapy over the course of four months. Dr. Levine also had him fitted with a corrective brace that helps flex his ankle upward and keeps the toes of his right foot from dragging, caused by



Photographer: Joshua Bright

weakness of the leg muscles. As Dunleavy’s strength grew, so did his self-confidence. He began jogging with a friend, working his way up to longer distances. “The first time I ran three miles,” he says, “I was on cloud nine.”

Dunleavy credits his wife, Eileen, for encouraging him to seek the right help, and Dr. Levine for showing him the power of a can-do attitude. “Rusk turned around my life,”

Since completing physical therapy at Rusk, Brian Dunleavy has participated in several 5K and 10K races.

Dunleavy says. “Seeing Dr. Levine was an epiphany. If you don’t have a doctor who inspires you, find one who does.” For Dr. Levine, the inspiration is mutual. “Brian is my hero,” she says. ■

CONTACT: To find a rehabilitation specialist at NYU Langone, call 212-263-6037. Or visit nyulangone.org/rusk.

Understanding Brain Chemical May Lead to Treatments for Social Disorders

Oxytocin, a brain chemical dubbed the “love drug,” is thought to be the hormonal glue that binds mother and infant. In mice, it attunes a mother to the ultrasonic distress calls of a lost pup, enabling her to find and retrieve her helpless newborn. Neuroscientist [Robert Froemke, PhD](#), and his research team at NYU Langone Medical Center’s Skirball Institute of Biomolecular Medicine, wondered if oxytocin is potent enough to induce such maternal behavior in mice that have never given birth.

As part of a study published in *Nature*, the researchers paired three groups of “non-moms” with veteran mothers and observed how the mice responded to the pleas of distressed pups. One group of non-moms



Illustrator: Jo Ortiz

received injections of oxytocin, a second received injections of saline solution, and a third was genetically engineered to express oxytocin-releasing brain cells sensitive to light. Implanted fiber optics allowed the researchers to flash blue light onto the cells and stimulate the release of oxytocin.

Within 12 hours, the mice that received oxytocin either through injection or optical stimulation began

retrieving more distressed pups than those that received only saline injections. After three days the oxytocin-enhanced non-moms were rescuing pups at the same rate and speed as the veteran mothers. “With oxytocin, the non-mom acts like a foster mom,” says Dr. Froemke, whose study was supported by The Esther A. & Joseph Klingenstein Fund, Inc. “She isn’t lactating, but she can pick them up and return them to the nest.”

The researchers believe this insight into oxytocin and maternal behavior is a valuable step toward the development of oxytocin-based treatments for autism, schizophrenia, post-traumatic stress, and other disorders that affect social behavior. ■

HPV: Friend and Foe?

The human papilloma virus (HPV) has a bad reputation—and deservedly so. This sexually transmitted organism is the primary cause of cervical cancer and has been linked to cancers of the skin, oral cavity, esophagus, and anus. However, a new study by researchers at NYU Langone Medical Center suggests that some strains of this virus may actually be protective.

The investigators found that 69% of Americans with no known significant diseases are infected with 1 or more of 109 strains of HPV. The virus was found most often in the skin, followed by the vagina, mouth, and gut. Only 4 of the 103 men and women tested had either of the two HPV strains (types 16 and 18) linked to most cases of cervical cancer. “HPV is clearly a natural part of the human

microbiome,” explains pathologist [Zhiheng Pei, MD, PhD](#). “However, what most of these strains are doing is a bit of a mystery.” Dr. Pei hypothesizes that some are potentially harmful but are inhibited by a healthy immune system. “Disease may develop if this balance is altered in some way, such as by immunosuppressive drugs,” he says. Other strains may be protecting us, perhaps by triggering a general immune response to HPV.

The researchers plan to develop new diagnostic tests that can more accurately assess a person’s “true” HPV infection status, and to study the roles of various HPV strains in health and disease. Meanwhile, says Dr. Pei, it’s a good idea for preteens and teens to receive the HPV vaccine, which protects them against types 16 and 18. ■

Why Our Brains Don’t Get Overloaded

How does the mind process vast amounts of information without crashing like an overloaded computer? In a study published in *Nature*, neuroscientist [Wenbiao Gan, PhD](#), of NYU Langone Medical Center’s Skirball Institute of Biomolecular Medicine, and Joseph Cichon, an MD/PhD student in Dr. Gan’s lab, found an important clue by documenting changes in the motor cortex, as mice learned new tricks on a treadmill.

To observe the changes, the researchers genetically engineered the mice to express a protein that fluoresces beneath a microscope in activated

dendrites, the spindly, branched projections of brain cells that relay electrochemical signals to other brain cells. “The activated dendrites of brain cells exhibited elevated calcium and look like little lightning bolts,” explains Dr. Gan.

The researchers found that learning to run forward on the treadmill generated fluorescent “lightning bolts” on branches of the dendrites that were different from those activated by running backward. When the researchers confined activity to a single branch in mice running forward and backward, the neuronal

activities weakened and the performance of the mice suffered. “The physical separation of the lightning bolts seems to allow the brain to constantly encode new information,” says Dr. Gan. “Spatial separation prevents interference.”

The finding could help explain the mechanical underpinnings of sensory overload in certain human diseases, such as autism and schizophrenia. “In both diseases, the brain may be binding information in the wrong way,” notes Dr. Gan. “We believe it has something to do with too much signaling on one branch.” ■

E-Cigarettes and Teens: A Combustible Combination?

In light of a new report that e-cigarette use among young people tripled in the last year, *News & Views* asked [Donna Shelley, MD](#), director of the Smoking Cessation Program at the [Laura and Isaac Perlmutter Cancer Center](#) at NYU Langone Medical Center, to put this troubling trend into perspective. A member of the Departments of Medicine and Population Health, Dr. Shelley serves as the principal investigator for New York City Treats Tobacco.



Why are more and more teens using e-cigarettes?

Teens have a tendency to experiment, so it's not surprising that they would be trying the newest "drug." But the primary driver of increased use among teens is the aggressive marketing and the dramatic rise in flavored options, which appeal to younger consumers.

Are e-cigarettes safe?

An e-cigarette is essentially a nicotine-delivery system, and we don't want to see kids using any form of nicotine. Nicotine has negative effects on the developing adolescent brain that create risk of addiction to other drugs. In other words, it may be a "gateway drug," making users more susceptible to the abuse of other substances.

Do e-cigarettes contain other harmful ingredients?

There are over 250 products on the market, each with a different mix of ingredients. Based on tests, e-cigarettes contain a number of toxicants—man-made toxic substances—but in much lower amounts than those found in cigarette

smoke. So although we can't say that e-cigarettes are safe, the vapor is likely to be much less toxic than cigarette smoke.

Do e-cigarettes help people quit smoking?

Studies suggest that e-cigarettes may have a role in helping smokers quit. One study showed that e-cigarettes were just as effective as nicotine patches. But more research is needed to say with confidence that e-cigarettes can help smokers quit. Until then, smokers should use one of the seven medications that have been clearly proven to help smokers break the habit. One big concern is that people who use e-cigarettes won't quit combustible cigarettes and will become persistent dual users, which may actually undermine quitting.

Do e-cigarettes have any benefits?

We want to encourage quit attempts and the use of safe—or safer—forms of nicotine for those smokers who can't quit. Many smokers who are trying to quit are looking for a product that can deliver nicotine more safely than a cigarette, but they also want a product that more closely mimics the smoking experience. E-cigarettes may provide both. So it isn't surprising that smokers are turning to e-cigarettes for help with reducing or quitting. They have potential public health benefits if they prove to be effective in helping smokers quit.

How can teen use of cigarettes be reduced?

Prohibiting sales and marketing to minors, keeping the price high, and regulating flavoring. What we don't want to do is overregulate e-cigarettes to the point where these products become more difficult to obtain than combustible cigarettes for adults who want to stop smoking but continue to need nicotine. ■

CONTACT: To find a physician who treats nicotine addiction, call NYU Langone's Physician Referral Service at 888-769-8633.

Vanquishing Fat to Make It Vanish

The list of gizmos that promise to effortlessly melt away fat is as long as the list of reasons to doubt them. But Vanquish®, a device approved by the FDA, is the real deal, says plastic surgeon [Alexes Hazen, MD](#), director of the Aesthetic Surgery Center at NYU Langone Medical Center. "A lot of devices claim to take away fat," she notes. "This one actually does it."

Vanquish eliminates up to several inches of fat from the legs and trunk. For people who just can't seem to lose those last few stubborn pounds, the procedure offers a painless alternative to scalpels, suction

hoses, and starvation diets. Square panels positioned over trouble spots like the belly and love handles emit high-frequency radio waves that heat up water inside the fat cells to about 105° F, killing the fat cells while sparing the denser, less watery tissue beneath them. "All you feel is a little bit of heat," says Dr. Hazen. "There's no bruising. It's very safe and comfortable."

The treatment typically consists of four 45-minute sessions, with one week between them to allow the liver and lymph nodes time to process the dead fat cells and excrete them through the urine. To aid this flushing process, Dr. Hazen advises her patients

to hydrate well on the day of the procedure and the day after it. Most patients notice substantial changes within three months, the time it takes for the skin to tighten and all the fat cells to process.

"If you do nothing else in terms of dieting or exercise, you will probably lose up to two inches around the waist and three pounds," explains Dr. Hazen, who has treated about 100 patients with the device since she began using it last year. ■

CONTACT: To find an NYU Langone physician who treats patients with the Vanquish device, call 646-501-4480.

The Violet Ball



1. J. Ira Harris and his wife, Nicki.
2. Harrison Hochberg, Tucker Harris, and Alexander Hochberg.
3. Dr. Christine Ren-Fielding.



NYU Langone Medical Center held its annual Violet Ball at Cipriani 42nd Street on May 7, raising more than \$7.2 million. More than 800 guests gathered to honor philanthropists J. Ira and Nicki Harris for their generosity to the Medical Center, particularly its obesity prevention programs. To dramatize how bariatric surgery helped him win a decades-long battle to achieve weight-loss, Ira Harris removed his jacket, donned one now too large for his frame, and playfully wrapped it around his wife.



4. Richard and Ellen Schapps Richman.
5. Dr. Joseph Ravenell; Medical Center Board Chair Kenneth G. Langone; Dr. Kathie-Ann Joseph; Dr. Robert I. Grossman, the Saul J. Farber Dean and CEO of NYU Langone; and Thelma Duggin.

Photographer: Jay Brady

KiDS of NYU Langone Springfling

The Annual KiDS of NYU Langone Springfling Gala, held on April 29 at The Plaza Hotel, raised more than \$1.1 million to support children's services. This year's event honored KiDS Board Member Jill Sedley and her husband, Ronald Sedley, for their dedication to children's healthcare at NYU Langone Medical Center, and pediatric ophthalmologist Mark Steele, MD. KiDS Board Chair and Medical Center Trustee Alice Tisch opened the program, which included remarks by Robert I. Grossman, MD, the Saul J. Farber Dean and CEO of NYU Langone, and Jeannie Uyanik, who shared her story about Dr. Steele's sight-restoring care of her son, Sami.



1. Albert Uyanik, Jeannie Uyanik, and Dr. Mark Steele.
2. Stephen Mack and Dr. Catherine Manno. 3. Robert and Shyamli Milam. 4. Emily Melnick and Jill Sedley.
5. Trudy Elbaum Gottesman, Janet Ginsburg, and Alice Tisch. 6. Patty Newburger and Dr. Jonathan LaPook.

Photographer: Jay Brady

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News & Views is published quarterly for NYU Langone Medical Center by the Office of Communications and Marketing.

Readers are invited to submit letters to the editor, comments, and story ideas to communications@nyumc.org.

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Kathy Lewis, *Senior Vice President, Communications and Marketing*

News & Views

Thomas A. Ranieri, *Editor*
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Office of Communications and Marketing
550 First Avenue
New York, NY 10016

Graduation 2015



1. Dr. Lynn Buckvar-Keltz, associate dean for student affairs; Martin Lipton, Esq., chairman, NYU Board of Trustees, Medical Center trustee; Dr. Dana Zalkin, class president; Medical Center Trustee Dr. Jan Vilcek, professor of microbiology, graduation speaker; Dr. Robert I. Grossman, the Saul J. Farber Dean and CEO of NYU Langone; Dr. Steven Abramson, vice dean for faculty, education, and academic affairs, and chair of the Department of Medicine. 2. Dr. J. Thomas Roland, Jr., the Mendik Foundation Professor of Otolaryngology and chair of the Department of Otolaryngology. 3. Dean Grossman and Dr. Chinonyerem Okoro. 4. Dean Grossman and Dr. Stephen Amrock. 5. Dr. Samuel Penziner, Dr. David Pineles, and Dr. Alexandra Plichta.



Photographer: Joshua Bright