

Perlmutter Cancer Center

AN NCI-DESIGNATED COMPREHENSIVE CANCER
CENTER AT NYU LANGONE HEALTH

Fall 2019

Where No Two Patients Are Treated Exactly the Same (Not Even Twins)

Former New York City firefighters
Phil and Paul Malenczak are facing
down a different kind of threat:
prostate cancer.



PANCREATIC
CANCER

THANKS TO A NEW
SCREENING PROGRAM
AT PERLMUTTER
CANCER CENTER,
DR. NATHAN LINK BEAT
THE ODDS AGAINST
A DISEASE WITH THE
WORST OUTCOMES.

Doctor—

When Dr. Diane Simeone (left) screened Dr. Nathan Link (right) for pancreatic cancer, she discovered a golf-ball-size growth on his pancreas. Dr. Link, who lost his father and uncle to the disease, didn't think twice about having the tumor removed. "A lesion can turn fast," he says.



Patient

Relationship

Dr. Diane Simeone has performed more than 1,000 pancreatic surgeries—a level of experience that quickly earned the trust of her colleague and patient, Dr. Nathan Link.



In 2017, Nate Link, MD, a husband and father of three, sensed a looming health crisis.

After losing both his father and uncle to pancreatic cancer, the 60-year-old chief medical officer of NYC Health + Hospitals/Bellevue feared he might be next. He knew that pancreatic cancer often ran in families, had single-digit survival rates, and rarely caused symptoms until it was too late. What he didn't know was how difficult it would be to find a clinical setting where he could have his personal risk assessed. He searched exhaustively, but "there really wasn't any such thing as pancreatic cancer screening," he says. "I just couldn't find a protocol."

Then, last fall, in a serendipitous twist, the protocol found him. During a clinical meeting at Tisch Hospital, he overheard colleagues discussing a new screening program at NYU Langone Health for people at high risk for pancreatic cancer, led by Diane Simeone, MD, director of the Pancreatic Cancer Center at Perlmutter Cancer Center. Dr. Link emailed Dr. Simeone right away, explaining his family history. "She said I absolutely would qualify for the program,

and I should just come on in," he recalls.

The Pancreatic Cancer Center, launched in 2017, is among a small number of centers in the country to offer an active screening program supported by a dedicated genetics counselor and a robust research team. "For high-risk patients, it was generally thought that there was nothing we could do, so patients didn't seek counsel," says Dr. Simeone, the Laura and Isaac Perlmutter Professor of Surgery. "Now, we can find lesions before they turn cancerous. We have more to offer." Last year, the center treated more than 400 patients, all while researching new risk factors for pancreatic cancer and trying to develop a blood test for its early detection.

In Dr. Link's case, he tested negative for all of the genes associated with pancreatic cancer (about 15 are known so far), but because of his family history, Dr. Simeone advised a series of imaging tests, a recommendation that would validate Dr. Link's sense of urgency. An endoscopic ultrasound revealed a cystic mass the size of a golf ball growing on his pancreas. "It was a classic premalignant lesion," Dr. Link recalls. "The tumor was benign, but it had about a 50% chance of turning cancerous, and I wasn't about to take that risk."

So, last March, Dr. Link underwent the Whipple procedure, a five-hour operation in which Dr. Simeone removed the head of his pancreas, excising the growth, and then reconnected the organ to his digestive system. "Even though it's a very drastic intervention, I had no difficulty making the decision to have it done," Dr. Link says.



► TO LEARN ABOUT PERLMUTTER CANCER CENTER'S HIGH-RISK SCREENING PROGRAM FOR PANCREATIC CANCER, CALL 212-731-5655, OR VISIT NYULANGONE.ORG/PANCREATICCANCERCENTER.

"I had full confidence in Dr. Simeone. She's one of the most experienced pancreatic cancer surgeons in the country."

The surgery went smoothly, and after a week of recuperating in the hospital—a typical amount of time required to allow the digestive system to adjust—Dr. Link was back at home. Remarkably, just four weeks later, he was hiking 10 miles a day in the South of France on a much-anticipated family vacation, an event that kept him motivated during his recovery. "My goal was to be with my family," he says. "Because of that, I was pretty aggressive in walking and getting up on my feet as soon as I got home. I was walking more and more each day."

Today, Dr. Link is back at work and feels fully restored, without any physical limitations. "My digestion and activity level are completely normal," he says. Beyond his physical health, he's grateful for the peace of mind that came with the intervention. "A lesion can turn fast," he says. "There's a point where it crosses over the threshold and becomes malignant. Will that moment come in the next three months or the next 30 years? It's impossible to predict, and pancreatic cancer has the worst survival rate of any cancer. So if there is any cancer I would want to prevent, this is the one."

"For high-risk patients, it was generally thought that there was nothing we could do, so patients didn't seek counsel. Now, we can find lesions before they turn cancerous. We have more to offer."

The Promise of Personalized Medicine for Pancreatic Cancer

Of the more than 56,000 cases of pancreatic lesions diagnosed each year in the US, less than 1% of them are identified before they turn malignant. Some 80% of malignancies are diagnosed at a late stage. "These patients need new approaches to early detection and new treatments more quickly," says Diane Simeone, MD, director of the Pancreatic Cancer Center at Perlmutter Cancer Center. "One important way we can do that is by putting patients at the center of our research." To that end, Dr. Simeone also serves as chair of the Steering Committee of Precision Promise, a new clinical trial consortium funded by the Pancreatic Cancer Action Network. When Precision Promise launched this summer, Perlmutter Cancer Center became a lead site among the 14 participating institutions nationwide. Unlike traditional trials that test only one or two treatments at a time, Precision Promise is evaluating multiple experimental therapies simultaneously, with the goal of delivering personalized medicine that's more likely to be effective. "We'll learn and adapt as we go," says Dr. Simeone. "It's a whole new way to tackle pancreatic cancer."



When **Dr. Abraham Chachoua** meets with a patient, cancer is usually the last thing they discuss. And that's the point.

AN ELEPHANT NEVER FORGETS, and neither does Abraham Chachoua, MD, the Jay and Isabel Fine Professor of Oncology at NYU Langone Health. "I think of my patients as my family," he says, "and I would do anything for my family." Dr. Chachoua's office at Perlmutter Cancer Center overflows with mementos from his patients—most of them elephants of one kind or another, each one unique. His museum-quality collection was born a decade ago when one of his patients explained to him that an elephant with its trunk upturned is a symbol of good fortune. Over the years, other patients followed suit, bringing him souvenir elephants from all over the world.

Every figurine has a story. One of his favorites is about the young woman with stage IV lung cancer who gave him a Peruvian elephant made of alpaca. While



under Dr. Chachoua's care, she also developed breast cancer. "She didn't let any of that stop her," he says. "She would just travel the world. We chose a chemotherapy that covered both cancers. Her last couple of scans showed she's free of disease. I think that's pretty impressive."

Lung cancer claims the lives of more than 150,000 Americans annually—more than breast, colon, and prostate cancers combined. Because the disease metastasizes quickly and often causes no symptoms in its early stages, nearly half of all cases are diagnosed at stage IV, when the average life expectancy is 18 to 24 months.

To improve those odds, Perlmutter Cancer Center launched a comprehensive Lung Cancer Center in 2017. A multi-disciplinary clinical and research hub, the center currently has a growing number of clinical trials under way to investigate transformative new therapies that may significantly extend survival and minimize symptoms. "We take a coordinated approach to each patient's care," explains Dr. Chachoua, chief of medical on-

The Elephants in the Room

cology. "Every person we treat has a think tank on their side."

The most promising treatments include targeted therapies aimed at specific genetic changes within the tumor, and immunotherapies that boost the immune system's ability to destroy tumor cells. "When I came to NYU Langone for a research fellowship in 1985," recalls Dr. Chachoua, "the only treatment available for metastatic lung cancer was chemotherapy, and the average life expectancy was six to nine months. Now, we have doubled the length of survival for a subset of patients, and 5 to 10% of patients on immunotherapy can be cured. Lung cancer is no longer an imminent death sentence."

Dr. Chachoua is proud of Perlmutter's reputation for personalized patient care, noting that while treatment is critical, good doctoring makes a difference, too. "My goal," he says, "is not only to help patients live as long as possible, but with as high a quality of life as possible. That patients think well enough of the care we give to add to the collection is very rewarding."



Abraham Chachoua, MD, chief of medical oncology at Perlmutter Cancer Center, encourages his patients to focus on the things that will make the hardships of cancer worthwhile: family, job, hobbies. "The focus can't be all about coping with the cancer."



A Feat of Surgical Skill

When a complication in the OR turns an ordinary case into a crisis, veteran lung cancer surgeon **Dr. Harvey Pass** leads an extraordinary team effort to save a life.



With a three-star rating from The Society for Thoracic Surgery, a recognition given to only 16 hospitals, NYU Langone ranks among the best hospitals for general thoracic lung cancer surgery in North America.

Jay Weiner’s cardiologist called with good news and bad news. The good news: Weiner’s six coronary stent grafts all looked fine, as did the results from his cardiac stress tests. The 73-year-old retired dental-supply executive savored a moment of relief. Then came the bad news: Weiner’s CT images seemed to indicate a spot on his left lung. To follow up, he would need a PET scan as well.

Terrified, Weiner drove to his local hospital in New Jersey. The new scan confirmed the presence of a lesion about the width of a nickel on the upper lobe—given his history of heavy smoking, the cardiologist warned, a probable cancer. “I called a friend who’s a rep for a drug company, and said, ‘If you could choose any hospital in the country, where would you have this treated?’ ” he recalls. The friend recommended Perlmutter Cancer Center at NYU Langone Health, recently designated a Comprehensive Cancer Center, the highest ranking awarded by the National Cancer Institute. Its record of excellence in the past five years includes the recruitment of more than 20 nationally renowned faculty members, a 110% increase in new patients, and a doubling of patients enrolled in clinical trials.

Weiner met with Abraham Chachoua, MD, the Jay and Isabel Fine Professor of Oncology and chief of medical oncology, who referred him to Harvey Pass, MD, the Stephen E. Banner Professor of Thoracic Oncology and chief of thoracic surgery, for further evaluation. Because symptoms of lung cancer seldom arise before the disease advances, 70% of cases go undiagnosed until stage III

or IV. So in a way, Dr. Pass told Weiner, he was fortunate: if he did have lung cancer, it had been caught early, when survival rates are relatively good. But how to proceed was far from obvious.

“This was one case where I wanted to get the advice of my colleagues,” Dr. Pass says. He discussed the complexities with other specialists at that week’s multidisciplinary lung meeting. One of the patient’s stents had been implanted just two months earlier, making surgery, which would require him to go off his blood thinner, unusually risky. Adding to that concern was the fact that he’d already had three heart attacks. Yet the tumor was too close to his heart to be safely treated with radiation therapy. Because the mass was growing rapidly, waiting would be dangerous as well. After weighing all these factors, plus Weiner’s physical vigor and acceptable pulmonary function, the group concluded that moving ahead with surgery was the best option.

Weiner agreed. On April 9, 2018, he was wheeled into an operating room on the sixth floor of Tisch Hospital. Dr. Pass planned to perform a minimally invasive procedure, inserting a tiny video camera and surgical tools through two small incisions. For better access, he propped Weiner on his side on the OR bed. As he pierced the ribcage, however, a dreaded signal appeared on the vital signs monitor: ventricular fibrillation. The patient was going into cardiac arrest.

To save his life, the team had to act fast. Dr. Pass lengthened the incision and cut the tissue between two ribs. Reaching into the chest, he opened the



**Harvey Pass, MD, the
Stephen E. Banner
Professor of Thoracic
Oncology and chief
of thoracic surgery,
is among the leading
surgeons in the nation
for the treatment of lung
cancer and
mesothelioma.**

110%

Increase in the number of patients treated at Perlmutter Cancer Center in the past five years, driven in part by a dramatic expansion of clinical expertise.

heart sac. Then, he began manually pumping Weiner's heart to keep blood flowing to his brain—a task made more challenging by the patient's position. Meanwhile, the anesthesiologist poured medications into Weiner's veins to try to restore a heartbeat. Grabbing a set of defibrillator paddles, Dr. Pass delivered a shock to the quivering organ. It didn't work, but he kept trying, applying the paddles seven times between rounds of cardiac massage. To ensure adequate blood pressure, he kept close watch on the monitor as he worked. Finally, after a harrowing 25 minutes, Weiner's heart began beating on its own.

The next step was to determine whether the cancer surgery could continue. The team wheeled Weiner across the hall to one of NYU Langone's state-of-the-art hybrid operating rooms, designed to accommodate both open surgery and catheter-based procedures. There, they were joined by Mathew R.

Dr. Pass faced another stark dilemma. He knew that finishing the surgery would be risky. But trying again later was out of the question. "We couldn't put the patient through that trauma twice," he says. If he didn't remove the tumor now, it would likely spread and become incurable.

Williams, MD, chief of adult cardiac surgery and director of the Heart Valve Center—the first surgeon in the US to be dual-trained in interventional cardiology and cardiac surgery, and one of the country's leading practitioners in both disciplines. "It's a tremendous asset to have him available at a moment's notice," says Dr. Pass.

Dr. Williams performed an angiogram, which showed that the arteries were clear. If the fibrillation had resulted from a blood clot, he surmised, the cardiac massage might have flushed it out. Still, he suggested, the safest option from a cardiovascular standpoint was to give Weiner a large dose of anticoagulants, which would preclude completing the operation.

Dr. Pass faced another stark dilemma. He knew it would be risky to keep Weiner off blood thinners long enough to finish the surgery. But operating later was out of the question. "We couldn't put the patient through that trauma twice," he says. If he left the tumor, it would likely spread and become incurable. Did the possibility of prolonging Weiner's life—and sparing him the ordeal of chemotherapy—justify taking one more chance? Dr. Pass's decision was based on long experience. In the hybrid OR, he uncovered the incision and excised the lesion (which lab tests later showed was malignant), along with a wedge of lung surrounding it.

When Weiner woke up in the cardiac ICU, he learned that

his surgery had been somewhat more eventful than expected. Remarkably, tests showed no cognitive deficits or cardiac damage; his brain and heart had been deprived of oxygen only briefly before Dr. Pass began pumping. He received an implantable defibrillator four days after the operation. Three days after that, he returned home, and soon he was back to playing with his grandchildren.

Weiner wasn't quite out of the woods yet: in August, a CT scan turned up another tumor on the same lung. This time, though, it could be treated without surgery. Benjamin Cooper, MD, director of photon therapy services in the Department of Radiation Oncology, administered stereotactic body radiation therapy, which delivers precise, focused beams that spare surrounding tissue. After 10 sessions, Weiner was declared cancer free. "I can't rave enough about the doctors and staff at Perlmutter," he says. "And I would lay down my life for Dr. Pass. As far as I'm concerned, he's a gift from God."

To Dr. Chachoua, this case illustrates the advantages of treatment at an academic medical center, where, when things go wrong in complex ways, top specialists from diverse fields join together to set them right. "If Jay hadn't had access to the highest level of care, he probably wouldn't have survived," he says. "This is what NYU Langone does best."



When patient Jay Weiner went into cardiac arrest during a procedure to remove a cancerous nodule in his lung, Dr. Harvey Pass led a heroic team effort to save his life and complete the surgery. "If Jay hadn't had access to the highest level of care, he probably wouldn't have survived," says Dr. Abraham Chachoua, Weiner's oncologist. "This is what NYU Langone does best."

**BRAIN
TUMORS**



The 7-Ton Surgical Tool

NYU Langone Health is home to one of only two MRI scanners in New York City designed for use during surgery. For patients with brain cancer, the technology is a true game changer.

The surgical excision of brain cancer is a difficult and delicate balancing act. Cut too little, and the cancer will spread. Cut too much, and the patient may suffer grave, permanent deficits. Preoperative brain scans provide vital visual guidance, but their accuracy diminishes as the brain shifts during surgery. To help overcome these challenges, NYU Langone Health's top-ranked neurosurgeons are now equipped with an intraoperative MRI (iMRI), a state-of-the-art scanner that can be called into action during an operation to confirm, in real time, that the tumor is completely excised.

The seven-ton machine (one of only two in New York City) sits between OR 3 (background) and OR 6 (foreground) in the new Helen L. and Martin S. Kimmel Pavilion. To transfer the patient to the iMRI, the top of the specially designed operating bed is slid over the top of another bed, which is then docked to the scanner. In as few as eight minutes, depending on how many images are needed, a new set of scans becomes available for the neurosurgeon and neuroradiologist to compare against preoperative images. "iMRI is a game changer," notes John Golfinos, MD, chair of the Department of Neurosurgery. "It helps differentiate tumor tissue from normal tissue, minimize disturbances to critical brain regions, identify complications such as hemorrhaging, and circumvent shifting brain tissue that can obscure tumor margins—all of which helps a patient avoid a second trip to the OR."

The new intraoperative MRI suite in the Kimmel Pavilion is used for about half of the brain surgeries performed at NYU Langone.

Many Treatment Options, but No Easy Answers

When **Artie Zuckerman** was diagnosed with prostate cancer, doctors at Perlmutter Cancer Center helped him cut through the confusion and navigate his treatment options with confidence.

PROSTATE
CANCER





Like many men, Artie Zuckerman had virtually no symptoms when he was diagnosed with prostate cancer at age 68. A fitness enthusiast who gets plenty of exercise caring for his three Great Danes, he felt blindsided. “I thought I was doing pretty good,” he recalls.

At 68, Artie Zuckerman had a 31-inch waist, a 46-inch chest, and could knock out 20 chin-ups. “I was exercising, eating my fish and veggies,” recalls the Staten Island native, who works as a chauffeur and personal assistant for a corporate CEO. “I thought I was doing pretty good.” Aside from getting up to go to the bathroom twice a night—common for men his age—he felt vibrant. So when tests showed that Zuckerman had prostate cancer, his fear was mingled with a sense of disbelief.

Like many of the more than 174,000 men diagnosed with the disease annually in the US, he faced an agonizing decision. “For patients with prostate cancer, choosing a course of action can be overwhelming,” says Herbert Lepor, MD, the Martin Spatz Chair of the Department of Urology and director of the Smilow Comprehensive Prostate Cancer Center, part of Perlmutter Cancer Center at NYU Langone Health.

A decade ago, the vast majority of patients diagnosed with prostate cancer opted for a radical prostatectomy—surgical removal of the prostate—or radiation therapy. However, today almost half choose active surveillance, in which slow-growing early-stage tumors are monitored through a combination of a blood test that measures a protein known as prostate-specific antigen, or PSA, and biopsies. This trend reflects a raft of recent studies showing that prostate tumors rated 6 or less on the Gleason scale (a 1 to 10 measure of likely aggressiveness) rarely metastasize. Still, many patients are uncomfortable with a watch-and-wait approach, and it’s typically not an



Artie Zuckerman at his home in Staten Island with his canine crew: (clockwise from top) Bella, 11; Oscar, 1; and Phoebe, 2.



NYU Langone's leading expertise in prostate cancer offers patients a broad spectrum of treatment options.

option in higher-risk cases like Zuckerman's. Then, the choices become more complex.

Zuckerman's MRI scan revealed a gumball-size tumor, and biopsies showed a Gleason score of 7, indicating an intermediate risk that the cancer would spread beyond the prostate. He visited several specialists, each of whom suggested a different type of treatment. He took to the Internet, as many patients do, in search of information and talked with friends who'd undergone treatment for prostate cancer. But his confusion only intensified; he simply couldn't find a consensus on which treatment was best. Finally, he consulted Dr. Lepor, whose approach put him at ease. "He spent an hour with me," Zuckerman recalls. "I was impressed with his experience, his confidence, and his honesty."

As a leading prostate cancer surgeon, Dr. Lepor has performed more than 5,000 radical prostatectomies. Yet he has also helped pioneer a nonsurgical technique known as focal ablation, in which precisely targeted beams of energy, such as extreme cold or high-intensity ultrasound, destroy diseased tissue while leaving the rest of the prostate intact. Preliminary studies—including some by Dr. Lepor and his colleagues—suggest the method can eradicate tumors with fewer side effects than surgery or radiation. In

addition, unlike with radiation, patients can undergo another round of focal therapy or opt for conventional methods in case of recurrence. "I told Artie that this could be a way to control his cancer with less risk of life-altering complications," Dr. Lepor explains. "But I emphasized that there were no guarantees."

Zuckerman was willing to take a chance. Because of the position of his tumor, among other factors, Dr. Lepor recommended focal cryotherapy, in which repeated freezing and thawing causes cancer cells to rupture. Last July, while Zuckerman was under anesthesia, Dr. Lepor inserted a thin probe into his prostate, using ultrasound guidance to reach the site of the tumor. He then cycled supercooled argon gas through the probe, chilling the target area to -40°C . The procedure took about two hours, and Zuckerman, like most patients, went home the same day. He returned to work 10 days later.

Since then, Zuckerman has experienced no incontinence, and his sexual function, though impacted at first, has returned to near normal. A follow-up PSA test, MRI, and biopsy after six months showed no cancer. (He'll continue with PSA testing every six months.) "I think I did the right thing," he says.

But ultimately every man with prostate cancer must make his own choice, notes Dr. Lepor. "This is a visceral decision," he says. "One patient will insist on the most definitive cure. Another will accept some uncertainty if there's less impact on quality of life. The doctor's role is to provide realistic expectations, and help patients process the risks and benefits."

"I told Artie that this could be a way to control his cancer with less risk of life-altering complications. But I emphasized that there were no guarantees."

PROSTATE
CANCER

Tour the Universe of Treatment Options

One in nine men in the US will be diagnosed with prostate cancer during their lifetime. Fortunately, the cancer has a 99% five-year survival rate, higher than any other form of cancer. That's due to both early detection and a number of recent advances in treatment—many pioneered at NYU Langone Health. Here's an overview of common treatments. Which therapy is best for which patient depends on a constellation of factors, from the aggressiveness of the cancer to the patient's age, health, and personal preferences.

► TO FIND A DOCTOR WHO TREATS PROSTATE CANCER, CALL 646-929-7950 OR VISIT NYULANGONE.ORG/PROSTATECANCER.

► Active Surveillance

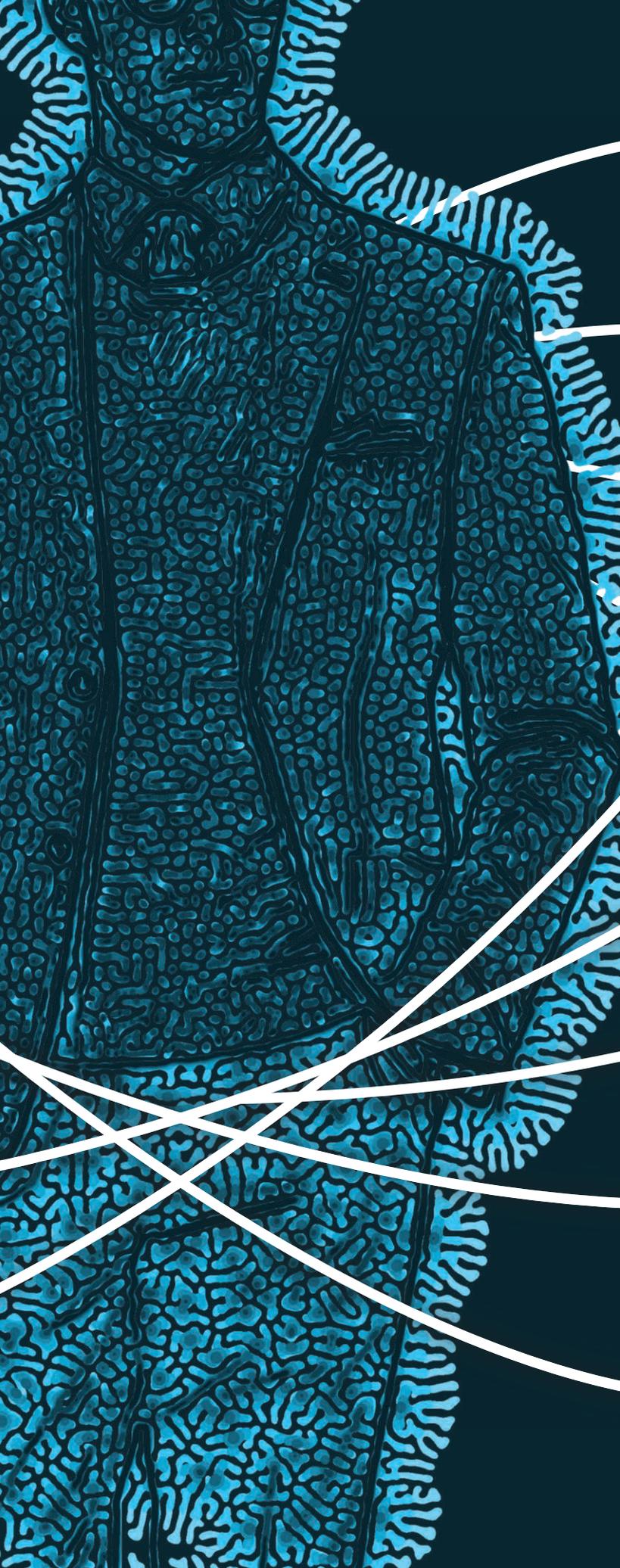
Doctors monitor cancer with blood tests, exams, and biopsies.

► Focal Ablation

Extreme cold or high-intensity sound waves target cancer while preserving healthy tissue.

► Radical Prostatectomy

Surgical removal of the prostate gland and surrounding tissue.



► **Brachytherapy**

Tiny, radiation-containing pellets, or seeds, implanted at the tumor site; often paired with external radiation therapy.

► **Radiation Therapy**

Short- or long-course treatments in which high-energy rays or particles target cancer cells. Includes intense modulated radiation therapy, stereotactic body radiation therapy (Cyberknife, TrueBeam), and proton beam radiation therapy.

► **Hormone Therapy**

Medications that suppress male hormones to stem the growth of aggressive or recurrent cancer cells; often paired with radiation therapies.

► **Immunotherapy**

Medications stimulate the immune system to attack cancer cells.

► **Chemotherapy**

Medications shrink or kill prostate cancer cells.

**PROSTATE
CANCER**

A Pair of Not-Quite-Identical Diagnoses



After years of battling blazes as New York City firefighters, twin brothers **Phil** and **Paul Malenczak** are facing down a different kind of threat: prostate cancer.

Twin brothers Phil (red) and Paul (blue) Malenczak cast their lines in Gardiner's Bay, East Hampton, where they live.



As identical twins, Paul and Phil Malenczak share many affinities.

The 68-year-old brothers both played lacrosse in college, served together in Brooklyn with the Fire Department of the City of New York, work as bartenders at an East Hampton golf club, and share a lifelong passion for fishing. Last year, they discovered they have something else in common: both men have prostate cancer.

After a routine physical, Paul (Phil's junior by three minutes) learned that his prostate-specific antigen, or PSA, score was 14. While the blood test is far from definitive and numerous factors can account for elevated levels, a score above 4.0 merits further evaluation. Last summer, Paul underwent an ultrasound-guided biopsy at another institution and was diagnosed with low-risk adenocarcinoma, the most common form of prostate cancer.

In August, on the advice of Robert I. Grossman, MD, the Dean and CEO of NYU Langone Health, whom Paul knew from the golf club where he worked, Paul consulted urologic oncologist James Wysock, MD, assistant professor of urology and a surgeon at Perlmutter Cancer Center who specializes in cancers of the urinary tract and male reproductive system. To arrive at an accurate diagnosis and treatment plan, Dr. Wysock recommended two advanced tests. A multiparametric MRI showed that additional regions of Paul's prostate were suspicious, and an MRI-ultrasound-fusion targeted biopsy indicated that the cancer was slightly more advanced than the initial biopsy had indicated. This moved Paul into an intermediate-risk, or stage II, category, requiring treatment rather than surveillance.

Dr. Wysock, a pioneer in fusion biopsies, has performed more than 500 of these procedures, which help differentiate harmful prostate cancers from small, nonaggressive forms that may not require treatment. "This sophisticated biopsy was very valuable to us," explains Dr. Wysock, "because it made possible a more accurate diagnosis and treatment."

Like Paul, Phil had no symptoms, but he was so startled by his brother's news that he consulted Dr. Wysock in December 2018. Though Phil's PSA score was 8, lower than Paul's, Dr. Wysock felt an abnormal nodule on the prostate during a rectal exam. An MRI and targeted biopsy revealed that Phil's cancer was more extensive than Paul's. Though it, too, was classified as intermediate risk, the MRI raised a concern that the tumor was starting to invade through the lining, or capsule, of the prostate. Phil admits to being a bit more rattled by the diagnosis than his brother. As Christmas approached, he thought to himself, "This can't be happening."

Dr. Wysock explains that while Paul and Phil Malenczak are the first set of twins he's ever diagnosed with prostate cancer, their simultaneous onset doesn't really surprise him. "If you have a brother or a first-degree male relative with prostate cancer, your likelihood of getting the disease may be twice as high as that of the general population. With identical twins who have the same genetic pathways, the risk is absolutely greater."

As firefighters, Paul and Phil pride themselves in being men of action, so they were eager to learn about their treatment

options. They soon discovered, however, that men with prostate cancer face an avalanche of information and a bewildering array of choices. While many forms of prostate cancers are slow-growing, others can progress rapidly. Men diagnosed with a less aggressive form are typically offered the option of active surveillance; they're monitored closely and treated only if there's evidence that the cancer is advancing. For men who require treatment, however, the choice between a conservative or aggressive approach is often a difficult one. Depending on the case, the options may include surgery, hormone therapy, radiation, or ablative treatments that destroy diseased tissue. "There are critical differences," explains Dr. Wysock, "so the discussion about the short-term and long-term implications of each one makes the shared decision-making process complex."

Among men in the US, prostate cancer is the second most common cancer (behind skin cancer) and the second leading cause of cancer death. The disease strikes one in five men. This year, more than 174,000 men are expected to be diagnosed, about 60% of them over age 65. The risk for black men is 60% higher than for the general population.

Dr. Wysock considers a radical prostatectomy (removal of the prostate) the most definitive treatment because it yields the most data about the tumor, reveals whether cancer has invaded surrounding structures, and leaves the door open for other treatment options, such as radiation therapy. Because the prostate lies deep within the pelvis, surgery can impact

urinary control and sexual function. Dr. Wysock notes, however, that more than 90% of patients regain urinary control over time, and those who experience sexual dysfunction can be treated. While radiation therapy is less invasive, it can have the same side effects, but “if cancer recurs,” he says, “it may limit treatment options.” A second round of radiation therapy is usually off the table due to the risk of further complications, he explains, and if surgery is necessary, prior radiation therapy can complicate both the surgery and the potential side effects.

Given the complex treatment decision Paul and Phil faced, Dr. Wysock wanted them to be well informed about both surgical and nonsurgical options. Learning that they preferred to receive their care close to home, he referred them to Jonathan Haas, MD, clinical associate professor of radiation oncology and chair of the Department of Radiation Oncology at NYU Winthrop Hospital in Mineola, which officially merged with NYU Langone on August 1. Among the options Dr. Haas discussed was stereotactic body radiotherapy (SBRT), a procedure that delivers precise, high-dose radiation. NYU Langone offers SBRT at all of its radiation oncology facilities to treat a variety of cancers, including prostate cancer. Dr. Haas delivers SBRT with a machine called the CyberKnife, which targets the tumor from hundreds of angles. In 2005, NYU Winthrop became one of the first adopters of CyberKnife technology, invented in the 1990s to treat brain tumors. Now the largest such practice in the country, it treats more than 600 patients annually at its hospital



The Malenczak twins were diagnosed with prostate cancer four months apart.

About half of all men diagnosed with early-stage prostate cancer choose active surveillance, opting for treatment only if slow-growing tumors turn dangerous.

on Long Island and a satellite site in Manhattan.

Dr. Haas’s proximity and approach appealed to the twins. NYU Winthrop is a short drive from their home. Unlike conventional radiation therapy, which demands nine weeks of therapy, the CyberKnife requires only five consecutive days, with each session lasting less than an hour. For Phil, a personal trainer who works out six days a week, the convenience was particularly important. In his case, however, treatment had to be delayed for six months. Drs. Wysock and Haas were concerned about the possibility that Phil’s cancer had invaded through the

lining of the prostate, so they recommended a course of hormonal therapy—an androgen blockade administered by Dr. Wysock—to shrink the prostate gland and its tumor, the target for radiation. By mid-June, Phil was ready for the treatment his brother had undergone four months earlier.

Dr. Haas reports that the Malenczak brothers are doing “absolutely fantastic.” Their prognosis is excellent, he says, and to underscore the point, he notes that “men with intermediate-risk prostate cancer have a survival rate in the low-90% range, for all forms of treatment.”

**BREAST
CANCER**



Faced with a deadly breast cancer diagnosis, **Karen Peterson** finds her way to a potentially lifesaving clinical trial at Perlmutter Cancer Center—and makes medical history in the process. >>>

The Phone Call That Changed Everything

So when she saw the scan showing metastatic tumors throughout her body two years later, Karen understood what she faced: a survival expectancy of 18 to 24 months. “I thought, ‘Okay, you’ve been preparing for this moment, even if you didn’t know it would come.’”

Her oncologist recommended sticking with chemotherapy, the only accepted treatment at the time for triple-negative breast cancer. But Karen’s awful experience with the side effects of chemotherapy made her vow never to undergo it again. What’s more, she knew from her extensive research that another round of chemo could diminish her odds of qualifying for a clinical trial. Scouring government and medical center websites for alternatives, she spotted an intriguing clinical trial for breast cancer on the website for Perlmutter Cancer Center at NYU Langone Health. It involved immunotherapy, an emerging class of drugs that trains the body’s own immune system to kill off cancer cells. Immunothera-

Four years ago, Karen Peterson received a life-altering diagnosis of stage I triple-negative breast cancer—the most aggressive type. The news brought a rough year of treatment that began with a lumpectomy and ended with a double mastectomy. Hedging on the one-in-four chance that her cancer might return, Karen resolved to learn everything she could about it. A single mom with a nonverbal autistic adult son and a background in television production and social work, she began reading, googling, and speaking to nutritionists, yoga teachers, patient navigators, scientists—“anyone with a relationship to cancer,” she recalls.

4-15%

Percentage of women with triple-negative breast cancer who respond to immunotherapy.

py works only in a minority of cancer patients, and it can cause intense side effects, but in the past five years, it has emerged as one of the only therapies to rein in advanced cancers.

Karen thought she might qualify for the trial, so she mailed her test results to its principal investigator, oncologist Daniel C. Cho, MD, associate professor of medicine and director of Perlmutter Cancer Center's Phase 1 Drug Development Program, which runs roughly 30 clinical trials to evaluate the safety and promise of new cancer therapies. "Dr. Cho called me himself, which surprised me," Karen recalls. "It wasn't the nurse or coordinator. He told me I couldn't get into that trial, but there was another immunotherapy trial coming down the pipeline, and he asked if I would be interested. Wow! It felt like getting into Harvard. When it comes to clinical trials, there are only so many slots and many exclusions."

With Dr. Cho's help, Karen became the first triple-negative breast cancer participant, among 20 with other types of metastatic cancers, in the trial of two different types of immunotherapy drugs. The combination, the researchers hoped, would unleash the immune system's T cells to find and destroy tumors and remember the cancer if it returned. Karen's odds of responding to the treatment stood between 4% and 15%, Dr. Cho cautioned. She spent much of the first week under observation for side effects. The second infusion, three weeks later, brought flulike symptoms—sometimes an encouraging sign that the immune system is gearing up. "I had faith," says Karen.

"Dr. Cho called me himself, which surprised me. It wasn't the nurse or coordinator. He told me I couldn't get into that trial, but there was another immunotherapy trial coming down the pipeline, and he asked if I would be interested. Wow! It felt like getting into Harvard."

Eight weeks later, a scan revealed heartening news: the lesions had shrunk. Within months, they were gone, except for a spot on Karen's pelvis, which, Dr. Cho says, may be merely an unhealed hole in the bone where cancer once grew. In April, after a year of unchanged scans, Karen finished the trial as a "near complete responder." She's not alone: promising results have led to phase 2 trials for bladder and lung cancers, and phase 3 trials for kidney cancer and melanoma, edging this

treatment closer to FDA approval. "The hope is that people like Karen will never need another treatment," says Dr. Cho. "We can't say they are actually cured until we are 5 to 10 years out, but that is the hope."

Grateful and enthused, Karen has become a patient advocate, speaking and writing about her experience. "People say, 'Karen, how did you find the trial?'" she says. "I tell them I did a lot of work and pushed forward on faith. Plus, I got lucky. I got to Dr. Cho, and he called me back."



COURTESY OF KAREN PETERSON

A woman with her hair in a bun, wearing a bright yellow, one-shoulder, form-fitting dress and white sandals with large circular embellishments. She is smiling and leaning against a wooden post on a set of brown stone stairs. She is wearing a leopard print watch on her left wrist, a gold necklace, and gold earrings. Her right hand is on her hip, and she is holding a pair of sunglasses. The background shows the steps of the stairs and a dark metal railing on the left.

Karen Peterson just a few months after completing a two-year clinical trial of immuno-therapy at Perlmutter Cancer Center. Opposite page: Karen with Daniel C. Cho, MD, director of Perlmutter's Phase 1 Drug Development Program, who led Karen's trial.



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Perlmutter Cancer Center Hits New Heights

Over the past five years, Perlmutter Cancer Center has experienced unprecedented growth, increasing our volume of new patients by 110%, more than doubling the number of patients enrolled in clinical trials, and recruiting more than 20 renowned faculty members to leadership positions. Our physical footprint has expanded, too. In June, we opened a new multispecialty outpatient facility, Perlmutter Cancer Center—Sunset Park (shown here), just two blocks from NYU Langone Hospital—Brooklyn, which offers chemotherapy and other infusion services, along with radiation therapy. Meanwhile, NYU Langone Health’s merger in August with NYU Winthrop in Mineola, NY, expanded the Center’s growing ambulatory network on Long Island, making it easier for many of our patients to receive care closer to where they live and work.

In recognition of our deepening commitment to cancer care and research, Perlmutter has earned comprehensive status from the National Cancer Institute, a prestigious designation that moves it into an elite group of 50 cancer centers nationwide. We’ve also received a \$75 million gift to establish a new Center for Blood Cancers that will dramatically expand patient services and research efforts focused on multiple myeloma.

