

# FOX CHASE Forward

BROADENING THE CONVERSATION ABOUT CANCER | SUMMER/FALL 2020

## LOCKING DOWN OPIOIDS

Despite  
Potential  
Misuse,  
Opioids  
Still  
Best  
Cancer  
Pain  
Option



**A FRESH PERSPECTIVE**

As our understanding of cancer keeps evolving, we must keep looking at this disease with a fresh perspective. For our patients and the people who love them, cancer presents an ever-changing reality. So, too, it is important for us who study and treat this disease to think about it in new ways.

Part of this approach means considering the larger context in which cancer exists, the implications it has for people's lives, and the beliefs and attitudes that people bring to news of a diagnosis.

In this issue of *Forward*, we go beyond the immediate concerns and obvious questions that often accompany diagnosis and treatment to explore some of the broader issues that can be part of the cancer experience.

Our cover story examines one of these issues: opioid use. While we know that opioids offer the most effective treatment for cancer-related pain, we recognize concerns about these powerful drugs amid

the opioid epidemic in America. How do we balance appropriate clinical use and quality of life with fears of dependency and potential addiction?

Within the cancer experience, the patient is rightfully our main focus. But there are others who go through the experience as well: the caregivers. Their journey can be difficult, rewarding, and sometimes overlooked. Although their struggles may not be noticed, caregivers' needs are valid. Self-care and support are critical. We discuss this important role in one of our feature stories.

We also acknowledge the stigma that surrounds lung cancer diagnosis, even for patients who have never smoked. In a story about never-smokers, as they are called, we discuss a surprisingly common type of lung cancer. Genetics and the hormone estrogen may play a role. We are studying this disease closely in the first and only clinic of its kind on the East Coast.

Cancer is life-changing. Not



simply a disease, it is an all-encompassing experience stretching beyond itself to influence so much of what we think, feel, and do. If we are present within ourselves and there for others, we can devote ourselves to moving forward in spite of it.

Richard I. Fisher, MD  
PRESIDENT AND CEO

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**Forward**

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COLIN LENTON

COLIN LENTON

## STAFF GO ABOVE AND BEYOND TO HELP PATIENTS AND EACH OTHER DURING COVID-19 PANDEMIC

### KEEPING SUPPLIES OF FOOD, PPE FLOWING

Amid the COVID-19 pandemic, staff at Fox Chase Cancer Center found new ways to provide essentials and keep morale high. Chris Hiban, director of food services, stepped up to do just that.

Hiban created a mini-market at the hospital's snack bar where patients and staff could pick up essential items like bread, milk, eggs, butter, lunchmeat, and cheese, as well as in-demand items like toilet paper and paper towels.

Hiban also helped Fox Chase procure a stock of personal protective equipment (PPE) for staff before supplies began to dwindle. "A lot of the vendors I work with that usually supply stadiums and schools had extra stock because of closures," Hiban said, so he was able to secure PPE supplies.

In addition, Hiban worked to help keep spirits high among staff. He assisted the hospital in coordinating a "comfort cart," which brought snacks and other items to different departments throughout the day.



Tracey Hunter and Paul Maher worked overtime to track down extra ventilators needed for patients.

### STAFF MEMBERS TRACK DOWN RESPIRATORS

In mid-March, as it became clear that COVID-19 could reach pandemic levels, feared shortages of medical supplies had not yet become an issue at Fox Chase Cancer Center. But that didn't stop

employees from preparing for possible shortages with longer shifts and increased efforts to obtain necessary equipment.

Two such staff members are Tracey Hunter, supervisor of respiratory care, and Paul Maher, a respiratory therapist. Due to a staffing issue, Hunter and Maher had to work 24-hour shifts.

During the shift, the two made numerous calls to obtain more ventilators for patients. On a normal day, Hunter said, a call to a rental company meant a ventilator would show up a few hours later. But with a national shortage of ventilators due to the emerging pandemic, that was no longer a guarantee, although Hunter and Maher were eventually able to obtain additional ventilators.

"When we were short staffed, people were volunteering, staying longer, and doing whatever was necessary to meet the needs of the patient," said Hunter.

Chris Hiban, director of food services, created a mini-market at the hospital's snack bar where patients and staff could pick up essential items.



THOMAS STEPHANO



### EMBODYING "FOX CHASENESS"

Fox Chase Cancer Center prides itself on care and service that goes above and beyond that offered at other cancer centers, a characteristic that has become known as "Fox Chaseness." Even in uncertain times, Fox Chase employees continued to provide a caring environment for patients.

One shining example of this was Lucille Williams, reception supervisor in the Department of Radiation Oncology. Williams noticed a patient was still waiting for a ride two

hours after his appointment had ended. She became concerned and called the patient's daughter, only to find out she had been in a car accident and was running late.

Williams told the patient what had happened. After learning that he had not eaten all day, she took him to the cafeteria to buy him lunch and kept him company.

### WORKING OVERTIME TO KEEP EVERYONE SAFE

Fox Chase relies on the work of environmental services (EVS) to keep the center clean and

sterile, and their help was even more critical during the COVID-19 pandemic. EVS staff worked tirelessly to meet the needs of patients and staff, and helped ensure the hospital's safety with increased cleaning measures.

Jonathan Wright, EVS director, said he was never more proud of his staff than when they continued to step up to the plate. "The EVS management team has been extraordinary," he said.

EVS staff, many of whom are individuals over 60 at higher risk of contracting COVID-19, cancelled previously scheduled time off to come to work every day to improve the hospital's safety, Wright said.

They also put patients at ease, said Kathy Rich, supervisor of housekeeping. "The thing about Fox Chase is that EVS staff is close with the patients. ... It's pretty impressive."

Jonathan Wright, Kathy Rich, and their environmental services team worked tirelessly to keep the center clean and sterile.



## NEW INFLUENZA FINDINGS COULD HAVE KEY IMPACT ON CANCER THERAPIES

In new findings published in the prestigious journal *Cell*, researchers at Fox Chase Cancer Center clarified a fundamental host defense mechanism that detects the presence of influenza virus and rapidly destroys infected cells.

The findings are a “major milestone” that have exciting implications for a variety of fields, including cancer immunotherapy, said Siddharth Balachandran, lead author of the study and professor in the Blood Cell Development and Function program at Fox Chase.

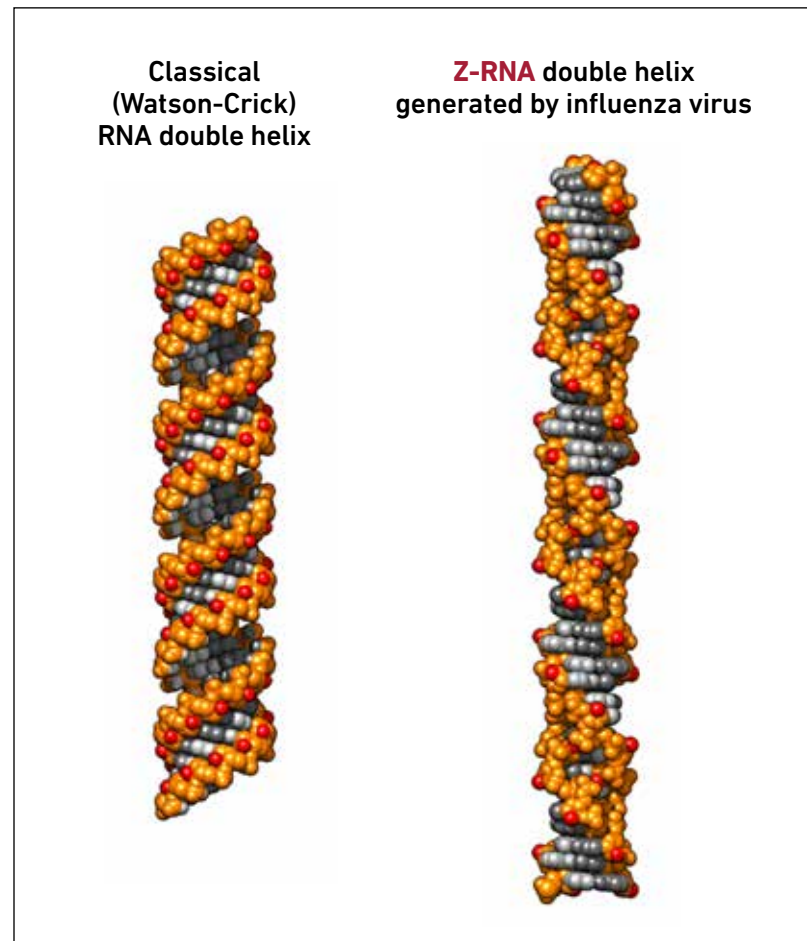
In previous research, Balachandran and other researchers had identified a protein called

The findings are a ‘major milestone’ that have exciting implications for a variety of fields, including cancer immunotherapy.

— SIDDHARTH BALACHANDRAN, CO-LEADER, BLOOD CELL DEVELOPMENT AND FUNCTION PROGRAM

ZBP1 that is essential for sensing the presence of influenza virus in lung cells. But they did not know how ZBP1 was being activated. “In other words, what was ZBP1 ‘seeing’ that told it the cell was infected? Now, we know the answer,” Balachandran said.

It turns out that ZBP1 “sees” Z-RNA, a new form of RNA produced by influenza virus. “Folks have been looking for Z-RNA for



decades. This particular structure of RNA is what is called a pathogen-associated molecular pattern, and discovering a new such pattern is a major milestone. It also has significant implications for cancer immunotherapies,” Balachandran said.

“Although immunotherapy is clearly the most promising new cancer treatment approach in decades, a major problem with current immunotherapeutic drugs is that over half of all patients either are refractory to treatment or will develop resistance to the therapy. Making such resistant

cancers sensitive to treatment is therefore a huge unmet need,” Balachandran said.

“Mimicking a virus infection in resistant tumors has the potential to fill this need, because it can rekindle the immune response to the tumor,” he added. Balachandran expects that synthetic Z-RNAs and other ZBPI agonists, by mimicking an influenza infection and activating ZBP1 in resistant tumors, will alert the immune system to the malignancy and promote positive immunotherapeutic outcomes in otherwise unresponsive disease.

IMAGE COURTESY OF MARK ANDRAKE

## FOX CHASE RESEARCHER PROVIDES NEW INSIGHTS INTO BRCA-MUTATED CANCERS

In two recent studies, researchers at Fox Chase Cancer Center have uncovered processes that may contribute to the development of BRCA-mutated cancers and have also shed light on the response and resistance of cancers to certain chemotherapies.

Mutations in the BRCA1 and BRCA2 tumor suppressor genes are the strongest known genetic risk factor for breast and epithelial ovarian cancer. In addition, inherited mutations in BRCA genes are now understood to contribute to other cancer types, including colon and prostate. Although BRCA genes increase cancer risk, tumors with such mutations are particularly sensitive to some forms of cancer therapy.

“The findings have implications for cancer therapy because drugs known as PARP inhibitors successfully treat BRCA1-mutant breast and ovarian cancers,” Neil Johnson, an associate professor in the Molecular Therapeutics program at Fox Chase, said of one of the studies, which was published in the journal *Molecular Cell*. “Our work suggests different mutations may disable DNA repair by different mechanisms and could impact response and resistance to PARP inhibitors.”

In the other study, which was published in the journal *Nucleic Acids Research*, Johnson and colleagues identified the protein RNF168 as a key component of the BRCA DNA repair pathway.

In individuals without mutated BRCA1 and BRCA2 mutations, the proteins produced by these genes play a major role in repair of DNA, protecting it from mutations. This function is lost when the BRCA genes are mutated.

Johnson and colleagues showed that when BRCA1 is absent, excessive RNF168 expression increases DNA damage when cells replicate and contributes to the high level of mutation seen in BRCA1-mutated cancers. In ongoing work, Johnson’s laboratory is seeking to understand how cells regulate levels of RNF168 expression, what additional functions RNF168 performs, and importantly, how this pathway can be targeted for the development of new cancer drugs.



GETTY IMAGES

Research at Fox Chase has shed light on how BRCA-mutated cancers such as the ovarian cancer shown here may develop resistance to certain chemotherapies.

# Locking Down

## | O | P | I | O | I | D | S |

Despite Potential Misuse, Opioids Still Best Cancer Pain Option

TO MANY, THE IDEA OF USING OPIOIDS FOR PAIN CAN BE a hard pill to swallow in the midst of a national epidemic of opioid abuse. This is especially true for cancer patients who may have to take opioids to get relief from both short- and long-term pain. • As the opioid epidemic continues unabated and is covered in the media, patients are often stuck weighing the risks and benefits of these drugs. Healthcare professionals say it is pivotal for both patients and doctors to be educated and confident in their treatment options, particularly when it comes to opioids. • Opioid medications for cancer pain and other acute pain have been treatment options since the early 1900s. Their use increased over the last three decades after studies showed chronic pain was being treated inadequately. • The use of opioids grew more quickly in the 1990s when drugs like controlled-release morphine, controlled-release oxycodone, and fentanyl, known by such brand names as MS Contin, OxyContin, and Actiq,

By MARIAN DENNIS

Photo Illustrations by SPOOKY POOKA



were promoted as being safe and came to be used more freely for both acute and chronic pain. According to the Centers for Disease Control and Prevention (CDC), when opioid use began to grow, often through inappropriate prescribing, the number of overdoses and deaths from prescription opioids also increased. Prescriptions also began finding their way into the hands of unintended recipients.

Since the early 2000s, the Food and Drug Administration has been working to implement risk-management programs to decrease overall opioid misuse. But that hasn't changed the fear and stigma surrounding the drugs, even when they are prescribed in situations where they are beneficial to patients, such as short-term use after surgery or in long-term use as part of a palliative care plan.

"In my conversations with patients, they often mention that they are afraid to tell their friends or even family members that they are taking opioids for the fear of being ostracized," said Marcin Chwistek, a palliative care physician and director of the Supportive Oncology and Palliative Care Program at Fox Chase Cancer Center. "This is an area that is often fraught with myths and misconceptions."

Despite their complicated history, opioids continue to be one of the best options for managing cancer pain when used appropriately, Chwistek said.

### Sorting Through Misconceptions

**O**ne of the many misconceptions about addiction is that it is the same as physical dependence and tolerance. "This misunderstanding may result in clinicians avoiding the prescription of opioids for a patient who could potentially benefit from them," said Chwistek.

Addiction is a complex neurobiological disease that is characterized by the patient's loss of control over the medication. It can result in serious social disruptions including family life and work and can sometimes lead to legal issues, Chwistek said. Physical dependence, on the other hand, affects every person who takes opioids regularly and develops within a week or two of starting therapy.

"Physical dependence leads to withdrawal symptoms when opioids are discontinued abruptly. Therefore, almost all cancer patients who take opioids for their cancer-related pain develop physical dependence, but only a minority is affected by addiction," Chwistek said.

Additionally, opioid tolerance also develops over time. This means that patients may need to increase how much of an opioid they take in order to get the same pain relief. "This is something we monitor patients for carefully. There are strategies we use to prevent that, such as opioid rotation—changing from one medication to another. This sometimes helps in slowing down the tolerance," Chwistek said.

Dylan Sherry, another palliative care physician at Fox

**"We always try to match the right medication to the pain. We always start with non-opioid medications if it's appropriate."**

— DYLAN SHERRY,  
PALLIATIVE CARE PHYSICIAN

Chase, said the most common misconception he's seen is the idea that patients dealing with cancer pain can get as many opioids as they want.

"That's simply not the case," Sherry said. "We always try to match the right medication to the pain. We always start with non-opioid medications if it's appropriate. We want to control someone's pain as much as possible, but it doesn't mean that person isn't also at risk of opioid addiction."

Risks differ due to patients' personal characteristics and can be related to factors such as genetics, or medical, personal, and social history. Each of these, as well as other circumstances, is taken into account when a clinician plans on prescribing an opioid.

### Opioid Monitoring Methods

**S**ince potentially anyone taking opioids is at risk for opioid-related adverse effects, Chwistek said, monitoring all patients with "standard precautions" is essential.

Physicians take particular care to assure minimal risks of addiction while providing appropriate pain management to patients throughout cancer treatment. Monitoring these individuals is done in several ways, including regular clinic visits, prescription monitoring, individual risk assessment, toxicology screenings, and more.

In the case of opioids, one of the first lines of defense is the individual risk assessment. With these guidelines, physicians ask patients being considered for opioid pain management several questions about their personal and medical history. The assessment test includes questions about family history of drug or alcohol abuse, personal history involving abuse of alcohol and illegal or prescription drugs, psychiatric issues, or preadolescent sexual abuse. An individual's answers are assigned a point value that then allows physicians to assess their risks and provide appropriate pain management.

"The results determine how we think about the patient in prescribing opioid medication," Sherry said. "If a patient were on the moderate or high end of risk, we would think about not giving them a long prescription until we knew they would use it appropriately. A one-month long prescription is typical, but for these individuals, we might give them a week instead."



Urine drug screenings are another way doctors can keep track of medication for their patients. In addition to making sure a patient isn't taking medications that they aren't prescribed, the drug screenings also allow physicians to determine whether patients are taking what they are prescribed, a factor Sherry said is equally important.

Electronic monitoring systems are also an essential tool that helps physicians track where prescriptions are going. These programs "continue to be among the most promising state-level interventions to improve opioid prescribing, inform clinical practice, and protect patients at risk," according to the CDC.

"When a physician is planning to generate a prescription for a controlled substance, they should access the Pennsylvania Prescription Drug Monitoring Program, also

known as the PDMP, before prescribing it so they can know if that patient has also received that or other controlled substance medications from another prescriber. This could indicate possible 'doctor shopping' and looking for prescriptions for controlled substances," said Dwight Kloth, director of pharmacy at Fox Chase. The PDMP uses the hospital electronic health record and community pharmacy computer systems of all eligible healthcare entities in Pennsylvania.

This process is even more efficient at Fox Chase, where pharmacists are familiar with the various therapeutic approaches of prescribing physicians and only dispense medications to Fox Chase patients prescribed by Fox Chase providers, said Kloth. The e-prescribing process eliminates issues that could arise during a patient's visit to a community pharmacy, such as concerns about prescription

authenticity, while also eliminating possible legibility questions that can occur with handwritten prescriptions.

“An electronic prescription process where the prescriber must use password authentication to access the computer system before they can issue the prescription is another level of security,” said Kloth.

### Opioid Use and Surgery

**F**or many patients, using opioids even for a short period after undergoing a major surgery can be a cause for concern. In these situations, physicians say education about procedures and treatment is key.

John Daly, a surgical oncologist at Fox Chase, is a member of the American College of Surgeons and a co-chair of its



Palliative care physician Marcin Chwistek says the use of opioids is “fraught with myths and misconceptions.”

THOMAS STEPHANO

Patient Education Committee. The committee has a task force that looks at opioid use, misuse, and overuse. The task force educates patients about the use of opioids, the elimination of opioids from operative care, and other methods of pain management.

The first and most critical step in patient education, Daly said, is communication. When physicians outline what the operative procedure is going to be, what patients can expect during recovery, and how much discomfort or pain they will likely experience, the patient can go into the procedure with confidence.

“The preparation for all this is vitally important. If you need to paint a wall, you don’t suddenly get your paint can and your brush out and go at it. You prepare the surface. In the same way, with a patient undergoing an operation, you have to prepare them for all this,” said Daly, who is also the interim dean at the Lewis Katz School of Medicine at Temple University.

He added that there are a number of ways patients and physicians can lessen pain throughout the process so that postoperative opioid use can be minimized. One way is for patients to take medication prior to surgery. These can include taking pain-reducing medication such as acetaminophen or gabapentin, muscle relaxers, or anti-anxiety medication. Daly said taking these medications before surgery can help the patient relax and can jumpstart pain management before pain even begins.

“All these things put them in a better place, and this goes along with pre-habilitation, making sure they’re in as good shape as they can be before they undergo the procedure,” said Daly.

During procedures, surgeons and anesthesiologists can take a number of measures to help ease postoperative pain. Doctors can use intravenous acetaminophen, spinal anesthesia, or blocks, which are injections of numbing medication on certain parts of the body, as they perform surgery.

**“In my conversations with patients, they often mention that are afraid to tell their friends or even family members that they are taking opioids for the fear of being ostracized.”**

— MARCIN CHWISTEK,  
PALLIATIVE CARE PHYSICIAN

“Blocks actually reduce the patient’s physiologic response to the operation itself. So placing the blocks prior to any incisions reduces adverse physiological responses to the surgery. The use of these blocks is really quite important to try to reduce pain afterward,” Daly said.

He noted that most patients, even after major surgery, should experience less pain just a few days after surgery. Daly said studies on postoperative recovery and national attention on the need to reduce opioid addiction have allowed surgeons to prescribe fewer opioids to patients following surgery.

“What we know from research from a number of institutions around the country is that we need to prescribe about three or four days of pain medication. In contrast, years ago what would happen is a patient would have a major operation and be discharged from the hospital with 30 days of opioid medication,” said Daly.

In many of these instances, either the patient would take the medication or another person would find the medication, take it, and possibly become addicted, he said. “We now know that we can prescribe five or ten pills for most things. There won’t be much of a need for refilling it and the patients will recover well,” said Daly. In addition to medications, he said, there are a number of alternatives that patients can use to help reduce their pain.

### Alternative Approaches to Pain Management

**C**ancer pain is a multidimensional experience that involves physiological changes and is also characterized by significant emotional, cognitive, and sociocultural responses,” Chwistek said. “All of these factors need to be taken into consideration and addressed comprehensively. Plans will therefore include medications, but also counselling, perhaps physical therapy, or a referral to interventional pain management.”

This practice uses pain blocking techniques to help patients with quality of life. These can include injections

or nerve blocks; radiofrequency rhizotomy, a method of turning off a nerve’s ability to send pain messages to the brain; and electrical stimulation, which sends electrical pulses to the area of pain.

Fox Chase also offers other forms of pain management that focus on mindfulness and stress relief. Some of these options can be pursued through the Integrative Care Program at Fox Chase. The program offers patients and caregivers the opportunity to participate in sessions that include yoga classes and music therapy, which may ultimately help reduce stress and improve mood, making it easier to deal with cancer pain.

Patients and caregivers can also utilize the stress management program through the Section of Psychiatry. The program components may include individual psychotherapy, cognitive behavioral therapy, relaxation techniques, group psychotherapy, and medication management.

Another unique pain management tool offered at Fox Chase is Reiki, a healing technique involving transferring energy through touch. Darrin Richman, a technology support and development pharmacist at Fox Chase and a Reiki master teacher, said Reiki serves as a way for patients to cope with pain on an individual level.

“Reiki is different for every person. What some patients experience when they come to us is a reduction in pain without any change in medication. Many people talk about decreased stress and being able to sleep peacefully through the night. People have different experiences with it. Sometimes it just puts them in a relaxed state,” said Richman. Although there is limited hard scientific data on the use of Reiki, Richman said, the patients who have experienced it find it very helpful. “They come because it makes them feel good.”

Reiki sessions at Fox Chase are provided by volunteers and are free for patients and caregivers. “Although I understand why some may be skeptical, I’m always amazed by what I see occur during and after a session. Reiki helped me through some very physically and emotionally challenging times in my life. It has been a gift for me to be able to share Reiki with those at Fox Chase,” said Richman. “It’s another tool and it gives people an option.”

As these alternative tools for cancer pain management continue to be refined, so does the use of opioids. Though opioids in many cases are the best option for some patients, physicians are continuing to study their use and other means of treating pain.

“Opioids do remain the most effective treatment for cancer-related pain, and for now, they will continue to be the cornerstone of medical management. However, their use has been evolving,” said Chwistek. “Their role may diminish over time as new pharmacological and non-pharmacological treatments become more accessible and available. For now, opioids remain the best option for many cancer patients.” ♦

# No Smoke, But Fire

It's Not Just Smokers Who Get Lung Cancer

BY MARIAN DENNIS

IN THE LATE SPRING OF 2017, TIFFANY FAGNANI HAD A LOT ON HER plate. She was the caregiver for a brother with cerebral palsy. He couldn't speak, and she was his voice. Fagnani was also a full-time nurse. So although she wasn't feeling well, she brushed it off as stress due to her hectic life.

But several weeks later, she felt a tremor in her arm and eye. She suffered from migraines, so she took her medication. But when she realized she was going to pass out, she called 911. When the ambulance arrived, they found Fagnani unconscious in her Hershey, Pennsylvania, home.

Doctors believed Fagnani had suffered a stroke, but after performing some scans, they found a 2-centimeter mass in her brain and a 3-centimeter mass in her lung. She was diagnosed with lung cancer that had metastasized to her brain and transferred to another hospital, where they told her she had six months to a year to live. She was 36 years old.

Fagnani was bewildered by the diagnosis, because she rarely smoked. She felt lost in a cloud of smoke. But she learned that many people like herself, dubbed "never smokers," could be diagnosed with lung cancer. During her journey, she also discovered that many never smokers are

PHOTO ILLUSTRATION BY CLINT BLOWERS





younger women and that genetics and the hormone estrogen can play a major role in their disease.

“I was terrified, scared, and worried about what I was going to do about my brother. They told me in the hospital I wasn’t going to make it. I felt that I had a lot more in my life to accomplish, and I wasn’t ready to give up,” she said.

Who are Never Smokers?

Although the main risk for lung cancer is smoking, patients like Fagnani develop lung cancer despite having never smoked or having smoked fewer than 100 cigarettes in their lifetime. Never smokers typically develop adenocarcinoma, a type of non-small cell lung cancer.

“This is something that not everybody knows about, because people associate tobacco use and cigarette smoking with lung cancer. Here in the United States, if you have 100 patients with lung cancer, 80 of them will be smoking-related. However, 20 of them, which is still a significant portion, will have never smoked a cigarette in their life and yet still develop lung cancer,” said Nick Bodor, a fellow in the Hematology/Oncology Department at Fox Chase Cancer Center.

Those numbers are even higher in some parts of Asia, where close to half the patients in an average lung cancer clinic may not have a smoking history, Bodor said. Data shows that lung cancer continues to be the leading cause of cancer deaths worldwide. Globally, about 15 percent of men with lung cancer have never smoked, as opposed to nearly 50 percent of women with lung cancer.

And although smoking-related lung cancer generally affects individuals 70 and older, clinicians tend to see lung cancer in never smokers who are considerably younger, said Bodor.

“If never-smoker lung cancer were its own thing it would be bigger than any lymphoma. The point is, it’s common,” said Joseph Treat, a thoracic oncologist at Fox Chase.

It’s so common, in fact, that Fox Chase has a clinic solely devoted to it.

### A THREE-PRONGED APPROACH



The Never Smoker Lung Cancer Clinic was developed in 2019 and is the first and only clinic of its kind on the East Coast. The clinic takes a three-pronged approach that includes treating patients, conducting clinical trials, and doing basic research.

It also addresses the need to identify risk factors for lung cancer, develop clinical trials, and produce effective screening methods and treatment options.

The clinic is open to individuals who have never smoked or have a very light smoking history and have a lung cancer that is positive for a driver mutation such as the epidermal growth factor receptor (EGFR) gene mutation. Over half of never smokers, including Fagnani, have a mutation in the EGFR gene, as opposed to less than 10 percent of lung cancer cases in smokers.

“One of the earliest things an oncologist has to do is get



**Above:** Thoracic oncologist Joseph Treat is on staff at the Never Smokers Lung Cancer Clinic at Fox Chase, the first and only of its kind on the East Coast. **Below:** Tiffany Fagnani was 36 when she was diagnosed with lung cancer, despite having rarely smoked. She said the diagnosis left her “terrified.”

molecular testing of the tumor, particularly with never smokers, because there’s a much greater likelihood that they’re going to have a mutation in a gene like ALK or EGFR,” said Bodor.

Preliminary research has shown elevated levels of carcinogenic estrogen metabolites in the never-smoker lung population, specifically those with an EGFR gene mutation. Metabolites are produced during life-sustaining chemical reactions in all organisms. Treat said their early data suggest these levels aren’t as elevated in patients with other gene driver-mutations, indicating they may be contributing to the disease in patients with the EGFR mutation.

For this unique subset of patients, treatment is equally unique. For example, immunotherapy drugs, which enhance the ability of the body’s immune system, have proven to be extremely effective against many types of cancer. But, Treat

said, immunotherapy is not effective in patients with the EGFR mutation, which is a pressing issue.

Treat and Bodor are conducting a clinical trial to determine whether combining an immunotherapy agent called atezolizumab, also known by its brand name, Tecentriq, with chemotherapy and a vascular endothelial growth factor inhibitor can improve immunotherapy effectiveness for patients with EGFR mutations.

### THE ROLE OF ESTROGEN



In this clinical trial, they will also continue to look at levels of estrogen metabolites and how this may be associated with lung cancer in never smokers. This is possible because of fundamental research done by Margie Clapper, deputy scientific director at Fox Chase, who has been studying the relationship between estrogen and lung cancer for 20 years.

Clapper was the first to show that lungs can function in a similar way as breasts by breaking estrogen down into metabolites. The finding is key because Clapper has proven that some of those metabolites are cancer causing. “When I got the data it made perfect sense to me that maybe the reason for this increase among women was something as obvious as estrogen,” said Clapper. Being able to profile estrogens in body fluids is key to classifying individuals by their risk factors.

THOMAS STEPHANO

“We may be able to look at families at higher risk, determine if they have a bad estrogen profile, and prove it’s contributing to lung cancer risk,” Clapper said. Such individuals could be treated with anti-estrogen drugs.

“Despite all the answers that research has provided, we don’t quite understand what estrogen is doing in the lung,” said Clapper. “In terms of research, it is very exciting to think we may be able to shed some light on the stigma that surrounds this disease—not knowing why it happens is heart wrenching. There is no warning sign and until now, no inkling of what the cause might be. That’s the hardest part.”

But there is good news, she added. “Although never smokers are usually diagnosed at an advanced stage, they tend to do better overall.” Drugs are available to target the genetic defects that many never-smoker lung cancer patients have, something that is not true for smokers who develop lung cancer.

### COPING WITH A DIAGNOSIS



Although never smokers often have good outcomes, the uncertainty related to how and why they developed the disease in the first place can leave them feeling isolated and frustrated.

“There’s a lot of anger with the diagnosis and stigma that goes with it,” said Lisa Etkins, a Fox Chase social worker who counsels lung cancer patients. “The first question these patients get is always, ‘Did you smoke?’ I had a patient once who never smoked and was diagnosed with lung cancer. She ended up wearing pink all the time because she felt it was easier to just pretend it was breast cancer.”

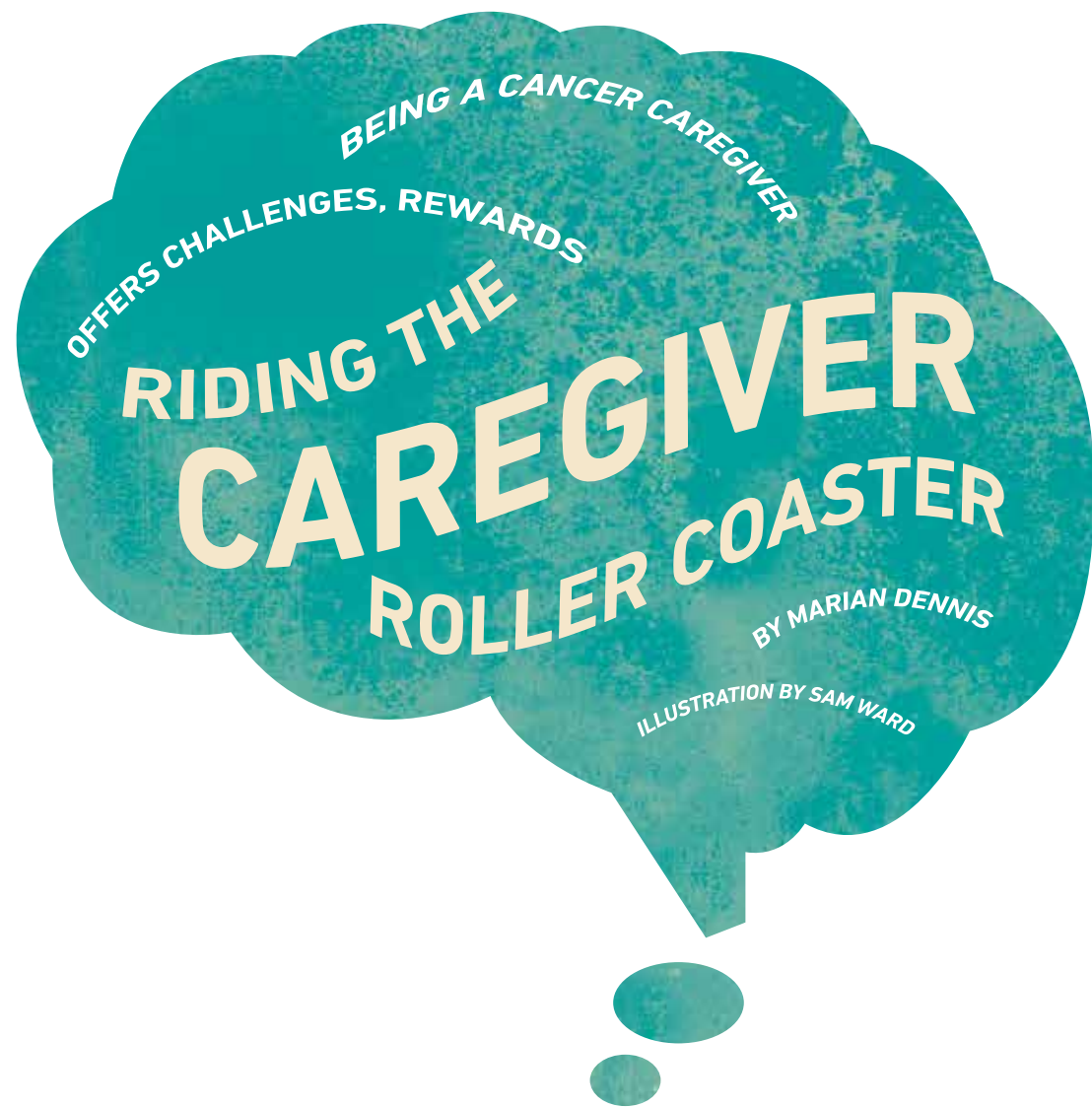
Fagnani recalled similar feelings of frustration.

“There’s this blame placed on the person because people think it was a choice you made that led to this diagnosis. But the only thing you need to get lung cancer are lungs,” she said. “I went back and tried to think about what I could have done differently. ... The answer is nothing.”

After Fagnani came to Fox Chase, she joined a peer support group to help her cope with her feelings, which helped tremendously. At the support group, she met a mentor who was her biggest cheerleader and helped her through some of the toughest parts of her diagnosis. Fagnani said having support from people who had been in her shoes made all the difference.

Another way Fagnani dealt with her diagnosis was to educate herself about the disease. Since her diagnosis, she has made it her mission to attend as many conferences as she can and to raise awareness about never-smoker lung cancer to further funding and research initiatives.

“We need to bring awareness and we need the research funding. I feel that it doesn’t get the funding and attention it deserves because of the stigma,” said Fagnani. “I do have a feeling they’re going to find out a lot. ... There is hope. This is not a death sentence.” ♦



**B**eing a caregiver for a loved one with cancer can be frightening and heart-wrenching, but it can also be rewarding. In many ways, it's a job as complicated as the disease itself.

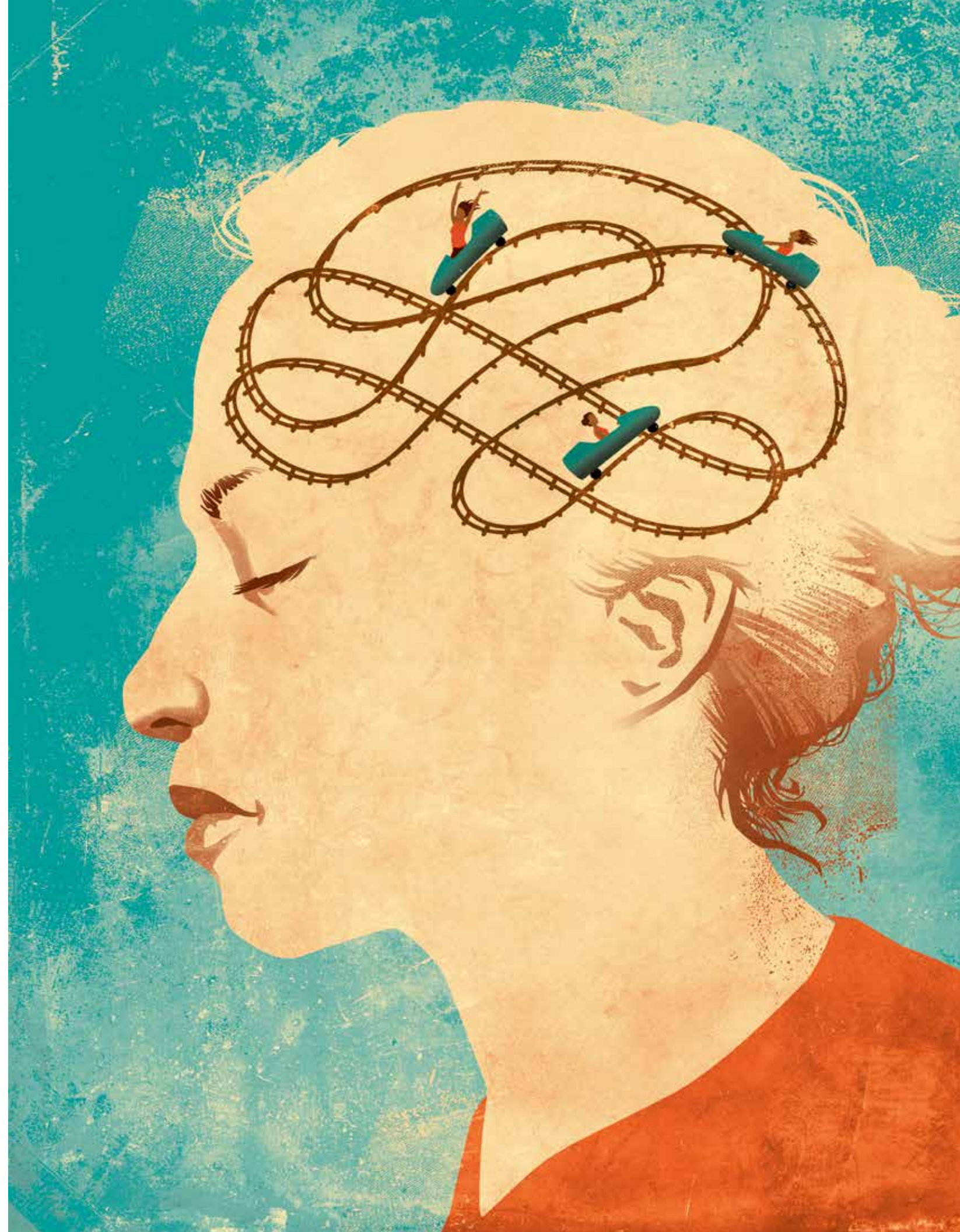
"I always tell caregivers, it's like a roller coaster and the caregiver rides that roller coaster with the patient. They're just in a different seat," said Lisa Etkins, a social worker at Fox Chase Cancer Center. "The emotional impact of being in a raw place with the patient, going through a challenging time and being present for them, can make people's relationship much more intimate or difficult."

The caregiver's role can be a hard one to navigate. In many cases, they take on the role for someone in their life who is close to them, which can make the job that much more challenging.

One such person is Jeannie Watson, 58, of Glendora, New Jersey. She took care of her husband Bill on and off for 20 years. They had been to numerous doctors about his condition and had gotten no real answers. It wasn't until 10 years into caring for him that doctors could finally tell her that he had non-Hodgkin lymphoma.

She recalled that some of the most painful parts of this journey were to be expected, such as watching someone she loved deal with more and more challenges to their health and happiness. "I remember when he couldn't go in the ocean anymore because it was too rough. That was what he loved, swimming in the ocean."

Watson responded to this challenge and others as she always did, by giving all she could to caring for her husband. "We worked around it and did a few years going away where



there were calmer waters in places like Mexico,” she said.

Focusing completely on his care was one of the most important things she ever did, but that didn’t mean she didn’t face her own challenges. Among many of her memories, Watson recalled being awake around the clock and days where she felt so tired she would sleep in her car in the emergency room parking lot. “There were days I didn’t think I could survive. I would go from 7 a.m. to 1 a.m. because I had to, and I was always on edge,” Watson said. “I was the last one to be taken care of, and I didn’t think about it then.”

#### PRIORITIZING SELF-CARE

Putting personal well-being on the back burner is common among caregivers. Paula Finestone, a clinical psychologist at Fox Chase, said caregivers’ needs often get neglected for a variety of reasons.

“Often the caregiver fills all the roles, so it can be difficult to ask for help. People in the community don’t know how to help and don’t want to add to the burden. They may also have their own fears and anxiety about cancer,” said Finestone.

That issue was echoed by Richard Lamb, an advisor on the Patient Family Advisory Council for Fox Chase. Lamb cared

For many couples in caregiver-patient roles, therapy sessions may be the first time anyone has asked how a caregiver is doing, she said. Sometimes, Reese added, it can be helpful for them to know that they are supported and heard.

But sometimes processing experiences doesn’t end when the caregiver role does.

Watson continued dealing with the stress of caregiving even after her husband passed away. Looking back, she now understands some of her behavior better. She was told by her therapist that she could be struggling with post-traumatic stress disorder (PTSD), a mental health condition triggered by a traumatic event. Symptoms can include anxiety, disrupted sleep, and intrusive thoughts or flashbacks.

Even if a caregiver doesn’t struggle specifically with PTSD, coming to terms with what happened when they were active caregivers can still take time. Lamb noted that after his role as a caregiver ended, he still thought about whether he had done enough.

“There’s always doubt in your mind. Have I done everything I can to make my wife’s life better? There’s a lot of mental games that go on in your head, and I don’t think they go away after your loved one passes,” said Lamb.

**“THERE’S ALWAYS DOUBT IN YOUR MIND...THERE’S A LOT OF MENTAL GAMES THAT GO ON IN YOUR HEAD, AND I DON’T THINK THEY GO AWAY AFTER YOUR LOVED ONE PASSES.”**

— RICHARD LAMB, CANCER CAREGIVER

for his wife for several years after she was diagnosed with gastrointestinal stromal tumors in 2001. He noted that in addition to the possibility of friends and neighbors pulling back from the situation, the patient’s feelings about socializing may change as well, which ultimately affects the caregiver.

“As a caregiver, you have to accept the role. You’re not a spouse, parent, or close friend anymore. It’s a different mindset. Your social life changes drastically. Sometimes your spouse doesn’t want to do something even if they’re healthy enough to do it, so it’s an adjustment,” said Lamb.

That adjustment sometimes requires a different kind of support.

“We often hear from partners that they feel a loss of control or are more stressed than the patient because the patients are the ones who are doing the treatments and going to appointments. Partners sometimes can feel left out and helpless because they don’t have a chance to be heard from,” said Jennifer Barsky Reese, a licensed psychologist and associate professor in the Cancer Prevention and Control Program at Fox Chase. Reese conducts research on how couples cope after breast cancer diagnosis and treatment.

#### BRINGING OUT THE BEST

Caring for a loved one, however, doesn’t begin and end with only the challenges. In many cases, according to Reese, couples have reported feeling closer to each other as they work together through a cancer diagnosis. Such was the case for Lamb.

“We grew much closer as a couple. We had always been very good friends, but we became even more emotionally closer. It helped us as she dealt with her cancer,” said Lamb. Additionally, he found a greater appreciation for things that can sometimes be taken for granted.

“The fun things we did during her last two years became much more joyful. We even did some things the last two or three months with the family, and those are very intense memories that the family and I will always cherish. You appreciate things a whole lot more,” he said.

Watson had similar feelings. “I never knew how strong I was until I handled that. Sometimes I think to myself, ‘Would this have been you your whole life, regardless, or is this you because of what you went through?’ In some ways it’s been positive for me,” she said.



Jeannie Watson got through her experience as a cancer caregiver because the outside support she had was “fabulous.”

“I want to make that connection between breathing and relaxation, so when they are in that intense situation about a diagnosis and the anxiety creeps up, or they’re butting heads with the patient, I want them to be able to go to that breath and have a moment to think about how to respond,” said Finestone.

Finestone said there are a number of apps to help with mindfulness training (see “Resources for Caregivers,” below).

Another thing to remember about being a caregiver is that it can also be a stepping stone toward giving back, said Finestone. “One of the perks of caregiving is that an individual reprioritizes. They may realize that working too many hours is not beneficial. They start spending the rest of those hours doing something they enjoy,” she said.

One of the many ways individuals can reprioritize is by joining the Patient and Family Advisory Council, which helps make positive changes at Fox Chase by providing patient and family perspective. Both Watson and Lamb have taken part in this council.

And both said the best advice they can give to caregivers is to remain educated about care and stay healthy by seeking the right support. “I would say stay knowledgeable and be part of a trustworthy support group. Anticipate the patient’s needs, be efficient and organized. It will help keep you calm and under control, which your loved one needs,” said Lamb.

“You can’t handle it all yourself,” said Watson. “Whether it’s through your family, church, or friends, if you don’t get the help you ask for, turn to someone else. I got through what I did because the outside support I had was fabulous, especially from my children.” ♦

Watson copes by knowing that she gave her husband everything she could, and even though she misses him every day, she believes her husband sent her the man she is with today. “Even when you think it’s over, it’s not over. It’s just beginning,” she said.

#### COPING AS A CAREGIVER

Caregivers experience many ups and downs, but there are resources available to help them and professionals have a number of recommendations to assist with the process. One of the most important points health care professionals and experienced caregivers stress is paying attention to the health of the caregiver.

“One very important thing is that self-care piece. I encourage caregivers to spread the wealth in terms of caregiving. It’s also beneficial for a patient to have interaction with several people, not just one person,” said Finestone.

She also recommends several strategies for “mindfulness,” a form of meditation. The general principle behind mindfulness is that while an individual is focusing on one thing, like their pattern of breathing, they can begin to feel calmer.

#### RESOURCES FOR CAREGIVERS

##### SUPPORT WEBSITES

- Cancer.org:** The American Cancer Society website offers a variety of resources for caregivers and patients.
- Cancersupportcommunity.org:** This website features free programs offering emotional support, education, and hope for people impacted by cancer.
- Caringbridge.org:** This site allows caregivers to easily share health news with friends and family and helps connect caregivers and patients with their communities.
- AARP.org/caregiving:** AARP offers a variety of helpful information on caregiving as well as a hotline specifically for caregivers seeking resources for support (1-877-333-5885).
- Caregiveraction.org:** The Caregiver Action Network is a

nonprofit organization that offers education, peer support, and resources to caregivers.

##### MINDFULNESS WEBSITES AND APPS

- Thisiskara.com:** A free website containing a range of mindfulness meditations specially designed to support individuals affected by cancer.
- Calm:** A meditation and relaxation aid.
- Stop, Breathe & Think:** An app that customizes meditations based on your mood.
- Breathe2Relax:** A stress management tool that emphasizes breathing exercises to decrease stress.
- Anxietyhelper:** A free app for Apple products that is designed to teach individuals about their mental health and provide tools, information, and resources to cope.

NINA HIEN

# DIMINISHED BUT NEVER DEFEATED

BY MARIAN DENNIS

Alan Zlatkin has always believed in the power of having a positive attitude.

Since his youth, he has believed that the key to succeeding in anything is to never give up. On days where that mentality doesn't come so easily, all he has to do is look at his wrist.

On a medical bracelet that he wears is the phrase "diminished but never defeated." Zlatkin has made it his personal mantra after seeing the effects of cancer and facing a tough diagnosis himself.

"The diminished part came from a neighbor who I was friendly with. He was a smoker and he developed lung cancer. One day I saw him, and he was roughly my height—about 6 feet—but he didn't look it. He was stooped over, thinning, and pale. I thought, 'Look how diminished you look.' The defeated part is a matter of attitude," said Zlatkin.

His philosophy was tested in April 2017 when, at the age of 74, he began losing weight and had trouble keeping food down. He went to his family physician and was referred to an endocrinologist who spotted a mass on his pancreas. It was then that Zlatkin came to Fox Chase Cancer Center.

"I respected the doctor who referred me a great deal. When he said go there, I knew it was right. I'm not a big person for second and

third opinions. I thought Fox Chase was going to be a good place for me, and I was right. They helped ease the chaos almost immediately."

He saw Jeffrey Tokar and Michael Bartel, both of whom are gastroenterologists and interventional endoscopists. After treating Zlatkin for blocked bile ducts, they conducted biopsies that confirmed Zlatkin had pancreatic cancer.

"I had already decided to be positive and not be an emotional wreck when confronted with the news. From the moment I felt that

"Defeated is a matter of perspective and will. I feel no matter how serious the illness, I can overcome it with the right help and the right attitude."

— ALAN ZLATKIN, PANCREATIC CANCER SURVIVOR

I had cancer I had decided the best approach was to be stoic, to basically be confident I could overcome it with the doctors and try to simply go on with my life," said Zlatkin.

He was then treated by Fox Chase physicians Michael Hall, a medical oncologist and genetic risk specialist, and Joshua Meyer, a radiation oncologist. "The first thing I felt was a sense of calm and confidence in them. Every doctor I met at Fox

Chase was incredible," said Zlatkin.

In July of 2017 Zlatkin began chemotherapy treatments to shrink the tumor enough for it to be operable. He began radiation therapy in November of 2017 and ultimately underwent a Whipple procedure in January 2018. The complex procedure involves removing the head of the pancreas, part of the small intestine, the bile duct, and the gallbladder to treat tumors. The organs are reconnected at the end of the procedure to allow for normal digestion.

During his surgery, Zlatkin also had a CivaSheet inserted. CivaSheet is a customizable, flexible implant that emits focused radiation at the site of a tumor to attack the malignancy while avoiding healthy tissue. Following surgery, he had a second round of chemotherapy that lasted six weeks.

Throughout these treatments, Zlatkin often found it difficult to stay positive and began to feel as if



COLIN LENTON

his cancer was dominating his life. "Cancer makes you confront your mortality. There's nothing like a disease that kills that makes you confront it more," he said.

With help from his wife Patricia, Zlatkin was able to make some adjustments to improve his quality of life, one of which was a new diet after 40 years of being a vegetarian. Zlatkin was surprised to find that diabetes was a side effect of his cancer. "I relied on pasta and dishes my wife made, but because of the diabetes we had to eliminate it. She formulated a diet for me," Zlatkin said.

"We have been together for 49

years, and she is the best thing that ever happened to me. During the initial stages, she couldn't have done more for me. She did a lot of research in terms of nutritional issues in order for me to get stronger. She's the best," he said.

Today, Zlatkin has been in remission for two years and spends his days keeping active by walking his dogs, Molly and Sully, several miles a day and reading as many books as he can find. He comes back to Fox Chase every six months to see his doctors. His ultimate goal is to spend as many years as he can with his family and to watch his grandchildren grow up.

"I'd like to reach five years of remission, but I need at least 10 years more to dance at my granddaughter's wedding. I also want to watch my grandson play ball in high school. For now, I'm looking forward to the end of this pandemic," said Zlatkin.

"I would tell anyone to go to Fox Chase, where you can get the care, treatment, respect, and kindness that doctors, nurses, and staff provide routinely. Defeated is a matter of perspective and will. I feel no matter how serious the illness, I can overcome it with the right help and the right attitude."

# A WORKING-CLASS SCIENTIST

BY MARIAN DENNIS

Growing up in Barcelona, Spain, Israel Cañadas was fascinated by the world around him and dreamed of a career in science.

Cañadas, now an assistant professor in the Blood Cell Development and Function Program at Fox Chase Cancer Center, was the first member of his family to go into the sciences. His father was a carpenter and his mother worked at a large company before they eventually opened their own business together.

But when Cañadas started showing an interest in science, his parents eagerly supported him. “As a kid, my parents gave me a toy microscope as a gift. I remember taking samples of plants and insects from the forest to check under the microscope. It was just a toy, but that always stands out to me because I loved it,” said Cañadas.

He eventually graduated to a real microscope and carried that passion with him throughout his academic and professional career. He studied biology at Barcelona University before receiving a master’s degree in biomedical research in 2009 from Pompeu Fabra University, also in Barcelona, where he went on to earn a doctorate in biomedicine in 2013.

Cañadas became a postdoctoral

researcher at Hospital del Mar d’Investigaciones Mediques Institute in Barcelona before moving to the United States in 2015 as a postdoctoral fellow at the Dana-Farber Cancer Institute, where he studied cancer biology and cancer immunology.

Cañadas credits his wife, Noelia, whom he met while studying in

United States, Canada, and Europe. “We really like to experience and even live in different cultures. We’re always looking to try different foods and meet new people,” said Cañadas.

It was his experience at Dana-Farber that solidified his dream of running his own lab and doing his own research. That goal came

“I come from a working class family. ... I'd like to encourage all kinds of social classes to pursue a path in science or biomedicine if it's really their dream.”

— ISRAEL CAÑADAS, ASSISTANT PROFESSOR, BLOOD CELL DEVELOPMENT AND FUNCTION PROGRAM

Barcelona, with encouraging him to move to the states. “When I finished my PhD and was considering going outside the country, I wasn’t totally sure. She was very important in that decision because she told me, ‘Science is your passion, and you should be able to work in a different country and start your own lab someday,’” said Cañadas.

The couple have been together for 18 years and have traveled to a variety of destinations, including Vietnam, Cuba, Costa Rica, the

to fruition when he came to Fox Chase in November 2019. “I found that Fox Chase is a great place for me to be able to work in the middle of all these fields, in cancer biology and immunology in the lab, and to be close to the hospital, patients, and physicians to find applications for all the research I’m doing,” he said.

“Since I visited the center to do my interview, I found that the environment, the community is very nice. I feel a lot of support in

this environment and it feels like a kind of family,” Cañadas said.

His work focuses mainly on identifying how tumors resist immunotherapy and how to use existing immune signaling pathways to break that resistance and find new therapies. As part of this work, he is developing a technology that would allow researchers to use a microfluidic device to culture cancer cells, immune cells, and other cell types from the environment of a human tumor sample. The tool will allow researchers to conduct analyses of specimens on smaller scales, as well as doing them more quickly and cheaply.

“I’m interested in using this technology to treat fresh tumor samples from patients at Fox Chase with immunotherapy and then check how effective different therapies are. These could include experimental therapies or therapies I have conceived from my projects that would be interesting to test in tumors. My passion is to know the unknown, to make discoveries. That’s my dream,” Cañadas said.

“My philosophy in work is to really enjoy the moments. In science this is very important, because a lot of times you don’t find what you’re looking for. You can be wrong or you can find something that you were

not expecting, so I think it’s really important to have an optimistic outlook and never give up.”

Cañadas said his family’s support, along with dedication and hard work, have been paramount to a successful and rewarding career in science. “I come from a working class family. It’s something I’m proud of, particularly because my parents continue to support my brother and me in our education. I’d like to encourage all kinds of social classes to pursue a path in science or biomedicine if it’s really their dream. Work hard, be positive, and you will finally reach what you really want.”



CARDONI

# A QUEST TO MAKE CANCER GO THE WAY OF POLIO

BY GEORGE BESCHEN

Growing up in the 1940s, retired business executive Al Gabriele had one primary fear: polio. The image of children encased in iron lungs on March of Dimes pamphlets still haunts him. “It was a terrifying thing in my youth—and yet my three children are barely aware of it today,” Gabriele said. “That’s what money and research can do to change the outlook on a disease.”

A longtime Fox Chase Cancer Center champion, chair of the planned giving committee, former board member, and major donor, Gabriele said the ultimate aim of his philanthropy is to make cancer a scourge of the past. It is part of his personal past: He survived head and neck cancer more than 50 years ago.

A goal that ambitious requires support at a scale that may be beyond Gabriele’s present means. But through a major planned gift, he and his wife Barbara are able to give at a level they feel confident will significantly aid Fox Chase physician-researchers in

prevailing over cancer.

“When you arrive at a time of life when expendable cash is now limited, many people feel they have to be content making modest annual cash gifts, but if you still want to make a real difference, the best way is with a planned gift,” he said. “Just knowing that I’ll be

“Just knowing that I’ll be advancing work and a mission I believe in after I’m gone is a terrific comfort.”

— AL GABRIELE, LONGTIME FOX CHASE CANCER CENTER CHAMPION

advancing work and a mission I believe in after I’m gone is a terrific comfort.”

Gabriele has made provisions in his will for a gift supporting Fox Chase’s cancer prevention and control research, a program now led by Margie L. Clapper. His forward-focused approach to philanthropy makes it possible for him to enjoy another fringe benefit while he’s still here: He and Clapper enjoy a close friendship,

meeting at a favorite café throughout the year to hear updates on each other’s lives and her lab’s research.

“Al’s strong commitment to cancer prevention research is deeply rooted in his personal experiences and intense yet humble desire to improve the lives of others

in the most meaningful way,” said Clapper. “His unwavering support, words of encouragement, and heartfelt friendship continue to inspire me to do my best to fulfill his wish of ending this devastating disease.”

Gabriele makes philanthropy a family affair. Fifteen years ago, he and his wife Barbara established the Gabriele Family Foundation. Each November, they and their three children—a



FOX CHASE INSTITUTIONAL ADVANCEMENT

daughter in New York City, a son in Phoenixville, and a son in Colorado—conduct a virtual board meeting on Skype. Together, they discuss and vote on the dozen or so grant submissions they receive and three are awarded gifts totaling \$25,000. Gabriele’s nine grandchildren weigh in, and his sons’ spouses are important parts of the discussion as well. “Our youngest

grandchild is 9 and he reads every proposal!” he said.

Gabriele believes so much in the power of philanthropy that he’s made himself a virtual one-man development shop at his retirement community, Meadowood Senior Living in Worcester, Pennsylvania, where he’s led individual campaigns to fund special projects.

But Gabriele’s advocacy and support of Fox Chase occupies a

**Al Gabriele and his wife Barbara with three of their nine grandchildren. His three children and the grandchildren help him determine which grants to award.**

unique space in his life, especially as a cancer survivor. “I don’t think about how lucky I am anymore,” he said. “Now I’m focused on how lucky my grandchildren will be if something I’m doing will help them think of cancer the way we now think of polio.”

## FOX CHASE STAFF RECEIVE DONATIONS DURING COVID-19 FIGHT

As COVID-19 began to put a strain on hospitals in mid-March, numerous restaurants, companies, and individuals stepped up to donate food and other items to healthcare workers on the front lines of the pandemic.

Fox Chase Cancer Center received multiple donations of food, personal protective equipment, and personal care items from the community as staff continued to

go above and beyond in caring for patients.

“We are overwhelmed by the tremendous support our faculty and staff have received from so many in our community during this time of crisis,” said Richard I. Fisher, president and CEO of Fox Chase. “In particular, the many food donations and encouraging messages from local businesses have provided a tangible reminder that we are all coping together.”



Dunkin' Donuts was one of the many businesses that donated food and personal care products to Fox Chase staff to recognize their dedication during the COVID-19 pandemic.

## FOX CHASE CERTIFIED UNDER ASCO'S QUALITY ONCOLOGY PRACTICE INITIATIVE

Fox Chase Cancer Center has been recognized by the QOPI Certification Program LLC as successfully completing a three-year certification for oncology practices that meet nationally recognized standards for quality and safety in cancer care. The QOPI program, a wholly owned subsidiary of the American Society of Clinical Oncology (ASCO), builds on ASCO's Quality Oncology Practice Initiative (QOPI).

“Fox Chase is honored to be recognized for our achievements in patient care. This certification shows the impressive work of our faculty and staff and their dedication to ensuring our patients' health and safety,” said Fox Chase president and CEO Richard I. Fisher, MD.

## LONG-TIME STAFF MEMBERS RETIRE

Several staff members with over 100 years combined service to Fox Chase Cancer Center are retiring. Lori Goldstein, a professor in the Department of Hematology/Oncology and Deputy Associate Director of Clinical Research, will be retiring after 30 years. She was also director of the Naomi and Phil Lippincott Breast Evaluation Center, where she led a multidisciplinary team of providers.

“She has contributed at the national and international level to research and education in breast cancer as a member of the American Society of Clinical Oncology, where she has served in numerous roles and has been recognized with Fellowship and the Statesman Award,” said Richard I. Fisher, president and CEO of Fox Chase. She will remain on faculty as professor emeritus, serving as a consultant to the chair of Hematology/Oncology on special research and academic projects.

Chief Nursing Officer Anne Jadwin, who provides administrative oversight for all nursing practice, will retire after 20 years at the center. Joanne Gurney, administrative director of perioperative services, is retiring after 14 years of service. Ginny Martin, who has been clinical director of ambulatory care since 1988, is retiring as well.

“Fox Chase remains a compassionate place due to the dedicated nurses at its heart, who work passionately to lighten the burden of the cancer experience on its patients and families. I am very proud to have helped lead a fantastic group of those nurses every day in my role here,” Martin said.

FOX CHASE INSTITUTIONAL ADVANCEMENT



Members of the Nurse Residency Program gather to celebrate receiving accreditation from the American Nurses Credentialing Center.

## FOX CHASE EARNS NURSING RESIDENCY ACCREDITATION

Fox Chase Cancer Center has announced that its Nurse Residency Program achieved Practice Transition Accreditation from the American Nurses Credentialing Center (ANCC). They were awarded Accreditation with Distinction, the highest recognition awarded.

“This accreditation validates our program for being evidence-based, current, and relative to nursing practice,” said Deborah Baldassarre, MSN, RN, OCN, NP-D-BC, Nursing Residency Program Coordinator.

The ANCC Practice Transition Accreditation Program validates hospital residency or fellowship programs that transition registered nurses and advanced practice registered nurses into new practice settings that meet rigorous, evidence-based standards for quality and excellence.

Nurses in accredited transition programs such as Fox Chase's Nurse Residency Program experience curricula that promote the acquisition of knowledge, skills, and professional behaviors necessary to deliver safe, high-quality care.

## FOX CHASE COMMUNITY RALLIES AROUND ITS PATIENTS

As the increasing severity of the COVID-19 pandemic forced hospitals to shift from screening visitors to forbidding them entry altogether, patients had to start attending treatment appointments alone. Knowing how important caregiver support can be, Fox Chase Cancer Center reached out to its community with a direct mail and social media campaign that asked them to show their support for patients.

In the first week, more than a thousand people responded. One

message in particular summed up the overall sentiment: “We're thinking of you during your treatment. You are never alone.”

The messages were shared with patients in various ways to help them realize that many people, a number of them patients who had walked the same path, cared about them. The messages were used in a short video in which several donors and nurses read excerpts of them. The video played on screens inside the center, and the messages were also shared on social media.

JOE HURLEY



**Carolyn Fang** has been elected as a fellow to the Society of Behavioral Medicine, a multidisciplinary organization of

behavioral and biomedical researchers and clinicians. Fellow status is awarded for outstanding contributions to the advancement of the science and practice of behavioral medicine.



**Edna "Eti" Cukierman** was named a fellow of the American Gastroenterological Association, the oldest and most

prestigious medical society dedicated to disorders of the gastrointestinal tract in the United States. She was also elected to the council of the American Society for Matrix Biology, which promotes basic, translational, and clinical research on the extracellular matrix.



**Sanjay S. Reddy and Namrata "Neena" Vijayvergia** were recently honored by being selected for



The Pennsylvania Medical Society's (PAMED) listing of Top Physicians Under 40. Winners were nominated by colleagues and selected

by a committee of PAMED members. “Dr. Reddy and Dr. Vijayvergia are adored by their patients and staff,” said Jeffery Farma, chief of the Division of General Surgery.



**Christian Koch** was recently named a review editor for *Frontiers in Cancer Endocrinology*, a specialty section in the journal *Frontiers in Endocrinology*. The peer-reviewed, open-access journal features 15 subsections that focus on all aspects of endocrinology.

# ROB KRIGEL: ONCOLOGIST TURNED PATIENT

BY SARAH JAYNE HUGHES

In 1984, Rob Krigel came to Fox Chase Cancer Center as director of the Department of Hematology. During his time at Fox Chase, Krigel conducted groundbreaking work on early clinical trials of combination therapies for the treatment of cancer, as well as interferon research.

But Krigel had already made a name for himself at New York University, where he had trained as a hematologist and oncologist prior to joining the staff there. His time at NYU coincided with the beginnings of the AIDS epidemic, and Krigel became a leading authority on the management of AIDS-related malignancies.

After leaving NYU, Krigel found his second family at Fox Chase, where he became known for the great compassion he showed his patients and their families. “He was beloved and a symbol of the special character of the institution,” said Lou Weiner, an oncologist and former colleague at Fox Chase who later became Krigel’s best friend. Wiener is now director of the Georgetown Lombardi Comprehensive Cancer Center in Washington, D.C.

Although the two had attended the same undergraduate and medical schools, they had never crossed paths before coming to Fox Chase. But they became close, rooming together at medical conferences, going on family vacations together, almost like brothers.

Krigel also helped train the next

generation of oncologists, people like Lori Goldstein, a professor of hematology and oncology at Fox Chase. “He made us better, more caring people and physicians,” said Goldstein.

In 1993, Krigel left Fox Chase to become director of the Lankenau Cancer Research Institute in Wynnewood, Pennsylvania. After being at Lankenau for about six months, Krigel called Weiner in the middle of the night because he thought he had perforated an ulcer.

knowing tone, because he knew what was going to happen.” Krigel then insisted that Weiner be his physician.

Bonnie Perlmutter, Krigel’s wife, remembered that despite the hardship of his treatment, being at Fox Chase made it easier. “You could just see it in his eyes and how he walked down the hallway. He loved it there and they loved him.”

Krigel died on April 24, 1994. He was 44.

Carrying on the family tradition,

“People like Rob don’t come around very often. It is a mark of his impact and his character that we still think and talk about him to this day.”

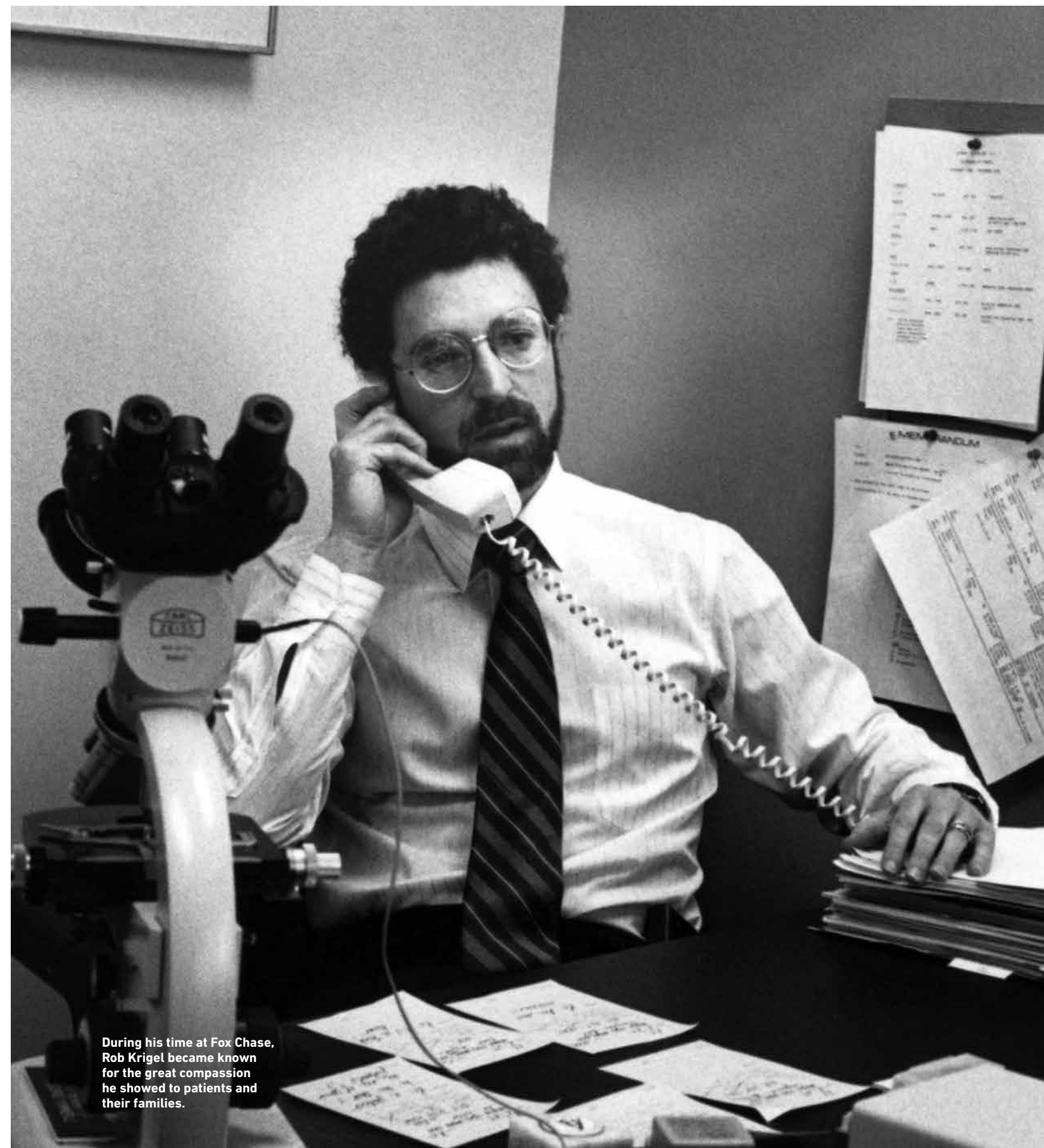
— LOU WEINER, ONCOLOGIST AND BEST FRIEND OF ROB KRIGEL

Weiner, who was the attending medical oncologist at Fox Chase, reviewed the X-rays and later bloodwork showed that Krigel had cancer, angiosarcoma that had spread through his body and had previously shown no symptoms. “I had to go in at the moment we made the diagnosis and tell my best friend he had cancer,” said Weiner.

He recalls Krigel insisting on seeing the X-rays himself and going down to the radiology suite in his hospital gown. “He took one look at the X-rays and knew exactly what they meant,” said Weiner. “He said, ‘Aww’ with a kind of sad and

Krigel’s daughter Anna is a gastroenterology fellow at New York Presbyterian Hospital who was deployed to the frontlines during the COVID-19 pandemic, and his son Jonathan is a psychologist like his mother.

Fox Chase remembers Krigel with the Krigel Teaching Award, which is given to a faculty member, and the Krigel Lectureship, which promotes translational research. “People like Rob don’t come around very often,” said Weiner. “It is a mark of his impact and his character that we still think and talk about him to this day.”



During his time at Fox Chase, Rob Krigel became known for the great compassion he showed to patients and their families.

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my cancer care  
absolutely mattered.”

**Brooke Fuller**  
Colorectal Cancer Survivor

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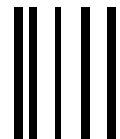
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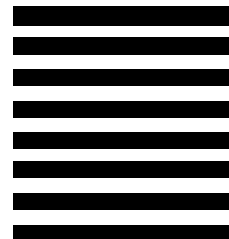
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