

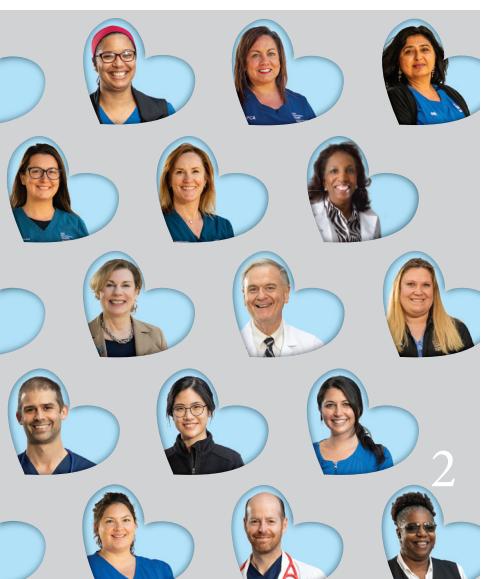
Yale Cancer Center

centerpoint

MAGAZINE



SMILOW
CANCER
HOSPITAL
**CELEBRATING TEN
YEARS
OF PATIENT CARE**



departments

- 1 Director's Letter
- 10 Giving
A Gift of Sacrifice and Safety
- 12 Support
A Silver Lining for Support Groups
- 14 Honors and Generosity
Celebrating awards and gifts to Yale Cancer Center and Smilow Cancer Hospital
- 16 Network
Smilow Cancer Hospital Care Center at Westerly
- 17 Meet the Physician
Kevin G. Billingsley, MD, MBA



On the Cover

Healing Together:
Providers and Staff from
Smilow Cancer Hospital
and the Smilow Cancer
Hospital Network

Peter Baker **photographer**

features

- 2 Healing Together
Cancer doesn't pause during a pandemic, and neither have the providers and staff at Smilow Cancer Hospital. During the COVID-19 outbreak in Connecticut, the top priorities for leadership at Smilow Cancer Hospital have been to care for patients and their families and to support providers and staff.
- 6 Yale Researchers Tackle COVID-19 and Learn from Patients with Cancer
Since the pandemic hit, Yale Cancer Center scientists have worked overtime to investigate topics like abnormal blood clotting, antibodies to the virus, and the mechanism of SARS-CoV-2 replication and pathogenesis, as well as the unique reaction of patients with cancer to COVID-19. What they are learning has already changed the way doctors care for patients with coronavirus.

yale cancer center
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Charles S. Fuchs, MD, MPH

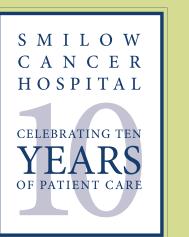
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We began 2020 with grand plans to celebrate Smilow Cancer Hospital's tenth anniversary and commemorate the transformative advances in immunotherapy that have changed the way many patients are treated for cancer over the last decade. The arrival of COVID-19 in Connecticut early in March quickly changed our focus from one of celebration to rapidly ensuring the continued exceptional care of our patients, while simultaneously launching protocols that secured the safety of our patients, providers, and staff. The last four months have truly inspired me as a leader and strengthened our cancer community at Yale Cancer Center and Smilow Cancer Hospital.

Together, our providers, nurses, and staff have relocated inpatient units and outpatient care, created new patient care practices and standards on a daily and sometimes hourly basis, and challenged one another to continuously innovate in the way we deliver cancer care and conduct research. Our patients continued to receive the personalized care and treatment they needed throughout the pandemic, and our clinical environments always had safety as a first priority.

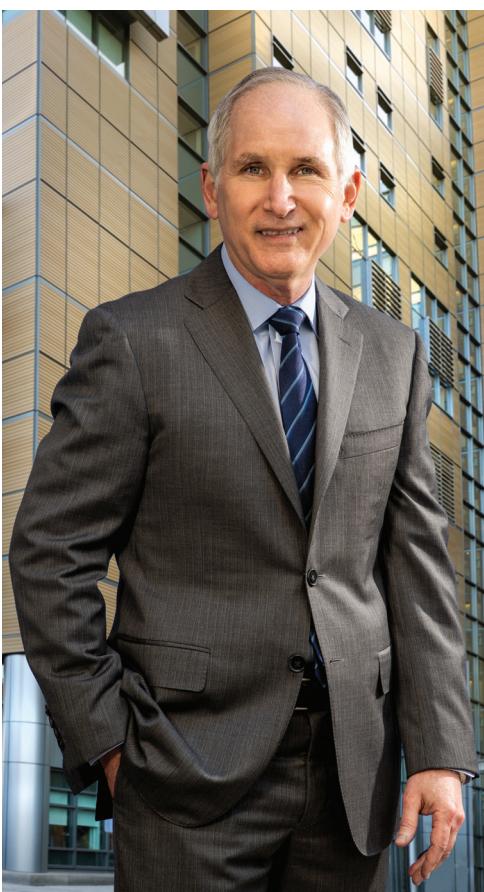
Our nursing leadership teams developed new ways to protect our patients, including the launch of a Smilow Rapid Evaluation Clinic to assess, test, and triage any patient who displayed concerning symptoms in a protected environment. They also maintained the availability of our Smilow Extended Care Clinic to provide specialized care for our patients with acute oncologic symptoms, without the need to access emergency departments.

At the same time, many of our cancer research laboratories pivoted their team's focus to use their expertise to tackle important questions involving the SARS-CoV-2 virus. With the help of philanthropic support and a supplemental support grant from the National Cancer Institute, our scientists quickly launched investigations into immune response, antibodies to the virus, viral replication and pathogenesis, and, importantly for our specific patient population, the clinical outcomes of cancer patients infected by the virus.

While cancer care and research will always be forefront at Yale Cancer Center and Smilow Cancer Hospital, the ability of our entire community to heal together during these challenging months has been paramount. Our patients and their families, and our entire cancer enterprise emerged stronger, together as a result. In the decades that follow, we will long remember the heroic work of our providers and staff, and the great courage of the patients and families that inspire us.

Sincerely,

Charles S. Fuchs, MD, MPH
Director, Yale Cancer Center and
Physician-in-Chief, Smilow Cancer Hospital





HEALING TOGETHER

Jenny Blair writer Peter Baker photographer

“I AM CONTINUALLY PROUD OF OUR COMMUNITY, WHO ROSE TO EVERY CHALLENGE TOGETHER TO PUT OUR PATIENTS AND THEIR NEEDS FIRST. WE HAVE KEPT PATIENTS AND OUR OWN COMMUNITY SAFE AND CONTINUED PATIENT TREATMENT AND CARE IN INNOVATIVE WAYS.”

— Dr. Charles Fuchs

Cancer doesn't pause during a pandemic, and neither have the providers and staff at Smilow Cancer Hospital. During the COVID-19 outbreak in Connecticut, the top priorities for leadership at Smilow Cancer Hospital have been to care for patients and their families and to support providers and staff. To meet those goals, major changes were implemented, but teamwork and quality cancer care remained at the forefront.

“I am continually proud of our community, who rose to every challenge together to put our patients and their needs first. We have kept patients and our own community safe and continued patient treatment and care in innovative ways,” said Charles S. Fuchs, MD, MPH, Director of Yale Cancer Center and Physician-in-Chief of Smilow Cancer Hospital. “We didn't miss a beat.”

“Together, we've been able to safely care for cancer patients during the pandemic,” said Kim Slusser, MSN, RN, Vice President for Patient Services. “As we start to have patients return to our main hospital, I want to reassure them that we're doing everything to keep them and our staff safe.”

NEW CARE LOCATIONS

When Smilow Cancer Hospital was designed, its architects planned for the top three floors to have negative-pressure ventilation, which is important for patient safety in the event of an infectious respiratory disease. The Yale New Haven Health System (YNHHS) activated the ventilation system when the COVID-19

pandemic hit early this spring, using the negative pressure to keep air flow restricted and protect the remainder of the hospital and patients from COVID-19.

That meant patients already based on those floors needed to be relocated to make space for patients with COVID-19, and over the course of a single day, all were safely transferred via ambulance to the Yale New Haven Hospital (YNHH) Saint Raphael Campus just a few blocks away. Of that move, Maggie Zampano, RN, an oncology nurse with 16 years of experience at Yale New Haven, said, “It was poetry in motion. It was thought out. It was calm. The unit is beautiful where we are and we very quickly became a tight-knit group.”

Infection prevention begins before the care encounter. Though some oncology surgeries were postponed for safety, those that could not be were scheduled at the Saint Raphael Campus. Stringent COVID-control protocols continue, including complete physical separation from other patients. Prior to surgery, bone marrow transplant, or hospital admission, patients are tested for COVID-19. Those who are scheduled for an outpatient visit or for radiotherapy or chemotherapy receive a phone call the day before from a nurse who screens the patients and assesses for COVID-19 symptoms. “It's also a great opportunity for our nurses to answer patients' questions around safety,” Ms. Slusser said.

In a second layer of safety, patients arriving at all Smilow Cancer Hospital facilities undergo another screening, including a



“THE ADDITIONAL LEVEL OF SAFETY HAS REALLY HELPED NOT ONLY OUR PATIENTS FEEL SAFE, BUT ALSO OUR STAFF FEEL SAFE. WE KNOW OUR COMMUNITY IS WELL PROTECTED.”

— Kim Slusser, MSN, RN

temperature check. Those who do not have their own masks are provided with one before entering. During the actual check-in process, patients are screened for a third time. As for staff members and providers, all of them are masked, and all self-monitor for COVID-19 signs and symptoms twice a day and all wear personal protective equipment while at work.

“The additional level of safety has really helped not only our patients feel safe, but also our staff feel safe. We know our community is well protected,” Ms. Slusser noted.

To make physical distancing easier, ambulatory care centers have expanded treatment hours. Other safety measures include six-foot markers and plexiglass screens in waiting rooms. Exam rooms are extensively cleaned between patients and deep-cleaned daily.

TELEHEALTH IS HERE TO STAY

Not all patients need to see their physician in person for follow-up care and regular check-ins, and safe, time-saving Telehealth alternatives have blossomed. Between March 15 and April 19, the number of video and phone visits with Smilow Cancer Hospital providers more than tripled, with thousands of visits occurring each week. Support groups, complementary therapies, and question-and-answer forums are available virtually as well.

“In many cases patients are very pleased and prefer it,” said Kevin Billingsley, MD, MBA, Chief Medical Officer for Smilow Cancer Hospital. “To not have to travel, to not have to park, or, if you are working, to not have to take as much time off from work—all of those are positives.”

Dr. Billingsley added that for people who are uncertain how to navigate the technology, a team of employee volunteers offering tech support are available to help. Patients with cancer who are grappling with COVID-19 at home are not overlooked, Ms. Slusser added. “We started daily wellness calls for our patients who were either waiting for a COVID test result or were COVID-positive,” she said. Nursing staff call daily to check in, asking about symptoms and answering questions.

RAPID EVALUATION CLINIC

These patients sometimes develop symptoms that resemble those of COVID-19, such as fever or shortness of breath. Instead of risking a visit to the emergency department, they can now get immediate testing at the newly developed Smilow Rapid Evaluation Clinic.

Ms. Zampano, who is among those staffing the new clinic said, “We needed a safe place for our oncology population to come and get their [testing and treatment], but also be able to keep others safe. So they come here.”

Patients with mild or no COVID symptoms can also continue to obtain COVID testing through one of the YNHHS’s ambulatory test sites.

REOPENING

As Connecticut’s outbreak subsides, many aspects of care at Smilow are reverting to the pre-pandemic normal, while maintaining an array of COVID-related safety practices to

protect patients and staff. Ambulatory care is moving back to Smilow, surgeries are resuming, and many clinical trials are once again welcoming new enrollments.

But many changes, including COVID symptom screening and physical distancing in waiting rooms, will remain in place for now. So will masks: “We haven’t even begun to discuss not wearing masks,” Ms. Slusser said. “Until we’re at a different place nationally with COVID, I don’t see these measures going away any time soon.”

WHAT THE FUTURE HOLDS

The pandemic’s first wave is waning, and hospital leaders are proud of the collective response of the Smilow community. Together they have healed patients, supported one another, and built an even stronger foundation for cancer care under unprecedented circumstances.

“Our interprofessional teams have done amazing things over the past eight weeks,” said Dr. Billingsley. “One of the takeaways for us is we can do more for our patients over a shorter period of time than we ever imagined.”

But with future outbreaks possible, Smilow Cancer Hospital and other healthcare systems across the nation are working to establish a new normal. Many of the changes will continue, leaders say—Telehealth, for one. “The use of telemedicine to communicate with patients, to evaluate patients, to check on patients, is something we want to continue and make part of the practice in Smilow,” Dr. Fuchs said.

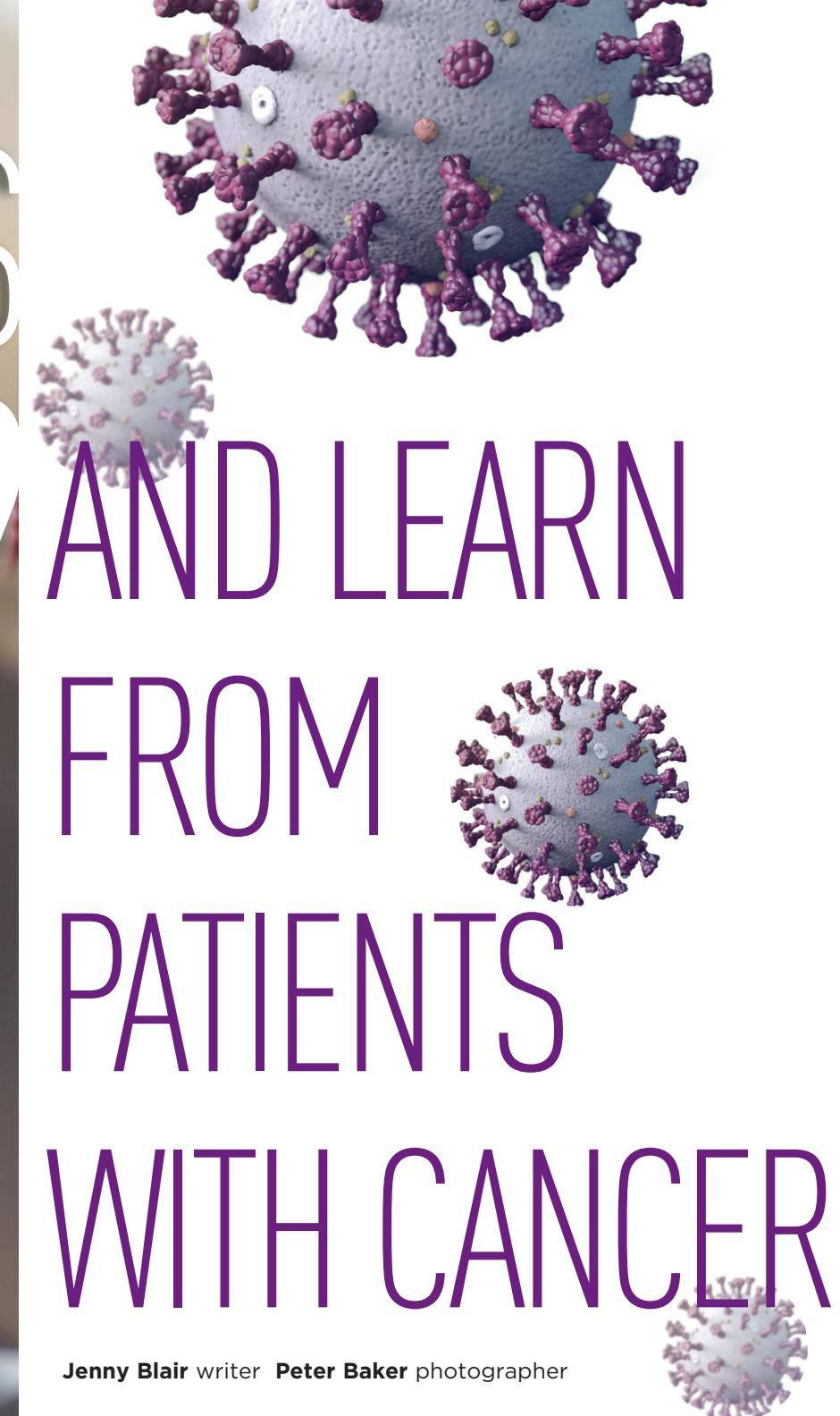
Of course, in-person care is not going away. Many patients need to be seen in person and safety for those patients is paramount. “We have infusion and exam-room space in the building that is safe and protected,” Dr. Billingsley said. “We are assuring patients that it is safe to come to their main treatment home for their ongoing therapy.”

It’s crucial that routine medical care, including cancer screenings, continue as well. “Routine appointments like colonoscopies, mammographies, OB/GYN exams, people going to the doctor because they’re tired and they find that they’re anemic, all that care where things get discovered—that has not gone on in the last few months,” Dr. Billingsley said. “Now, we’re really trying to get people reengaged. Our goal is to meet patients where they are.”

He added that although the pandemic requires extra caution, human touch is an important part of the healing process. “We never want to get too far from those roots.” ☈



YALE RESEARCHERS TACKLE COVID-19



AND LEARN FROM PATIENTS WITH CANCER

Jenny Blair writer Peter Baker photographer

Across Yale Cancer Center this spring, most research labs shut down to protect their personnel from COVID-19. To protect patients, clinical trial enrollment also took a two-month pause. But several of our researchers with relevant expertise have continued to conduct critical research on SARS-CoV-2, the deadly new coronavirus that causes COVID-19.

Since the pandemic hit, these Yale Cancer Center scientists have worked overtime to investigate topics like abnormal blood clotting, antibodies to the virus, and the mechanism of SARS-CoV-2 replication and pathogenesis, as well as the unique reactions of patients with cancer to COVID-19. What they are learning has already changed the way doctors care for patients with coronavirus.

“I am so proud of what our research scientists and research staff have done. We are well suited to do this work. It’s just inspiring. The pivot to COVID-19 projects has been incredibly fast.”

— Dr. Charles Fuchs

“I am so proud of what our research scientists and research staff have done,” said Charles S. Fuchs, MD, MPH, Director of Yale Cancer Center and Physician-in-Chief of Smilow Cancer Hospital. “We were well suited to do this work,” he said. “It’s just inspiring.” The pivot to COVID-19 projects has been incredibly fast, he added.

For example, on the evening of Sunday, March 22, the National Cancer Institute (NCI) emailed Dr. Fuchs offering YCC researchers the chance to compete for additional funds. The catch: the application would be due that Friday, a stunningly fast deadline for a process that normally takes months.

A rapid grant competition was designed and announced Monday morning. By that Wednesday, Dr. Fuchs and Daniel DiMaio, MD, PhD, Waldemar Von Zedtwitz Professor of Genetics and Professor of Molecular Biophysics and Biochemistry and of Therapeutic Radiology and Deputy Director of Yale Cancer Center, had received thirty applications from YCC researchers. A quickly-assembled review panel spent Thursday reading and narrowing them down.

“By Friday morning we had a rank list,” Dr. DiMaio said. They nominated a study of antibodies to the coronavirus headed jointly by Aaron Ring, MD, PhD, Assistant Professor of Immunobiology, and Eric Meffre, PhD, Associate Professor of Immunobiology and of Medicine (Immunology). “Dr. Fuchs and I wrote a cover letter and sent the application to the NCI with about two minutes to spare on Friday afternoon.”

The project won YCC one of the coveted \$250,000 federal grants. “Everybody was very compliant and supportive, we all played well together, and it was a great outcome,” Dr. DiMaio said.

Early in the pandemic, physicians noticed that many COVID-19 patients develop coagulopathy, or abnormal blood clotting, a sometimes lethal complication. In a recent Grand Rounds presentation, hematologist Alfred Lee, MD, PhD, told participants about his team’s race to understand what drives COVID-19-associated coagulopathy, or CAC.

Patients who are hospitalized often receive routine preventive anticoagulation medications, explained Dr. Lee, who is an Associate Professor of Medicine (Hematology). Recognizing that patients with COVID-19 have an unusually high risk of developing blood clots, many institutions have adopted treatment guidelines calling for increased doses of anticoagulants than those typically used in patients without COVID-19. The Yale New Haven Health System (YNHHS) was one of the first in the country to adopt such an approach.

In studying the mechanism of CAC, Dr. Lee’s team spent weeks measuring clotting proteins and other factors in blood samples from COVID-19 patients, both those in the ICU and those in

regular hospital beds. Step by step, they found evidence that CAC involves processes that likely result from injury to the cells that line blood vessels, in addition to activation of platelets, and possibly a failure of the body’s usual brake on clotting.

The results were recently presented as a late-breaking oral abstract at this year’s European Hematology Association meeting. Dr. George Goshua, a first-year fellow in the Hematology and Medical Oncology Fellowship Program at Yale, gave the presentation.

Many questions about CAC remain and Dr. Lee’s team is continuing to investigate; these data led YNHHS’s critical care leaders to add aspirin, an antiplatelet medication, to COVID-19 ICU patients’ anticoagulation regimen, in addition to clinical trials of other drugs that may help to lessen the severity of the disease.

Exactly how infection with the novel coronavirus might lead to endothelial cell damage remains unclear, but it might directly invade them, as it does airway cells. Virologist Craig Wilen, MD, PhD, Assistant Professor of Laboratory Medicine and of Immunobiology, is working to understand that interaction. His lab dove into SARS-CoV-2 research early, synthesizing the virus’s infamous spike protein—the one that allows it to enter human cells—shortly after its genetic sequence went public in January.

Thanks to University support, Dr. Wilen was able to rapidly equip Yale’s Level 3 Biosafety lab to study the respiratory virus, stocking the facility with high-end imaging and drug-screening equipment and research basics like freezers and centrifuges.

Then began weeks of what Dr. Wilen calls “non-glamorous, but essential” work to determine how to wrangle the coronavirus in captivity. How best to grow it and to count up its numbers? What kinds of host cells did it multiply in? Finally came a key experiment: detecting which of eight airway cell types the virus likes best, and whether it tends to infect different cell types over time.

Dr. Wilen’s team set up a system that simulates lung cells’ interface between liquid and air, growing human bronchial cells on a filter. They added virus to the air side of the paper, allowing it to infect the cells. A few days later, they used a novel technique called single-cell RNA sequencing to measure the virus’s presence in each different cell. The lab of David van Dijk, PhD, Assistant Professor of Computer Science and Medicine (Cardiovascular Medicine), performed the computational analysis.

Drs. Wilen and van Dijk found that the virus first infects ciliated cells, which include long tail-like projections that move in unison to beat mucus and debris up and out of the lungs. The virus might be enabling its own persistence in the lungs by disrupting the way these protective cells function.

Dr. Wilen’s lab has also performed a genome-wide genetic screen to detect which host genes are essential for infection. Armed with these data, they’re exploring which drugs might target those gene products and potentially help control the infection. “It feels like the most powerful Excel spreadsheet I’ve ever had in my life,” Dr. Wilen exclaimed.

As of the end of May, YCC’s clinical trials are once more becoming available to new cancer patients. Those who are already enrolled will resume more active participation after a two-month period of remote treatment and monitoring.

But some patients with cancer at Yale—those hospitalized with COVID-19—have been able to supply researchers with invaluable information during the pandemic. That’s thanks to the IMPACT biorepository, which stores samples of bodily fluids, such as blood

protective antibodies, and characterizing immune cell receptors.

Among the people contributing samples to the IMPACT biorepository is a small but growing number of patients with cancer who have been diagnosed with COVID-19. Michael Chiorazzi, MD, PhD, and Roy S. Herbst, MD, PhD, are particularly interested in what their immune reactions may reveal about the virus.

They hope to answer two questions. First, what are the differences in course of illness and clinical outcomes with COVID-19 for the patients with and without cancer? Second, among patients with cancer, how do the therapies they are prescribed impact their immune responses and outcomes?

Patients with cancer may be in a unique position to help scientists unravel how the virus kills some of its sufferers. Because many are taking medications that suppress the immune system,

“These questions are acutely urgent so we can treat patients appropriately depending on what kind of demographic they come from. We’re learning in real time how patients are reacting to this virus.” — Dr. Akiko Iwasaki

and nasal swabs, from COVID-19 patients as well as from healthcare workers. These samples offer scientists like Akiko Iwasaki, PhD, the opportunity to map out the body’s changing immune response during a bout with the coronavirus.

Dr. Iwasaki, who is the Waldemar Von Zedtwitz Professor of Immunobiology and a Professor of Molecular, Cellular and Developmental Biology, is studying immune cells and immune proteins, including antibodies and cytokines. The goal is to understand how patient characteristics like age, sex, or chronic conditions like diabetes affect the immune response to SARS-CoV-2 infection over time.

“These questions are acutely urgent so we can treat patients appropriately depending on what kind of demographic they come from,” said Dr. Iwasaki. “We’re learning in real time how patients are reacting to this virus.”

She is also collaborating with other Yale researchers on a host of other studies on the immune response to SARS-CoV-2, such as developing antibody tests, understanding how the body generates

the way they react to the virus can offer insights into basic biological questions in a way that other patients may not be able to.

For example, many people who die of COVID-19 do so due to an immune overreaction called a “cytokine storm.” This phenomenon can also be a side effect of some cancer immunotherapy drugs. Yet immunotherapies can also result in enhanced immunity, raising the tantalizing possibility that they could be helpful in COVID-19.

“[Does] being on immunotherapy make you more likely to clear the virus and never develop symptoms? Or does it make you more likely, if you do develop symptoms, to have a worse course in the hospital?” Dr. Chiorazzi asked. Either scenario is plausible, he noted.

“Hopefully, we can better design a treatment for cancer patients based on what we find,” said Dr. Iwasaki, who is studying their immune responses in collaboration with Drs. Chiorazzi and Herbst. “It’s actually a really important cohort [of patients] to look into. Just imagine if one of these drug treatments used for cancer are actually beneficial in COVID-19.” ☀



PETER BAKER

A Gift of Sacrifice and Safety

At the beginning of March, Bonnie E. Gould Rothberg, MD, PhD, MPH, FACP, was looking forward to a well-deserved vacation—not an easy thing to plan as a physician and a mother of five. Her vacation plans were complicated, like most logistics in Dr. Gould Rothberg's busy life. She would take two weeks off from her role as an oncology hospitalist working at Smilow Cancer Hospital's Oncology Extended Care Clinic (ECC) to spend time with her family. "An oncology hospitalist is a new and evolving role across the country," explained Dr. Gould Rothberg. "It includes internists like myself and some oncologists who have a hankering for inpatient medicine and dedicate their practice to caring just for oncology patients requiring urgent or inpatient care." She and her husband, renowned entrepreneur Jonathan Rothberg, MS, MPhil, PhD, and three of their children would fly to the Bahamas for a week, then to France to ski, with a stopover to visit their college-aged son doing a semester abroad in London. From London, Bonnie would return to Connecticut, while Jonathan would continue on to Monte

**Bonnie E. Gould Rothberg,
MD, PhD, MPH, FACP**

Carlo where he was to receive an award from His Serene Highness, Prince Albert of Monaco.

But by March 4, two days before they were set to leave, reports of COVID-19 cases overtaking Europe were coming in. "I was nervous to see that there were 30 cases near the ski resort we'd booked in France, so I cancelled that part of our trip," said Dr. Gould Rothberg. Nevertheless, on March 6, they got on their flight, landing in the Bahamas to chilly weather and more bad news. "Every day there was an email from the hospital, first saying that medical personnel who were abroad should return to the U.S., then warning that they might have to be quarantined when they did return," recalled Dr. Gould Rothberg. The world news was equally dire. "We were glued to Twitter and CNN, hearing stories about not enough Personal Protective Equipment (PPE) for doctors and nurses in Italy, in China," explained Dr. Gould Rothberg. "We were worried what would happen with colleagues in the Yale community."

Dr. Gould Rothberg knew the vital importance of PPE, particularly in caring for those with compromised immune systems, like the patients seen in the ECC. "In pre-COVID times, if you suspect a cancer patient has the flu, you put a mask on before you go into the exam room, then replace it with a new mask before seeing the next patient, because you don't want to risk getting anyone sick," she explained. "Now, with COVID, PPE is treated with more respect."

The Rothbergs would soon decide to do what they could to help keep everyone in the Yale New Haven Health System safe, by donating a gift of \$2 million to the Yale School of Medicine, a portion of which was directed to provide funding to ensure hospital staff had adequate PPE, and a portion for COVID-19-related research. "We wanted to be sure the people we cared

about would be protected to do their work, essentially, the work of tireless heroes," said Dr. Gould Rothberg.

Meanwhile, back in the Bahamas, supposedly on vacation, Dr. Gould Rothberg was having what she calls a "knee-jerk response" to return to her oncology patients. "I had to get on that plane," she recalled. "I said to my family, 'My shift starts at the ECC on March 25. The last thing I want is to have to call in sick because I'm quarantining after my vacation.'" One thing that influenced her decision was reading the stories coming out of Italy, where dermatologists and pathologists were on the frontlines caring for COVID patients. "I am a board-certified internist, doing hospital medicine, which is exactly the skillset needed to manage COVID patients. To not be there would have been socially irresponsible."

By March 15, Dr. Gould Rothberg was back to doing 12-hour shifts in the ECC. Then, on March 27, with COVID-19 cases in Connecticut rising, she received news she wasn't expecting. Because the medicine house staff had been assigned to care for those with COVID-19, there was a gap in overnight coverage for the Smilow Cancer Hospital oncology patients requiring inpatient care. "I was asked if I'd be willing to do overnight shifts there," said Dr. Gould Rothberg.

Since March 28, Dr. Gould Rothberg has been covering the night shift, four nights a week. "I'm back to living like I did in college, with dishes piling up in the sink and eating cereal for dinner. But it's the best thing I've ever done in medicine."

It may also be the toughest thing she has ever done. For one thing, Dr. Gould Rothberg has not seen her husband or children since hugging them goodbye on March 10th. "I don't want to transmit the virus to our family," she said. The kids—all five of them—hunkered down with their father on

their boat off the coast of Georgia, while Dr. Gould Rothberg is holding down the fort at home. "It's been difficult at times," she explained. "It's just me and four walls. Mother's Day was especially bittersweet with all five of my children, including my adult children who don't gather often, all together but not with me. Celebrating by Zoom was just not the same."

On her off-days, she takes walks with her new puppy, gardens, and does video calls with her family. Yet, she also says there is nothing she would rather do than show up for Smilow Cancer Hospital's patients at 6:30 pm, ready for the night shift. "It's the new reality," she said. Once she arrives, she gets the lowdown on her patients, then cares for them for the next twelve hours, after which she joins morning rounds to introduce patients she admitted and update the team on overnight events.

As unwavering as the routine has been, it can also be "unnerving," she said. "We have to be very careful at the hospital, even on our designated COVID-free Smilow service." The fact that no visitors are allowed during the pandemic also presents challenges. It can be difficult keeping patients' family members informed about a loved one's condition via phone or video screen. "It's especially tough when we have to make hard decisions about a patient's care, and the family hasn't been able to see what's happening first-hand."

One thing that has been enormously reassuring: "We have what we need to be able to provide hands-on care," said Dr. Gould Rothberg. And as tough as it has been not to be with her family, Dr. Gould Rothberg says she has "no regrets" about leaving them behind. "Cancer doesn't care if there's a pandemic. We can't forget about these patients, especially now. We need to make sure that there's a safe space for them here." ☐



A Silver Lining for Support Groups

Following a diagnosis of cancer, feelings of isolation, helplessness, anxiety and/or depression can be overwhelming. Support groups have long been a popular option for patients and families in need of reassurance; a safe place to share experiences and concerns with others who are going through a similar experience. However, with the arrival of COVID-19 and its subsequent quarantine, public gatherings came to a halt, temporarily discontinuing support groups at Smilow Cancer Hospital. Support groups are a weekly option to offer solace and support for individuals with cancer.

With more than 20 support groups throughout Smilow Cancer Hospital's Network, nearly 200 group members would be impacted by the COVID-19 quarantine. And with no opportunity to visit the hospital for supportive care services and loss of socialization with other patients, it was critical to get the groups up and running as soon as possible in some capacity. Virtual technology began to take shape across the hospital. Primarily used for department or team meetings, the technology was embraced by many including Bonnie Indeck, LCSW, Manager of Oncology Social Work and

The Cancer Caregivers Support Group, designed for family members and friends of patients, has seen its attendance double since its meetings shifted to a virtual setting. For Susan, a member whose adult child was recently diagnosed with brain cancer, being able to join from her home in Illinois has been a godsend.

her team of social workers.

"The transition to audio conferences and virtual meetings has gone surprisingly well," she said. Bonnie was originally due to retire in April after a 39-year career at Yale New Haven Hospital, but extended her stay for more than a month to help with the transition of social work to a virtual care model. She was instrumental in laying the groundwork for the rapid shift to virtual meetings. Bonnie noted, "Some of our groups turned right away to audio conferences, while others adopted Zoom as their method of communication. It's just been terrific, as patients and their families need more support right now versus less."

Halley Robinson, LCSW, leader of the Lung Cancer Support Group, was initially skeptical. "I was worried attendance might drop off and about our patients' ability to adapt to a new structure, because it was otherwise such a close-knit group. We only recently shifted from conference calls to using Zoom, and I have been pleasantly surprised and impressed with the resiliency of our members throughout it all. It has been wonderful for all of us to maintain that connection and has offered access to others who were unable to participate in the past due to one reason or another."

Dawn Chamberlaine, a two-time lung

cancer survivor, is one of Halley's regular attendees. She commented, "While I miss the reassurance of having our meetings at Smilow and looking around the room to see how people are doing, our group has translated successfully to Zoom. Ultimately, the number one thing we give each other is hope and being a source of support for each other. No one knows what it (cancer) feels like, but in our meetings, everyone knows."

The Cancer Caregivers Support Group, designed for family members and friends of patients, has seen its attendance double since its meetings shifted to a virtual setting. For Susan, a member whose adult child was recently diagnosed

with brain cancer, being able to join from her home in Illinois has been a godsend. "My child lives in New Haven and I live outside Chicago, and when I flew in for his brain surgery, by chance I was able to join a meeting in person as he recovered.

The members listened to me, were there for me, and shared resources I could not access anywhere else." Now that Susan has returned home to Illinois, she can continue to participate in meetings and receive the support she has been unable to find locally.

Sustaining the face-to-face connections between members has been an underestimated benefit of the virtual

Zoom meetings. Mary Strauss, LCSW, leader of the Cancer Caregivers, Head and Neck Cancers, and the Circle of Hope Support Groups, and co-leader of the Prostate Cancer group, explained, "our Prostate Cancer group meets twice a month and since the meetings are now virtual, it has been so well-received that our members do their own Zoom meetings on the weeks in-between our meetings, just so they can keep in touch."

Overall, Mary notes that member enthusiasm has been high, attendance across her groups has increased, and she has several new members joining who now live out-of-state. "Virtual meetings have widened our outreach abilities."

Looking ahead to when the quarantine is lifted, it is anticipated that a hybrid form of support groups will continue with a return to in-person meetings, but with a Zoom option.

"It is very reassuring to me to know our team of social workers and our members are in a good place. It has been an exciting development for our patients and their at-home support teams to have the continuity of care and support through technology," said Bonnie. "Crises like this encourage growth, and the overwhelmingly positive feedback we have received has been a wonderful silver lining." ☐



Honors

July 2019-December 31, 2019

Nita Ahuja, MD, MBA, Jorge Galán, DVM, PhD, Akiko Iwasaki, PhD, and David G. Schatz, PhD, were elected to the National Academy of Medicine.

Marcus Bosenberg, MD, PhD, and Aaron Ring, MD, PhD, were awarded a \$3.8 million grant from the National Cancer Institute to develop a new cytokine-based immunotherapy for melanoma.

Peter Tattersall, PhD, received a two year R21 grant from the National Cancer Institute for \$400,000 in funding to pursue studies on Armed Oncolytic Parvoviral Vectors for Modulating the Tumor Microenvironment.

Ranjit Bindra, MD, PhD, and Patricia LoRusso, DO, received a grant from the Rising Tide Foundation for \$450,000 to support funding for biomarkers for their phase I clinical trial testing olaparib against IDH1/2-mutant cancers.

The National Academy of Inventors (NAI) has named **Rong Fan, PhD**, as one of the Spring 2019 NAI Senior Members.

Jun Deng, PhD, was awarded a big data research grant from the National Science Foundation/National Institutes of Health. The award is \$750,000 over three years, and began on August 1, 2019.

Stand Up To Cancer and the Society for Immunotherapy of Cancer awarded **Dr. Yang Liu** one of five Convergence Scholar Fellowship Awards.

Jason Cai, PhD, was awarded an Exploratory/Development R21 grant from the National Institutes of Health (NIH).

Lajos Pusztai, MD, DPhil, was awarded a Susan G. Komen Leadership Grant.

Debra Brandt, DO, was selected as one of 12 oncologists nationwide to participate in the 2020-21 ASCO Education Scholars Program.

Nina Kadan-Lottick, MD, was awarded a U01 Collaborative Research Grant through the National Cancer Institute Moonshot Implementation Improving Outcomes for Pediatric, Adolescent and Young Adult Cancer Survivors.

Lynn Savic, MD, received a Radiological Society of North America Trainee Research Prize for her work on Novel Molecular Imaging Biomarkers for Immune Response to Liver Cancer Therapy.

Peter Glazer, MD, PhD, and W. Mark Saltzman, PhD, received a new grant in collaboration with colleagues at Carnegie Mellon University from the National Institutes of Health's Somatic Cell Genome Editing (SCGE) Program.

Laura Morrison, MD, was elected to the Board of Directors for the American Academy of Hospice and Palliative Medicine (AAHPM).

Caroline Johnson, PhD, received the Metabolomics Association of North America 2019 Young Investigator Award for excellence in metabolomics work by early-career scientists.

Don Nguyen, PhD was awarded a renewal to his R01 from the National Institutes of Health to study mechanisms of lung cancer lineage heterogeneity and metastasis.

Through a newly funded T32 training program led by principal investigators **Roy S. Herbst, MD, PhD**, and **Liping Chen, MD, PhD**, the Yale Cancer Center Advanced Training Program for physician-scientists was funded by the NIH.

Valentina Greco, PhD, received a NIH Director's Pioneer Award and **Mandar Deepak Muzumdar, MD**, and **Noah Palm, PhD**, each received an NIH Director's New Innovator Award through the NIH High-Risk, High-Reward Research Program.

Generosity

July 2019 – January 2020

\$1,000,000 +

Anonymous

\$500,000 - \$99,999

Anonymous

AstraZeneca Pharmaceuticals
The Breast Cancer Research Foundation
Mr. Louis & Mrs. Debra Chenevert
The Frederick A. DeLuca Foundation
Susan G. Komen for the Cure
Yale New Haven Hospital Auxiliary

\$100,000 - \$499,999

American Association for
Cancer Research, Inc

The American Cancer Society Inc.

Jeremiah M. Bogert

Connecticut Cancer Foundation, Inc.

Connecticut Innovations, Inc.

CureSearch for Children's Cancer

Doris Duke Charitable Foundation

Fidelity Charitable Gift Fund

Mr. Jonathan & Mrs. Mindy Gray

Diane Heller

Susan and Aaron Hollander

John and Amy Johnson

Paul K. Kelly

Sigrid A. Klein

Robert E. Leet & Clara Guthrie Patterson Trust

The Lovemark Foundation

Roslyn Meyer

Quidditch Foundation

Gerald K. Reen

Charles H. Revson Foundation

Rising Tide Foundation

The William O. Seery Foundation

C. G. Swebilius Trust

Stephanie S. Williams

\$50,000 - \$99,999

Anonymous

Raymond and Pamela Benn

William L. Bernhard

The Honorable Tina Brozman Fdn
The Community Foundation for
Greater New Haven

Edward P Evans Foundation

Stuart M. Johnson

Leukemia & Lymphoma Society
The Melissa Marottoli Hogan Fdn

New England Brewing Company
Mr. George & Mrs. Sandra Schussel
Mary D. Starr

\$25,000 - \$49,999

Lucille Alderman

All American Waste, LLC

American Society for Radiation Oncology

Anonymous (2)

City of West Haven, Breast Cancer Awareness Program

John P. de Neufville

FREEPLAY

Martin J. Juliano

Marc Lustgarten Pancreatic Cancer Fdn

Joseph D. Morris

Richard and Sheila Schlesinger

St. Baldrick's Foundation

Stony Creek Brewery, LLC

Westbrook B.P.O Elks #1784

\$10,000 - \$24,999

Anonymous (4)

Alan and Joan Berlin

Bristol-Myers Squibb Company

Cohen's Bagel Company

Susan Cugliari

Don's Hat Rack



Smilow Cancer Hospital Care Center at Westerly

CENTER AT A GLANCE

- A patient-centered focus on exceptional cancer care
- 13 staff members; oncology board certified clinicians
- Medical Oncology, including chemotherapy and infusion treatments
- Hematology services, available for patients with any type of cancerous and non-cancerous disorders affecting the blood, lymph nodes, and bone marrow
- Radiation Oncology, provided by Yale Cancer Center physician specialists
- Genetic testing, including genomic profiling of certain cancers
- Clinical trials, available only through Yale Cancer Center
- Lab and Pharmacy services on site for the convenience of our patients
- Access to supportive care clinicians, including an oncology nurse coordinator, social workers, a dietitian, clinical research staff, palliative care, and survivorship planning

WESTERLY HOSPITAL
25 Wells Street, 2nd Floor
Westerly, RI 02891
Phone: (401) 656-4950

Robert Legare, MD
Rebecca Vanasse-Passas, MD

"The Smilow Cancer Hospital Care Center in Westerly brings Smilow quality care to our patients in Rhode Island, providing them access to a National Cancer Institute-designated Comprehensive Cancer Center and its innovative care and clinical advances. We continually coordinate with our colleagues in New Haven to ensure all treatment options are reviewed through multidisciplinary tumor boards, and each patient receives personalized cancer care."

— Dr. Robert Legare
Medical Director



meet the physician

Kevin G. Billingsley, MD, MBA

Chief Medical Officer | Professor of Surgery

You joined us in January, and quickly pivoted your role to oversee a transition of cancer care during COVID-19. What have been some of the greatest challenges? Rewards?

The impact of COVID-19 and sudden influx of patients to Yale New Haven Health in March created an immediate space challenge for cancer care. Smilow Cancer Hospital was built with the foresight of negative pressure space, creating the ideal environment for COVID-19 care. This challenged us to move our cancer patients to another location, leaving Smilow for COVID-19 care, and ensuring our cancer treatment and care was in a COVID-free environment. Our nursing leadership and staff did this with brilliance, moving three floors of inpatients to our Saint Raphael Campus in 36 hours, and later coordinating the move of three ambulatory units with the same multidisciplinary care that makes Smilow special.

Through these transitions, I quickly learned how deep and interconnected the Yale New Haven Health System is and how adaptable our clinicians and staff are. There is an enormous capacity for change, and we now know that we can answer the call for change quickly. I am so gratified to work with some of the most compassionate cancer care professionals in the world at Smilow. Their good cheer, resilience, stamina, and dedication helped us all to rally through. Smilow is a welcoming, but complex organization and through the pandemic I got to know many people quickly, some of whom it would otherwise have taken much longer to get to know.

As we begin to look ahead, what new practice have we implemented and will continue to use at Smilow and our Care Centers?

Cancer care is not elective and treatment has continued throughout the pandemic. Implementation of Telehealth has been a heroic lift on the part of our IT team and a 333% increase in Telehealth visits over two months resulted. Moving forward, we will absolutely leverage Telehealth. The availability of video appointments helps our patients gain more control over their lives, and provides us with an even greater ability to tailor patient care to their clinical status and preferences.

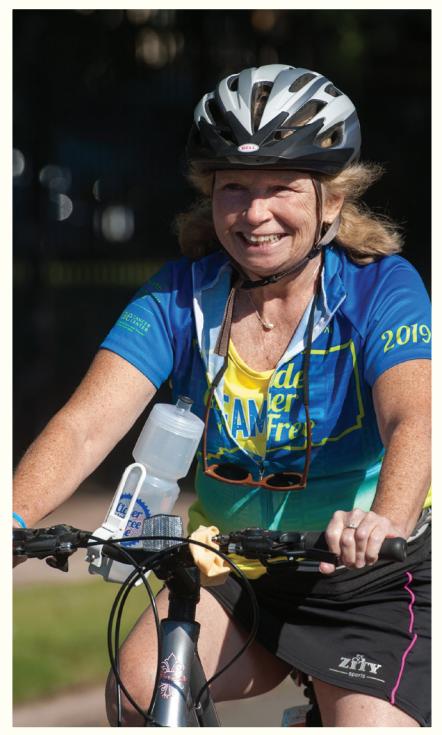
With the help of our nursing leadership, we also created the Smilow Rapid Evaluation Clinic to initiate a pathway to quickly and safely assess and test cancer patients with fever and other symptoms. This Clinic will likely continue to be a valuable resource for our patients while COVID infection remains a risk.

Your focus on surgical treatment for patients with gastrointestinal cancers allows for collaboration. How does the multidisciplinary team unite to benefit your patients?

Clinical care remains central to my work, and a passion that I bring to my role as Chief Medical Officer. The opportunity to bring direct observations from patient care to leadership helps to ensure that the planning that we're doing is effectively improving our care for patients and optimizing the working environment for our caregivers.

As a surgeon focused on metastatic cancer in the liver, all of my clinical care is team-based. The surgical cases I do are often dependent on prior response to chemotherapy and closely aligned with medical oncology. We are also privileged to have a world-class team of interventional radiologists, who are delivering amazing results with liver regeneration to maintain and improve function post-surgery. Our Liver Cancer Tumor Board meets weekly, and our multidisciplinary team dynamics are strengthened with each patient we care for together.

WE RIDE APART SO WE CAN ALWAYS BE TOGETHER



While public health concerns will prevent us from gathering together in person on September 12 for the 2020 Closer to Free Ride presented by Bank of America, we will still unite from wherever we are to deliver the hope, love, and support that Smilow Cancer Hospital and Yale Cancer Center need. From the moment you register for our redesigned 2020 event, you will be part of our Closer to Free Ride community and will still be able to show your support.

