

FALL 2020

MSKNews

MEMORIAL SLOAN KETTERING CANCER CENTER

Changing the Game

MSK's Adolescent and Young Adult program is ensuring young patients get the best care.



Memorial Sloan Kettering
Cancer Center

Patient Danielle Leventhal, age 26.
Photo: Alex Leventhal

SCIENCE NEVER STOPS:

MSK Researchers Featured at ASCO and AACR Meetings

Two of the biggest cancer research conferences of 2020 — put on by the American Society of Clinical Oncology (ASCO) and the American Association for Cancer Research (AACR) — featured several Memorial Sloan Kettering experts presenting new research. These findings included an assessment of Medicaid expansion on cancer mortality rates and research connecting early-onset cancer with inherited gene mutations in young adults. In response to restrictions put on large gatherings during the COVID-19 pandemic, both conferences moved to an entirely virtual format for the first time. Nearly 43,000 people from 138 countries attended the three-day ASCO conference in May, and a total of 73,000 attendees, representing 127 countries, joined the two-part AACR annual meeting held in April and June.

Medicaid and Cancer Mortality Rates

At ASCO, MSK proton therapy fellow Anna Lee and radiation oncologist Fumiko Chino presented findings from their study on the effects of Medicaid expansion on cancer mortality rates after the passage of the Affordable Care Act (ACA) in 2010. They found that the 27 states (and the District of Columbia) that expanded Medicaid saw fewer cancer deaths than the 23 that did not.

“In the United States, there are 1.8 million new cancer diagnoses every year. Cancer is a healthcare-amenable

condition, meaning that access to healthcare is expected to improve survival outcomes,” says Dr. Lee. “We wanted to study if there was an additional cancer mortality benefit for residents of states that expanded Medicaid under the ACA, compared to those that did not.”

Senior study author Dr. Chino says that in 2017 alone there were an estimated 785 fewer cancer deaths in states with expanded Medicaid. “We estimate that an additional 589 cancer deaths could have been prevented in nonexpanded states had they expanded Medicaid.”

New Research on Gene Mutations

At the AACR meeting, MSK medical oncologist Zsofia Stadler presented research showing that young people with cancer are more likely to have cancers caused by inherited mutations than older people with cancer.

Dr. Stadler says that cancers typically seen in older adults — breast, colon, pancreatic, kidney, prostate, and ovarian — are extremely rare in people age 18 to 39 and are classified as early onset. In her study, 21 percent of people in that early-onset group had an inherited genetic mutation. This means that they were born with the mutation and that it appears in every cell of the body. It also means the mutation was passed down from a parent, and other family members are likely to have it as well.

“In the United States, there are 1.8 million new cancer diagnoses every year. Cancer is a healthcare-amenable condition, meaning that access to healthcare is expected to improve survival outcomes.”

— Anna Lee

In another group of young adults with cancers more typical of their age group, just 13 percent had an inherited genetic mutation. These cancers include sarcoma, testicular cancer, and brain cancer.

These results have important implications for the treatment of young people with early-onset cancers, their long-term follow-up care, and genetic testing and counseling of family members, says Dr. Stadler. •

Turn to page 19 to read about the awards and honors given to MSK researchers during the AACR meeting.

ROBBINS FAMILY AWARDS RECOGNIZE NURSING EXCELLENCE

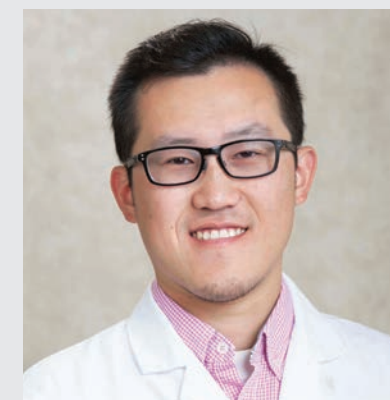
In May, seven nursing staff members were honored with a Robbins Family Award for Nursing Excellence. It was the first year that the awards were sponsored by the Robbins Family Foundation, established by longtime MSK Board member Clifton S. Robbins and his family. The award winners were nominated by fellow nurses, administrators, doctors, and patients. “Nurses at MSK have much to be proud of and grateful for,” says Elizabeth McCormick, Chief Nursing Officer. She credits “unwavering support from hospital leadership, which consistently empowers us to deliver high-quality nursing services and to achieve our professional aspirations.” •



Excellence in Patient Care Support
Joseph Kesselbrenner
Senior Systems Analyst, Nursing Quality Management



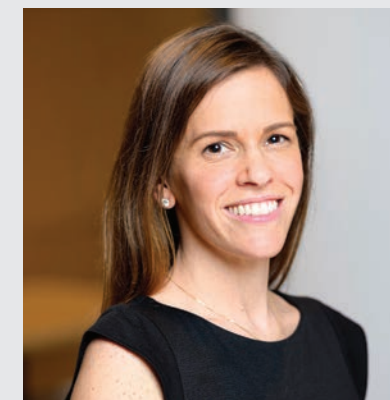
Excellence in Nursing Leadership
Andrea Smith
Nurse Leader, Outpatient Nursing Services, Evelyn H. Lauder Breast Center



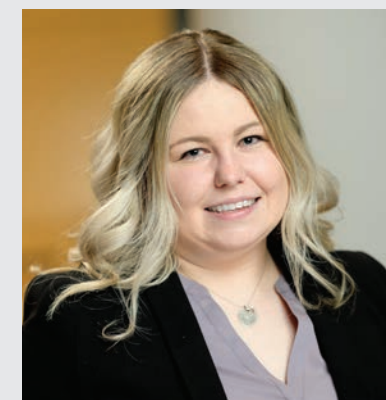
Excellence in Advanced Nursing Practice
Leon Chen
Nurse Practitioner, Critical Care, Intensive Care Unit



Excellence in Nursing Practice
Jessica Agostini
Clinical Nurse IV, Perioperative Nursing Services, Josie Robertson Surgery Center



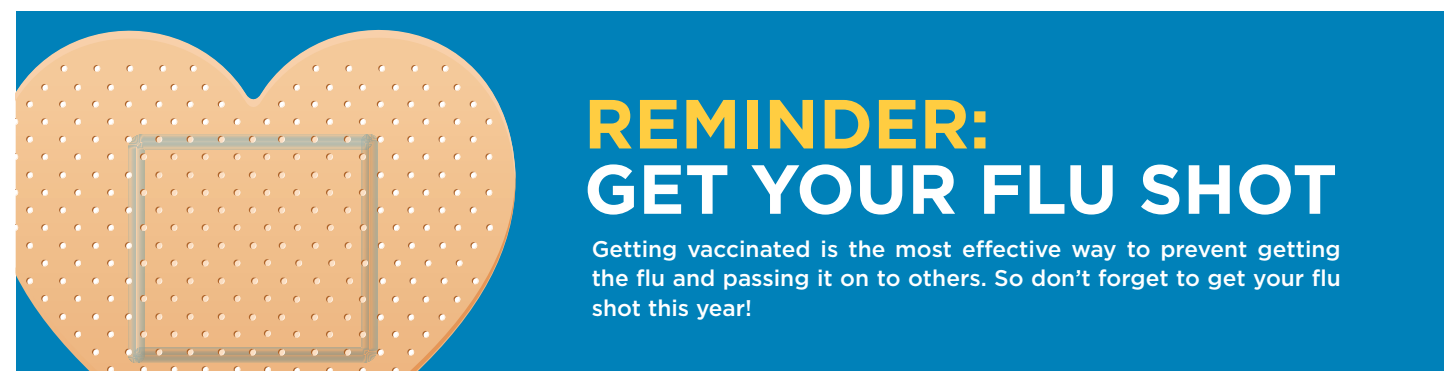
Excellence in Nursing Education
Jennifer Fox
Clinical Nurse IV, Outpatient Nursing Services, David H. Koch Center for Cancer Care at Memorial Sloan Kettering Cancer Center



Excellence in Clinical Trials Nursing
Meghan Salcedo
Clinical Trials Nurse IV, Outpatient Nursing Services, Myeloma Service



Excellence in Nursing Research
Kristen Fessele
Senior Nurse Scientist, Nursing Research, Office of Nursing Research



**REMINDER:
GET YOUR FLU SHOT**

Getting vaccinated is the most effective way to prevent getting the flu and passing it on to others. So don't forget to get your flu shot this year!

The Path Ahead

MSK didn't pause during the response to COVID-19. Instead, doctors, nurses, and researchers got creative.



PhD candidate Laura Menocal made sure necessary work at the lab kept going in the face of COVID-19.

“It felt like watching a terrifying storm moving toward us in slow motion.”

That is how Memorial Sloan Kettering lymphoma doctor Matthew Matasar describes watching the COVID-19 pandemic unfold.

MSK doctors, researchers, and staff never wavered in their commitment to continue to provide care for people with cancer, even as much of the world stood paralyzed.

The story of that response has important lessons about resilience and creativity, as well as insights into what lies ahead in the new normal as the threat from the virus persists.

Getting Testing Right

Infectious disease expert Monika Shah says it was unnerving that so little was known about COVID-19 in March.

“In medicine,” she says, “we’re used to practicing in an evidence-based fashion, meaning that we rely on data and prior experience. But there was no evidence for us. We had to gather our

own data and learn from our own experiences as we went along, even as we worked to help keep people safe.”

Like many hospitals, MSK faced possible shortages of testing supplies. To increase efficiency, MSK developed its own system to test for the virus. “I remember coming in one weekend and we started to put together a plan to ramp up testing,” says Dr. Shah. “Very quickly we went from doctors like me ordering individual tests to a system that could get a test for any patient or any one of our thousands of employees.”

The new system worked well and also helped streamline the organization. “I have a patient who has been coming to MSK for more than 25 years,” says Dr. Shah. “He lives in a Brooklyn neighborhood that had a high rate of COVID-19. When he grew concerned about some symptoms, I had him come in for testing.”

The man tested positive for COVID-19 but did not need to be hospitalized. “He was amazed by how

well organized everything was, from the time he called us, to the separate screening area where he was tested, to the phone calls he received to ensure he was recovering appropriately,” says Dr. Shah.

Care Closer to Home

MSK’s regional care locations have been crucial for patient care during the pandemic.

“I’m so grateful that MSK invested in our regional care network,” says Dr. Matasar, who is the Medical Site Director at MSK Bergen. “The overwhelming preference of patients is to get the care they need closer to home, especially if they live outside New York City. We never closed MSK Bergen or any of our regional locations across New York and New Jersey, and that’s so important.”

MSK also brought care right into people’s homes, thanks to a massive scaling up of telemedicine visits, when doctors and patients see and talk to one another using computers or smartphones. By late June, two out of

every three outpatient appointments were telemedicine visits. “People have been talking about telemedicine in cancer care for a long time,” says Dr. Matasar, “but in a ‘wouldn’t that be cool’ kind of way, as if it’s something out of a *Star Trek* episode.”

Medical oncologist Nitya Raj says replacing office visits with telemedicine has been transformative. “Going forward,” she says, “telemedicine is really going to make medicine better for doctors, nurses, and especially patients and their families who won’t have to travel to get great MSK care.”

The Research Lens

As doctors and nurses adapted for patient care, MSK’s researchers responded to the COVID-19 pandemic with their own creativity and determination.

In March, researchers organized the Laboratory Emergency Task Force to identify and facilitate the complex logistics required to pause research across MSK.

Laura Menocal, a PhD student who works in the lab of Andrea Schietinger, joined a team that checked in on Sloan Kettering Institute labs, even at the height of the pandemic. “Once or twice a week, I came into the lab alone and stayed for an hour or two to take care of things that were absolutely necessary,”



“A lot of other cancer centers had to pause research during their initial COVID-19 response,” says medical oncologist Matthew Matasar. At MSK, many clinical trials were able to continue.

Ms. Menocal says. Her efforts meant colleagues could avoid exposure to COVID-19. Ms. Menocal knew all too well how dangerous the virus could be: “My cousin, a doctor in Mexico, died of COVID-19. Of course, it was a very difficult time for me both personally and professionally.”

Because of the dedication of researchers like Ms. Menocal, MSK’s labs have resumed their work. “It was very smooth picking up my work again,” she says. “I’m very excited about what’s ahead in cancer research because we are making so many important discoveries.”

The Future of Clinical Trials

Clinical trials are a vitally important part of cancer research, as they investigate possible new therapies. “A lot of other

cancer centers had to pause research during their initial COVID-19 response,” notes Dr. Matasar. “However, MSK kept many of our clinical trials going because we know for some patients, that’s the very best type of cancer care.”

To continue the trials and stay on schedule, MSK relied in part on telemedicine, which until the COVID-19 pandemic was virtually unheard of in clinical trials. For the first time, many patients receiving novel therapies were no longer heading into their doctor’s office but instead were comfortable at home. “Our goal was to have people come to see us only when they were actually receiving treatment and do checkups through telemedicine,” explains Dr. Raj.

For some clinical trial patients, providing treatment required extra ingenuity. “A colleague told me about an MSK clinical trial patient from Latin America who had to fly into New York City regularly for treatment,” says Dr. Matasar. “During the pandemic, MSK figured out how to fly the investigational drug to the patient and had it administered by a local oncologist there.”

That kind of commitment sets MSK’s care apart. “We’ve heard often to never waste a crisis. And MSK learned a lot from this one,” says Dr. Matasar. “From testing to patient care and clinical trials, when we look back at what we’ve done and how we’ve improved, we’re going to be shocked and proud of what we’ve accomplished.” ●



Ms. Menocal with Hector Alejandro Trigueros Menocal, her cousin and a surgeon in Mexico who specialized in oncology and female reproductive health. Dr. Trigueros Menocal died after contracting COVID-19 when treating patients in Veracruz. Photo: Marta Menocal

Bridging the Gap

Recognizing the unique needs of adolescents and young adults treated at MSK

Tyler Wong's girlfriend first sensed something was off.

In April 2020, the couple was cuddling at home when girlfriend Joanhy felt a lump in Tyler's belly. Tyler felt it too. Thinking it could be a hernia, Joanhy asked the urologist she works for to examine Tyler. The doctor determined that it wasn't a hernia and ordered more tests. Fearing it was something serious, Joanhy called Memorial Sloan Kettering. That's when Tyler's journey to diagnosis and treatment began.

Tyler, 25, of Bayside, New York, credits Joanhy with getting him to MSK. "She spearheaded everything," he says.

Tyler was diagnosed with desmoplastic small round tumor, a rare form of sarcoma that often strikes boys and men between the ages of 10 and 30. "I had just finished school and started an apprenticeship as an electrician with Local Union 3," he recalls. "My life had just started, and the diagnosis put everything on hold."

The uncertainties that came with a life turned upside down were very unsettling. But at MSK, Tyler found answers — and hope. He met Emily Sarro, a nurse practitioner in MSK's Adolescent and Young Adult (AYA@MSK) program who would help coordinate his care. In addition to explaining his treatment, which would include chemotherapy, immunotherapy, surgery, and likely radiation, Ms. Sarro told him about the wide variety of resources that he could take part in through AYA@MSK. Tyler knew he was in good hands. His interest was piqued when Ms. Sarro mentioned MSK's Integrative Medicine Service. He already liked doing yoga and tai chi and was ready to give meditation a shot.

"Tyler was appreciative that people sat down to get to know him," Ms. Sarro says. "He was eager to get the best care and to get started."

Setting Out to Save Lives

Broadly, the survival rate for children with cancer has increased greatly in the past three decades. But for adolescents and young adults, there hasn't been as much progress.

Paul Meyers, Chief of the Sarcoma Service in Pediatrics and Vice Chair for Academic Affairs, notes that there are key biological differences between these groups of patients and across cancers that are not yet understood.

"The most common form of leukemia in children is acute lymphocytic leukemia, which currently has a 90 percent cure rate," says Dr. Meyers. "The adolescent and young adult population more commonly has acute myeloid leukemia, which is a harder disease to treat and has seen far less progress." For sarcomas, according to Dr. Meyers, older age can often mean a worse prognosis.

But one thing holds true: MSK experts are committed to driving change and improving the outlook for adolescents and young adults.

William Tap, Chief of MSK's Sarcoma Medical Oncology Service, and Julia Glade Bender, Vice Chair for Clinical Research in the Department of Pediatrics, are leading the mission forward.

"When I came to MSK, my priorities were to close the gap between pediatric and adult patients and to improve the experience for people in this age range," says Dr. Glade Bender. She is internationally known for the development of new treatments for pediatric solid tumors.

"When I came to MSK, my priorities were to close the gap between pediatric and adult patients and to improve the experience for people in this age range."

— Julia Glade Bender

Dr. Tap has spent ten years at MSK, making important discoveries to propel new treatments for adolescents and young adults with sarcoma. He says an approach to care must also be geared specifically toward these patients. "There are unique stressors in this age group that medicine does not fully understand or address properly," he says. "Our goal is to provide well-rounded care that addresses their needs beyond medicine."

The program unites experts across 16 specialties, including medicine, surgery, social work, sexual health, and survivorship. The goal is simple: provide the best care for MSK patients ages 15 to 39.

The Right Care at the Right Time

When she was 22, Danielle Leventhal noticed a pain in her left shoulder and chest that made it hard for her to breathe. An avid runner, Danielle was also having trouble keeping up with her father when they'd go jogging.

When the pain got more intense, the Westchester, New York, artist had a chest X-ray that showed a large mass. She then had a biopsy at a local hospital. It took weeks until she was diagnosed with pleomorphic liposarcoma in 2017; by that time, a softball-sized tumor was wrapped around her aorta and pushing on her heart and lungs. She had major surgery at another hospital, but since then Dr. Tap has overseen all of her cancer care — chemotherapy, radiation, and more.

AYA@MSK
is uniquely positioned to help patients like Danielle.

Danielle Leventhal received a bachelor of fine arts in painting with a second major in art history from the Sam Fox School of Design and Visual Arts at Washington University in St. Louis.

Adolescents and young adults with cancer often receive delayed diagnoses and present with more-advanced disease, according to Dr. Glade Bender. Because cancer is very rare in this age group, patients may not think much of their symptoms, and local doctors may not suspect cancer because they see so few cases across their careers — or even none at all. And without expertise in this area, there's also a gap in meeting their supportive needs, which could lead to worse outcomes for this vulnerable population, says Dr. Tap.

At Danielle's first meeting with AYA@MSK, Ms. Sarro asked Danielle's mom to step out of the room so she

could speak with Danielle one-on-one. Danielle was grateful to have some private time with Ms. Sarro because she felt she had the opportunity to ask more of the hard-hitting questions with someone she related to. She wanted to learn as much as she could about her own long-term health and often didn't have time to ask questions at her clinic visits, which were more focused on her disease and its current treatment.

"Danielle's involvement in AYA@MSK has empowered her to be her own advocate and take charge of her treatment," says Dr. Tap. "It has also helped her family allow Danielle to grow and become more independent while still

being a significant part of this journey."

This commitment is not unusual. Adolescents and young adults who come to MSK often participate fully in their own care, says John Healey, Chief of MSK's Orthopaedic Service.

"Our patients take an active role in getting well again and staying healthy," he says. He's proud of the resilience he sees in them. "It's just like when your child graduates or gets married. Helping these people find their way is hugely gratifying."

After surgery, proton therapy, and chemotherapy, Danielle's cancer went into remission. Unfortunately, it has returned twice. But at MSK, Danielle had more options and is now on a new

chemotherapy regimen that has shown success in sarcoma tumors.

“Her involvement in AYA@MSK very much prepared her to tackle the next phase of her disease and its treatments,” Dr. Tap says.

Beyond Traditional Care

Cancer is tough, no matter the age. But adolescents and young adults face a whole host of unique challenges.

“Adolescent and young adult patients are much less likely to have alternative sources of financial support if they cannot work, and cancer treatment usually makes it impossible to continue working,” says Dr. Meyers. “They also are used to being on their own and typically have much less family support, which makes sticking to treatment difficult.”

Less family support can also mean that these young patients may experience depression, anxiety, and post-traumatic stress disorder, according to Alexandra Russo, a clinical social worker who is integral to the AYA@MSK care team.

Social workers provide age-appropriate counseling on how to handle life's transitions in the midst of the unthinkable. They can also make referrals to other MSK specialized services, like social-work-led support groups or experts in the sexual health and fertility programs.

“These patients in particular can feel a little lost, and their caregivers have their own needs as well,” says Ms. Russo. “But we offer support and resources to meet so many of their needs.”

Tyler agrees: “At MSK, it's not just about hitting the cancer with medicine.

“Danielle’s involvement in AYA@MSK has empowered her to be her own advocate and take charge of her treatment.”

— William Tap

Photo: Michael Prince

There's a well-rounded approach, and Emily's always just a phone call away.”

Philanthropy has been essential to the program's inception and growth. A generous donation from the Kristen Ann Carr Fund has been instrumental. The fund honors the memory of a sarcoma patient at MSK.

Teen Cancer America, a nonprofit founded by legendary rockers Roger Daltrey and Pete Townshend of The Who, helped found The Lounge, a gathering spot at Memorial Hospital where young patients can relax, hang out, and catch up with friends.

The Lounge typically hosts group events that bring the community closer together. “Activities can range from video game tournaments to comedy shows to self-care workshops,” says Teen and Young Adult (TYA) program coordinator Lindsay Richards. The TYA arm of the AYA@MSK program provides the support services that complement each

patient's medical care. “Working with teens and young adults is meaningful because I can give them the space to forget about their challenges for a while,” says Ms. Richards.

But even before the COVID-19 pandemic made in-person socializing impossible, the TYA staff knew that a physical space was not enough for today's youth. They helped develop The Lounge app, a secure place where MSK's teen and young adult patients can connect with one another online.

Looking Ahead

AYA@MSK has big plans for the future: Program leaders regularly ask for feedback from patients to better respond to their needs, and the group has increased telemedicine appointments, which are clicking with today's tech-savvy youth.

The future is bright for new treatments too. At MSK, there are now clinical trials just for adolescents and young adults with sarcoma — though these trials are still a rarity. These trials will help standardize care approaches for patients around the world.

But MSK doctors and researchers aren't making advances on their own. It requires a united effort to move the needle and improve survival rates for teens and young adults with cancer.

“We already collaborate with the Dana-Farber Cancer Institute, and we've established collaborative efforts with Dutch colleagues at the Netherlands Cancer Institute and the Radboud University Medical Center. It's very easy to join forces; everyone just wants to help,” Dr. Tap says.

“The seed has been planted,” adds Dr. Glade Bender. “And the cool thing will be to watch it grow.” ●



MSK Interview

8 Questions with Tomya Watt

Photo: Tamara Fleming Photography

Tomya Watt is Vice President of Talent Acquisition & Mobility and Chief Diversity Officer at Memorial Sloan Kettering. She's been with Human Resource's Talent and Acquisitions team since 2010. Her new role as Chief Diversity Officer began in 2019.

What drew you to talent acquisition originally?

When I finished my MBA, I was looking for roles that would suit my temperament. I am introverted, but I'm also social, and I like people. Starting with my days in banking, I was always looking for a connection to a mission or to people, but I never really found it. At MSK, I know that every job that my team helps to fill is touching a patient in some capacity. That gives me the connection that I didn't have in my other roles.

How do you see your role as Chief Diversity Officer?

Having someone in this role means that employees know they can air their concerns without fear of retribution. It's my duty to make sure that the organization hears these concerns, and that we're not just paying lip service — that we actually take action.

Has the job changed or intensified in 2020?

Yes. I'm having many more discussions with employees and with leaders around the organization. Leaders want to do the right thing when it comes to creating an inclusive and diverse environment, but they're not always sure how to do it. They come to me seeking advice on how to navigate this space in a meaningful way.

Is it overwhelming?

I'm a Black woman who is the mother of two young adult Black children, a daughter and a son. We each experience racism in our communities every day in some way — from microaggressions to overt racism. So let's just say it's challenging.

What do you hope MSK can accomplish, concretely, in supporting diversity and inclusion?

As an institution, we need to have policies and processes to ensure that all employees feel valued and respected. We need to see an increase in diverse representation among leadership, including on the Board. Leaders need to hold their teams accountable to move toward an antiracist environment. And for our patients, we need to increase the number of Black and brown patients who receive care here.

Were you surprised by anything that came up during the recent listening sessions with employees?

As a Black woman? No, absolutely not. I think some leaders in the organization may have been surprised, and that's why the listening sessions were crucial: Our leaders needed to start to understand these issues for themselves in order to be committed to the change

that needs to happen. Change has to start with leadership, and leadership in this organization is white.

Do you think we are at a pivotal moment in time when institutions will finally start dealing honestly with systemic racism?

If not now, I don't know that it will ever happen. Think about it: Eight minutes and 46 seconds — that's how long it took for that white police officer to kill George Floyd. If change doesn't happen now, then the message is that Black lives really don't matter. I am going to be relentless about trying to drive change in the organization.

Who inspires you?

My children and my niece and nephew inspire me. I want to leave the world a better place for them. Also, my mother is an inspiration. She was a plaintiff in the *Brown v. Board of Education* lawsuit in Charlottesville, Virginia, where she grew up. To think about all she went through, it just feels like I'm being pulled along by that history. She was part of this movement to provide opportunities for the children behind her. And now I'm in a similar place of wanting to do the same for the children in my family. I'm dually inspired by my past and my future. ●



Nurse practitioner Emily Sarro helps coordinate care for patients in MSK's Adolescent and Young Adult (AYA@MSK) program.

Personal Perspective

Memorial Sloan Kettering is committed to having conversations about discrimination, diversity, and inclusion, and creating change throughout the organization. Some of our colleagues shared their personal experiences and insights.

LOUIS VOIGT

*Associate Attending
Department of Anesthesiology & Critical Care Medicine, Department of Medicine
Chair, Ethics Committee*

“I was raised and went to medical school in Haiti and continued my training here in the United States.

Through many years at MSK, I’ve been struck by colleagues’ reaction to me — on the units, in the cafeteria, and many other places. I came to realize it’s because we don’t have many Black physicians, particularly Black male physicians.

As an institution, we need to create an environment that is truly diverse, both in the faculty and in the population we serve. I know that we provide such wonderful care, but too often Black and Hispanic folks and people of other races don’t have the opportunity to receive it.

Black and Hispanic patients combined are less than 15 percent of our patients. And yet, in New York City and the surrounding area, only 50 to 60 percent of the population is white, and the rest is Latinx, Black, Asian, and others. I’m not blaming MSK alone. But there is a lot that needs to be done in terms of creating services for people who should be coming to us at MSK. We should create a more ethical and equitable environment.”



MARIA CANCIO

*Pediatric Oncologist
Head of Clinical Operations, Stem Cell Transplantation
and Cellular Therapies
Department of Pediatrics*

“I grew up in a small town in Puerto Rico called Aguadilla. For generations, when my family has needed cancer care, we traveled to New York to Memorial Sloan Kettering. When I was asked to join MSK, I was proud to join its long tradition of excellence and innovation.

One of my favorite aspects of working in New York is having the opportunity to meet people from all over the world. Patient and staff diversity foster an enhanced academic environment, as creativity and discovery come when people with different skills, experiences, and points of view meet to solve complex problems. I love learning from patients and seeing the strong bonds they form with staff — especially when they find someone they can identify and really connect with.

Sometimes that connection is formed through a shared language. I experienced that with an unforgettable couple — we bonded as fellow Spanish speakers. They even asked me to be the matron of honor at their wedding. By continuing to weave together this quilt that represents our community, we strengthen MSK.”

Photo: Karsten Moran



RICHARD ELLIS

*Director, Regulatory Oversight & Product Development
Clinical Research Administration
Research and Technology Management*

“I’ve been at MSK for 21 years. I started as a session assistant, helping patients during visits, and advanced from there. For me, MSK is a wonderful place. I believe competence is valued, and I’ve had many advocates and mentors — often people who don’t look like me.

But MSK is not perfect, and it’s not immune to the discrimination and systemic racism that are part of the national dialogue, especially after the killing of George Floyd. I believe there should be more people of color as patients and leaders here. And I’ve seen talented people of color leave MSK. Issues of inclusion may have played some part.

However, I’m an eternal optimist. I think there are many people at MSK whose hearts are in the right place and who recognize the richness that diversity adds and that it can make MSK even more successful. And I know from my own experience that there are leaders at MSK who are committed to making a difference. There will be soul-searching and sacrifices. But I believe that ultimately, we will come out of this time being a lot better.”

HOWAH HUNG

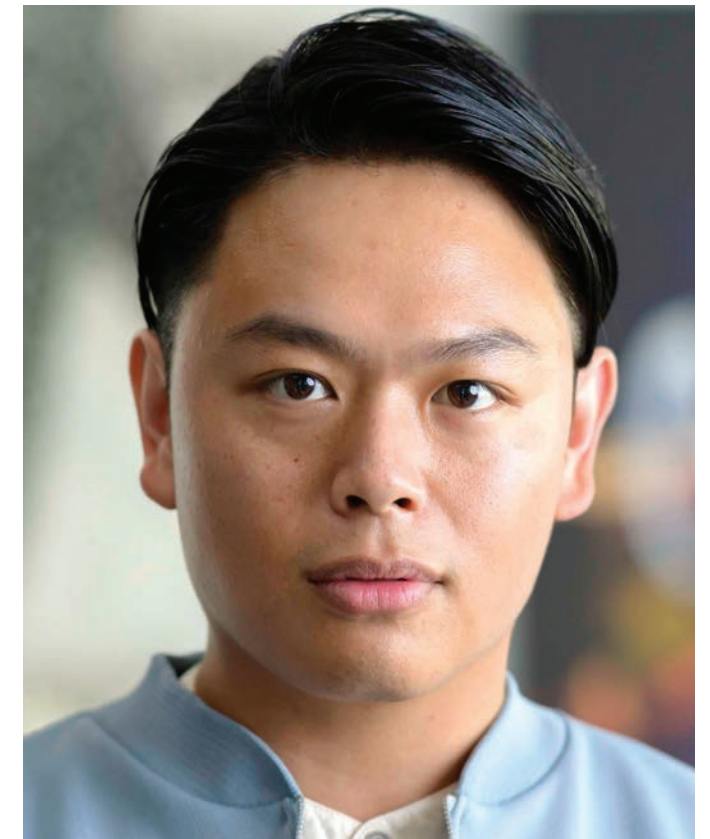
*Lead Assistant General Counsel,
Research and Technology Management*

“I would encourage people to remember all flavors of diversity: racial, ethnic, cultural, socioeconomic, gender, sexual orientation, and more. A person’s experiences with discrimination or tolerance can inform the way that person thinks and acts. For instance, I appreciate the welcoming environment at MSK, where I can proudly display candid photos of me and my husband. Previously, as a lawyer in private practice, I was hesitant to do things like that for fear of prejudice or castigation.

I identify as sexually fluid and as an American of Chinese descent; it’s good that diversity is top of mind these days. The Black Lives Matter movement is important because it encourages people to not tolerate discriminatory behavior, whether overt or passive, and it makes folks more vocal about identifying as allies.

I feel that there is not enough dialogue on what changes need to be made in society and the workplace to ensure that people of minority backgrounds feel comfortable and are able to overcome the biases they face. There needs to be more focus on action — not just awareness.

As one example in the LGBTQ space, an important issue we need to manage better is the proper care and treatment of our transgender patients as well as transgender staff.”



YADIRA ROSEMIN

Associate Director, Outpatient Operations,
MSK Ralph Lauren Center

“My mother is Puerto Rican and my father is Cuban. My ethnicity is a huge source of pride. It is rich in racial diversity and culture, but can also cause painful discrimination. I often wonder why we as humans tend to label other people and highlight differences instead of celebrating our similarities, even though we recognize that we all want the same thing — the best for ourselves and our loved ones. Perhaps it is the fear of the unknown.

Being the only nonwhite person in a meeting is common, and I wonder how that can be in 2020. Possibly because people reach out to colleagues that they have a relationship with, and those relationships are part of professional development and promotions. I don't think a white colleague would feel quite the same worry about belonging, and I would encourage people to be more welcoming and inviting to people of different backgrounds.

I moved recently from working in the Department of Neurosurgery to work at the MSK Ralph Lauren Center in Harlem. I live in Harlem, and the idea of serving my own community is very exciting. This also means I can spend more time with our three daughters. I want to make sure they have the opportunity to compete with anyone, at the highest standards, like we have at MSK.”



MAMADOU DIALLO

Security Guard II (Memorial Hospital), Facilities Management

“I came to America from Guinea, in Africa, 15 years ago and have worked at MSK for nine years. When a new employee is hired and joins MSK, I make their ID card. I get to meet all kinds of people.

The killing of George Floyd was a tragedy and made me upset. It was clear the people who did it didn't value human life. Just because someone has power does not mean they can kill a person like an animal.

I am Black and Muslim, and although I have not personally faced racism or discrimination, I think that the reason discrimination is such a problem in America is because people forget that everyone has a role to play in our society. Sometimes when people at MSK forget their ID cards, they say, 'Don't you know who I am?' I tell them, 'Yes, I know who you are, but there is a procedure we all have to follow.' Too many people think the rules don't apply to us all equally, but if you think of other people as part of the same team as you, you will treat them with respect.”



YAIHARA FORTIS SANTIAGO

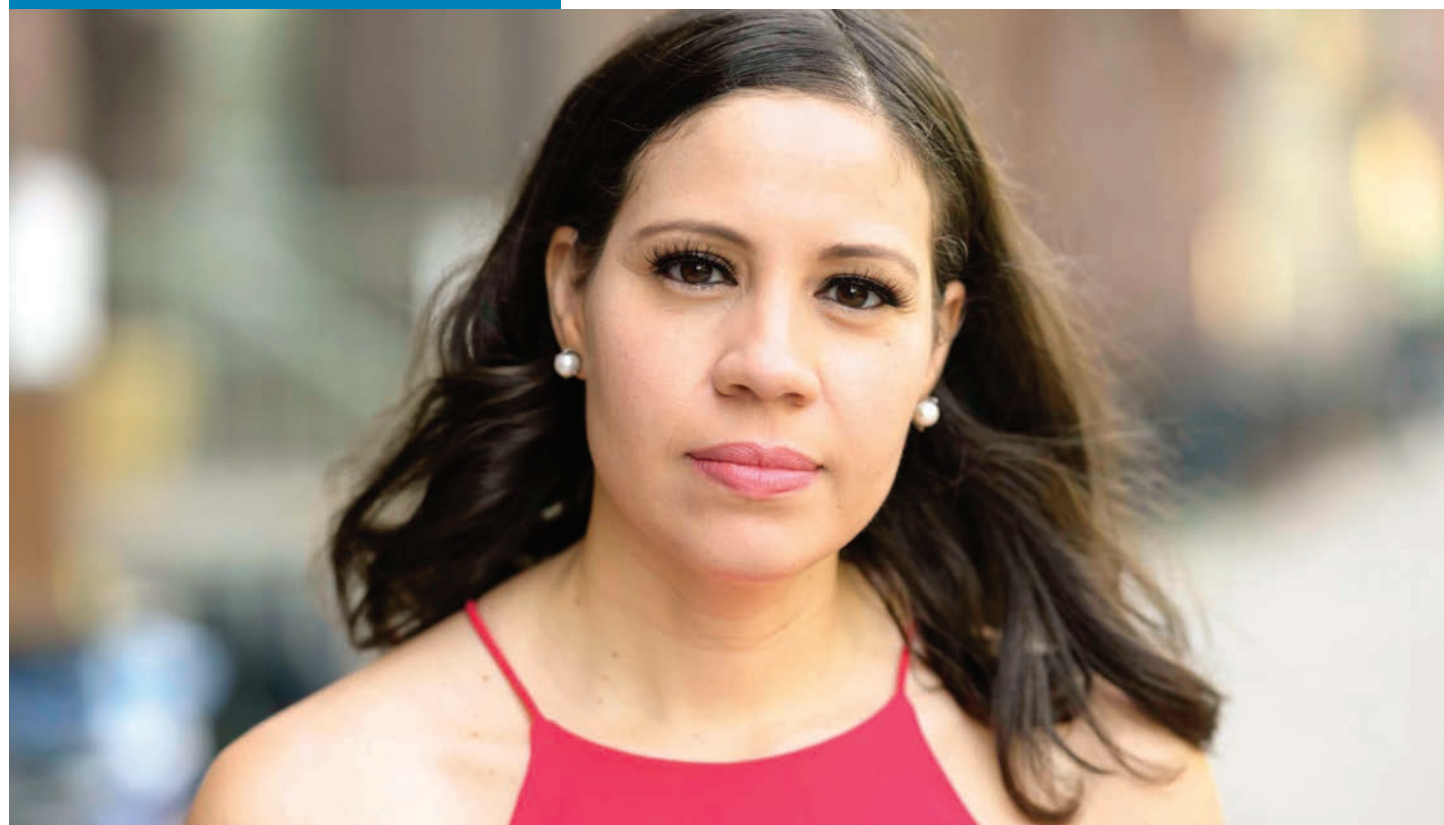
Associate Director, Office of Postdoctoral Affairs & Trainee
Diversity Initiatives, Sloan Kettering Institute

“I came from Puerto Rico to pursue my PhD in neuroscience, and I experienced the cultural shock of being a minority student. In Puerto Rico, I never had to think about how other people saw me when I entered a room. In the United States, I learned that students and scientists of color experience barriers. For me, one barrier was language, because English is not my first language, and I really struggled a lot in graduate school trying to be comfortable in a language that wasn't my own.

Barriers can make scientists who are Black, Latinx, Native American, or from another culture feel that they don't have a place and that they have to pretend to be something they are not. The reality is that we need different approaches, voices, and ideas to come to the best solution for a problem. That's particularly true in cancer care and the development of new technologies.

We all want to believe that science is a meritocracy system, where the best and the brightest are always going to succeed, no matter the color of their skin. But it doesn't work like that. There are systemic differences in resources and education.

I am committed to helping mentor and train scientists, particularly trainees of color. We need to help them develop the skills that will help them succeed.”



PATRICK SAMEDY

Associate Director, Quality and Safety Systems

“I grew up in New York City and the Long Island suburbs. The killing of George Floyd was painful. I'm not one to show much emotion, but I cried in front of my parents, wife, and children. Structures like the justice system — which are supposed to protect us — have very different outcomes for people like me. I think more people are understanding that racism is not a figment of anyone's imagination. Even in 2020, racism is very real.

My work at MSK involves measuring patient outcomes and quality of care. I feel my work is valued by leadership, which I'm happy about. However, people should understand how isolating it can be as a minority in the workplace. Are you free to speak up? Do you feel heard?

I'm hopeful the country becomes more tolerant. I have to be hopeful. I hope my sons — who are 2 and 5 — grow into adulthood in a time that's more sensitive and culturally aware. I'm also hopeful about MSK's commitment to being more diverse and helping underserved populations. As an analyst of data, I know we can measure these things and make sure we make progress. Our mission is global. Our outlook must be too.” •



Are you an MSK student, staff person, or faculty member who wants to share your story?
Get in touch at publicaffairs@mskcc.org.

Unmasking the Secrets of COVID-19

In March 2020, medical oncologist Santosha Vardhana was faced with a new challenge: Many of his patients with lymphoma were becoming infected with the COVID-19 virus. As he saw more cases, Dr. Vardhana noticed a troubling pattern begin to emerge. Patients were managing well through the initial stage of infection but then got progressively worse. Many of them suffered irreversible lung damage.

“The longer they were sick with COVID-19, the harder it was for the immune system to fight back at all,” says Dr. Vardhana, who also conducts research in the lab of Memorial Sloan Kettering President and CEO Craig B. Thompson. “There was a desperate need to find a way to help them get better.”

Dr. Vardhana wondered if people with lymphoma were especially susceptible to the virus. Lymphoma is a disease of the body’s immune system — it cripples the very thing that fights off an infection such as COVID-19.

He looked for clues in his patients’ blood tests. What he found was that while the cancer was suppressing one arm of the immune system, COVID-19 was depleting another part of it. This perfect storm is what was allowing the virus to persist, causing extreme damage to the lungs. Meanwhile, MSK immunologist and medical oncologist Jedd Wolchok was thinking about this problem and how it intersected with MSK’s long-term commitment to studying immunotherapy and immunology.

“We quickly began to strategize about how we could use our knowledge of the immune system and medicines that affected it to try and enhance the response to COVID-19,” Dr. Wolchok says.

The pair brainstormed and came up with an inspired solution: a drug called N-acetylcysteine, which is used to treat people with cystic fibrosis, a disorder of the lungs and digestive system. They thought that if the drug could help restore lung tissue in those patients, it might be able to help people with COVID-19 too.

They swiftly designed a clinical trial at MSK to test their theory.

“Everyone here worked together to get this trial going quickly, from the Institutional Review Board that approved the study to the nursing staff that learned how to administer the drug,” Dr. Vardhana says.

Today, MSK continues to play a crucial role in the global effort against



Medical oncologist Santosha Vardhana says a clinical trial “wouldn’t have happened this fast if MSK didn’t make it a priority due to an intense focus on COVID-19.”

COVID-19. Doctors and researchers from across the institution have drawn on their vast experience in fields from biology and immunology to chemistry and more to achieve one simple goal: learn how the virus affects the body so they can better care for patients.

Don’t Delay

As the pandemic surged in New York City in March, Drs. Vardhana and Wolchok were right to be concerned about their patients. Cancer therapies, especially chemotherapy, can lower a person’s immune defenses and make them susceptible to infections.

“For many of our patients, cancer care was suspended,” says MSK Chief Medical Epidemiologist Mini Kamboj. “And rightly so, given the uncertainty of the situation.”

But cancer care can’t wait. MSK doctors felt the urgency to get answers about COVID-19 and safely resume treatments as soon as possible.

“It was so palpable how little we knew in March going into April,” says Ying Taur, an infectious disease specialist. Colleagues at MSK and other institutions were phoning him for advice: When



“The course of disease and recovery is still not fully understood. We had to give patients time to make sure they didn’t go through another phase of illness,” says Chief Medical Epidemiologist Mini Kamboj.

would it be safe to have patients come in for treatment? With each call, he gave an honest answer: He didn’t know. But he also knew that wasn’t good enough.

Drs. Kamboj and Taur set out to get a clearer picture of the actual treatment risks. They launched a study looking at more than 400 MSK patients in active cancer treatment who were diagnosed with COVID-19 between March 10 and April 7. One key aspect of the research was that they followed the patients for 30 days after their COVID-19 treatment ended.

What they found was encouraging: For most adults, chemotherapy didn’t seem to make COVID-19 any worse.

“If you’re an oncologist and you’re trying to figure out whether to give patients chemotherapy, or if you have cancer, these findings should be very reassuring,” Dr. Taur says. “People should not delay cancer treatment.”

The study was published in June in *Nature Medicine*.

Drs. Kamboj and Taur caution that there are still some questions. There was some evidence in their research that people treated with checkpoint inhibitors (which work by releasing the brakes on the immune system to attack cancer) had an increased risk of severe breathing problems. There is

also a need for a deeper dive into patient outcomes for individual cancers.

Unique Expertise

A COVID-19 infection still is complicated for people with cancer. It can cause a wide range of symptoms, from fever to inflammation to difficulty breathing. But MSK doctors are tackling these problems by applying lessons already learned from addressing similar symptoms caused by cancer or its treatments.

“Our experience in caring for people with cancer — and in how the immune system behaves — has given us ideas for how to overcome some of these challenges,” Dr. Vardhana says.

It’s understood in the medical community that some of what makes COVID-19 so damaging to the body is not just the infection itself. An overzealous immune system is also to blame — it works too hard and starts damaging the body. MSK specialists are familiar with this phenomenon: They’ve seen it occur in some people who receive a type of immunotherapy called chimeric antigen receptor (CAR) T cell therapy.

CAR T cell therapy was pioneered at MSK, so doctors here are especially proficient at minimizing and treating an

“People should not delay cancer treatment [because of concerns about the virus].”

— Ying Taur



Andrew Kung says the findings of his recent study helped ease the fears of those concerned about COVID-19 infection in children with cancer.

Kids with Cancer Are Not at an Increased Risk of COVID-19 Infection In March and April, Andrew Kung led a study in MSK's Department of Pediatrics that provided great reassurance to people concerned about COVID-19 in children with cancer. He and his collaborators found that children with cancer are no more likely than other kids to be affected by COVID-19. The research, published in May in *JAMA Oncology*, was the first in the United States concerning COVID-19 in children with cancer.

"Despite some fears that children might be a reservoir of COVID-19 infection, we found that kids have lower rates of infection than adults," says Dr. Kung, Chair of the Department of Pediatrics.

The study came to another encouraging conclusion: If kids with cancer did become infected with COVID-19, they typically had only mild symptoms, did not have to be hospitalized, and were able to recover at home.

Dr. Kung says these findings allow for a sigh of relief: "This means we can continue lifesaving cancer therapy with standard precautions and safeguards but without heightened concern about adverse outcomes due to COVID-19 infection." •

extreme immune system response, even in the most severe cases.

"This expertise has helped enormously as we try to prevent similar damage in COVID-19 patients," says MSK medical oncologist Jae Park.

Blood cancer specialists Boglarka Gyurkocza and Ann Jakubowski are leading a new effort to tamp down the excessive immune response. They started a clinical trial at MSK that tests whether a drug called tocilizumab (Actemra®) can minimize damage to the lungs and other organs in COVID-19 patients. Tocilizumab is an immunosuppressive drug, meaning it slows down immune system activity and prevents it from going into overdrive. It is approved by the US Food and Drug Administration to treat several forms of arthritis.

"This drug targets a specific inflammatory molecule that is detected at high levels in people with COVID-19 infections," Dr. Gyurkocza says. "We think therapies like this, combined with other approaches that can enhance tissue repair or target the virus directly, could bring substantial improvements for patients."

Moving Forward

But what about a vaccine? That's the real hope for bringing COVID-19 under control.

As of mid-August, there were more than 130 publications related to COVID-19 from MSK researchers.

To develop a vaccine against COVID-19, the worldwide scientific community first needs a clear picture of how the immune system responds to the virus. That response is often understood through antibody testing.

To an average person, a COVID-19 antibody test tells them whether they previously had the virus. To a scientist, antibody test results tell a deeper story.

It's like the difference between looking solely at a baseball team's win-loss record, versus scrutinizing individual batting averages, home run totals, and strikeout rates in order to understand why the team didn't make the playoffs.

At MSK, physician-scientist Michael Glickman and structural biologist Christopher Lima are committed to that deeper story behind a COVID-19 antibody test. They work with MSK's Antibody & Bioresource Core Facility and Immune Monitoring Core Facility and started creating a COVID-19 antibody test in February.

Their test detects and measures three antibody types, one of which frequently blocks a virus from entering healthy cells. This is known as a neutralizing antibody. The most effective vaccines, such as those for polio and measles, stimulate the body to produce these types of antibodies, according to Dr. Glickman.

"A COVID-19 vaccine, when it's created, will likely work by causing the body to produce neutralizing antibodies, as well as other types of immunity," he says. "An antibody test like the one created by MSK could provide clues into what that effective response looks like."

When a virus like COVID-19 enters the human body, the immune system responds instantly, with no time to lose.

That, too, is how the MSK community reacted to COVID-19. •



SOCIETY ANNOUNCES 2019-2020 FUNDRAISING EFFORTS, LOOKS AHEAD TO 2020-2021 CAMPAIGN

The Society of Memorial Sloan Kettering announced that its 2019-2020 net fundraising efforts totaled more than \$5.6 million, which is consistent with recent years. Over the next year, the group expects to provide more than \$2.7 million in support of MSK's various research needs — specifically, in furthering the institution's pediatric precision medicine initiatives and providing funding for new ideas pursued by junior investigators and Sloan Kettering Institute researchers. Additionally, The Society's patient care initiatives totaled more than \$1.2 million; the largest portion of this budget benefits access to care as well as provides emergency financial assistance to patients in need.

The 2020-2021 Society Campaign will focus on supporting patient care, research, and education at MSK. "Now, more than ever, Society funding is needed to accelerate leading-edge research at MSK," says Kate Allen, President of The Society. She also notes the need to support MSK's patients when they are most vulnerable and to enable their access to MSK's standard-setting care: "The focus of our 2020-2021 campaign acknowledges the circumstances our patients and staff face and highlights how The Society is uniquely positioned to help." •

The Society of Memorial Sloan Kettering, founded in 1946, is a volunteer-led organization within MSK dedicated to promoting the well-being of patients, supporting cancer research, and providing public education on the early prevention, detection, and treatment of cancer.



YOUR IMPACT: MSK COVID-19 FUND

Nurse Lauren Shea was on the front lines of MSK's response to COVID-19.

The MSK COVID-19 Fund was established in April in response to the desire of so many in our community to help during the crisis. Thanks to more than 3,000 donors, Board members, and MSK employees, the fund has raised more than \$6.2 million — making a crucial difference for MSK patients and staff. Every gift is driving research and treatment forward, supporting our staff, and allowing MSK to continue providing exceptional care to our patients.

We're grateful for this outpouring of generosity and are proud to report on the impact of these donations across three funding areas.

Greatest Needs

As global demand for critical supplies accelerated, some prices for medical supplies rose to nearly 40 times their standard cost. Philanthropy helped MSK purchase personal protective equipment and other essentials needed to keep patients and staff safe. At the height of the crisis in New York City, MSK was

using record numbers of masks, gloves, gowns, and more.

Research and Innovation

Donors helped MSK quickly shift certain aspects of our research infrastructure in order to understand and combat COVID-19 in the context of our patients with cancer. Contributions also helped expand digital technology capabilities so that thousands of people could receive care at home through telemedicine, and hospitalized patients could stay connected to loved ones.

Employee Relief

MSK employees — our healthcare heroes — are living with many effects of the pandemic, including financial hardship. Donations have allowed more than 3,000 MSK staff members to receive grants for essential expenses. •

To learn how you can join the MSK Giving community and make an impact, visit giving.mskcc.org.

Use Your Donor-Advised Fund to Give to MSK

A donor-advised fund (DAF) is an increasingly popular method for charitable giving in the United States. It's easy: You make a tax-deductible donation to a single account. Later, you can choose to support MSK.

Already have a DAF? Support MSK today. Learn more: giving.mskcc.org/donor-advised-funds

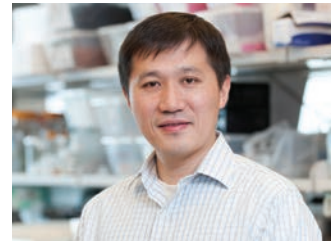
APPOINTMENTS AND PROMOTIONS



Sofia Haque
Neuroradiologist
Promoted to Clinical Member; Department of Radiology, Neuro-radiology Service



Atif Khan
Radiation Oncologist
Promoted to Member, Memorial Hospital; Department of Radiation Oncology, External Beam Radiotherapy Service; New Jersey (Central)



Minkui Luo
Chemical Biologist
Promoted to Member; Chemical Biology Program, Sloan Kettering Institute



Christine Mayr
Molecular and Cell Biologist
Promoted to Member; Cancer Biology & Genetics Program, Sloan Kettering Institute



Marius Mayerhoefer
Radiologist
Appointed as Member, Memorial Hospital; Department of Radiology, Body Imaging and Molecular Imaging and Therapy Services



Mark Melrose
Urgent Care Physician
Appointed as Associate Clinical Member; Department of Medicine, Urgent Care Service



Fei Ye
Clinical Scientist
Appointed as Member, Memorial Hospital; Department of Laboratory Medicine; Director, Assay Development



Craig Nolan
Neuro-Oncologist and Neurologist
Promoted to Clinical Member; Department of Neurology, Neurology and Brain Tumor Services



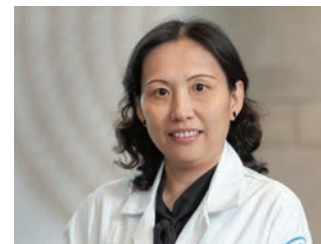
Krystyna Romaniuk
Urgent Care Physician
Appointed as Associate Clinical Member; Department of Medicine, Urgent Care Service



Michelle Steffers
Hospitalist
Appointed as Associate Clinical Member; Department of Medicine, Hospital Medicine Service



Quaid Morris
Computational Biologist
Appointed as Member; Computational & Systems Biology Program, Sloan Kettering Institute



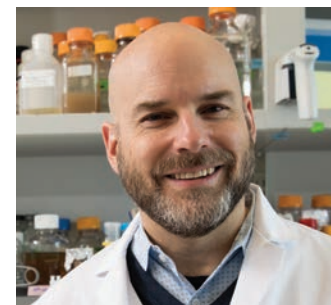
Honglei Zhang
Radiologist & Nuclear Medicine Physician
Appointed as Associate Clinical Member; Department of Radiology, Body Imaging and Molecular Imaging and Therapy Services

SCOTT KEENEY AND CHRISTOPHER LIMA ELECTED TO NATIONAL ACADEMY OF SCIENCES

In April, Scott Keeney and Christopher Lima were elected to the National Academy of Sciences.

Dr. Keeney (left), a member of the Molecular Biology Program and a Howard Hughes Medical Institute (HHMI) investigator, studies DNA double-strand breaks and the mechanisms of meiotic recombination.

Dr. Lima (right), Chair of the Structural Biology Program and an HHMI investigator, studies the macromolecules that carry out posttranslational protein modification and RNA processing. ●



INAUGURAL KRAVIS WISE AWARDS SUPPORT FEMALE SCIENTISTS

MSK has established the Marie-Josée Kravis Women in Science Endeavor (WiSE) to provide financial and professional support to scientists pursuing biomedical research at MSK, pledging its commitment to gender equity in science and paving the way for more women to become leaders in their field.



Graduate Fellowship Winner
Sahana Rao is a fourth-year PhD student in the Tri-Institutional Chemical Biology Program, a collaboration among Memorial Sloan Kettering, The Rockefeller University, and Weill Cornell Medicine.



Postdoctoral Fellowship Winner
Linde Miles, a postdoctoral fellow in MSK's Human Oncology and Pathogenesis Program, studies the genetics of blood cancers.



Postdoctoral Fellowship Winner
Mohita Tagore, a postdoctoral fellow in the Sloan Kettering Institute's Cancer Biology and Genetics Program, studies cell communication in cancer.

MSK KUDOS



Charles Sawyers (left) was named President-Elect of the American Association for Cancer Research Academy for 2020–21.

Cameron Brennan, Marc Ladanyi, Francisco Sanchez-Vega, and Nikolaus Schultz received the Team Science Award from the American Association for Cancer Research.

Luis Diaz, Jr. received the Waun Ki Hong Award for Outstanding Achievement in Translational and Clinical Cancer Research from the American Association for Cancer Research.

Jedd Wolchok received the American Association for Cancer Research-Joseph H. Burchenal Award for Outstanding Achievement in Clinical Cancer Research.

Janice Reid received the 2020 Community Service Award from the Caribbean American Nurses Association at the 32nd National Black Nurses Day Celebration held at New York University Langone Orthopedic Hospital in February.

Anthony Daniyan, Melody Smith, Daniel Prince, and Tracy-Ann Moo were named winners of the 2020 Internal Diversity Enhancement Award.

Marcel van den Brink was elected to the Royal Netherlands Academy of Arts and Sciences (Koninklijke Nederlandse Akademie van Wetenschappen, or KNAW).

Vinod Balachandran, Lydia Finley, and Andrea Schietinger were named 2020 Pershing Square Sohn Prize for Young Investigators in Cancer Research winners.

Cornelius Taabazuig was named to the list "100 Inspiring Black Scientists in America" by *Cell Mentor*.

Michael Zelefsky received a fellow designation from the American Society for Radiation Oncology.



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Performance Artists Bring MSK Patient Stories to Life

On June 18, Memorial Sloan Kettering streamed a special performance of stories written by MSK patients as part of the Visible Ink writing program. It was the 12th annual performance and the first presented virtually.

Visible Ink enables MSK patients, survivors, and caregivers to write on any topic in any form with the individual support of an experienced writing mentor. This year, writers focused on their experiences during the COVID-19 pandemic. The pieces, ranging from heartfelt to humorous, were read aloud by icons of Broadway, television, and film.

Daytime Emmy Award-winning actress Susan Lucci read patient Mary Shannon Little's sardonic "Dear Corona," an admiring letter from cancer to the virus, complimenting its deadlines but

warning that its time is short: "Enjoy fame and fear while it's yours [...] Something more lethal will always come along — like climate change. I think that guy's got legs."

Diane Baker, a Golden Globe- and Emmy Award-nominated actress, read "Lessons Learned" by Claire Harris Tunick about how living in quarantine reinforced the same lessons learned while dealing with cancer: the importance of friendships, love of family, and empathy. "All in all, I've learned that there is much to be gained from loss."

Visible Ink, supported solely by grants and donations, was founded in 2008 by the program's director, Judith Kelman. ●

[Learn more at giving.mskcc.org/visible-ink](https://giving.mskcc.org/visible-ink)

