

MOFFITT MOMENTUM[®]

Volume 8, Issue 1

A BETTER FUTURE

Optimizing transplant outcomes

VACCINES AND CANCER

As personalized as you can get

FOLLOWING THE LEADER

Patients celebrate family milestones



®

Leadership Message



Patrick Hwu, MD
President and CEO

Dear Friends,

We are pleased to share with you this issue of Moffitt Momentum. As you read the features you will see that everything we do leads back to the well-being of our patients.

Our quality patient care is closely tied to innovative and transformative research, education, prevention and especially access for all to the best standard of clinical care as well as access to the newest treatments through clinical trials.

Meet Stella Dellinger, who is continuing to fight her cancer and has been enrolled in multiple clinical trials over the last decade. She shares how she didn't even know what a trial was and how scared she was initially. Today she continues to educate Hispanic women about the importance of clinical trials.

We can learn much about various types of cancer and better ways to treat these diseases by making sure that clinical trials are designed for and offered to diverse populations with the aim of eliminating cancer health disparities. One such disparity is unequal access to transplant donations.

Moffitt's Blood and Marrow Transplant and Cellular Immunotherapy Program has received funding through an internal initiative to promote research that addresses the unmet needs of minority patients like Michael Signil. Michael shares how he needed a stem cell transplant to survive after

being diagnosed with non-Hodgkin lymphoma, but because of his race no match was available. He was able to receive a haploidentical transplant from his brother, but such matches come with risks.

Moffitt launched two clinical trials to improve the success of haploidentical transplants, and Michael is participating in the trial that aims to optimize the transplant chemotherapy regimen to reduce the risk of blood cancer recurrence after transplant. He has responded well and hopes his participation in the trial will also help others.

You will also meet two survivors of advanced melanoma, Kay Gann and Mike Potthoff, who credit the benefits of scientific research that led to innovative cures with their being alive today. Both of these patients share their stories and how they anticipate enjoying upcoming family milestones because of new treatments.

We hope you enjoy reading these and additional insightful stories that underscore Moffitt's mission to contribute to the prevention and cure of cancer by supporting and conducting scientific research leading to better treatments, our work to eliminate cancer health disparities, and our unwavering commitment to serving our patients.

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INCREASING DIVERSITY IN CLINICAL TRIALS

By Sara Bondell

With less than 10% of minority cancer patients enrolled in trials, Moffitt is working to break down barriers and increase access to care.

When Stella Dellinger was diagnosed with breast cancer in 2010, she was filled with an overwhelming fear of the unknown.

After a double mastectomy and chemotherapy, that dread struck again when her doctor said two words she had never heard before: clinical trial.

A clinical trial is a research study that tests how safe and effective a treatment is prior to federal approval. A native of Colombia, Dellinger says until that moment, she had no idea what a trial was.

“We are not educated about those things, that is the truth,” said Dellinger. “I was so scared because you don’t know anything about it and you don’t have anyone else to talk to who is in the same position.”

“I was so scared because you don’t know anything about it and you don’t have anyone else to talk to who is in the same position.”

Dellinger is not alone. Whether it is due to a lack of awareness or distrust of the medical community, minority patients are underrepresented in clinical trials. According to the Sidney Kimmel Comprehensive Cancer Center, less than 10% of cancer patients enrolled in clinical trials are racial or ethnic minorities. Between 2016 and 2018, 5.4% of Black patients and 8.7% of Hispanic patients were enrolled in any trial at Moffitt Cancer Center.

The lack of diversity in clinical trials can result in minority populations missing out on receiving treatment at early stages of disease or losing complete access to potentially life-saving treatment. So, Moffitt has made it a priority to identify ways to break down barriers and increase access to care for minority patients.



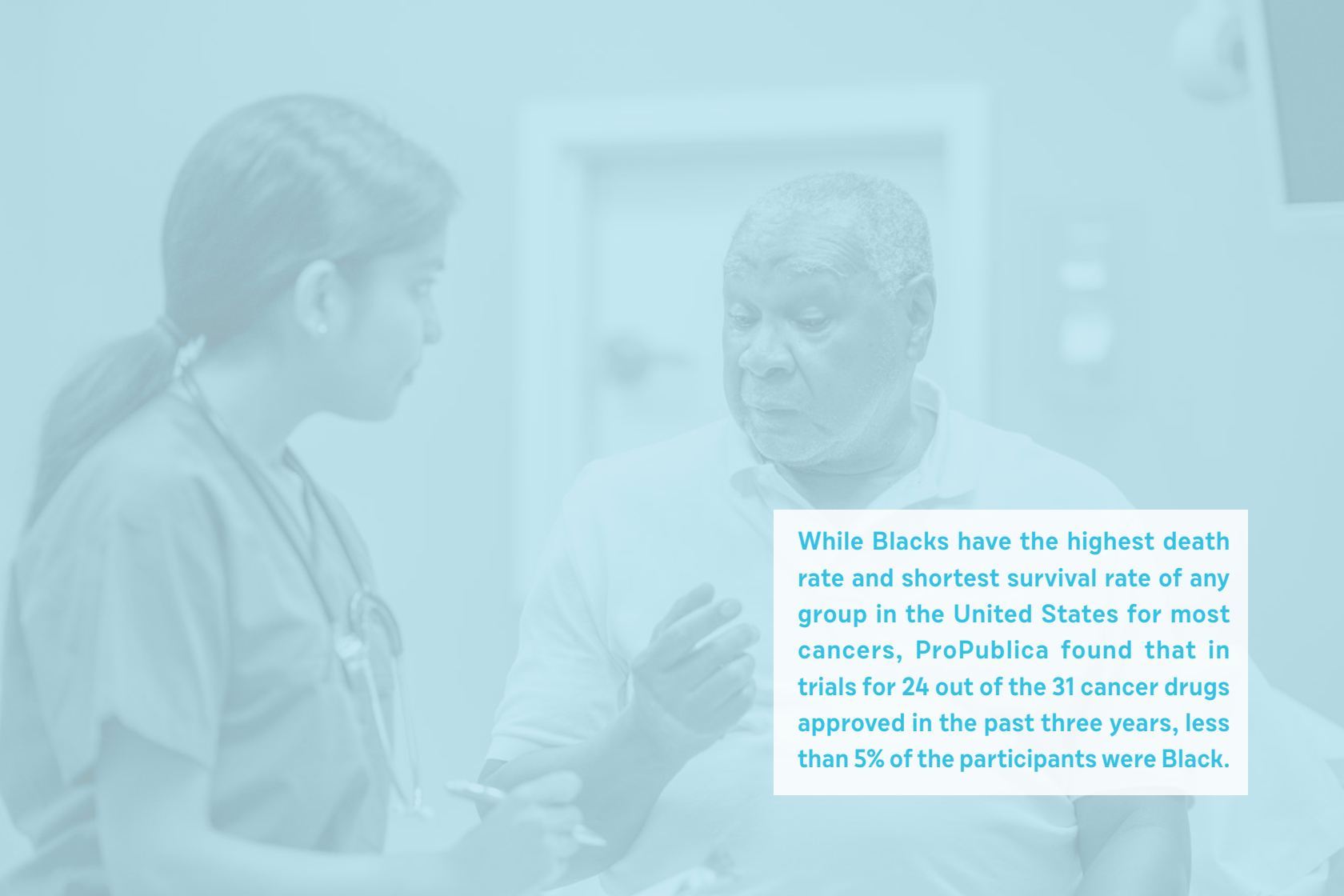
Stella Dellinger (center) helps educate other Hispanic women about the importance of clinical trials.

HISTORICAL ROOTS

When researchers stopped just looking at cancer under the microscope and started analyzing the genetic makeup of a tumor, everything changed. They realized each patient is an individual, and that your genes can impact your cancer and treatment response. Race and ethnicity play a key role in your genetic makeup.

“If your clinical trial predominately enrolls white men, then the data that you obtain from the trial may not be as informative regarding how the treatment will perform in let’s say females or minority populations,” said Hatem Soliman, MD, medical director of the Clinical Trials Office at Moffitt.

While Blacks have the highest death rate and shortest survival rate of any group in the United States for most cancers, ProPublica found that in trials for 24 out of the 31 cancer drugs approved in the past three years, less than 5% of the participants were Black.



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“If we don’t accrue diverse populations to trials the results are in turn less diverse,” said Jhanelle Gray, MD, chair of Moffitt’s Department of Thoracic Oncology. “Yet we take results and apply them across multiple diverse groups. This is a knowledge gap we need to overcome.”

To overcome the challenge, multiple barriers need to be broken down that contribute to health care disparities. For some, there are socioeconomic issues like transportation, childcare and lack of access to affordable insurance. For others, it’s mistrust that is deeply rooted in the nation’s history.

In 1932, the Public Health Service and the Tuskegee Institute launched a study to track the progression of syphilis in Black men. The study involved 600 Black men who were told they were being treated for “bad blood,” a term used to describe several different ailments. Not only had the men been misled and not given all the facts required to provide informed consent, but the men were also never given adequate treatment for their disease. Because of this, many died, went blind or experienced other severe health problems. The study was stopped in 1972 after an advisory panel concluded it was ethically unjustified.

“This has been difficult to overcome because you have the legacy of these historical events,” said Soliman. “Minority

patients still express distrust of medical establishments in some cases. You hear the phrase, ‘We don’t want to be used as guinea pigs.’ ”

The idea of fatalism can also be found in some minority communities. When someone is diagnosed with cancer, they can have the idea that things are in a higher power’s hands, and that despite medical intervention, whatever is going to happen will happen. It can be a powerful notion that keeps patients from enrolling in clinical trials.

“You hear the phrase, ‘We don’t want to be used as guinea pigs.’ ”

“I think understanding all of these sensitivities and nuances when you’re talking to patients is going to be critical to breaking down these barriers,” said Gray.

TAKING ACTION

Because there are multiple factors that cause health care disparities, there needs to be a multifactorial approach to fighting it. Moffitt’s main goal is to identify the differences

in health care delivery to minority populations and establish new ways to provide better outreach to those communities.

To help with that task, Moffitt created the Office of Community Outreach, Engagement and Equity in 2018. The office works to keep equity at the forefront of the cancer center’s research and sends outreach team members into the community to increase awareness on topics like screening and clinical trials.

“With the diverse communities that we serve, there is not a one-size-fits-all model and having people who reflect and understand the different groups that make up our diverse community builds respect and trust on both sides,” said Susan Vadaparampil, PhD, MPH, associate center director of the Office of Community Outreach, Engagement and Equity. This doesn’t just apply to race and ethnicity, but also to gender and age, HIV-positive patients and sexual and gender minorities.

When Trials and Navigation Educator Viviam Sifontes began doing outreach work in the Hispanic community, she saw firsthand the negative attitude toward trials and the immediate need for education. “There are cultural and historical barriers that exist that are very rooted into people’s minds and hearts in the Hispanic community,” she said. “I want them to know we’re not playing with human life.”

So, Sifontes started chipping away, one presentation, one patient at a time. She explains what a clinical trial is, dispels misconceptions and highlights medical regulations that promote accountability and transparency. She also relies on her own experiences to make connections (she survived lower intestinal cancer and has been enrolled in a clinical trial). This made all the difference for Dellinger when she met Sifontes at Latinas United for a New Beginning (LUNA), a support group for Hispanic breast cancer patients and survivors.

“Within minutes of meeting Viviam, we had an immediate connection,” said Dellinger. “That connection is so important.

She was someone who got to know me and guided me, which is what I needed because I was blind. I was just taking the word of the doctors, but now I had someone else who has gone through what I have.”

Sifontes says while recruitment is always challenging, things are slowly improving. “Now that we are doing personalized medicine I think people are more prone to listen and realize, OK, they are making a medication specifically for me. That opens the window of opportunity so hopefully we will see an increase in minority recruitment.”

“I want them to know we’re not playing with human life.”

Moffitt has also launched the RESPECT, or Reaching Out and Engaging Special Populations to Expand Clinical Trials, program. It focuses on bringing together providers, researchers, clinical trial coordinators and social workers to ensure every patient is educated about clinical trials and is offered an opportunity to enroll if possible.

The Thoracic Oncology Program has taken it upon itself to dig even deeper into building awareness thanks to TIDE, or Thoracic Honors Inclusion, Diversity and Equity. “It’s to help us all know that we have implicit bias and learn how to recognize it, deconstruct it within ourselves and make sure we don’t carry it to our colleagues, to the clinic, to our research or to our patients,” said Gray. The clinic also has established the Thoracic Minority Accrual Task Force that continually investigates patient accrual and brainstorms ways to partner on health care disparity initiatives and increase the diversity in clinical trials.

Moffitt’s Research Institute not only has a Minority Clinical Trials Committee, but has also tasked researchers with analyzing the center’s last 10 years of work in health care disparities to better



DR. HATEM SOLIMAN
Medical Director, Clinical Trials Office



DR. JHANELLE GRAY
Chair, Department of Thoracic Oncology



DR. SUSAN VADAPARAMPIL
Associate Center Director, Community Outreach, Engagement & Equity



VIVIAM SIFONTES
Trials and Navigation Educator

identify key areas that need new strategies and resources. The institute has also created an initiative to fund internal clinical trials geared specifically toward addressing the unmet needs of minority populations. It has led to groundbreaking research in both solid and liquid tumors, such as ways to optimize the mismatched bone marrow transplants that minority patients usually undergo (see accompanying story on next page).

“I think things are moving faster than they were 10 years ago,” said Gray. “I think the recent social unrest has brought a lot to light and really helped with the dialogue and understanding of where some of the disparities and discourse come from. The importance of focusing on this has become a little more tangible, visible and elevated.”

CULTURAL CHANGE

Dellinger is continuing to fight her cancer, and has been enrolled in multiple clinical trials over the last decade. Although she has moved out of the Tampa Bay area, she continues her work with LUNA and helps educate other Hispanic women about trials.

“When new members come into our group, we try and teach them about trials and find someone to talk to them who has been through a similar experience,” said Dellinger. “But more work needs to be done to educate minority communities.”

While some inroads have been made, clinicians and researchers agree there is a lot of work left to do to increase diversity in

clinical trials. It has become a top priority, but Moffitt isn’t starting from scratch.

“The good thing about Moffitt is that we started paying attention to this issue well over a decade ago and have been slowly building,” said Vadaparampil. “I think we are ahead of the game because we’ve been in the business of engaging our community from very early on.”

Moving forward, clinics pledge to be more vigilant about clinical trials to find appropriate ones for as many patients as possible. That means focusing on the patient’s unique needs, improving communication and continuing community outreach.

“I know we want to see big percentage increases in recruitment, but I feel like if we educate one person at a time, recruit one person at a time, that makes a difference,” said Sifontes. “That one makes you get up the next day and do it again.”

Behind the scenes, researchers are currently working on developing a matching software so patients don’t fall through the cracks.

No matter what the strategies are, the most important thing moving forward is sustainability.

“It can’t just be jumping on the bandwagon,” said Gray. “It has to be a cultural change. I believe at Moffitt we can collectively drive intentional change and meaningful advancements that are seen in our actions today and in the future.”



“I believe at Moffitt we can collectively drive intentional change and meaningful advancements that are seen in our actions today and in the future.”

FINDING THE MATCH

By Sara Bondell

Imagine being told you have blood cancer and need a stem cell transplant to save your life.



MICHAEL SIGNIL
Cancer Survivor

Photography: Jeremy Peplow

Now imagine being told the chances of finding a donor **ARE SLIM BECAUSE OF YOUR RACE.**

That's what happened to Michael Signil when he was diagnosed with non-Hodgkin lymphoma at age 30. While he was responding well to chemotherapy, a transplant was his only shot at a cure. But as a Black man, his chance of finding a donor on the national registry was low.

"It's discouraging to see that there was no match," said Signil. "I looked it up online, and if I didn't find a match and have the transplant, I could only survive about 10 more years with chemotherapy."

White donors dominate the National Marrow Donor Program. Whites of European descent have a 75% chance of finding an optimal donor, while Blacks have just a 16% chance. Hispanics and Latinos have about a 50% chance of finding a match.

Patients like Signil who can't find a match with a family member or unrelated donor can seek alternative donor types. One option is a haploidentical transplant, which comes from a related donor who is a half match.

This unequal access to donors on the bone marrow registry represents a major health care disparity. The Blood and Marrow Transplant and Cellular Immunotherapy Program at Moffitt Cancer Center has received funding through an internal initiative to promote research that addresses the unmet needs of minority populations to launch two clinical trials to improve the success of haploidentical transplants.

"We are hopeful that by optimizing the haploidentical transplant platform it brings us closer to where we are with fully matched transplant outcomes," said Nelli Bejanyan, MD, a medical oncologist in the program and the lead investigator in both studies.

The ultimate goal: Nearly every patient who needs a stem cell transplant will have a donor, regardless of race and ethnicity.

HALF MATCH

Many patients with blood cancers or disorders require allogeneic stem cell transplants, which involve transferring the stem cells from a healthy person into a patient's body after high-intensity chemotherapy and radiation. The donated stem cells can come from either a related or unrelated donor.

Human leukocyte antigen, or HLA, matching is used to match patients and donors for transplant. It's more complex than just matching blood type – it's more like a fingerprint – and the goal is to match 8/8 different HLA markers. Since HLA types are inherited, siblings sometimes make good matches. Each full sibling has a 25% chance of being a full match. As most patients have more than one sibling, approximately 30% of patients have at least one matched sibling. If a family member isn't a match, patients turn to the bone marrow registry.

While you can match with a donor from a different race, it is less likely. "There are many things that determine whether we can find a suitable donor, but one of the dominant issues is race and ethnicity," said Joseph Pidala, MD, PhD, a medical oncologist in Moffitt's Blood and Marrow Transplant and Cellular Immunotherapy Program.

When Signil was told he needed a transplant, the majority of his family members not only wanted to be tested to see if they were a match, but also donate to the registry. However, they couldn't find any donation centers in Signil's mother's native country of Bermuda.

"It seems like no Caribbean islands have access. No African countries have access," said his mother, Belinda Signil. "These are places with large minority populations and it feels like if you are Black or African American you are butted out."

If a family member or unrelated donor from the registry aren't an option, doctors look to other donor types to facilitate



Michael Signil's mother, Belinda Signil (left), was unable to find any donation centers in her native country of Bermuda.

Photography: Jeremy Peplow

"It was discouraging to see that there was no match."

"I looked it up online, and if I didn't find a match and have the transplant, I could only survive about 10 more years with chemotherapy."

stem cell transplant, including mismatched unrelated donors, umbilical cord blood or related haploidentical donors. "Racial and ethnic minorities have to rely on these often because they can't find that ideal fully matched unrelated donor," said Pidala.

Everyone is a half match with a parent, son or daughter, and there's a 50% chance a sibling is a half match, so haploidentical transplants drastically improve a chance for an appropriate match.

Signil's brother, Sean, and his father were both suitable half matches, but Sean was a better match because of his age. Sean not only donated enough stem cells for his brother's transplant, but also extra that can be frozen and used for Michael in the future if needed.

Historically, haploidentical transplants came with an increased risk for graft-versus-host disease (GVHD), where the immune cells from the donor attack the patient's healthy tissues.

However, in the early 2000s oncologists developed a new GVHD prevention approach using a chemotherapy agent called cyclophosphamide. When given after a haploidentical transplant, this treatment reduces the chance of GVHD.

While this new chemotherapy regimen made the risk for GVHD after a haploidentical transplant comparable to that of a matched donor transplant, haploidentical transplants can still carry a slightly higher risk of cancer recurrence.

“Minorities suffer the most because they don’t have enough options available in terms of donors and then their outcomes are not as good,” said Bejanyan.



Photography: Jeremy Peplow

‘FIND THE SWEET SPOT’

The first haploidentical transplant trial focuses on reducing the risk of GVHD. The standard protocol for haploidentical transplants includes a cocktail of chemotherapy and immune blocking medicines to prevent GVHD. One of those drugs, tacrolimus, can cause harsh side effects such as kidney damage and tremors.

Moffitt’s study switched tacrolimus with a different immunosuppressive drug called sirolimus. Almost 60% of those enrolled on the trial were minority patients, and not only did they experience fewer side effects, but also the new drug combination resulted in a decrease in the risk of GVHD from 40% to the historical benchmark of 20%.

The results are so promising that Moffitt now uses the new GVHD prevention regimen as the standard platform for all haploidentical transplants.

“The trial impacted patients. It clearly provided benefits in terms of preventing GVHD, but it also clearly provided minority patients access to timely stem cell transplant,” said Pidala.

Michael is enrolled in the second haploidentical transplant trial, which aims to optimize the transplant chemotherapy regimen to reduce the risk of blood cancer recurrence after transplant.

“I thought this trial was my best shot at beating this thing,” he said. “If I did the safe route, maybe it wouldn’t have worked. This was my Hail Mary pass, going for the gold.”

Prior to transplant, patients undergo what is called conditioning chemotherapy, which includes two drugs combined with radiation.

“The risk of blood cancer recurrence depends very strongly on the chemotherapy given prior to the transplant,” said Hany Elmariah, MD, a medical oncologist in the Blood and Marrow Transplant and Cellular Immunotherapy Program and lead investigator of the trial. More intense chemotherapy results in a low risk of relapse, but a high risk of toxicity and mortality. Less intense chemotherapy lowers that risk of toxicity, but carries a higher risk of recurrence.

“We are hoping to find a sweet spot that best balances the risks of toxicity and recurrence,

“I thought this trial was my best shot at beating this thing.”

“If I did the safe route, maybe it wouldn’t have worked. This was my Hail Mary pass, going for the gold.”

ultimately to improve the overall likelihood for cure,” said Elmariah.

To find that sweet spot, the trial provides a new regimen of chemotherapy and radiation. While the trial is still open, initial results show the new protocol could have a positive effect on recurrence rates.

Both trials demonstrate Moffitt’s mission to increase minority participation in clinical trials and that the studies can be successful. The results also not only benefit minority patients, but also older and sicker patients of all races in need of transplants who may not tolerate the harsh transplant process.

“When you have a patient who is a minority, you expect it’s very likely they will end up getting a haploidentical transplant,” said Elmariah. “So, having trials aimed at optimizing haploidentical transplants is inherently going to be beneficial to racial minorities.”

MAKING THE FUTURE BETTER

Because of alternative donor sources such as haploidentical transplants, the goal moving forward is to continue to optimize all types of transplants to combat complications and reduce risk of disease recurrence.

More than six months since his transplant, Michael is cancer free. He hopes his participation in the clinical trial will someday help others.

“It was a great thing to be a part of,” he said. “It was a hard thing to go through, but I am happy I can make the future better for someone else.”

Michael and his family are still pushing to bring awareness and donation opportunities to minority communities around the world, and hope his story will help bridge the health care inequality gap.

“Historically speaking, medical professionals and minorities don’t have a good track record. The average African American is not so keen to participate in anything that says the word ‘trial,’ ” said Belinda. “The fact my son is a success story will hopefully inspire others to go to the doctor and be more trusting.”

“It was a hard thing to go through, but I am happy I can make the future better for someone else.”

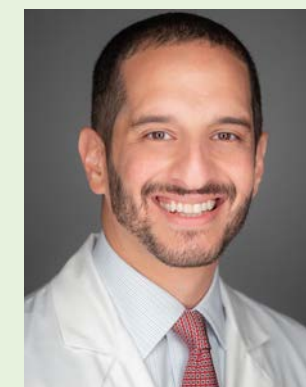
Department of Blood and Marrow Transplant and Cellular Immunotherapy



DR. NELLI BEJANYAN



DR. JOSEPH PIDALA



DR. HANY ELMARIAH



Photography: Kevin Kirby

Will There Be A Vaccine for Cancer?

The COVID-19 vaccine came out of cancer research, and its success opens the door for future cancer treatments

By Sara Bondell

As COVID-19 swept the world, it didn't feel like there was any end in sight. The pressing question on everyone's mind: When will there be a vaccine?

The past didn't instill much confidence. After all, an Ebola vaccine wasn't approved by the U.S. Food and Drug Administration until the end of 2019, more than five years after the virus's latest epidemic.

But then, in December, the FDA granted emergency use of a COVID-19 vaccine manufactured by Pfizer. A week later, the Moderna vaccine received the same approval.

And while that quick turnaround may have seemed miraculous to some, it wasn't. It was all thanks to cancer research.

"When we talk about the COVID-19 vaccine, this is not new technology," said Patrick Hwu, MD, president and CEO of Moffitt Cancer Center. "They could make this vaccine so quickly because they had already been doing this for cancer."

Now the success of the vaccines is once again generating excitement about developing a similar inoculation for cancer.

Moffitt is currently studying a vaccine that uses the same technology as the COVID-19 vaccine in lung cancer, and is opening a trial for head and neck cancer in the spring.

MESSENGER RNA

Most traditional vaccines, like the flu shot, use inactivated or weakened viruses that once injected into the body stimulate an immune response that can later protect against infection. There are also protein vaccines, such as the hepatitis B and human papillomavirus (HPV) vaccines, that deliver the part of the virus that stimulates a protective antibody response. Developing these vaccines is a complicated process that requires much time and money.

Vaccines based on messenger RNA, or mRNA, do not have these problems. Instead of using the virus, they contain genetic material that instructs the body to develop defenses against future infection. These vaccines can be produced quicker and cheaper than traditional ones.

Development of the COVID-19 vaccine can be traced to the early 2000s and Hungarian scientist Katalin Karikó, who discovered a way to harness the power of mRNA to fight disease. Her work caught the eye of Ugur Sahin and Ozlem Tureci, co-founders of BioNTech, a German biotechnology company. They hired Karikó to continue her work on using mRNA to cure cancer.

"When we talk about the COVID-19 vaccine, this is not new technology. They could make this vaccine so quickly because they had already been doing this for cancer."

While chemotherapy is the main weapon to fight cancer, it acts like an atomic bomb, killing healthy cells along with cancerous ones. Sahin and Tureci realized they could better fight the disease by harnessing the immune system, and they believed mRNA could get the job done.

As tumors grow, they express unique markers called neo-antigens that are not found on normal cells. By sequencing a tumor and finding the unique markers, the scientists believed they could create a vaccine to get the immune system to respond to those markers.

But progress on using mRNA vaccines in cancer treatment was slow. Then cases of a novel respiratory virus started popping up overseas, and mRNA technology was given new life. Once scientists were able to sequence this mysterious disease,



Moffitt President and CEO Dr. Patrick Hwu receives a COVID-19 vaccine.

Photography: Kevin Kirby

they got to work. In fact, BioNTech was one of the companies that partnered with Pfizer to develop its COVID-19 vaccine.

‘AS PERSONALIZED AS YOU CAN GET’

The success of the COVID-19 vaccine took mRNA technology from the laboratory to the spotlight, and Moffitt researchers are now preparing for a first-of-its-kind cancer vaccine trial.

The study, which is part of a larger national trial, is headed by Kedar Kirtane, MD, a medical oncologist in Moffitt’s Head and Neck Oncology Program. It will determine the safety and efficacy of an mRNA vaccine for head and neck cancer patients with recurrent or metastatic disease in combination with pembrolizumab, a checkpoint inhibitor.

“We will take a tumor sample and sequence it to look for the unique cancer markers. Then we will create a vaccine to target them,” said Kirtane. “It really is as personalized as you can get.”

While there currently are two approved immunotherapy treatments for head and neck cancers, only about 20% of patients respond. Vaccine trials like this one will hopefully open the opportunity to satisfy a critical unmet need in this patient population.

“The biggest thing thus far that has made me happy about the COVID-19 vaccines is the safety,” Kirtane said. “RNA vaccines have been studied for a while, but we haven’t seen mass use of them. So, the fact there’s all this data suggesting safety really is the first big thing.”

Moffitt’s Thoracic Oncology Program is also participating in a multicenter study evaluating the safety and efficacy of the addition of an mRNA vaccine to combination immunotherapy treatment for non-small cell lung cancer patients with metastatic disease.

“The biggest thing thus far that has made me happy about the COVID-19 vaccines is the safety.”

In the future, there may also be a place for mRNA vaccine technology in cervical cancer treatment. Previously, many pharmaceutical companies were studying DNA-based vaccines to treat high-grade cervical cancer caused by HPV. While the vaccines showed some level of efficacy, the administration of the vaccine required an uncomfortable procedure called electroporation, which uses electrical pulses to create temporary pores in cell membranes.

“RNA vaccines have been studied for a while, but we haven’t seen mass use of them. So, the fact there’s all this data suggesting safety is the first big thing.”

“Companies that started with DNA-based technology are moving towards mRNA platforms because it really allows for a simpler delivery,” said Anna Giuliano, PhD, founding director of Moffitt’s Center for Immunization and Infection Research in Cancer. “This is a trend we are seeing and it started even before the COVID-19 pandemic.”

For most cancers, researchers don’t know what antigen to target to illicit an immune response. But when it comes to cancers caused by HPV, they know exactly which two proteins to target, making a vaccine a potential powerful treatment tool. Vaccines can be DNA based, mRNA based or protein based.

“When it comes to treating cervical cancer, there is a tremendous need for a vaccine,” said Giuliano. “The majority of cases occur in the poorest countries and treating those cases in cost-effective ways is a huge problem. This could fill an important medical need.”

Giuliano has received a grant from the National Cancer Institute to implement three trials to help prevent cervical cancer in Latin America. One of the trials will study the efficacy of a protein-based vaccine, which Giuliano says could easily be transferred into an mRNA vaccine if needed.

KEEP TRYING

Regardless of how they’re made, cancer experts believe vaccines could have a major impact on fighting the disease. The important thing is to keep studying them to determine if they need to be combined with other treatments and find the best timing for administration.

“The first step is to generate a lot of immune cells that can recognize the cancer, but we may need other therapies to get the other steps to happen,” said Hwu. “Those immune cells need to travel to the cancer and once they’re there they have to attack it.”

Vaccines can also be used as adjuvant therapy, given to patients after their tumors have been surgically removed to lower the risk that microscopic disease left behind can cause a recurrence.

The success of the COVID-19 vaccine has created new awareness of potential cancer treatments, and Hwu says he hopes this stimulates more vaccine research.



DR. ANNA GIULIANO
Director, Center for Immunization and Infection Research in Cancer

KEDAR KIRTANE, MD
Department of Head and Neck-Endocrine Oncology

“There are so many ways to make a vaccine and the first few ways we tried didn’t work. So, people started throwing their hands up and saying, ‘Oh, we can’t make cancer vaccines,’” he said. “But a vaccine could potentially be among the most cost-effective methods of preventing recurrences and the high costs of cancer care.

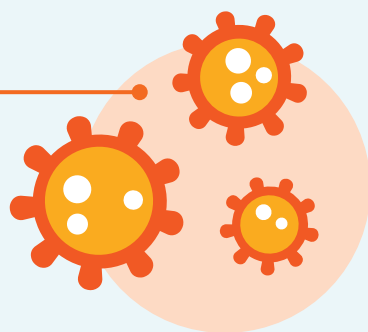
“We have to keep trying. Don’t give up on cancer vaccines.”

“We have to keep trying. Don’t give up on cancer vaccines.”

How mRNA COVID-19 Vaccines Work

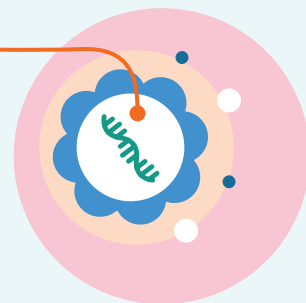
Understanding the virus that causes COVID-19.

Coronaviruses, like the one that causes COVID-19, are named for the crown-like spikes on their surface, called **spike proteins**. **Spike proteins** are ideal targets for vaccines.



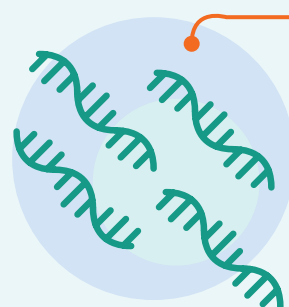
What is the vaccine?

The vaccine is made of mRNA wrapped in a coating that makes delivery easy and keeps the body from damaging it.



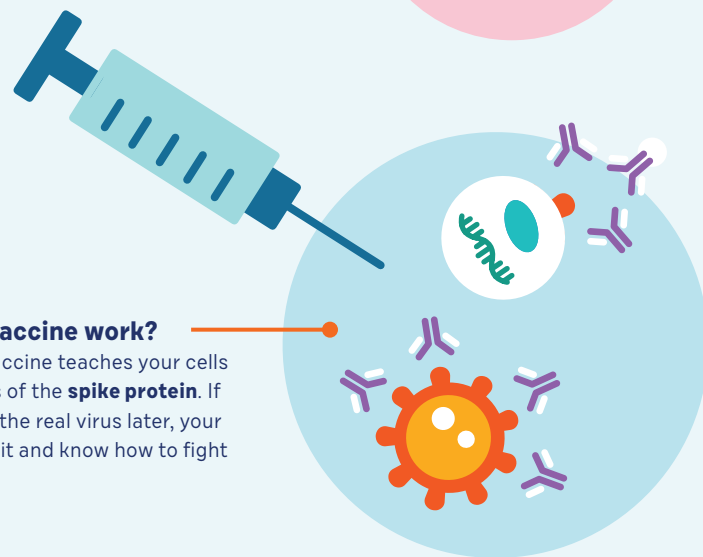
What is mRNA?

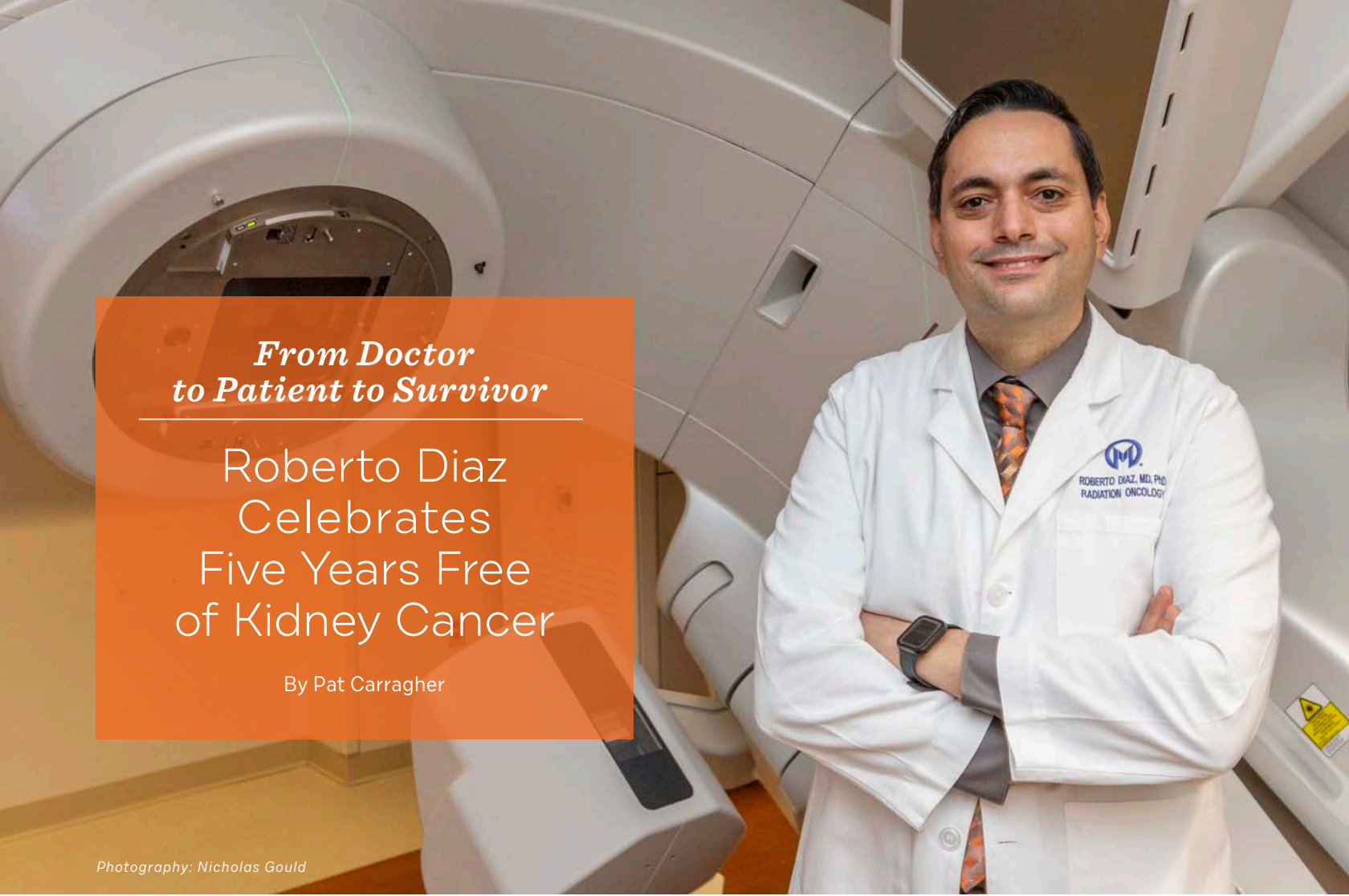
Messenger RNA, or mRNA, is genetic material that tells your body how to make proteins.



How does the vaccine work?

The mRNA in the vaccine teaches your cells how to make copies of the **spike protein**. If you are exposed to the real virus later, your body will recognize it and know how to fight it off.





*From Doctor
to Patient to Survivor*

Roberto Diaz
Celebrates
Five Years Free
of Kidney Cancer

By Pat Carragher

Photography: Nicholas Gould

JANUARY 2016 WAS PERHAPS THE MOST EVENTFUL MONTH OF DR. ROBERTO DIAZ'S LIFE.

The section head for Breast Oncology in the Department of Radiation Oncology at Moffitt Cancer Center was a father of four at the time. On New Year's Day that year, Diaz's wife surprised him with the news that their fifth child was on the way. That news wasn't the only cause for celebration as Diaz was two short weeks away from leaving for a medical mission's conference that would give him the chance to combine his faith with his desire to heal. Three days before that trip Diaz took his family out for dinner. At the time it felt like a typical Tuesday night. What happened after the meal was anything but typical.

"I was watching TV with my kids," Diaz said. "I had two on the side and one on top of me. Then all of a sudden, I felt a very sharp pain in my abdomen. I was thinking this is very likely to be gallstones. I had to stand up and it hit me like, 'wow!'"

The pain persisted to the next morning. Diaz recalled some uneasiness while swallowing, but knew he was scheduled to be in clinic at 6:30 that morning so he took some ibuprofen and headed to work. By noon it was clear something was wrong. Others around him had started to notice his pain.

"All of a sudden I'm told, 'you have kidney cancer.'"

"One of the breast surgeons, Dr. Khakpour, called me to ask if I wanted to see an add-on patient. I said 'no' probably for the first time ever because I wasn't feeling well. When I explained to Dr. Khakpour what was going on, she asked if I wanted to be seen by someone. In my mind I knew I had a gallstone, so I asked for a surgical recommendation. She suggested a gastrointestinal physician, and I said, 'no I don't have cancer, I have gallstones. I can feel it, it's gallstones.'" Khakpour was able to convince him to be seen in-house.

Diaz had an abdominal ultrasound performed and his initial instincts appeared to be right. There was evidence that he likely passed a gallstone. There was more lurking in the ultrasound, however. Diaz was surprised to learn that the imaging included his entire right side, not just his gallbladder. Had Diaz had the imaging done somewhere other than a cancer center, doctors likely wouldn't have looked at his kidney, where a 5-centimeter tumor was found.

"All of a sudden I'm told, 'you have kidney cancer.' I couldn't grasp it," said Diaz. The diagnosis was stage I renal cell carcinoma. "It was out of nowhere. The doctor wanted to get a CT scan to check to make sure it didn't spread. That's when it got real to me."

"I see patients who are in worse situations than me. I see their courage and how they fight..."

Up until that point Diaz had spent years studying and practicing medicine. He earned his MS, PhD, and MD degrees from New York University School of Medicine, spent his first year of residency in Internal Medicine at Yale University's Griffin Hospital and completed his training in Radiation Oncology at Vanderbilt University before eventually landing at Moffitt Cancer Center.

For the first time in his decadeslong career he found himself on the receiving end of that phone call. Suddenly he wasn't the doctor anymore. He was now a cancer patient. The medical missions conference was no longer on his schedule. Instead, a surgery to remove part of his kidney took its place.

Dr. Wade Sexton is a senior member in the Department of Genitourinary Oncology at Moffitt. He worked with Diaz to come up with a plan for surgery and the ensuing monitoring of the disease.

"When a physician is diagnosed with a malignancy, particularly a cancer surgeon or a cancer physician, the natural tendency is to think about all of the worst scenarios that you've encountered and it generates a lot of fear and anxiety and you're suddenly living the life of your patient," said Sexton. "It really hits home when it's somebody you're close to, somebody you're familiar with, or somebody with whom you're working alongside."



Dr. Wade Sexton

The day before his surgery, Diaz felt a sense of eeriness. He found himself performing an intraoperative radiation therapy surgery in the room next to where he'd be the one going under the knife in less than 24 hours. Diaz and Sexton thought the diagnosis was stage I based on the size and placement of the tumor.

The day of the surgery, the plan was for Sexton to perform a partial nephrectomy, or removal, at the bottom of Diaz's kidney. That plan quickly changed when the tumor was deeper than they initially thought. Sexton removed Diaz's entire right kidney.

"I go into surgery with a stage I diagnosis," said Diaz. "Then all of a sudden after the pathology report I'm at stage III. What other disease site do you have stage III cancer and the only thing we can do is surgery? There's no chemo. There's no radiation. No clinical trials I was eligible for. There's nothing to do besides watch it."

Diaz was 41 at the time of his surgery. On average, many kidney cancer patients aren't diagnosed until their 60s. "Here I am thinking, my goodness, if I didn't pay attention to my body about the gallstone, I would not have made it to my 50th birthday." It was particularly at this time that his Christian faith gave him peace and hope with his diagnosis. Many nights were spent in prayer with his wife. Could he live at peace, trusting that his children would be OK without him? Absolutely.

Fast forward five years and Diaz is now 46 years old with five children and cancer free. For five years the ensuing scans have given him five consecutive clean bills of health. Until this point, he had never publicly shared his cancer journey as a patient. So why now?

"It's been five years," said Diaz. "It's the excitement of what reaching that milestone in cancer means. I see patients who are in worse situations than me. I see their courage and how they fight and then keep fighting. I can relate more than they know. The anxiety that comes with waiting for scans, they call 'scanxiety.' I can relate to that because it's real."

Each year when Diaz goes for his annual scans, Sexton feels that same 'scanxiety' with him. At the end of the day Sexton knows that Diaz is now a better doctor for having gone through the cancer journey as a patient.

"Roberto is going to impact lives in a way that he would not have been able to before his diagnosis," said Sexton. "Not only does he possess medical expertise and technical ability, but now he's able to share a personal experience that will help him connect with a patient in a much greater way. He's blessed to be a survivor, and he's going to impact many more lives because of it."

He's blessed to be a survivor, and he's going to impact many more lives because of it."

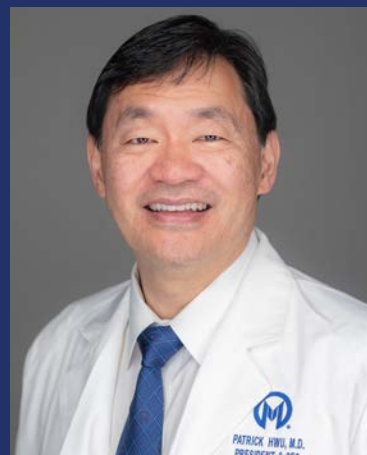


Photography: Nicholas Gould

*Facing Melanoma
with Optimism and Courage*

PATIENTS FOLLOW A COMPASSIONATE LEADER

By Cathy Clark



Why would a patient leave all that is familiar to follow a physician to another state and then to yet another state when care was available locally?

Meet Kay Gann and Mike Potthoff who began commuting from Georgia and Missouri, respectively, to MD Anderson Cancer Center in Houston, Texas, for treatment under Dr.

Patrick Hwu. Several years later, after Hwu accepted the position of president and CEO of Moffitt Cancer Center, each of these patients decided it was worthwhile to make another adjustment.

“I’m very honored that patients would follow me. You develop a personal relationship with patients, so I feel they are not just my patients but also my friends,” said Hwu.

Hope Is Converted to Reality

FOR KAY GANN OF BREMEN, GEORGIA, the reason had everything to do with hope. Hope for her future and the prospect of a healthy life to share with her beloved husband, Troy, and their three daughters, Morgan, Molly and Makenna. At the time of Kay’s diagnosis her girls ranged in age from preschool to early teens.

“Four years ago, I was given no hope from my medical team, and then I was able to find Dr. Hwu who had hope and ideas for other treatments to try,” Kay said.

Kay’s cancer journey began in August 2016 when she found a lump in her groin. She was otherwise healthy, and initially her doctor thought it was an inflamed lymph node. After two rounds of antibiotics the mass continued to grow and was affecting her ability to walk.

So started the arduous journey that ultimately led to meeting Patrick Hwu, MD, medical oncologist and now president and CEO of Moffitt Cancer Center.

Back in Georgia, a trip to the emergency room, followed by scans and a biopsy confirmed the frightening diagnosis – metastatic melanoma.

“How could this pathology report have my own name printed in big, bold letters at the top?” Kay recalls wondering as she viewed the report while at the hospital. “I thought I was in good health with no warning or any signs.” The doctors also were baffled and were unable to locate a primary source of origin on her skin for the melanoma which had gone inside her body and was spreading faster than Kay and Troy had realized.

Kay was referred to a major hospital in Atlanta for what she describes as a “very large surgery” to remove the lymph node mass and additional lymph nodes in the pelvic region as precaution. Kay could never forget that day. The surgery took place on Morgan’s 14th birthday.

She was in recovery for weeks, and the pathology report from the surgery indicated additional malignancies in her pelvic area lymph nodes. More scans showed cancer in Kay’s organs. “My



KAY GANN | *Cancer Survivor*

Photography: Nicholas Gould

“How could this pathology report have my own name printed in big, bold letters at the top?”

cancer had spread like wildfire,” Kay recalls. The oncologist in Atlanta told her and Troy that she qualified for some of the newer treatment because the pathologist report confirmed the cancer was in her major organs. “But the treatment would only slow the cancer down, we were told,” said Kay. “They gave me no hope.”

Despite the devastating report, Kay and Troy would not give up. “That’s when we knew we had to go further.”

WHERE TO TURN?

“By the grace of God, my cousin, Dr. Timothy Thomas, is an amazing pediatric cardiologist at Monroe Carell Jr. Children’s Hospital at Vanderbilt University Medical Center. He had connections through a colleague [Dr. Steven Frank, Department of Radiation Oncology, Division of Radiation Oncology and leader of the Proton Therapy Program] at MD Anderson Cancer Center in Texas,” said Kay. Her cousin called Dr. Frank who said, “I have the perfect person,” and Kay secured an appointment with Hwu. “So, we packed our bags and flew to Texas for Dr. Hwu to review my case. It was an anxious period and traveling was hard on me.”

Kay recalls nervously awaiting the appointment and her first impression of Hwu. “I remember Dr. Hwu coming into my room. He looked at me and then at my husband, both in the eyes, and said to me, ‘You’re 41 years old, and I’m here to help cure you for another 50 years,’ ” Kay said. “That’s when I knew God had led us right where we needed to be. Overwhelming peace flooded over my mind, heart and soul!”

Again, Kay underwent numerous scans, including an MRI of her brain. She and Troy knew the cancer had spread, but they didn’t realize the extent until viewing the scans. “My body looked like a dot-to-dot drawing, for the melanoma had spread

to my liver, lung, chest, skeletal spine, rib, breast, leg, arm and a small area on the brain,” said Kay. A liver biopsy to confirm the diagnosis of melanoma was scheduled the next day.

Shortly thereafter Kay was able to begin her first round of a combined immunotherapy regimen of YERVOY (ipilimumab) and OPDIVO (nivolumab), called IPI/NIVO, for metastatic melanoma. At the time this combination immunotherapy had just been developed. Advanced melanoma can be challenging to treat, but newer types of immunotherapy are showing much promise and providing encouragement.

Every three weeks for the next 12 weeks, Kay and Troy traveled to Texas for Kay’s treatment and monitoring. “I was able to endure all four rounds of treatment on schedule, which is usually not the case,” said Kay.

Kay had long since stopped being able to work, and her three girls were always top of mind. Adjusting to this temporary new normal was troublesome for Kay, who always had been on the go, whether working, traveling with family, attending her children’s sports or school activities. She also enjoyed attending Bible studies and being active with her local church family. Plans and schedules necessarily came to a halt as Kay struggled to get better.

In February 2017, after the end of the IPI/NIVO regimen the couple traveled back to Texas for a follow-up PET scan and brain MRI. “At that time, I had phenomenal success from treatment; my body responded miraculously by the grace of God!” Kay recalled.

Compared to the scans taken immediately before beginning the IPI/NIVO regimen, the new scans revealed the only area that had not responded to treatment was on the liver. Plans were made to address that particular mass following a period of rest and time to allow the immunotherapy to continue its work.

A few weeks later more scans showed the mass on the liver had grown and cancer had attacked Kay’s pancreas. “My liver and pancreatic enzymes began to rise above normal levels, which indicated that my body had taken a toll from treatments. Then, it was determined that I had pancreatitis and could not start back on treatment,” said Kay.

In the following months, Kay had more scans detecting other areas of cancer. In June 2017, Kay had a hepatectomy to remove over 60% of her liver and remove half of the right adrenal gland. Then in October 2017, she had another surgery. “This particular surgery was by far the toughest part of my journey; I had 30% of the tail of the pancreas removed as well as half of the left adrenal gland and my thyroid,” Kay said. “That was the hardest surgery I’ve had thus far, emotionally and physically.”

All anxiety related to that surgery was reversed by the report that followed. In November 2017, two days before Thanksgiving, Kay and Troy had an answer to their prayers. Her scans indicated the surgery was successful with no further evidence of metastatic melanoma.

Three months later, however, a scan followed by a biopsy confirmed a new area of melanoma near where the thyroid had been removed. Surgery was scheduled quickly to remove this area, which was dangerously close to her carotid artery and vocal cords. Concern that this was a cancerous lymph node weighed heavily on Kay and Troy.

A CLOSE CALL AND BACK TO NORMAL

Following this surgery, the couple were relieved to learn that the melanoma did not involve lymph nodes or lymphatic tissue. The cancer that was removed was in the muscular tissue around the area where the thyroid had been removed previously. “I had really worried about the area encompassing the muscles, but if it had not [been in the muscle], the cancer could have reached the trachea,” said Kay. “Miraculously, all eight lymph nodes were negative, and margins were clear.”

One small recurrence occurred since then, but “I’ve been cancer free since August 2018!” said Kay.

The summer of 2018 Kay returned to work as an executive assistant for a bank. “I wasn’t sure after the initial diagnosis if I would be able to return to work,” she said. “I will never take for granted being able to work and just being a normal mom and wife!”

“I will never take for granted being able to work and just being a normal mom and wife!”

When Kay and Troy learned that Hwu was moving to Tampa to accept the position of president and CEO of Moffitt Cancer Center they seriously considered whether to move Kay’s follow-up care.

“I was initially heartbroken when Dr. Hwu told me that he had accepted a position at Moffitt, but also I was ecstatic for him and very happy because it is a much-deserved position for him. I cannot say enough good things about Dr. Hwu; he is amazing, to say the least,” Kay said. “My husband and I decided that we had to follow him, because we are just not comfortable seeing anyone else and we believe there is nobody of his caliber and expertise.”

“I remember Dr. Hwu coming into my room. He looked at me and then at my husband, both in the eyes, and said to me, ‘You’re 41 years old, and I’m here to help cure you for another 50 years.’ ”



Kay and Troy Gann

Photography: Nicholas Gould

For Kay and Troy, it was more than Hwu's knowledge and expertise that brought them to Moffitt for Kay's follow-up treatment. Her youngest daughter, Makenna, was only 3 when she was first diagnosed, and she knew that Hwu understood how important her girls were to her. He regularly would ask how they were doing at school, in their activities and at home.

"I have so much to be grateful for because Dr. Hwu knew how much I wanted to be here to see my girls grow up and he did everything in his power to help make that possible," said Kay. Her oldest daughter graduates from high school this year. "Being able to see Morgan graduate is truly something that I fought for in my hardest of days," said Kay.

Kay now is cancer free, and visits Hwu every six months for scans and follow-up. She still sees a medical team at MD

Anderson where she had undergone her surgeries. In 2019 she began to have reconstructive surgery on her left leg where lymphedema is extensive. She keeps careful watch on that condition. This summer will be three years since recurrence of cancer and Kay anticipates being released to have lymph node transplant surgery to help relieve the lymphedema in her leg. Meanwhile when not at work, Kay can be found attending church, enjoying activities with her girls and taking short trips with her beloved family. She also takes every chance to share her journey to give hope for those in the fight against cancer, which has become a passion close to her heart. "We give thanks to God for the healing and for leading us to Dr. Hwu," said Kay. "We are very grateful. The whole family is."

"I have so much to be grateful for because Dr. Hwu knew how much I wanted to be here to see my girls grow up and he did everything in his power to help make that possible."



Photography: Nicholas Gould



MIKE POTTHOFF | Cancer Survivor

Photography: Ray Reyes

Aggressively Facing Advanced Melanoma

PATIENT GOES FOR EXPERIMENTAL TIL THERAPY

MIKE POTTHOFF'S CANCER JOURNEY began with a diagnosis of acral lentiginous melanoma. "It's not the type of melanoma caused from sun exposure," said Potthoff. "This cancer usually shows up in places like your fingernails or bottom of your feet. Bob Marley passed away from this type of melanoma." The rare form of skin cancer also is found on the palms of hands or under toenails. Acral melanoma the most common type of melanoma among people with darker skin, and it is found more frequently in African Americans and Asians.

"It's not the type of melanoma caused from sun exposure."

Shortly after the diagnosis Potthoff had his thumb, along with some sentinel lymph nodes, removed at Siteman Cancer Center in St. Louis, Missouri, near his home. A few months later the cancer had spread. That was in 2014. The survival rate was grim and there was no standard of care for this type of cancer at the time, and the doctor suggested he look for a clinical trial.

Potthoff knew he had to aggressively search out the best treatment, especially in view of his responsibilities as a husband and the father of four boys, now in college, and vice president of Retail Sales for Anheuser-Busch.

He visited medical oncologists at five different cancer hospitals, ultimately connecting with Patrick Hwu, MD, through the recommendation of a family friend. Soon Potthoff was at MD Anderson Cancer Center under the care of

Hwu, renowned medical oncologist and then chair of the Department of Melanoma Medical Oncology.

Potthoff recalls Hwu recommended a clinical trial of checkpoint inhibitors ipilimumab and nivolumab (IPI/NIVO) that was not available at MD Anderson. The combination treatment is now approved by the FDA to treat patients with advanced melanoma, but early on the therapy was available only by participating in a clinical trial.

PRIORITIZING THE PATIENT

On the spot, Hwu called the principal investigator of the trial and learned the trial was accruing patients in Connecticut and in Tennessee. “Dr. Hwu suggested I select the location that was most convenient, so I went to the Sarah Cannon Cancer Center in Nashville to participate in the IPI/NIVO trial under the care of Dr. Jeff Infante,” said Potthoff. “That’s when I probably gained the most respect for Dr. Hwu in that he prioritized the patient and doing what’s best for the patient over his own practice and hospital.”

Unfortunately, the immunotherapy regimen did not work well for Potthoff, and when cancer returned, he opted to go back to Hwu. “I knew he was the person I wanted to manage my cancer from there,” said Potthoff. He underwent numerous surgeries, and in 2017 Hwu placed him on a new immunotherapy clinical trial of tumor-infiltrating lymphocytes (TIL). Early in his career, Hwu had worked with colleagues at the National Cancer Institute, using immunotherapies and gene therapies to treat patients with advanced cancers. Their work with TIL showed success in melanoma.

TIL is a form of cellular immunotherapy that leverages components of the patient’s own immune system to seek out and attack specific cancer cells. TILs, special T cells, are naturally present inside some tumors. In TIL therapy, TILs are collected from the tumor during a biopsy or surgical resection, then grown to large numbers in a laboratory. Once successfully grown to billions in number, the TILs are infused back into the patient, where they actively attack cancer cells while leaving healthy cells alone.

“That’s when I probably gained the most respect for Dr. Hwu in that he prioritized the patient and doing what’s best for the patient over his own practice and hospital.”

“I knew he was the person I wanted to manage my cancer from there.”

EQUIPPING T CELLS WITH A GAS MASK

Before he could receive the TIL therapy, Potthoff underwent chemotherapy to in effect remove his immune system to condition it to receive infusions of TIL that would replace his immune system with the aim of irradiating the melanoma. These TIL infusions were followed by doses of interleukin 2 (IL-2).

“They took my T cells out of the tumors they had removed from previous surgeries, genetically modified them to make them resistant to the toxic effects of TGF-beta and multiplied them into the billions,” said Potthoff. TGF-beta is a substance the tumor makes to try to inhibit immune cells. The immune cells cannot come into the tumor, proliferate or survive because of TGF-beta, which is like poison to T cells.

Potthoff was part of an investigator-initiated clinical trial borne out of research in Hwu’s laboratory at MD Anderson Cancer Center. It is the first trial of its kind with TIL cells. The aim is for the trial findings to be published soon, and the hope is that ultimately this treatment will become FDA approved for patients with late-stage melanoma.

“Adding a gene into the T cells so they would resist the toxic effects of TGF-beta in effect puts a gas mask on the TIL so they could survive in the battlefield of the tumor,” said Hwu. Potthoff was given a transfusion of those genetically modified T cells in October 2017, followed by multiple and consistent infusions of IL-2 over October, November and December. IL-2 supercharges the T cells, and the idea is to get in as many infusions the body will withstand.

Receiving TIL therapy involves cycles of staying in the hospital for three or four weeks, then a week away from the hospital, but the patient must remain near the hospital during any break in therapy. Potthoff secured an apartment nearby where his wife, Patricia, could stay while he was in the hospital and this also allowed him to stay nearby during the off week in case of a reaction.

“When you sit with him, he gives you a sense of calm.”

Photography: Ray Reyes

After he finished the courses of TIL therapy in 2017, Mike continued his follow-up care with Hwu at MD Anderson, and now he sees Hwu at Moffitt Cancer Center every few months for scans and follow-up visits.

OPTIMISM AND REASONS TO BELIEVE

Asked why he followed Hwu to Tampa for follow-up care, Mike cited Hwu’s experience and expertise in melanoma treatment. Equally important was Hwu’s positive and confident manner. “He treats you as a person and really cares about people and understands what you are going through,” said Mike. “When you sit with him, he gives you a sense of calm. He’s very optimistic and it gives you the reasons to believe.”

The commute for the follow-up care has not presented a challenge because Mike is accustomed to traveling. In his work for Anheuser-Busch, where he has been the past 25 years, he spends about 60% of his time traveling throughout the country as he manages national accounts. And he is no stranger to Tampa, having lived in Fish Hawk for a couple years with his wife and sons – the oldest son, Ryan, plus a set of triplets, Tyler, Dylan and Kyle – while they were in grade school. His

job then moved him for the third time to St. Louis, where he was born and raised. In addition, their family has lived on the West Coast on four different occasions.

More recently, Mike and Patricia purchased a second home near the water in the Tampa Bay area to facilitate his stay during follow-up visits with Hwu and to use for family get-togethers. When not traveling or working, Mike enjoys golfing with friends, business acquaintances and his sons who are picking up the sport. More than anything else, he enjoys being with his family as much as possible. “I spend a lot of time with the kids; they are so very busy, so when they are on break from school we spend time together as a group, playing basketball, going for a run, golfing, fishing – most of all, time with family,” said Mike.

He especially looks forward to seeing Ryan graduate in May, “which I never believed I would be around to see,” said Mike. “Also, I’m looking forward to celebrating my parents’ 60th wedding anniversary this summer with family which, again, did not think I would be around to witness, but thanks to Dr. Hwu I will be able to witness both of these family milestones.”

AN EXPERT CONNECTION

A Patient's Journey Begins with the First Call

By Amanda Sangster

Time is critical when a patient receives a cancer diagnosis. The time between diagnosis and a patient's first visit with a cancer doctor can be frightening and emotionally taxing for the patient and their family members. Consumed with doubt, worry and anxiety, patients start their cancer journey experiencing a cascade of emotions.

For Moffitt patient Heather Hay, waiting to see a health care provider after receiving a cancer diagnosis felt like an eternity filled with anxiety of the unknown. "The hardest part of being diagnosed with cancer is the unknown," said Hay. "The time waiting for my appointment was by far the hardest part of my entire trajectory with cancer."

"The time waiting for my appointment was by far the hardest part of my entire trajectory with cancer."

In what could be the most frightening time of a patient's life, Moffitt understands that demonstrating urgency and compassion can alleviate some of the emotional burden felt by a patient and their family. At Moffitt, personalized cancer care now starts before a patient ever walks through the doors.

Within one business day of contacting Moffitt for an appointment, patients can now speak directly to a cancer expert from their care team. This newly implemented service aims at easing the stress and uncertainty that a patient may feel in between the time of booking their first appointment at Moffitt and the actual visit. This type of consultation is not something that is being routinely done at other cancer centers, placing Moffitt ahead of the curve once again in its approach to patient centered care.

"Some of that anxiety and nerve-racking feeling is gone after just having talked with someone. Hearing a human voice that just wants to help and from someone who understands your diagnosis – that human connection is key," said Hay.

The goal of this initial contact is to connect the new patient with an expert who understands their specific disease and to establish trust between them. It takes the interaction from being something transactional to a real human connection, creating not only a clinical bond but an emotional one as well.

The innovative idea was born organically within the gastrointestinal and genitourinary clinics. Health care providers began calling their new patients ahead of their first appointments. What they noticed following the call was a sense of calm and relief from within their patients as they addressed their fears and concerns.

As a result, patients, and providers alike, were better prepared for the onsite appointments, having discussed expectations, procedures and health history. Those new patients were also more likely to keep their appointments instead of seeking treatment from another center.



Dr. Jason B. Fleming

Jason B. Fleming, MD, department chair, Gastrointestinal Oncology, said standardizing rapid direct connection for all patients is a first-in-kind effort for cancer care.

"This approach fundamentally changes how we engage with our patients – it's not a common practice offered by other cancer centers," said Fleming. "We are redefining how patients begin

their cancer treatment and establishing a level of trust that the patient will feel throughout their entire cancer journey. Providing personalized care before a patient ever steps foot in the hospital shows that we're committed to our patients during a time when they're most fearful and anxious."

Since launching in the gastrointestinal and genitourinary clinics, this new service has spread within every clinic at Moffitt, becoming the new standard of care. During the expert-led phone call, the clinicians introduce themselves to the patient, answer clinical questions, provide guidance,

"Some of that anxiety and nerve-racking feeling is gone after just having talked with someone."

HEATHER HAY
Cancer Survivor

Photography: Kevin Kirby



Photography: Kevin Kirby

Themika Lewis, RN, prepares to call a patient.

listen and take notes about the patient's history, talk about the services that Moffitt offers and discuss the next steps in the patient's journey.

This new service has changed the workflow for clinicians and providers at Moffitt who had typically performed this outreach a few days prior to the patient's first onsite appointment. By moving this call up in the timeline of the patient's journey, clinicians are better able to connect with the patient and make their first appointment as productive as possible.

In contacting her patients, Themika Lewis, RN, from Moffitt's Malignant Hematology Clinic, found that this first phone call better prepared her patients in meaningful yet simple ways.

"A lot of the questions are related to where the clinic was located and expectations about that first visit," said Lewis. "They wanted to know, 'Will I start treatment this day?' or 'I don't know exactly what I have – what should I expect?'"

Lewis immediately realized how this first discussion with her patient left a calming effect on them. "After I've talked to them and heard their concerns, they'll always ask if I'll be there at their first visit," said Lewis. "I can tell how reassuring it is to them when I say, 'Yes, you will see my face on the first day.'"

The new service is designed to help patients through a difficult time and to ensure a smooth start to their cancer journey at Moffitt. By pioneering this new approach at Moffitt, the cancer center is demonstrating a commitment to providing compassionate, world-class care.

"Time is the most valuable thing we can give to our patients," said Fleming. "In some cases, the uncertainty of a diagnosis and the stress from it can become too much for a patient, and they may even seek treatment from somewhere else. By speaking with them right after they book an appointment, we're keeping Moffitt at the forefront of offering the best and latest treatment options – and most importantly, showing our patients that we're committed to them, emotionally and clinically, from the very start."

ABOUT MOFFITT CANCER CENTER

Moffitt Cancer Center in Tampa, Florida, has made a lasting commitment to the prevention and cure of cancer, working tirelessly in the areas of patient care, research and education.

MISSION

To contribute to the prevention and cure of cancer

VISION

To transform cancer care through service, science and partnership

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Move For What Matters

Join us on Saturday, November 20 for Moffitt Cancer Center's premier movement for cancer research. Registration is just \$25 through June 30. Register by July 31 to receive a special early bird welcome gift!



Register at
[MilesforMoffitt.com](https://www.milesformoffitt.com)

We continue to monitor the COVID-19 pandemic and at this time, it is our hope that participants will be able to safely participate in-person or virtually this November. Of course, we will continue to evaluate CDC and state guidelines and provide updates as the year progresses.

Visit [Moffitt.org](https://www.Moffitt.org) to find out about our upcoming events

WHEN YOU DONATE TO CANCER RESEARCH your gift will go directly to helping researchers and scientists develop the medicines and protocols that will advance cancer treatments and help cure patients. Simply put, your generosity will help save lives. Every gift, no matter the size, makes a difference. Now is the time to get involved and help make a difference. Visit [Moffitt.org/Give](https://www.Moffitt.org/Give) to find out more.



TO CONTRIBUTE TO THE PREVENTION AND CURE OF CANCER
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