

Leadership Message



Patrick Hwu, MD President and CEO

Dear Friends,

Walking the halls of Moffitt Cancer Center, I am always filled with so much hope and inspiration. So, too, are the pages of this issue of Momentum, which showcase the resiliency of our patients and the dedication of our team members who give so much to their calling.

Through numerous surgeries and the loss of a limb, one thing Nicolás Gutiérrez Martínez never lost was hope. In 2016, he faced a diagnosis of chondrosarcoma, a type of bone cancer. Doctors in the Dominican Republic wanted to amputate his leg, but he was determined to teach his young son how to walk first. A second opinion at Moffitt allowed him to accomplish his goal and avoid amputation through multiple recurrences. When his cancer returned again in 2019, he knew it was time. Now cancer free, Gutiérrez Martínez has not allowed his amputation to dull his zest for life.

As we pursue our mission, we continually seek innovative ways to accelerate scientific discovery and help more patients faster. Combining his personal drive to make a mark in the field of cancer with an impressive background in engineering, Greg Sawyer, PhD, is leading Moffitt's latest charge: the Department of Bioengineering.

To achieve Moffitt's mission, we are working to increase the diversity of our faculty, helping to ensure our providers reflect the communities we serve. For patient Clinton Melton, having Brandon Blue, MD, a Black doctor, helped him feel comfortable and has made all the difference in his cancer journey. Blue

and Odion Binitie, MD, have teamed up in an effort to encourage Moffitt faculty members to recruit from their own communities.

In serving a diverse population, Moffitt providers must consider each patient's personal, cultural, social and religious beliefs and how they might impact treatment decisions. Naomi Burgess, a Jehovah's Witness diagnosed with leukemia, was faced with fighting blood cancer without blood. Honoring her faith, her treatment team used a combination of chemo and immunotherapy. Burgess is now cancer free. Treating patients with special accommodations like bloodless medicine can be challenging but is a testament to Moffitt's commitment to patient-centered care.

Miriam Abascal Zimms is no stranger to cancer. She lost her mother to it at age 26 and would later be diagnosed with two separate cancers herself. Chemo, radiation, multiple surgeries and months spent in bed without her independence led Zimms down a dark path. The Arts in Medicine program helped bring out a light in her that had gone dim – and has led to both her healing and a new path in life helping others discover the healing effects of the arts.

Each of our patients and team members has a unique story to tell, and though we would love to share them all, we hope you enjoy those in this issue of Momentum. These stories emphasize why we do the work we do and keep us steadfast in our mission to contribute to the prevention and cure of cancer.

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When Nicolás Gutiérrez Martínez was diagnosed with chondrosarcoma, he chose not to undergo amputation. He wanted time to teach his son, Nicolás Alejandro Gutiérrez Castillo, to walk. When the cancer returned, he decided to change course.



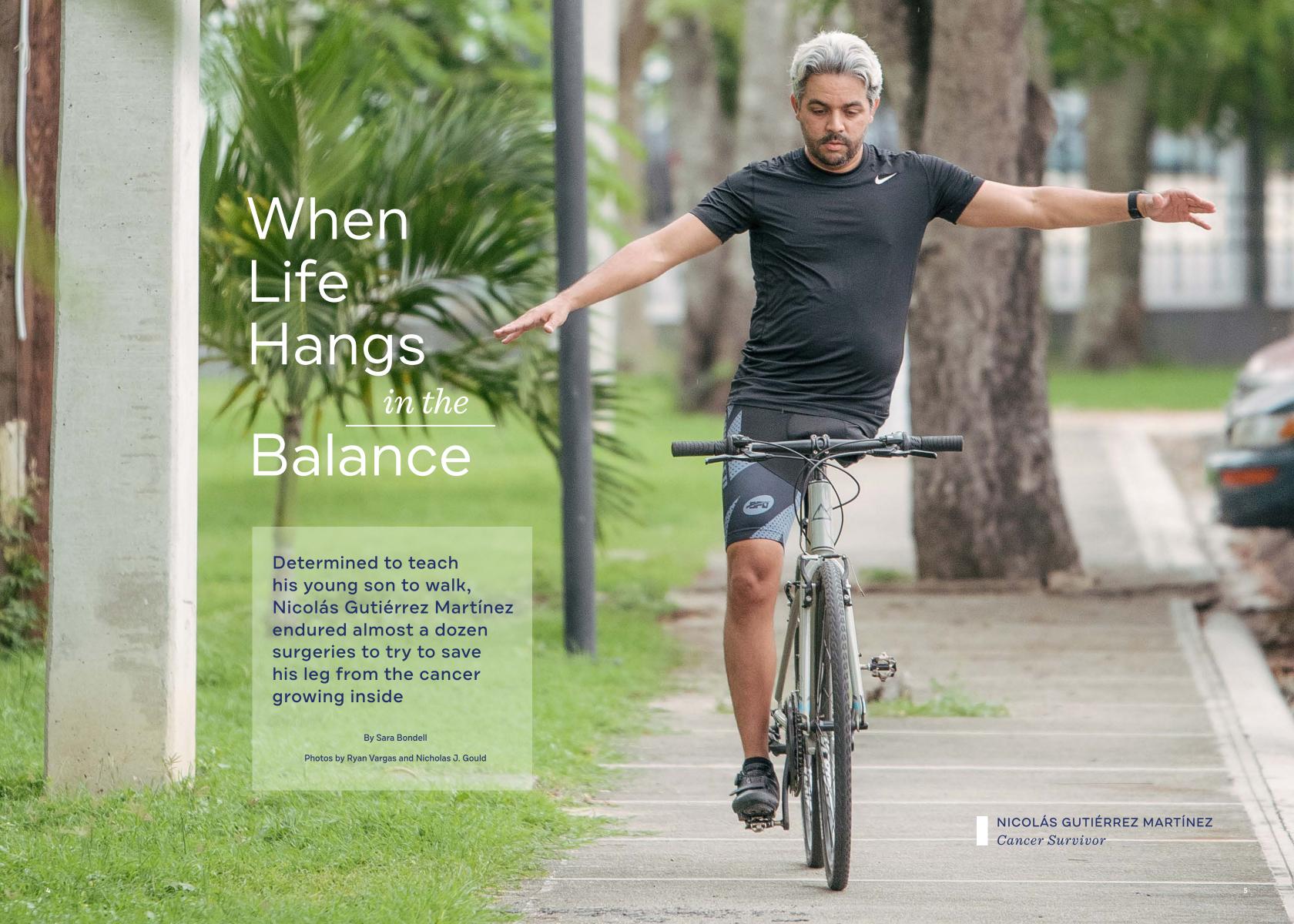
Emphasis on EngineeringExpanding basic science research



'Never Saw a Black Doctor'
Importance of representation



A Journey to Expression
Healing through Arts in Medicine



Nicolás Gutiérrez Martínez called his parents to let them know he made his decision. He and his wife went to the airport and rented a sports car. They drove to Miami and danced the night away. In the morning, they drove to Orlando to park hop at Walt Disney World.

The couple were happy. They danced, they walked, they ate, they laughed. They didn't let any sadness creep in. They forgot why they were there.

When a man with a prosthetic leg walked past Gutiérrez Martínez, reality slowly came into focus: This is going to be me.

In just a few days, the 32-year-old father would lose his entire leg. It was his last chance to stop the cancer growing inside his bones.

SAVE THE LEG

In 2016, Gutiérrez Martínez was working as an electrical engineer in Santiago de los Caballeros, Dominican Republic. He was a newlywed and a new father, he and his wife juggling blossoming careers with raising their 3-month-old son.



Nicolás Gutiérrez Martínez reunites with surgeon Odion Binitie, MD, during a recent visit to Moffitt. Gutiérrez Martínez underwent a rare surgery called an external hemipelvectomy.

Gutiérrez Martínez was proud of his healthy and active lifestyle. He was an accomplished marathoner and had just finished a practice run for his next race when he was called into a work emergency. After nearly 12 hours, he realized he hadn't used the bathroom. When he tried to go, he had difficulty urinating. A visit to the urologist revealed a large tumor on Gutiérrez Martínez's pelvis that was putting pressure on his bladder.

"When I found out, the worst was the uncertainty," Gutiérrez Martínez said. "What was going to happen to my family if I wasn't here?"

Gutiérrez Martínez was diagnosed with chondrosarcoma, a type of bone cancer that starts in cartilage, the smooth connective tissue that protects the ends of bones and most joints. Doctors in the Dominican Republic recommended amputation right away, but Gutiérrez Martínez was determined to find another way.

"I was going to teach my son how to walk and run the way my daddy taught me," he said.

Gutiérrez Martínez spent the next month searching for a second opinion. His godfather reached out to a friend and physician in Florida for guidance, and he told them to go to Moffitt Cancer Center.

A HELPING HAND

When Gutiérrez Martínez's case came across the desk of International Patient Services Supervisor Marianne Brandt, she was instantly invested.

"Any time there's a patient around my children's ages, I tell everyone I adopt them. It's a protection instinct," Brandt said.

Moffitt's International Patient Services Department helps patients and families from other countries transfer their care to the cancer center. This includes collecting necessary medical reports, helping with travel and lodging arrangements, providing financial guidance and offering cultural support. The department has helped patients from 133 countries, the majority coming from the Caribbean, followed by Latin America, Canada, the Middle East, Asia and Oceania. Since 2017, the team has helped coordinate care for more than 1,775 patients from around the world.

Brandt connected Gutiérrez Martínez with Moffitt's sarcoma experts and helped gather his medical reports and imaging. She organized his itinerary for his first trip to Moffitt.

"When you greet a patient who shares your culture and language, the connection is immediate," said Brandt, who is from Venezuela. "We try to be a little piece of home away from home and to be there for them for whatever they need. A hug, to sit down and listen to them, to find any resources they need while they are here. That is what drives our job."



A former marathon runner, Gutiérrez Martínez is now an avid biker. He rides up to two hours a day, three days a week, and enjoys staying active with his son, Nicolás Alejandro Gutiérrez Castillo.

"Marianne is an angel who was put on our path," Gutiérrez Martínez said. "She did everything she was supposed to do within her role and that she wasn't supposed to do. She did incredible work on our behalf at the time we needed it most."

A team of Moffitt physicians reviewed Gutiérrez Martínez's case at a tumor board meeting and determined they could remove the tumor and save the leg. In April 2016, Gutiérrez Martínez had his first surgery.

Two months later, Gutiérrez Martínez was walking. By December, he was running again. However, a year later, follow-up scans showed the cancer had returned in his thigh.

"With sarcomas, not only the type but also the location impacts the rate of recurrences," explained Odion Binitie, MD, one of Gutiérrez Martínez's surgeons. "For a pelvic

chondrosarcoma, recurrence rates could be 20% to 30%, sometimes even higher."

Gutiérrez Martínez returned to Tampa for a second surgery, where the surgical team removed the tumor in his thigh and a portion of his pelvis.

The cancer would come back two more times over the next two years. Gutiérrez Martínez was stuck in a revolving door of surgeries to remove new tumors and treat recurrent infections. Still, he never gave up hope.

"My motivation was that I wanted to live," Gutiérrez Martínez said. "I love my entire family to the moon and back and didn't want to be missing from their lives. It was either fight or give up and surrender, and I wasn't going to die."



"When you greet a patient who shares your culture and language, the connection is immediate. We try to be a little piece of home away from home."

- Marianne Brandt , International Patient Services supervisor



TIME TO CHANGE COURSE

When the cancer returned again in multiple places in 2019, Gutiérrez Martínez was ready to reevaluate his options. His son had learned to walk and run with his father. It was time.

"After all these surgeries, it doesn't matter how much faith you have, you can't keep continuing to do the same thing and expect different results," Gutiérrez Martínez said. "The best way to stop the tumor was to amputate."

Gutiérrez Martínez made the phone call to tell his parents, then left with his wife for what he calls his farewell leg tour. He had doubts about how he would continue living his active lifestyle, but he was never afraid.

"I think I have a lot of faith and a lot of optimism," he said. "I knew I was going to lose the leg and I knew this was the only way forward, the only way to resolve this for good."

Gutiérrez Martínez needed a complex and rare surgery called an external hemipelvectomy, which involves the removal of the entire leg at the hip along with a pelvic amputation.

After his surgery, Gutiérrez Martínez spent three months recovering in Tampa. His son came to visit and told his dad he was mad at God because he had taken his leg away.

"I had to explain to him God had given me the opportunity to take the leg away so I could be here with him."

Gutiérrez Martínez returned to the Dominican Republic in February 2020, just as the world was shutting down for the pandemic. He started watching videos online of other pelvic amputees riding bikes and set a new goal. He may not be able to run again, but if he continued his physical therapy and practicing with his prothesis, maybe he could bike. In October – just 12 months after losing his entire leg – Gutiérrez Martínez rode a bike for the first time.

"I knew I was going to lose the leg and I knew this was the only way forward, the only way to resolve this for good." "With this very bad experience, I feel grateful it happened to me because it made me a better person. I know that's ironic, but I am immensely grateful to God that I am able to walk beside my wife."

"It was an incredible moment," he recalled. "We were on our street and my son was with us. He hit my bike with his and we all fell and started laughing. We got back on and kept at it. What a metaphor for life to create."

Gutiérrez Martínez now rides up to two hours a day, three days a week. It's an incredible accomplishment for someone who is missing what's known as his "sitting bones," the bottom part of the pelvis that absorbs the body's weight while sitting.

"It affects the way you sit, the way you balance with or without your prothesis," Binitie said. "Unlike in a below- or above-the-knee amputation, there is no residual limb to attach a prothesis to. It takes a lot of physical therapy to sit, to transfer weight, to walk. A lot of this goes to his drive and zest for life as an amputee of that high of a level. He is the type of person where nothing can keep him down."

Gutiérrez Martínez is still working to overcome challenges associated with his amputation. He struggles with chronic urinary incontinence and has days where he needs to come home from work for a few hours to take his prothesis off and rest.

But if you ask him, Gutiérrez Martínez says he lives a normal life. His family's business is thriving, he bikes and swims and takes his now 7-year-old son to the city plaza to watch him play. He routinely sends photos and videos to his doctors and Brandt.

"He is so inspiring being a young man with a son and all these things happening in his life," Brandt said. "I personally learn a lot from patients because they show you how resilient they are. They have a lot of faith as they keep moving."

Gutiérrez Martínez had a small recurrence in his abdominal wall in April 2021 that required surgery, but since then has been cancer free. If he catches anyone looking at his prothesis or missing limb, he doesn't want their pity.

"With this very bad experience, I feel grateful it happened to me because it made me a better person. I know that's ironic, but I am immensely grateful to God that I am able to walk beside my wife.

"I have fought a huge battle and was able to overcome it. I don't lack strength. I don't lack faith. I do lack a leg, but I have other things to make up for it."



Gutiérrez Martínez is still navigating the challenges of his amputation, but he says he now lives a normal life with his wife, Maria del Pilar Castillo Almansa, and their son.



Para leer esta historia en español, active la cámara del teléfono para escanear el código QR.

This image provided by the Bioengineering Department shows glioblastoma, a type of aggressive brain tumor. The advanced imaging techniques used in Moffitt's new Bioengineering Department will enable researchers to closely observe 3D cancer models and how they behave.

ANEW FRONTIER in Cancer Research

The launch of Moffitt's
Bioengineering Department
brings novel tools to the fight
against cancer

By Corrie Benfield Pellegrino | Photos by Nicholas J. Gould

Greg Sawyer was used to working in the great unknown. Early in his career, the mechanical engineer had been part of the NASA team that designed the original Mars rover, a robotically operated vehicle developed to explore and withstand the harsh conditions on the red planet. Later, his team at the University of Florida built instruments to evaluate nanocomposites in low Earth orbit as they were exposed to the space environment on the International Space Station.

Sawyer's enthusiasm for figuring out solutions to complex problems was boundless.

But in 2013, he came up against a challenge that made the unknown almost unbearable. At the age of 42, he was diagnosed with stage 4 metastatic melanoma. The doctors never found the primary site, but the cancer had metastasized and spread.

Suddenly, Sawyer's world shrank. His work in surface engineering and interactions no longer seemed to matter as much. His focus shifted to the path immediately in front of him.

The father of two underwent several surgeries and rounds of radiation. Sawyer also began researching immunotherapy clinical trials. That brought him to Moffitt Cancer Center and a trial being led by Jeffrey Weber, MD, PhD.

In December 2013, Sawyer became a part of a pioneering treatment regimen of ipilimumab and nivolumab. The combination therapy, which has since been approved by the U.S. Food and Drug Administration, activates the immune system while tearing down tumor cell defenses. For Sawyer, it appears to be working.

But that treatment was just the start of Sawyer's journey into the world of cancer.

A SHIFT IN PURPOSE

While Sawyer was researching his own cancer and treatment options, the engineer part of his brain latched onto something — hope. What if the tools of engineering could be used to tackle the unknowns in cancer?

"When I was researching, I really had no idea what I was reading at first," he said. "I was just trying to learn on the fly, just trying to see where, if anywhere, our tools could be used."

For the next three years, Sawyer devoted himself to looking for ways he could contribute to cancer research. And for those three years, he felt like he was just spinning his wheels. After all, he had a doctorate in mechanical engineering, not cancer biology.

One day, he found himself again frustrated, standing in front of a whiteboard, trying to brainstorm how he could help tackle cancer. Then it hit him.

"I can really remember just thinking: We need to do this differently. Let's not feel guilty for what we don't know. Instead, let's write down how engineers would attack this problem, given all of the resources of engineering," he said.



 $Greg\,Sawyer, PhD, joined\,Moffitt\,as\,chair\,of\,the\,new\,Bioengineering\,Department\,in\,April\,2023.$

At the time, his lab at the University of Florida had been doing work in 3D printing. "There was this idea that maybe you could use 3D printing to print organs, and we thought maybe we could use it to print cancer and print tumors. What would happen if we could make thousands of little precise tumors, and what could researchers do with that? And we just started from scratch right there."

Sawyer converted his lab to focus on cancer and tumor engineering. He used his expertise in 3D modeling and high-resolution imaging to quickly reproduce tumors and allow real-time testing of therapeutics. He also began reaching out to cancer experts in search of collaborators.

That's how he met Elsa Flores, PhD, associate center director for the Division of Basic Science at Moffitt.

A NEW VISION FOR BIOENGINEERING

Flores had a vision to build bioengineering capabilities beyond individual collaborations. Based on her experiences as a chemical engineering student at the Massachusetts Institute of Technology, she envisioned Moffitt having its own Bioengineering Department, a first for a National Cancer Institute-designated Comprehensive Cancer Center.

She had seen Sawyer talk about his work in a seminar, and she was impressed. So she toured Sawyer's lab at UF in March 2022 to learn more about the work he was doing and to invite him to serve on the board of advisors for Bioengineering at Moffitt. Flores and Sawyer quickly initiated a collaboration to build a discovery platform to develop drugs for targets that have been deemed "undruggable."

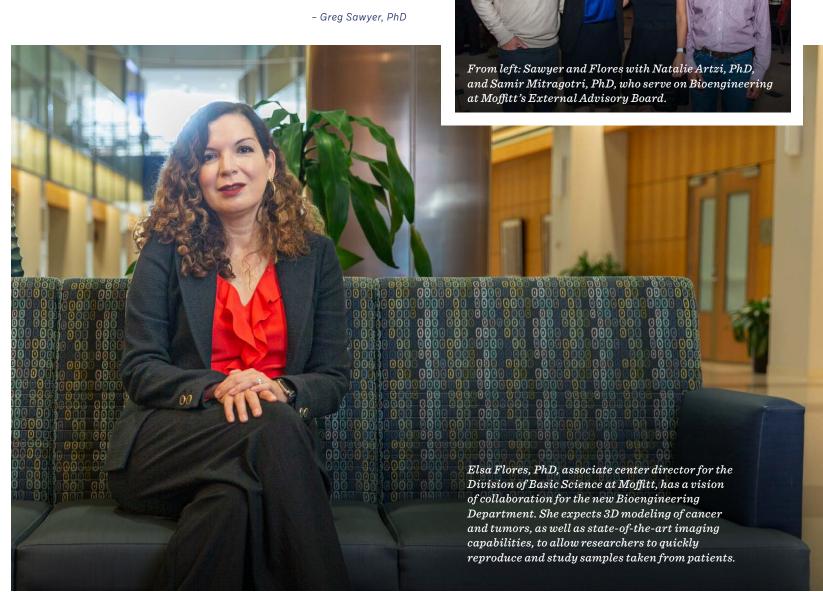
Sawyer's connection to the cancer center was already both personal and professional. In addition to being treated at

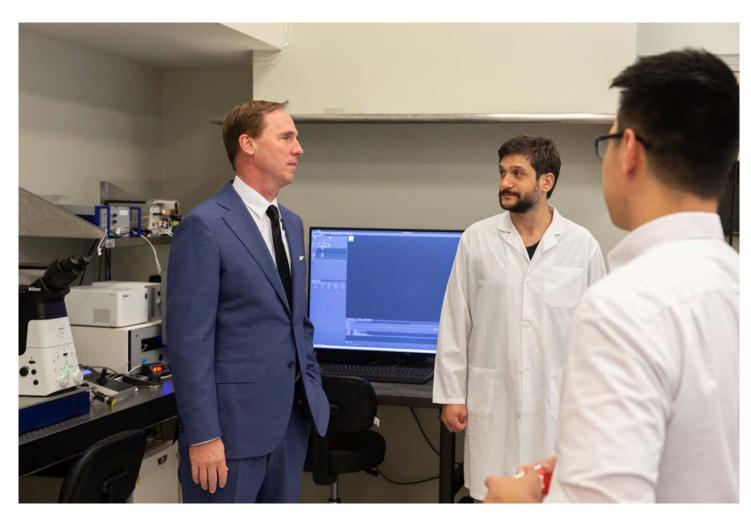
Moffitt, he had previously collaborated with Patrick Hwu, MD, Moffitt's president and CEO, on chimeric antigen receptor T-cell (CAR T) therapy. The pair had conducted experiments to observe in 3D how CAR T cells attack solid tumors.

As Flores and her lab began to learn his 3D modeling techniques, it became clear that Sawyer's passion for cancer bioengineering fit perfectly into Flores' vision for the future.

"There is so much excitement about this new initiative at Moffitt. In February 2023, Dr. Sawyer and I hosted a Bioengineering at Moffitt summit, which attracted thought leaders in engineering and cancer to Tampa to discuss this new department," Flores said.

"There was this idea that maybe you could use 3D printing to print organs, and we thought maybe we could use it to print cancer and print tumors."





Sawyer collaborates with Diego Pedro, PhD, and Duy Nguyen, PhD, far right, in his lab. As the Bioengineering Department grows, Sawyer expects the team to work with experts in a variety of fields, both inside and outside of engineering.

In April 2023, Sawyer joined Moffitt as chair of the new Bioengineering Department.

"It's nice to have a fresh perspective on how we study cancer," Flores said. "A lot of the reason that cancer therapy fails is because it's so nonspecific. It makes the patient sick because it's systemic. So being able to pinpoint therapies to the right place, we hope engineers can help us with that."

The new department is taking a multifaceted approach to accelerate cancer research. Sawyer's lab is collaborating with Moffitt researchers and clinicians in a range of other areas to provide 3D modeling of cancer and tumors, allowing researchers to quickly reproduce and study samples taken from patients.

"We've tried to re-create tumors mostly by genetically modifying cells in mice," Flores said. "Essentially, we were trying to engineer a tumor, but it's extremely difficult to model in the mouse because it's hard to re-create the complex genetics required for a human tumor to survive. Dr. Sawyer's platform allows us to actually take the tumor from the patient and duplicate it."

The department also arms researchers with groundbreaking microscopic imaging, enabling scientists to clearly observe the 3D cancer models and how they interact with their environment, metastasize and respond to specific therapeutics. To bolster imaging capabilities, Moffitt now houses a Nikon Center of Excellence, a state-of-the-art

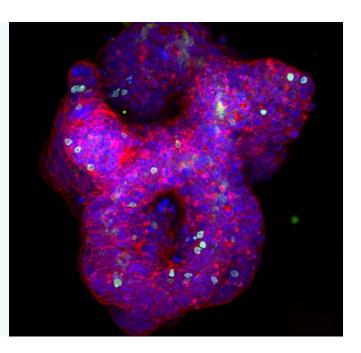
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- Elsa Flores, PhD

"Duplicating the tumor allows us to probe all the different pathways that we think are involved in cancer."

- Elsa Flores, PhD

This image provided by the Bioengineering Department shows a colorectal tumoroid with a POLE mutation.



facility that gives researchers and clinicians access to cutting-edge imaging technologies.

"With this imaging and the ability to look at tumors and the drivers of tumorigenesis on a single-cell level, we'll be able to ask questions that we haven't been able to ask before," Flores explained. "We'll be able to look at the resistance to certain drugs, the molecular changes and potentially new biomarkers to provide a more personalized therapy regimen for patients."

With the ability to produce thousands of small tumor samples from one patient biopsy and closely observe them,

As part of the Center for Innovation at the new Speros FL campus, researchers from Bioengineering and other departments will be able to work together on projects in open integration labs like this.

researchers can test the effectiveness of individual cell therapies at a scale that had not previously been possible.

"From one tumor, we can now run hundreds of thousands of experiments," Flores said. "Duplicating the tumor allows us to probe all the different pathways that we think are involved in cancer. That allows the testing of many different types of therapies, and it helps with reproducibility and scalability."

LOOKING TO THE FUTURE

Tsoi Kobus Design

The new Bioengineering Department is part of the Center for Innovation that will be located at Moffitt's SPEROS FL

campus in Pasco County. The engineers will work alongside scientists from the departments of Drug Discovery, Metabolism and Physiology, Molecular Oncology, and Tumor Biology in a new state-of-the-art research building.

"We're really trying to integrate engineers into the cancer center across the entire mission," Sawyer said. "From developing cell therapies, to helping clinician scientists to ultimately have tools for patients, to working with the basic scientists to help answer incredibly important fundamental questions."

This multidisciplinary collaboration is expected to come easy at the Speros FL campus, as the research building is being designed with open integration labs on every floor.

"The idea is that these laboratories will have all the features of the different types of

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research going on in the building, so the scientists from different areas can come together quickly to work on a problem," Flores explained. "With these engineers and scientists all co-located, there will be essentially unrestricted opportunities for collaboration, innovation, discovery and invention."

From these collaborations, Flores and Sawyer also expect to see innovative start-ups and partnerships with industry.

"It's a unique area in biotech," Sawyer said. "In bioengineering, we're trying to integrate things often across disparate fields. Those advances can become very important tools that need to be developed by small business to make them available more broadly to the larger cancer mission, across the country and around the world."

The new Speros FL research building is expected to open in fall 2025. In the meantime, Sawyer aims to build out the Bioengineering Department with a wide range of experts who can look at cancer research through a different lens.

"There's huge opportunity to get that fresh perspective, to pull in experts in astronomy, chemistry, nanomaterials, material science and drug discovery," Sawyer explained. "There are opportunities to pull these fields in and make use of their many advances that just haven't been applied to cancer research yet. That's how you accelerate discovery — by bringing in different groups."

A REMINDER OF THE MISSION

As the new department grows, Flores points out the benefit of its unique positioning within a Comprehensive Cancer Center. The engineers will have direct access to patient samples, oncologists and cancer researchers. They will also be surrounded by reminders of how much their work matters.

"Everybody knows someone who has been diagnosed with cancer, but it's not really in your face unless you're at a cancer center," Flores said. "I always tell people in my lab: If you ever feel like what you're doing isn't important, just



The Bioengineering Department that Sawyer leads is the first of its kind in a National Cancer Institute-designated Comprehensive Cancer Center.

walk over to where patients and families are sitting in the waiting areas. That inspires people."

For Sawyer, the mission is personal. His path in life changed after his diagnosis.

"I was trying to give back, to see what I could find, if anything, to give back to the cancer research community," he remembers.

A decade later, he is making progress in his mission — and once again shedding light on the unknown.

"There's huge opportunity to get that fresh perspective, to pull in experts in astronomy, chemistry, nanomaterials, material science and drug discovery. ... That's how you accelerate discovery — by bringing in different groups."

- Greg Sawyer, PhD

FOR PATIENTS & PROFESSION Representation Matters



Recruiting a diverse faculty improves patient outcomes

By Steve Blanchard

Photos by Kevin Kirby and Nicholas J. Gould

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"The first time I laid eyes on Dr. Blue, he put me in my room (at Moffitt) and changed my life. I can't even really put it into words, but I know that God laid a hand on Dr. Blue's heart to make sure I got the care I needed."

The moment Clinton Melton met Brandon Blue, MD, near the Red Lobby at Moffitt Cancer Center, he finally knew he was in the right hands.

Melton, 65, was diagnosed with multiple myeloma on Christmas Day 2020 after multiple doctor visits failed to offer an exact diagnosis. He had been told he had cancer, but he didn't know what type.

Not only did Moffitt help him to finally identify his cancer, but his interactions with Blue and the doctor's team changed everything about his cancer journey, Melton said.

"The first time I laid eyes on Dr. Blue, he put me in my room (at Moffitt) and changed my life," Melton said. "I can't even really put it into words, but I know that God laid a hand on Dr. Blue's heart to make sure I got the care I needed."

Melton, who is Black, said that having a doctor who represents his own community was a huge comfort in making him feel at peace with his diagnosis and helping him build trust in the medical team taking care of him.

For the first time, he said, he felt like he could be very direct with his medical team.

"I asked Dr. Blue to tell me like it was. I asked him if he ever thought I would walk out of that room and that I didn't want him to sugarcoat anything," he said. "He told me, 'Yes, you will be able to walk out.' And I did!"

RECRUITING FOR REPRESENTATION

Diversity, as the saying goes, is strength. And that's one powerful tool in Moffitt's mission to prevent and cure cancer.

That's why Odion Binitie, MD, an orthopedic oncologist in Moffitt's Sarcoma Department, works so hard to encourage Black and African American medical professionals to pursue a career at the cancer center. While his work has a long way to go, there have been strides in seeing more people of color in the cancer center's hallways.

"There is no magic number or an overall goal, per se," Binitie said of the ongoing recruitment efforts. "But we want to have our patients see themselves in our faculty. So the more African American and Black faculty members, the better. The more Asian, Pacific Islander, Muslim - every underrepresented group that we can hire, the better."

That representation made all the difference for Melton. Whenever he visits Moffitt, Melton looks forward to seeing Blue, even if he doesn't have a direct consultation with the doctor.

> Brandon Blue, MD, knew early on that he wanted a career in medicine. His first job in the field was at a nursing home when he was 16. Today as an oncologist, he works to introduce other young people to the profession.

"People I have been involved with in recruiting have been pleased to get to talk to another Black or African American faculty member to share experiences. They are pleased to know that they are coming to a place where there is a community among the faculty." - Odion Binitie. MD

Odion Binitie, MD, helped launch the Faculty Diversity in Oncology Program in 2018 to encourage a diverse group of Moffitt faculty

members to collaborate and recruit from their own communities.

to keep me alive."

"Even if I'm on campus for just bloodwork, I keep an eye out and hope that I get to interact with Dr. Blue," Melton said. "I don't pass by him without having a conversation, even if it's just for four or five minutes. I am going to say hello and

Blue emphasizes the importance of representation and interactions like these.

thank God and thank him on what has been accomplished

"I want to show people from my community that there are people from where they are who have made it to a successful adulthood," Blue said. "I also recognize the impact it has when a patient sees themselves in the medical team treating them, when they see a doctor who looks like them."

A native of St. Petersburg, Blue knew early on that he wanted a career in medicine. His first job in the field was at a nursing home as a 16-year-old. Today he is an assistant member in Moffitt's Department of Malignant Hematology.

"I wanted to do something to make a difference, and for me, oncology is the best way to do that," he said. "In this role, you must empathize and be personable. You're seeing someone at the most vulnerable part of their life. Everyone fears cancer – it doesn't matter their profession, their ethnicity or their race."

SLOW AND STEADY GROWTH

Blue and Binitie are both active in recruiting faculty and staff to Moffitt. In 2018, Binitie helped launch the Faculty Diversity in Oncology Program (FDOP), a faculty member engagement network that encourages a diverse group of Moffitt team members to collaborate and recruit from their own communities.

The reason for the group is simple – a more diverse faculty results in better patient outcomes.

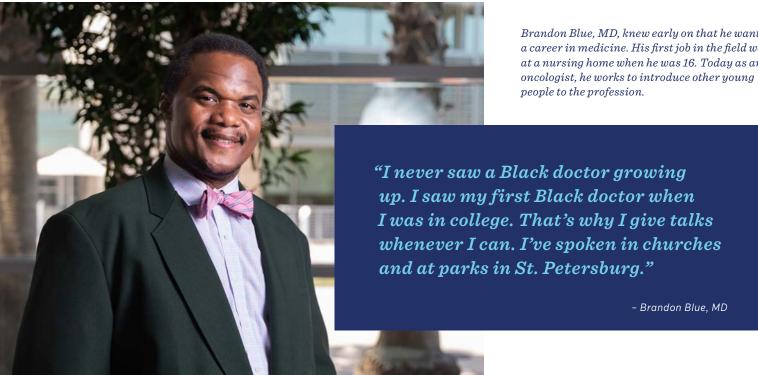
"We know that patients do better when their physicians look like them." Binitie said. "Departments and programs across the cancer center have reached out to FDOP to participate in interviews and meet candidates while on-site or virtually via Zoom."

That outreach is working. Steadily, Moffitt's diverse population of faculty and staff is rising.

Currently, there are 24 Black or African American faculty members employed at Moffitt. While that number may not seem like a lot, it shows a steady increase in diverse employment. When the FDOP formed, Moffitt had 15 Black or African American faculty members. This growth encourages doctors like Binitie and Blue to continue recruiting and inviting interested candidates to apply for positions throughout the cancer center.

"People I have been involved with in recruiting have been pleased to get to talk to another Black or African American faculty member to share experiences," Binitie said. "They are pleased to know that they are coming to a place where there is a community among the faculty."

As Blue points out, "there are tons of people out there" who want to work for organizations that are welcoming and have



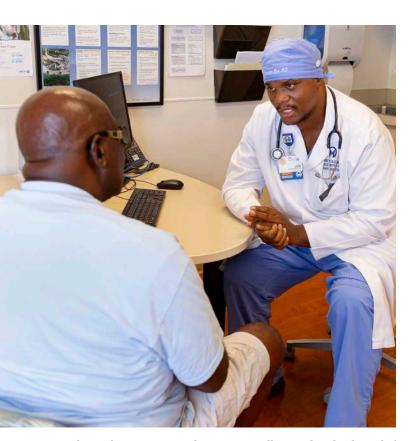
Moffitt.org MOFFITT MOMENTUM° | Volume 10, Issue 2 19 a place for them. That's why Blue is always sharing his story with youth and young professionals who are at the beginning of their medical careers.

"I never saw a Black doctor growing up," Blue said. "I saw my first Black doctor when I was in college. That's why I give talks whenever I can. I've spoken in churches and at parks in St. Petersburg. Kids are very visual, and they see sports stars and entertainers all the time, so they see those careers as options to succeed. There's nothing wrong with that, but my goal is to say, 'Hey, I'm here. I was literally where you were 10 years ago. Now I'm a doctor. You can do this, too."

Binitie said that Blue is not alone in his experience. Many young minorities don't see their community represented in the medical field. Ongoing recruitment and mentorship programs are the best way to change that, he said.

But it must be a collaborative effort across multiple programs and departments.

"I see reports on TV often talking about how Black patients tend to do better and live longer when they have a Black doctor. I'm proof of that."



 $\label{lem:melton} \textit{Melton, who expects to undergo a stem cell transplant by the end of the year, says he sees \textit{Blue as a main pillar in his support network.}$

BROADENING THE REACH

Many professionals, especially in the medical field, reach out to their own communities when it comes to recruitment. No matter their background, they will likely have most of their connections in their own community, whether it be in their neighborhoods, churches or their social circles.

"At Moffitt, our goal is to hire the best and the brightest, regardless of ethnicity and race," he said. "But with an intentional desire to improve the diversity of our faculty, we have to reach out to others who don't just fit our profile."

Binitie said he and the FDOP encourage colleagues from all backgrounds to use their networks and to connect with others to broaden the recruitment field.

"If there is a white man recruiting, he should consider reaching out to his Asian female colleague to see if she may have some candidates in mind," Binitie said. "That woman, who is a minority and has had her own journey to get to where she is, has an understanding that a lot of people get jobs through mentorships, sponsors and networking. We should utilize those connections all the time."

Other members of Moffitt's faculty are regularly working to expand Moffitt's diverse workforce. Diversity, equity and inclusion subcommittees have formed throughout the cancer center with representation from various racial and ethnic backgrounds. These subcommittees focus on helping residents and fellows seek out mentorships and guidance, as well as help with recruitment.

'HE FEELS MY PAIN'

Melton, who lives in Fort Pierce and travels regularly to Moffitt for treatment and consultations with Blue, said he sees his doctor as a main pillar in his support network.

"There are so many people on TV that use the terminology, 'I feel your pain," Melton said. "I know that Dr. Blue really does feel my pain. I see reports on TV often talking about how Black patients tend to do better and live longer when they have a Black doctor. I'm proof of that."

Melton said that by the end of the year he will undergo a stem cell transplant at Moffitt, which will hopefully put him on the path to remission. He said he trusts Blue and the team of providers at Moffitt and would not want to go anywhere else for his treatment.

"I have been in a lot of hospitals, but Moffitt is totally different," he said. "I don't know where Timbuktu is, but I told Dr. Blue that I would walk from there to Tampa to see him. That's how much that man means to me."



As a Jehovah's Witness, Naomi Burgess refuses to accept blood products. When she was diagnosed with leukemia, she faced the ultimate test of her faith.

Naomi Burgess needed blood. That's what doctor after doctor was telling her.

Her bone marrow was so packed with cancer that the disease was spilling into her blood, leaving no room for healthy blood production. Her hemoglobin, a protein in red blood cells that carries oxygen, was dropping dangerously below normal levels.

A blood transfusion would bump her hemoglobin back up. It would prevent a stroke or heart attack. Blood would save her life.

Burgess told doctors under no circumstances would she be accepting a blood transfusion. She would fight blood cancer without a drop of someone else's blood.

FINDING ANOTHER WAY

When Burgess was diagnosed with acute lymphoblastic leukemia (ALL) in the fall of 2020, she was overwhelmed by the typical feelings of shock, confusion and disbelief. But



For patients with leukemia, abnormal white blood cells can lower the number of red blood cells and platelets. Blood transfusions are typically a part of treatment.

she knew her case was anything but normal. Burgess is a Jehovah's Witness and will not accept blood.

Jehovah's Witnesses believe the Bible clearly commands Christians to abstain from blood. Life is a gift from God, and one cannot sustain life by taking in someone else's blood. Procedures such as transfusions of whole blood or any of its main components — red cells, white cells, platelets and plasma — are not acceptable.

"I knew so little about leukemia. I had no idea what to think, what to feel, what to fear or what was ahead," Burgess said. "The one thing I did know was that since I am one of Jehovah's Witnesses, my determination to always have bloodless medical care was going to come into the picture."

Burgess had to explain her beliefs to multiple doctors when she was admitted to a community hospital after her diagnosis. She felt she was met with some resistance, and fear started to creep in. It was one thing to understand her religious teachings, but it was another to be faced with the real-time life or death decision. She weighed the pros and cons, and she prayed. She had the support of her husband, who is not a Jehovah's Witness. She put her trust in God and asked her doctors to find another way – a bloodless way – to save her.

"I knew so little about leukemia.
I had no idea what to think,
what to feel, what to fear
or what was ahead."

"I refused to be a hypocrite at such a critical moment in my life. That's what I would have been if I gave up on my beliefs because suddenly it wasn't personally convenient. I couldn't live or die with that," she said.

Doctors decided to work to build Burgess' blood counts back up without a transfusion. She was given Retacrit, a drug that helps the body produce red blood cells, along with iron, fluids and oxygen. She underwent four rounds of "watered down" chemotherapy called vincristine combined with steroids to ensure the treatment didn't cause her hemoglobin to plummet with no surefire way to build it back up.

During her monthlong hospital stay, she stuck to her spiritual routine. She began each day reading a chapter of the Bible, and she attended twice weekly meetings with her congregation via Zoom.

Burgess' cancer burden dramatically decreased after four rounds of vincristine, but her only chance of cure was a bone marrow transplant. As a matter of personal choice, that option was off the table.

"I refused to be a hypocrite at such a critical moment in my life."

Burgess was only 45. She ran her own business and had just completed a four-year process to adopt her husband's two children. She was terrified to lose the life she had worked so hard to build. She knew she needed to find another way to keep fighting.

BLOODLESS MEDICINE

Bloodless or transfusion-free medicine and surgery refers to the care of a patient without the use of banked blood products. The first bloodless surgery was performed in the U.S. in 1962, and in recent decades major hospitals, including Moffitt Cancer Center, have established bloodless medicine and surgery protocols for patients who refuse blood transfusions.

There is no such thing as true "bloodless" surgery. Patients will always bleed in the operating room, but there are ways to reduce the amount of blood loss and decrease the need for transfusions.

Currently, there is no synthetic material or substitute for blood readily available and approved for use. That's why it's imperative for patients who refuse blood transfusions to have a full-scale workup before any surgical procedure. At Moffitt, benign hematologist Vania Phuoc, MD, helps optimize a patient's blood prior to surgery and, in some cases, treatment.

Phuoc completes a handful of these consultations each month and says that number is growing. Each case is highly individualized, based on the desired hemoglobin threshold for a specific surgery, the average estimated blood loss and the surgical techniques that will be used. Phuoc's job is to make sure a patient isn't anemic, meaning they don't have enough healthy red blood cells.

"If you have a person who is severely anemic to begin with and they lose significantly more blood during surgery, they are at risk for life-threatening complications, including compromised heart, lung, kidney and liver functions," Phuoc said.

If a patient is anemic or doesn't meet the desired threshold for surgery, intravenous iron as well as B12 and folic acid supplements can potentially get them to the goal. This is often used in tandem with erythropoietin stimulating agents – injections of medications that stimulate the bone



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complications."

- Vania Phuoc, MD

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marrow to make red blood cells – to help quickly raise red blood cell counts in preparation for surgery.

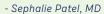
The same supportive measures can also be used postoperatively, especially if a patient loses a large amount of blood during surgery and would benefit from getting their blood counts promptly back to safer levels.

In the operating room, anesthesiologists and surgeons can administer medications and perform certain maneuvers to reduce blood loss. While these provide alternative options for those who will not accept blood, they also come with their own risks.

"Every patient, whether they accept blood or not, has very specific concerns. We tailor the way we care for the patient with their priorities and concerns," said anesthesiologist Sephalie Patel, MD, who helped create Moffitt's bloodless surgery protocols. "Bloodless surgery is a request we can honor, but this one has such severe consequences that we need to have a more in-depth conversation with them about the risks associated with their decision."



"Every patient, whether they accept blood or not, has very specific concerns."





Patel estimates that of the about 12,000 patients who undergo surgery at Moffitt each year, 50 to 100 ask for bloodless accommodations. The majority are Jehovah's Witnesses.

'ADDED PRESSURE'

The teachings from the Bible for Jehovah's Witnesses are clear regarding accepting someone else's blood or receiving an autologous blood transfusion — a blood donation that individuals give for their own use. However, there are other options that are a matter of personal choice. This includes techniques that circulate a patient's blood as an "extension of the body" as opposed to storing a patient's blood for future use.

Acute normovolemic hemodilution involves removing some of the blood from the body prior to the operation and diluting the rest of the blood left in the body. This way, any blood lost during surgery doesn't contain a high red blood cell count. Once the bleeding has stopped, the concentrated blood is recirculated back into the body.

Intraoperative cell salvage, or cell saver, uses a device to collect blood lost during surgery. Instead of throwing lost blood away, the blood is cleaned and returned to the body.

Surgeons can use certain drugs and a clotting promoter called tranexamic acid to stop excess bleeding during surgery. Selective embolization, a procedure that uses particles such as tiny gelatin sponges to block blood vessels during surgery, can also help reduce blood loss. In specific cases, laparoscopic or robotic surgery is beneficial because the gas used to inflate the abdomen with minimally invasive surgical techniques results in added pressure applied to blood vessels that limits some of the blood loss.

Even with all these options, careful preparation is the most valuable tool for surgical teams honoring bloodless accommodations.

"You can have adverse outcomes even in cases you don't anticipate to be complex," said Wade Sexton, MD, a genitourinary surgeon who collaborated on Moffitt's



In May 2023, Naomi Burgess rang the bell with her husband, Brent, after her last chemotherapy treatment at Moffitt. Ultimately, her team used a combination of chemotherapy and immunotherapy for her treatment.

bloodless medicine protocol. "Given some of the more advanced cases that we see, if a patient won't accept blood, there is added pressure and an added sense of responsibility. We slow down a bit and are more judicious in isolating everything that we think will bleed."

THE BROADER BENEFIT

Reducing the need for blood transfusions is always a goal in the operating room, regardless of whether a patient will accept blood.

"We always want to minimize blood loss as much as we can," Sexton said. "There is increasing data as to the detrimental effects of transfusion on different cancer-related outcomes. So, particularly at a cancer facility, anything we can do across the board to minimize transfusion is beneficial."

Risks of transfusions include allergic reactions, bloodborne infections, fevers and acute immune hemolytic reactions, where a patient's body attacks the transfused cells, causing kidney damage.

Since the creation of the bloodless medicine protocol, Patel has spearheaded preoperative anemia management for all patients. The standard blood management program now involves identifying patients who would benefit from initial hematological evaluations to try to improve the capacity for blood loss and ultimately rely on less blood transfusions.

BEATING THE ODDS

Determined to avoid a bone marrow transplant, Naomi Burgess transferred her care to Moffitt. Her case was discussed during a meeting of doctors at a malignant

"We always want to minimize blood loss as much as we can. ... So, particularly at a cancer facility, anything we can do across the board to minimize transfusion is beneficial."





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Burgess greets friends at the Jehovah's Witness meeting hall where she worships. It was the first time she had attended a Thursday evening meeting since the pandemic.

hematology tumor board, and the experts decided continuing the low-dose chemotherapy regimen wasn't the best option.

"This is a cancer that is occupying the bone marrow. It's like a weed in the garden. It's taken over the garden," said Bijal Shah, MD, Burgess' medical oncologist. "Now after low-dose chemotherapy, the healthy flowers, which are the healthy blood counts, are starting to come back. We did not get rid of the leukemia; we just knocked it down. We made space for healthy bone marrow cells, so now what do we do?"

Shah started Burgess on an immunotherapy called blinatumomab, which targets a protein on the outside of leukemia cells. While Burgess felt optimistic about it, the idea of being cured never entered her mind.

"We have no crystal ball, especially when we are doing things that are out of the box. I can't make any promises," Shah said. "Even in the best of circumstances, when you talk about ALL in adults, we are only going to cure roughly 40% of them."

The immunotherapy treatment caused Burgess' liver enzymes to skyrocket. She had to pause treatment but was eventually able to continue. She went home after three weeks, and a biopsy in March 2021 showed the treatment worked. There was zero trace of cancer.

Burgess completed one more round of immunotherapy before switching to maintenance chemotherapy for the next two years. She endured COVID and pneumonia and battled all the side effects that come with high-dose steroids. Her body is exhausted from her three-year fight.

On May 25, 2023, she rang the bell after her last treatment.

"As I look back over the past two and a half years and consider the extraordinary journey I have been on physically, mentally, emotionally and spiritually, I can say without reservation, the most poignant decision I made was to loyally stick to my Bible-based convictions," Burgess said. "That decision along with the doctors who supported my choice of bloodless medicine has led to my phenomenal results."

Burgess believes there needs to be more education, awareness and acceptance surrounding Jehovah's Witnesses' refusal of blood. There is a common misconception that the religion doesn't believe in modern medicine, but Jehovah's Witness hospital liaison committees work with health care providers to clarify ethical issues and help congregants find the best medical care that fits within the boundaries of the group's core beliefs.

"I was never interested in martyring myself, and I had no desire to die," Burgess said. "I was determined to fight with

"I was determined to fight with every fiber of my being, but I was also determined to be faithful to my beliefs."

every fiber of my being, but I was also determined to be faithful to my beliefs."

Treating a patient who falls outside the standard boundaries isn't easy, but it's doable.

"This was extraordinarily challenging," Shah said. "She is young, and I want to go full-court press. I want to do everything I can knowing she's young enough and healthy enough to tolerate it. But she's made her wishes clear. I appreciate that, and I am not going to go beyond that."

COMFORT, ENDURANCE, HOPE

On one evening in early June, Burgess and her family walk into the Jehovah's Witness meeting hall, escaping the summer heat. Inside, she is met with a different kind of warmth.

Big, lingering hugs and well-wishes surround her. It's the first Thursday evening meeting that Burgess has attended in person since the pandemic. She's wearing a mask – still cautious about being immunocompromised – but it can't hide her giant smile.

She sits in the second row, listening to Bible passages and reflections on themes like comfort, endurance and hope. It's what got her through her battle. It's what her congregation and faith will always offer.

"My body has been through the ringer, but I am alive," Burgess said. "I fought blood cancer without blood and won."

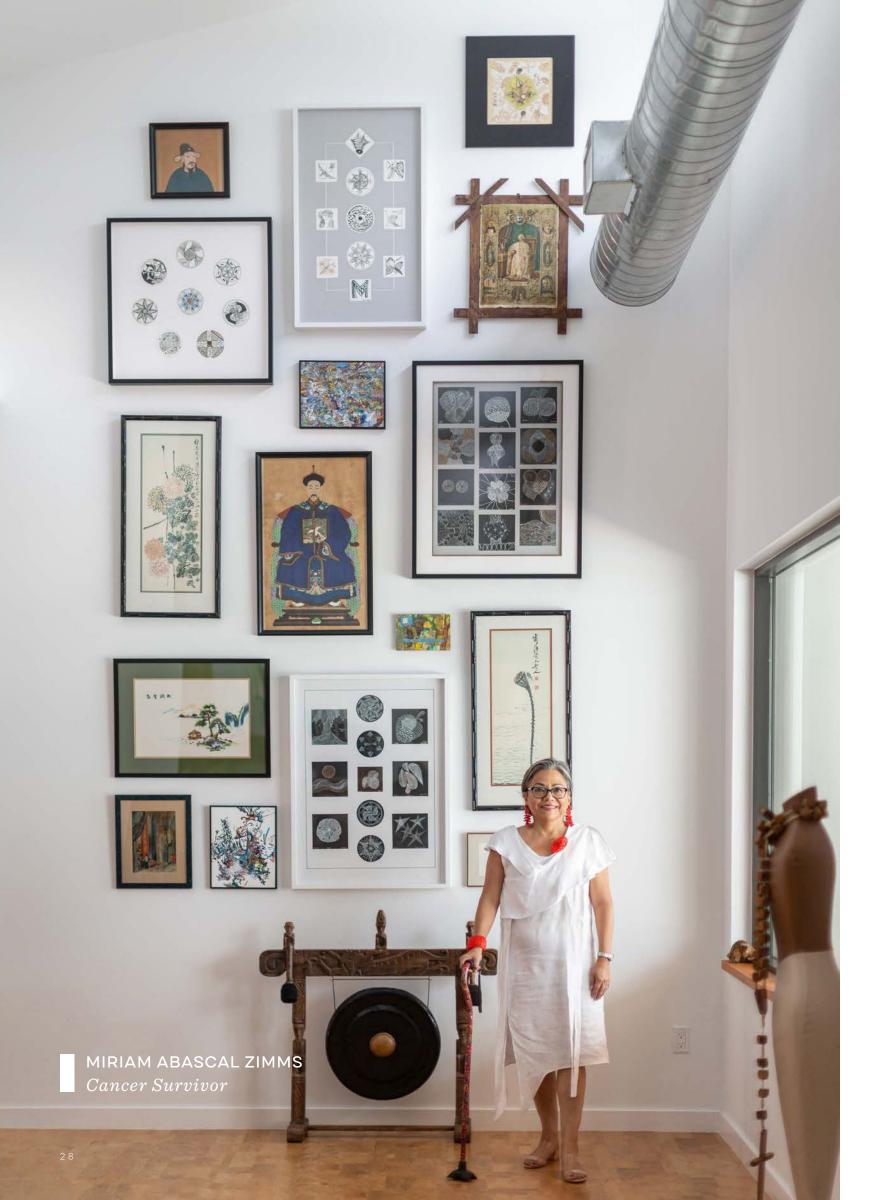


"I want to do everything I can knowing she's young enough and healthy enough to tolerate it. But she's made her wishes clear. I appreciate that, and I am not going to go beyond that."



- Bijal Shah, MD

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Art Brut:

An American Dream

Cancer has taken life and limb, but Miriam Abascal Zimms has found a way to blaze her own trail

By Pat Carragher | Photos by Nicholas J. Gould

You would be forgiven if you walked into Miriam Abascal Zimms' home and forgot you were in someone's house. Inside the doors, you're instantly greeted by art from floor to ceiling. Whether it's pieces she made, from Santa Fe or her native Guatemala, the variety is enough to make the waterfront views of Lutz's Lake Brant the second-most visually impressive part of the property.

When you turn the corner, there is a row of world masks adorning the wall. Just below, you notice the sink and refrigerator and are reminded that this is, in fact, someone's home and not a live-in art gallery.

That art just may be Zimms' life, though.

It was not always that way. Zimms has been on a long journey to get to where she is today.

A first-generation immigrant, Zimms left her native Guatemala in 1971 when she was 4. Along with her mother, Rosa, the two set out for America hoping to create their own version of the American dream.

CHAPTER 1: HER MOTHER'S DREAM

If Zimms' life were a book, the first chapter would be her mother's version of that dream.

"I always had this creative side to me as a child," Zimms said. "But I couldn't tell my mother I wanted to go to New York and be on Broadway."

She doesn't remember much from those first few years in the United States, but she remembers her mother working hard and persevering in the face of discrimination.



Miriam Abascal Zimms has turned her home into her own gallery, with art she has created and collected throughout the years.

To honor her mother's dreams, Zimms embarked on a career in business. She worked as a consultant in solid waste management for county governments, corporations and institutions, helping to plan their conservation and sustainability strategies. She took great pride in running zero-waste and waste reduction programs.

She was making the planet a better place for future generations

Sadly, Zimms was not far into her career when her mother passed. Zimms was just 26. Her mother was 58 when she died from metastatic breast cancer.



Zimms' first career was in waste management, but she found a new life in art during her recovery from chondrosarcoma. Now, she spends her days working on art projects and teaching groups locally and virtually across the country.

Three other women on her mother's side had also been diagnosed with either skin cancer, breast cancer or both. And her maternal grandfather had passed away from stomach cancer.

Zimms knew her risks. She started doing self-breast exams immediately. Once a month. Every month. She also got annual MRIs.

For 17 years, she found nothing. Two hundred straight self-exams. Everything status quo.

Until one day in 2010, when she became the fifth woman in her family to have that dreaded realization.

She found a lump in her left breast.

FROM DREAM TO DARKNESS

"I was not shocked," she said. "But I was surprised."

The diagnosis was triple-negative breast cancer (TNBC). She was 43.

"I remember thinking, 'Wow, I really have done everything I was supposed to do,'" she said. "I embraced a wellness lifestyle. I exercised. I was eating healthy because I saw the women in my family go from being fit, healthy women to their bodies changing when they hit menopause."

Zimms came to Moffitt Cancer Center for her treatment.

Up first was three months of chemotherapy. Once that was finished, she underwent a double mastectomy and the start of breast reconstruction to begin the process of feeling whole again. Reconstruction required four surgeries over the course of three years to complete. She worked through it all.

During that time, through genetic testing, she learned she had a BRCA1 mutation. With a newly discovered risk for ovarian cancer, Zimms had her ovaries and fallopian tubes removed.

"I remember thinking, 'Wow,
I really have done everything
I was supposed to do. I embraced
a wellness lifestyle. I exercised.
I was eating healthy."

A few months after recovering from surgery, something still didn't feel right. She brought up her concerns to her surgeons, John Kiluk, MD, and Philippe Spiess, MD, who called for a CT scan of her lower body.

That scan revealed a suspicious spot on her pelvis. The initial fear was that her breast cancer had spread.

"When that biopsy came back, I got a phone call saying, 'Do you want the good news or the bad news?' And I said, 'Well,

I'd like the good news first,' and the good news was that it was not metastatic TNBC," Zimms recalled. "But the bad news was that I had chondrosarcoma, primary bone cancer."

If her first cancer diagnosis was surprising, this new diagnosis was a full-blown shock.

There had been little to no time to separate from the breast cancer, months of chemotherapy and all the surgeries, but she couldn't take a break now. Her life was on the line.

Zimms underwent an internal hemipelvectomy. She had the majority of her left pelvis, hip ball and top part of her femur removed.

What followed was seven months of bed rest with in-home physical therapy, then one and a half years of additional in-home physical therapy. A lifetime of physical therapy became part of her new full-time job.

"The surgery saved my life," Zimms said. "But it left me with the inability to use my left leg and took away many of the things I used to do. I've had to modify the way I live, including my energy level of productivity."

During the months of not being able to leave her bed, the negative thoughts crept in.

"I felt like a helpless baby," she said. "I needed a full-time caregiver to help me with everything. That was when I started to think about the loss of my primary female body parts. My breasts, fallopian tubes, ovaries and now my left pelvis."

She was depressed. She was down. She was angry.

She describes the feeling as being on a bus. She was on her journey exploring how to live life after breast cancer. Suddenly, someone slammed on the brakes.

"The last four years just came flying forward," she said. "And I had to deal with it."

It was the darkest time in her life.

Then Moffitt's Arts in Medicine program brought out a light in Zimms that had been dormant for decades.



Moffitt's Arts in Medicine program started 25 years ago with a single artist taking this art cart around to patients.

'A PROCESS THAT OPENS PEOPLE UP'

The Arts in Medicine program started in 1998 and celebrates its 25th anniversary this year.

It began with a single artist and a cart full of art supplies. Frances Falk was the program's first coordinator, serving in the role from 1998 to 2003. Falk would visit patients at their bedsides and in the lobbies and waiting areas, bringing art directly to the people.

"The last four years just came flying forward. And I had to deal with it."

Later that first year, the program added a musician and transitioned into an open studio for patients to visit while they were undergoing treatment.

The program is based off an expressive arts model. The idea is to use art for healing and self-discovery.

"Our artists and musicians are not practicing as therapists," explained Amanda Bonanno, the program's current coordinator. "They're not coming up with goals or treatment plans. The control is all in the hands of the participant."

Bonanno joined Moffitt as the Arts in Medicine coordinator in 2016. She believes the open-endedness of the program gives patients the ability to feel free in their expression.



"No one is going to interpret or impose any meaning on the artwork that is made. It's oftentimes a process that opens people up to sharing, and that is their choice."

- Amanda Bonanno, Arts in Medicine program coordinator

"No one is going to interpret or impose any meaning on the artwork that is made," Bonanno said. "As a result, it's oftentimes a process that opens people up to sharing, and that is their choice."

Today, the program has seven artists-in-residence sharing both visual art and music across three Moffitt locations. That includes two art studios for anyone to visit during their time at Moffitt. True to the program's origins, the artists still use the art carts to visit patients right where they are.

CHAPTER 2: AN ARTIST EMERGES

Zimms had visited the art studio at Moffitt's Magnolia campus some during her breast cancer treatment. But during her recovery from hip surgery, something magical happened.

Marcia Brown was the artist-in-residence working in the studio that day. She had brought over a few projects to try, including Zentangle art, a creation of patterns using a repetition of dots, lines, curves and orbs.

Zimms initially declined. The rehabilitation process she was going through was brutal. She had to learn to sit, stand and walk again. The most basic movements came with a combination of pain and fear that was often overwhelming.

"I wasn't in a space of wanting to put anything dark on paper," she said. "It all felt so dark. But that's the space I was in."



Zimms describes her artistic style as "art brut," a French term that refers to pieces made outside of the traditional definition of fine art.

That's when Brown had the idea to flip the script. Instead of having Zimms put black ink on white paper, Brown suggested using a white pen on black paper.

Zimms took the supplies home, and the rest is history.

"At that point in my life, people were giving me books and all this big stuff to do at home, and I was not in a mental space to absorb any of that," she said. "So I needed something small and fast."

What followed was 300-plus pieces of Zentangle art tiles. People around Zimms quickly took notice.

"My husband and my stepdad would tell me I was really talented," Zimms said. "But then one of the Moffitt artists asked me to start bringing some of my pieces in and said, 'Wow, Miriam, you're really doing something special here."

"I wasn't in a space of wanting to put anything dark on paper. It all felt so dark. But that's the space I was in."

The decision was made to showcase Zimms' art in Moffitt's Healing Arts Gallery, which features art made by patients, families and staff. Each of her 300 pieces was framed and displayed for over a year. The pieces told the story of Zimms' journey. From her breast cancer to chondrosarcoma. They are tributes to her husband, Mitch Kessler, and Moffitt, as well as loss, pain and suffering.

"I did get a lot of feedback from doctors, and people would write me saying that they would stop and look at it. It really did a lot of healing," Zimms said. "Not just for the patients and families, but for team members who would stop every day on their way to the parking lot. It really touched a lot of people's lives."

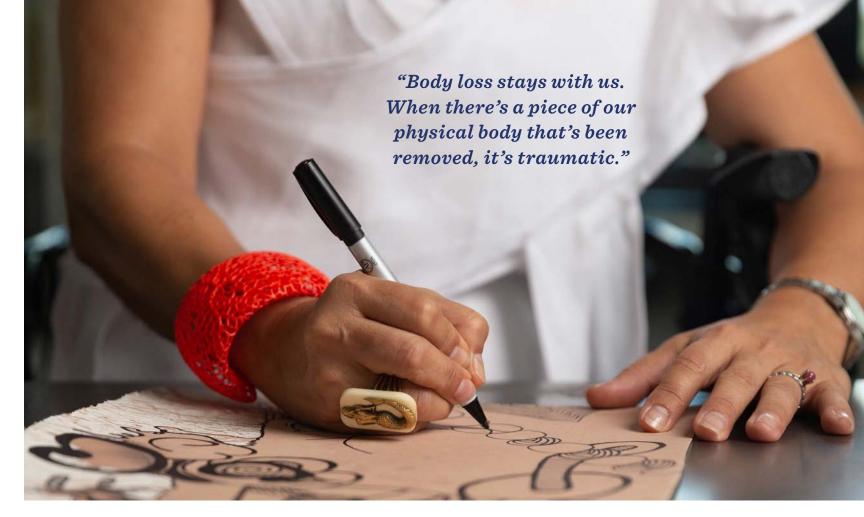
Zimms left her career in waste management to focus on her chondrosarcoma recovery. Cancer may have taken that part of her life from her, but it ended up unlocking something different.

"I believe that allowed the left brain to shut down," she said. "And what had been there when I was younger and very creative was allowed to completely blossom and show its face."

Local libraries started noticing her work and invited her to host shows and speak to art groups.

"People started to ask me if they could purchase this piece or that piece," she said. "That's when things really started happening."

Zimms suddenly found an additional life purpose as an artist and teacher of the Zentangle method and expressive arts, contributing greatly to her own healing.



Arts commissions started calling. She was connected with Arts4All Florida, an organization that pairs artists with disabilities with galleries throughout the state. To date, her art has appeared in 10 galleries in Florida.

Zimms now spends her days working on new art projects and teaching Expressive Tangling, a combination of Zentangle and expressive arts, to groups both locally and virtually across the country. Although she still deals with chronic pain, PTSD and anxiety, her feelings of depression are no longer constant. They have begun to come and go.

She describes her artistic style as "art brut," a French term that refers to pieces made outside of the traditional definition of fine art. Also known as outsider art, it's often self-taught or discovered following a major loss or health impact.

In her art, Zimms has also started focusing on larger pieces, applying repetitive patterns using tangling strokes to showcase a theme of body loss. It's a theme she knows all too well.

Zimms has 17 scars on her body to document her journey. Each of those 17 scars are showcased in her art.

"Body loss stays with us," she said. "When there's a piece of our physical body that's been removed, it's traumatic."

A LEGACY THAT LIVES ON

If chapter 1 of her life story was her mother's American dream, this was chapter 2. It was her American dream.

"It's really an opportunity that came into my life thanks to the Arts in Medicine studio at Moffitt," she said. "It came at a time that I needed something to give me purpose. It was a gift and a blessing."

Zimms and her husband believe in the healing power of the arts, and they have become generous supporters of the Arts in Medicine program. They want to make sure all patients have access to these types of holistic support programs. In June 2022, they donated a piano to the cancer center in honor of Jerry Kessler. It now sits in the lobby of the Richard M. Schulze Family Foundation Outpatient Center with the intent of providing joyful music for years to come.

Zimms is now 10 years' chondrosarcoma free and 13 years' breast cancer free. She has yearly follow-up scans to keep an eye out for any signs of new disease.

"I witnessed my mother's courage. I gained my knowledge and strength through her experience and then through my own," Zimms said. "Even though she passed when I was young, her legacy is carried inside of me. And no one can take that away from me. Not even cancer."

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

Create revolutionary breakthroughs and innovations that rapidly impact and save more lives

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