



PORTRAITS OF HOPE, INNOVATION AND TRIUMPH



Alan F. List, MD
President & CEO
Moffitt Cancer Center

MOFFITT MOMENTUM®

VOLUME 5, ISSUE 2

Dear Friends,

We are pleased to share this edition of Moffitt Momentum magazine with you. As you read the selected features, you will notice a common theme of strong women throughout the issue. The women highlighted are diverse and have experienced various life challenges as patients, survivors, caregivers, volunteers, health advocates, physicians, scientists and more.

Cancer survivor Theresa Jean-Pierre Coy is a wife, mother, attorney, small business owner and immediate past president of the George Edgecomb Bar Association. Learning that her diagnosis, inflammatory breast cancer, is more common and diagnosed at younger ages in black women than in white women is what inspired her to help raise money for Moffitt's cancer disparities research.

Emerald Cromwell and Elisa Hughes, adrenal cancer survivors who grew up in the same neighborhood and lost a colleague to the same disease, zealously search for answers, questioning whether the one in a million odds are more than coincidence.

In anticipation of this issue's theme, Asmita Mishra, MD, and Yvette Tremonti gathered with other female leaders throughout Moffitt for a roundtable discussion about the path to leadership for women. Mishra and Tremonti lead the Women in Oncology Interest Group, a mentoring group that helps explore and address the needs of women faculty at Moffitt. We share excerpts from their conversations.

Pancreatic cancer has the lowest five-year survival rate of any cancer, and it is difficult to diagnose in its early stages. In this issue you will meet some of the extraordinary women at Moffitt who are determined to change that. They share their thoughts on what is important as they work collaboratively in every aspect of care: research, pathology, medical oncology, radiation oncology, surgery and supportive services.

Laura Barber, herself a cancer survivor, shares how her experience during her husband Steve's chemotherapy, stem cell transplant and follow-up care at Moffitt is what drove her to volunteer at the cancer center.

We hope you enjoy reading these insightful stories that underscore the foundational role women continue to play in the cancer center and in our communities. These stories are relevant for everyone desiring to make a positive difference, and they encourage all of us to continue our work together to contribute to the prevention and cure of cancer.



A COMMON FOE
Determined new mother
fights smart



BEATING PANCREATIC CANCER
Strength in numbers



30 YEARS TOGETHER Tianjin partnership expands



THE BEST HUGS
Remembering
Margie Schwerdt

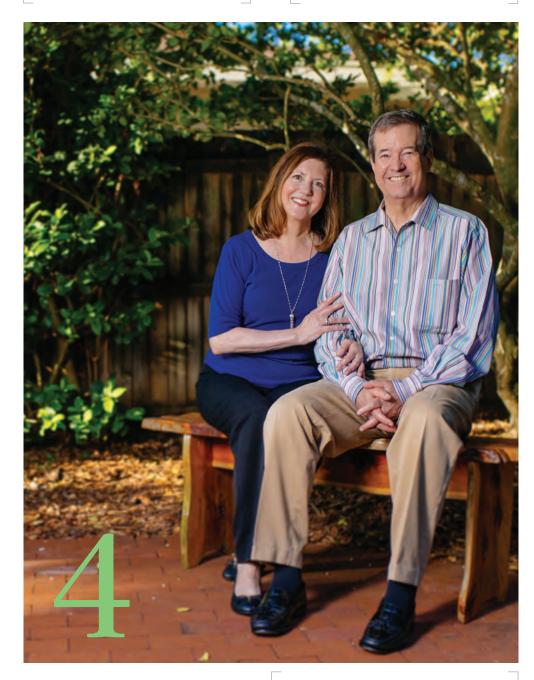


ONE IN A MILLION?

Multiple cases come close to home



TAKING A CHANCE Strong women step out of comfort zone



CARE PERSONIFIED
Love and faith go far post-transplant



ANEWNORMAL

Follows Six-Year "Transplantiversary"

By Cathy Clark

Steve, a successful ERISA tax attorney, and Laura, a Tampa native, married in April 2006. Life was ideal. The couple enjoyed traveling, gardening and college football. They felt fortunate to live on a tree-lined street near the church where they married and where they were surrounded by business colleagues and friends. They both enjoyed being active – Steve ran and Laura played tennis.

"I have tried to be active my entire life," says Steve. "For many years, I regularly ran four miles a day and would run races on the weekend."

Steve began to suspect something was wrong as the distances he could run without stopping or getting short of breath dwindled from four miles to two or less.

Little did he know the visit to his internist in March 2010 would mark the beginning of an eight-plus-year journey that would test his perseverance and resilience. Nor did Laura realize what ultimately would be required of her as Steve's caregiver. She detailed their journey in a blog for friends and loved ones, with entries both hopeful and poignant.

"For many years, I regularly ran four miles a day and would run races on the weekend."

Steve's hemoglobin count was low and continued to drop. Hemoglobin carries oxygen throughout the body, so it was no wonder he felt so tired. "Things we take for granted, like walking upstairs and just your daily activities became more difficult," said Steve.

Various tests were ordered in an effort to diagnose the cause. Steve had his first bone marrow biopsy in late 2010. He underwent treatments, none of which seemed to help. He needed blood transfusions every other week.

In 2011, Steve was placed on Procrit therapy to treat multilineage dysplasia and refractory anemia, the lowest grade of myelodysplastic syndrome. Myelodysplastic syndrome (MDS) is an umbrella diagnosis that includes a group of disorders in which immature blood cells in the bone marrow do not develop into healthy blood cells.

THREE DOZEN TRANSFUSIONS — AND COUNTING

By August 2011, Steve's hemoglobin count - normally between 13.5 and 17.5 in men, had dropped to six. He was referred to a world-renowned MDS research pioneer, Moffitt's President and CEO Alan List, MD.

"I'd probably had close to 36 transfusions of blood before I saw Dr. List," Steve said. All those transfusions caused a rare reaction for Steve but a common side effect. "I started breaking out in hives," he recalled. "So I needed injections of Benadryl before each transfusion."

Another complication ensued.

"Steve not only had common allergic reactions to the donor blood, he had also developed a red cell antibody," said Benson. "Steve cannot just receive blood off the shelf. He requires specialized units, specialized testing."

Though it happens in only about 1 percent of those who receive blood, patients can develop proteins called antibodies after exposure to donor red cells that their body can react to. "We have to give them blood that is compatible for those specific antibodies," Benson explained. "In Steve's case, he had developed a little 'e' antibody; we had to give him little 'e' negative blood."

In fact, Steve had developed three different antibodies with differing potential impacts to his health. The little "e" antibody definitely was the worst. If, for example, a person like Steve got a blood transfusion with little "e" positive blood, "e" could destroy his red cells and in some rare cases could actually cause a very severe transfusion reaction.

"This is an example of why testing each patient carefully before blood transfusion is so very important — and why donated blood is so important, why we need a wide variety of blood donors: so that we can find those specialized units and have enough," said Benson. "Without the blood transfusions, Steve would not have survived."

List confirmed the diagnosis of low-grade MDS and in October 2011 placed Steve on a therapy called anti-thymocyte globulin (ATG) to suppress his immune system. It required five days of treatment in the hospital. He still needed blood transfusions

and ongoing testing, but things appeared to settle down.

BIOPSY REVEALS FAST-TRACKED DISEASE

In late April 2012, Steve was scheduled for a bone marrow biopsy to monitor the disease. He and Laura fully expected to hear positive news when List delivered the results days later. Unfortunately, that was not to be. Steve had progressed from low-grade MDS to a high-grade version of the stealthy disease. His white blood cell counts were low, making him vulnerable to infection. Steve's fast-tracked disease could likely become leukemia within months, ultimately shortening his life.

"Without the blood transfusions, Steve would not have survived."

"I felt sick to my stomach, especially when Dr. List proceeded to tell us the only known possible cure at this point is a bone marrow/stem cell transplant," said Laura.

List referred Steve to Claudio Anasetti, MD, then chair of Moffitt's Blood and Marrow Transplant and Cellular Immunotherapy Department. Steve's brother was not a match, so Anasetti contacted Be The Match, the national registry. Patients and donors are matched through human leukocyte antigen (HLA) testing. The patient's HLA is compared to that of potential donors to determine if there is a match. HLA are proteins on most cells in the body. The immune system uses HLA to recognize which cells belong in one's body and which do not.

Fortunately for Steve, a 24-year-old man was a match, and he was willing and available to donate his stem cells. In the following years they have emailed, although they have not yet met in person.

Before the stem cell transplant, Steve would receive four rounds of Vidaza (azacitidine), a chemotherapy drug, followed by another bone marrow biopsy. Each round lasted seven days, with a 21-day break between rounds. He got through the chemotherapy with the help of another drug to deal with low white cell counts and blistering skin reactions.

OCTOBER 13, STEVE'S "TRANSPLANTIVERSARY"

Finally, on Oct. 13, 2012, Steve had the stem cell transplant.

A few days before, Laura wrote in her blog: "Steve is amazing. His faith and optimism have never wavered through these past two years."

"A week before the transplant and for three weeks afterward, I was in 3 West, and the staff was extremely supportive there. Very encouraging. Extraordinarily helpful. And every doctor I've dealt with during this period has been absolutely wonderful," Steve said.

Moving forward with blood transfusions following the stem cell transplant presented more challenges for Benson's blood bank team. Steve was born with type B+ blood, but the stem cell donor had type A+ blood.

Such a complete mismatch is one of the more challenging combinations any blood banker can face, according to Benson. Steve continued to make his own red cells for a period of time, as the donor transplant started to make new red cells and new antibodies. "So the two are BOTH making red cells and BOTH making antibodies. You need to provide blood that is compatible for BOTH the donor and the patient, so we need to give the very precious and in-demand universal group O blood," Benson said.

Steve was also cytomegalovirus (CMV) negative, having never been exposed to the virus. Over half the adults in the U.S. have had this common virus in their body by the time they reach age 40. CMV can infect anyone and does not cause problems for most people, but for someone with a weakened immune system, it can cause serious disease. So Benson's team also needed to make sure the blood for him was CMV-negative.

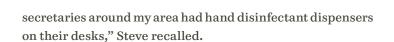
At this point, Benson already knew Steve's blood needs very well. She oversaw his photopheresis treatments for a common side effect of transplantation called graft-versushost disease (GVHD). Some GVHD is good, as it also can provide a graft-versus-tumor/

leukemia effect and suppress any residual disease like the MDS in Steve's case. But the GVHD can be so severe that it causes considerable harm to the patient and often needs to be treated aggressively.

Extracorporeal photopheresis is one of the therapies used in the treatment of GVHD. It can take many months to years for the GVHD to be adequately treated. "I saw him over a number of years and also learned he is my neighbor; he lives two streets down from me," Benson said.

BACK TO A NEW NORMAL

By December that year, Steve and Laura were grateful to be in their home, yet Steve's immune system was like that of a newborn infant and he was extremely vulnerable. Fortunately, he was able to work from home. When he was able to return to his office at Shutts & Bowen, they had moved a printer, a refrigerator and a microwave into his office so he would not have to spend any time outside of his office. "And all the



Oct. 13, 2018, marked Steve's six-year transplantiversary. In recent years he has participated in several 5Ks and intends to participate in many more. Steve and Laura have teamed up for Miles for Moffitt and Richard's Father's Day Family Walk/ Jog, hosted by Moffitt supporter and restaurateur Richard Gonzmart.

Faith was a major part of this journey, said Steve. "I never felt like I was alone or isolated during my time on 3 West or before when I had the chemo."

Today, Steve continues his Moffitt visits. Since Anasetti's retirement, Steve sees Joseph Pidala, MD, PhD, a medical oncologist in the same department. He still has to be careful, wearing gloves and a mask when doing the gardening work both he and Laura love – but the days of being hospitalized are far behind him. The future is bright. He continues his work at

Shutts & Bowen and while still vigilant, the precautions have relaxed. He and Laura have expanded the work in their garden and are back to enjoying an active social life. And as they stroll under the canopy of their tree-lined South Tampa street, they can't help but wonder about the coincidence of having their neighbor Dr. Kaaron Benson being part of their Moffitt treatment team and how she came to first know Steve's blood and then to meet him for his GVHD treatment and successful graduation off the therapy.

"I never felt that I was alone or isolated during my time on 3 West or before when I had the chemo."





Caregivers come from different walks of life, are different ages and are related to those requiring care in various ways. There is no one face of a caregiver. But if care could be personified and if there were a face of a caregiver, it would be that of Laura Barber.

This strong, talented woman, herself a breast cancer survivor (15 years out), has a public relations background and is a voice-over artist, certified Pilates instructor and Master Gardener (evidenced by the beautiful, peaceful garden she and her husband, Steve, have created).

Fiercely loyal, Laura committed to care for Steve 24 hours a day, seven days a week, knowing the responsibility would last at least 100 days following his bone marrow transplant. Such a commitment on the part of a caregiver is required for patients to receive a bone marrow transplant. In reality, the journey spanned years as Steve sought a diagnosis and underwent numerous therapies before the transplant.

Laura says her experience during Steve's chemotherapy, stem cell transplant and follow-up care at Moffitt is what drove her to volunteer at the cancer center. She proudly displays her badge as a volunteer with Moffitt's Patient and Family Advisory Program. And more recently, she was invited to join the Patient and Family Advisory Council.

ESTABLISHED IN 2005, MOFFITT'S PATIENT AND FAMILY ADVISORY PROGRAM brings the patient and family perspective into everything done at the cancer center. A highlight for the volunteers is a Christmas Eve tradition in which they give blankets and holiday cards to patients in the hospital. She and Steve have distributed blankets the past two

Christmas Eves. "That has been an incredible experience for the patients and caregivers to see us," says Laura. "They just seem so relieved to see there is normalcy on the other side of their journey—a new normal, yes, but certainly there is hope!"

As gratifying as her volunteer work and other interests are, Laura describes herself as "100 percent caregiver." Her life has returned to her own new normal. She is back to playing tennis and does not need to rush home from the grocery store or her myriad errands to check on Steve as she did during those 100 days post-transplant. She is thrilled that Steve has regained his health, has been back at work full time for years and has even taken up running again. Six years have passed since the transplant, it has been years since he had to "live in a bubble" and their active social life has returned.

"100 percent caregiver"

Would she take on this caregiver role if she had it to do all over again? The answer is a resounding "Yes!"

"This journey has been frightening, difficult, exhausting and emotional. It has also been enlightening, empowering and humbling," says Laura. "Love, family, friendship and faith were the cornerstones for our success."

On her February 2013 "Valentine" blog post, Laura wrote: "One of Steve's balloons given to him in the BMT wing on his second birthday [his transplantiversary], October 13, is still alive and kicking in our den. It is a heart that says 'Love you!' ... and I do love that man!"

For caregivers like Laura, deep love and strong faith go a long way. $\boldsymbol{\Theta}$



DR. KAARON BENSON:

Multifaceted Pathologist Tackles Complexities of Transfusion Medicine

By Cathy Clark —

SPEND TIME WITH KAARON BENSON, MD, AND YOU WILL LEARN A LITTLE ABOUT PATHOLOGY.

Spend a little more time, and you will learn how the complexities of transfusion medicine tie in with quality patient care. Delve further and you will meet a passionate patient-focused doctor, teacher, mother, energetic cyclist for a cause and a warm, sociable strong woman. Photos of her daughters and friends, along with memorabilia from her travels, grace her office walls and credenza.

Quality patient care, delivered through her expertise in transfusion medicine, is a key component to her professional life. "Transfusion medicine is a broader-based field than it appears at first glance," says Benson. She should know, having served a fellowship in Transfusion Medicine at the American Red Cross Blood Services in Los Angeles, where she later became assistant medical director. And since 1989, Benson, a pathologist, has been with Moffitt where she directs the cancer center's blood bank.



Dr. Kaaron Benson (left) chats with Dr. Alan List on Moffitt Day, held Jan. 17, 2018. Benson had just completed a four-day bicycle trek with the Cure on Wheels Capitol Riders.

The field of blood banking increasingly is referred to as transfusion medicine, because the work extends beyond storing units of blood products in refrigeration and performing cross matches. The all-encompassing work of transfusion as a practice is akin to personalized medicine, making sure that the right blood is available at the right time for the right patient.

"Some might think of blood transfusions as being primarily needed for accidents, but there is so much more," says Benson. The intricacies of making sure patients get the right blood they need is essential for patients like Steve Barber, who had developed antibodies over the course of having received multiple transfusions.

THIS FIELD OF MEDICINE IS FILLED WITH CHALLENGES, INCLUDING:

- Having enough blood in inventory, which is tied to adequate collections
- Making sure the blood is safe from known pathogens
- Constantly researching to recognize newly emerging pathogens
- Requisite blood donor screening and testing
- Meticulous storage, processing and retesting

Moffitt performs more than disease testing and screening for ABO, RH and other antibodies, notes Benson. Cytomegalovirus (CMV) testing is performed because the immune systems of cancer patients frequently are compromised and CMV-negative patients may be at particular risk. "We also routinely provide irradiated blood," says Benson. "This way our physicians do not have to think about specially ordering irradiated blood." This is a win, she notes, because it is a lifesaver for certain patients

who require it, and the irradiated product causes no harm to those not needing it.

Irradiation prevents donor T cells in blood and blood products from proliferating. Otherwise, those cells could mount an attack against the patient's immune system. "Irradiation of blood products is not necessary for every blood recipient," says Benson. "People with healthy immune systems can easily fight off the small number of donor T cells. But for a patient with leukemia, for

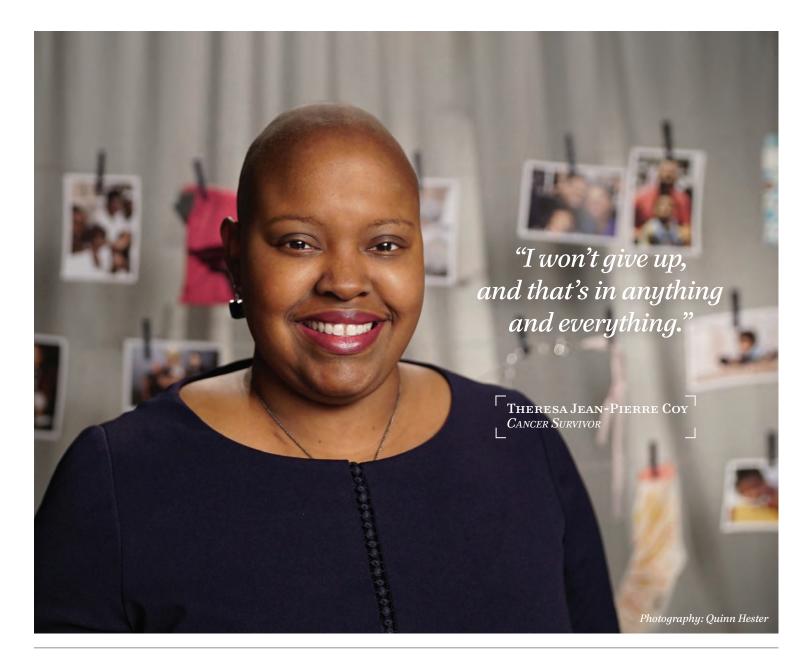
example, even a small number of blood donor T cells present in the transfused blood could create a lethal event." The irradiated blood helps to keep these particular patients safe.

Benson is serious about her complex work, which she clearly enjoys. But her passions extend far beyond the blood bank.

"Unlike most pathologists, I don't have a microscope and I don't do autopsies; I see patients. And when I don't see patients, I do a lot of patient consultation with patients who need specialized units of blood or other services. It is very satisfying that I have direct patient interaction and involvement in the patients' clinical care," says Benson. "And the thing that attracted me most to my position here at Moffitt was being able to teach. I very much enjoy all the teaching opportunities I have – with the medical students, and the pathology residents, the hematology oncology fellows. Also students in the USF physician assistant and nursing programs. So I always welcome those opportunities."

"Unlike most pathologists, I don't have a microscope and I don't do autopsies; I see patients."

When Benson isn't tending to the transfusion needs of patients or teaching the next generation of medical doctors or medical team members, you might find her riding her bicycle around her South Tampa neighborhood as she warms up for the next Moffitt Day. Last January, Benson was one of the Cure on Wheels cyclists who embarked on a 325-mile bike ride from Tampa to Tallahassee to lend support for Moffitt's mission to eradicate cancer and to ask for continued state support for Florida's premier cancer center.



TENACIOUS THERESA

Motherhood, Breast Cancer Diagnosis Fuel Attorney's Commitment to Fund Disparities Research

By Ann Miller Baker

The nickname "Tenacious Theresa" fits, for obvious reasons.

Theresa Jean-Pierre Coy is a wife, mother, attorney, small business owner, immediate past president of the George Edgecomb Bar Association and, now, a cancer survivor.

She says she's always considered herself a strong woman. "If you ask my parents, they'd say I was a strong-willed child," she quips. "I am one of those people that will keep doing something until I get the results that I want. I won't give up, and that's in anything and everything."

Consider her road to motherhood. Jean-Pierre Coy endured six miscarriages before she and husband Travis were blessed with son Thaddeus in January of 2017. Given their history, they found it hard to celebrate this seventh pregnancy. "It was more like, 'It's just a matter of time before we lose this one.'"

They almost did.

Jean-Pierre Coy was hospitalized on bedrest six months into the pregnancy. She made it three more weeks before an emergency C-section delivery. "I was just waiting for the doctor to peek over the surgical drape and say, 'I'm so sorry, he didn't make it.'" Until he lifted the baby for mom to see and nudged the

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"If you ask my parents, they'd say I was a strong-willed child."

boy's lips for a good, strong cry. "And that's when I literally started crying."

As it turns out, Thaddeus is just as tenacious as his mom. Though his first 10 days were spent in neonatal intensive care, he's been a happy, healthy boy ever since. "He looks like his daddy, but he acts like his mommy," she says. "He is independent, strong-willed, stubborn. I've got my work cut out for me. We've BOTH got our work cut out for us."

Jean-Pierre Coy didn't initially pause to think that much about changes in one of her breasts six months after Thaddeus was born. "It didn't seem odd to me that one was firmer than the other," she recalls, writing it off to possible blockage of a milk duct. "Like all working women, I thought, I'm taking care of Thaddeus, and I'll get to the doctor when I can."

It was October by the time she made it in for her first-ever mammogram, at age 37. When the test was complete, the mammography tech handed Jean-Pierre Coy a pink bracelet for Breast Cancer Awareness Month.

"Looking back, she knew — even though she couldn't tell me anything," says Jean-Pierre Coy. The radiologist asked to talk with her after the exam. "He said, 'I don't think it's an infection because you'd most likely feel pain. So, this may be cancerous.' And I just kept saying — what?"





Husband Travis and son Thaddeus

NEW CONNECTIONS

In the midst of these medical issues, Jean-Pierre Coy had been making connections she would come to appreciate in a new light, across two organizations inspired by the same community leader.

The George Edgecomb Bar Association, for which Jean-Pierre Coy then served as president, is described on its website as Tampa's largest predominantly African-American voluntary bar association. The association and Moffitt's George Edgecomb Society to support research into black cancer disparities are both named in memory of Hillsborough County's first African-American judge. Diagnosed with cancer and unable to find local options for treatment, Judge George Edgecomb was only 34 years old when he died in 1976. That loss was one of the motivating factors behind his friend and then-state representative H. Lee Moffitt's commitment to build a world-class cancer center in Tampa.

As president of the bar association, Jean-Pierre Coy had spent the months after her son's birth planning an annual membership luncheon. Lanse Scriven, a past president who is also a founding member of Moffitt's Edgecomb Society, had suggested the luncheon might be a good way for local attorneys and judges to learn more about Moffitt's minority cancer research efforts and the history both groups shared through Judge Edgecomb. Jean-Pierre Coy and Scriven got to know many Moffitt leaders in preparation for the luncheon. By mid-July, Scriven came to know Moffitt on a different level — as a newly diagnosed prostate cancer patient.

Fast-forward to October and the words "may be cancerous" from Jean-Pierre Coy's mammography radiologist. She had trouble scheduling a breast biopsy through her family physician and reached out to her Moffitt contacts for help. A biopsy and follow-up mammogram were immediately scheduled at Moffitt. Within a week, Jean-Pierre Coy was sitting in an exam room with Brian Czerniecki, MD, PhD, the chair of Moffitt's Breast Oncology Department.

His words, Jean-Pierre Coy recalls, were not a total shock given the mammography radiologist's concern. She had inflammatory breast cancer, stage three. Tumor cells were disseminated through the lymphatic fluids and skin of her breast, creating patterns like an orange peel.







"My first question to Dr. Czerniecki was, 'Am I going to die?'"
"Tenacious Theresa" needed to plan for her son, Thaddeus. "I
remember the look on his face," says Jean-Pierre Coy, "kind
of shocked that I would even think that."

Czerniecki had a different plan in mind. Chemotherapy would start immediately with a mastectomy and radiation to follow.

"I approach every patient, no matter what stage they are, with hope," says Czerniecki.

So far, Jean-Pierre Coy has taken that hope and run with it. Chemo and surgery are behind her — no small feat considering she took very little time off after the birth of her son and remains a fully engaged mom. At this writing, Jean-Pierre Coy is going through radiation therapy. She credits the unwavering love and support of her husband and family, as well as her faith, for getting her through the times when she didn't even want to get out of bed. And she has the utmost respect for her Moffitt care team: a wealth of caring nurses and four physicians she calls her "cast of characters."

"My first question to Dr. Czerniecki was, 'Am I going to die?'"

Besides Thaddeus and the rest of her family, she also has found new inspiration for her fight. Inflammatory breast cancer is more common and diagnosed at younger ages in black women than in white women. And that makes Moffitt's cancer disparities research all the more important to Jean-Pierre Coy.

NO COINCIDENCES

The 2018 bar association banquet in April gave attendees a chance to hear about bright black high school students interested in the law whose college careers will benefit from the association's scholarship support.

Then, they heard a different kind of story: a video of Jean-Pierre Coy and Scriven disclosing their cancer battles at Moffitt Cancer Center.

Many had no idea what their current and former association presidents had been going through, or that the cancers they were battling take an inordinate toll on blacks and African Americans.

But thanks to Jean-Pierre Coy and Scriven, they learned about Moffitt's efforts to address these cancer disparities through the research funding efforts of its George Edgecomb Society. They even met some of the Moffitt researchers studying disparities in prostate and pancreatic cancer with society grants, including Drs. Kosj Yamoah, Jennifer Permuth and Jung Choi.

And together, they raised \$120,000 for the George Edgecomb Society to fund further disparities research at Moffitt.

"I don't think anything is a coincidence," Jean-Pierre Coy says, thinking back to the weeks she and Scriven spent planning these joint bar association and society events, even before their respective diagnoses. "It formed a bond between the two of us — and between our two organizations — that we didn't expect."

"We're the largest African-American Bar Association in the Bay area. To be able to raise money in Judge Edgecomb's name that will go strictly to trying to find out why we African Americans are at higher risk for certain types of cancers — I don't know of any other organizations doing this. And I think we've barely scratched the surface.

"To be a small part of that money being raised is the single thing I'm most proud of. I know what it's going for. I want that research done, so we can figure out what's going on."

And you can bet that Tenacious Theresa won't give up on this cause. Θ

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can figure out what's going on."

When 'One in a Million' Isn't Quite So Uncommon

As Emerald Cromwell battles a rare adrenal cancer, she learns two close friends have the same disease.

By Ann Miller Baker

Emerald Cromwell kept repeating the statistic in her head — one in a million. Her family had joined her for this first-ever trip to Moffitt Cancer Center, each unwilling to believe that Emerald — their wife, daughter, sister — could possibly be that "one."

But the nurse in her knew something was seriously wrong.

For months, she'd written off the added pounds to approaching 40; the shortness of breath to the stress of being laid off at work. For her first job interview in years, she'd put on a pair of heels and soon noticed the swelling in her ankles and feet.

"Being a nurse," she said, "I kind of freaked out" thinking of potential cardiac issues. It would take two ER visits and the persistence of a physician (and former colleague) to obtain CT images of a mass above one of her kidneys in the adrenal gland. Friends of friends sent those images to Moffitt. Her brother went online searching for information on adrenal masses. More common than you might think, he told her, but the odds of being cancerous? Slightly less than one in a million.

Five days later — the day after her 40th birthday — Cromwell and her family crowded into an exam room, waiting to meet Ricardo Gonzalez, a surgical oncologist at Moffitt.

"He immediately said, 'I'm sorry this is happening to you,' " she recalled with a catch in her voice. "That's when I knew this was bigger than I thought."

As he sat across from her with her hands in his, Gonzalez explained how the mass — nearly 4 inches by 5 inches — was compressing organs and creating a large blood clot in the inferior vena cava, the vein that carries blood from the legs and lower body to the heart. Its sheer size and location could only mean it was adrenocortical carcinoma, or ACC.

"There's no cure for this cancer. That's the first thing I need

you to know," he said. "We're going to try to shrink this by hitting it with the 'big guns.'"

All Cromwell could think was, "I'm 40! I can't have cancer. I have two kids to raise!"

LOOKING FOR ANSWERS

Moffitt is the only National Cancer Institute-designated comprehensive cancer center based in Florida, attracting patients from all over the country to be treated for such "one-in-a-million" cancers.

As the leader of Moffitt's Endocrine Oncology Program, Julie Hallanger-Johnson, MD, knows just how rare and devastating that diagnosis can be. "These people stay in your mind," she said. "They are special patients."

Asked how many she currently treats, the doctor ticks through a list of names in her head to tally seven patients in recent months. $\,$

But having more than one from the same neighborhood?

As Cromwell would learn through the course of her care, she was not as alone as she thought. Two friends from her St. Petersburg neighborhood received treatment at Moffitt for the same cancer, and all three women were diagnosed in the past six years.

"It's just very strange," said Hallanger-Johnson. "There has to be something. There has to be a reason for this, and I think they all feel that way, too."

Cromwell is not content to write this off as a coincidence or statistical quirk. "We may never get the answer," she said. "But my goal is to raise awareness. There's something making us sick."

From October 2015 through April 2016, Cromwell soldiered through chemotherapy, knowing the odds were roughly 50/50 that her tumor would respond to a chemotherapy regimen of



Emerald Cromwell (left) and Elisa Hughes hold a photo of Shannon Jager, Cromwell's best friend. All three women were diagnosed with adrenocortical carcinoma and grew up nearby. Jager was just 42 when she passed away after a seven month battle with the disease.

powerful drugs called etoposide, doxorubicin and cisplatin. Not a cure, the chemo's only benefit would be to shrink her tumor. Six rounds of the stuffwas no picnic, but the encouraging scans kept her going. As the tumor shrank, the goal of surgical removal inched closer to reality.

Surgery with Gonzalez was scheduled for Good Friday 2016, a good omen to Cromwell's Greek Orthodox family. The complex operation went well — the mass was excised along with one kidney. And though internal bleeding landed her back in the OR the following day and in ICU for a week, she progressed to the next step in her care plan: radiation therapy, five days a week for six weeks ("worse than chemo") followed by three years on an adrenal-suppressing drug called mitotane, a derivative of the banned pesticide DDT, to blast any remaining cancer cells.

Cromwell endured it all with the goal of beating one last set of odds: Overall five-year survival rates for those with ACC are just over 50/50.

'TOO CLOSE TO HOME'

One of the perverse quirks of having a cancer diagnosis is how suddenly everyone you know wants to share their cancer experience. "You get all these texts and phone calls," Cromwell explained, "and it's very hard to respond." She opted to reveal her diagnosis to friends on Facebook, counting on posts to reduce retelling her story over and over.

Little did she realize the surprising posts she'd get in return. "A girl from high school that I was friends with reached out to me and said 'Hey, my sister Elisa has the same cancer and she was treated at Moffitt. Here's her number. Please call her.' But I just couldn't. I knew her. I was friends with her sister. But I just wasn't ready — it was too close to home."

It was about to get much closer.

On the one-year anniversary of her surgery, Cromwell's cellphone rang with a familiar number. It was her best friend, Shannon Jager. Inseparable since kindergarten, the two had attended the same schools, married best friends, got pregnant at the same time and watched each other raise their children from houses four blocks apart.

Cromwell could tell immediately something serious was up. Jager, the picture of health, sounded winded. "She said, 'Hey, I'm supposed to jump on a plane for a work trip tomorrow and I just want to run something by you. I'm having these symptoms and I'm really short of breath. My doctor said it's OK to fly, but I just don't feel right.'"



Dr. Julie Hallanger-Johnson (left) and Dr. Ricardo Gonzalez

"It's just very strange. There has to be something. There has to be a reason for this, and I think they all feel that way, too."

"And in my head, I thought, well that sounds like everything I had," recalled Cromwell. "But there's no way. There's just no way." Ever the nurse, she advised her friend not to board that flight. Fearing a pulmonary embolism — a blood clot in the lung — that is easily discounted in healthy, young adults, Cromwell knew a long flight could be dangerous, even deadly.

Jager heeded her friend's advice, cancelling the trip and instead heading back to her doctor's office for an ultrasound the next day. Sure enough, it showed the clot — and more. An adrenal mass. When Jager called to relay this news, Cromwell immediately headed to the hospital to meet her friend.

"I was scared they were going to biopsy her," she said. You have to be careful about puncturing a gland that produces adrenaline. And since these masses often are not truly solid (more like the consistency of an egg yolk), puncturing with a needle can potentially disseminate tumor cells throughout the abdomen.

"Just as I walked in, the doctor arrived and said, 'We're going to get a biopsy,' " she recalled. "And I politely said, 'Let's send her to Moffitt.'"

Jager was added to Hallanger-Johnson's mental list of ACC patients and began the same protocol her best friend knew so well.

AND THEN, THERE WERE THREE

By the time she'd reconnected with Cromwell, Elisa Hughes was already coming off the medication for her ACC. They'd grown up in the same neighborhood. Elisa's younger sister had been in the same class as Cromwell and Jager throughout school. As kids, Hughes and Jager had even taken dance classes from the same instructor.

It was Cromwell's Facebook post about her own diagnosis that had prompted the phone call from Elisa Hughes' younger sister and eventually brought the women back together.

Hughes was diagnosed at age 42 after years of debilitating migraines, leg cramps, heart palpitations and feeling like she couldn't eat because she was always full.

"Clearly, there was no room," she said, "because I had a tumor the size of a basketball in my belly."

She remembered the day she finally got the CT scan that led to her diagnosis. "You know when you walk out and the staff is sitting at a computer looking at the image? I happened to turn around and I saw this big black thing in my abdomen," said Hughes. "I don't know anything about anatomy, but I figured that's not good."

It took two surgeons and hours in an operating room at St. Anthony's Hospital in St. Petersburg to remove the 22-centimeter, 5-pound mass from Hughes' adrenal gland in January of 2013. "It was all encapsulated, thank God," said



Photography: Ray Reyes

Hughes. Initially, her St. Petersburg physicians thought the mass was an adrenal tumor called a pheochromocytoma, which is usually benign. It wasn't until the pathology report came back days later that they learned it was this one-in-a-million cancer called ACC.

When Hughes wound up at Moffitt for her first appointment, the seriousness of it all hit her. She and her mom had visited Moffitt often enough — Hughes' father underwent a stem cell transplant at the cancer center for multiple myeloma. "But when I walked in and saw all those people, I looked at my mom and my face just went white," said Hughes. "It hit me—I really have cancer."

Her scans have been clear ever since the tumor was removed. But to be sure no malignant cells had escaped the encapsulated mass, Hughes went through nearly three years of treatment with mitotane and steroids, up to 20 pills a day. She returned to work, her refuge, five months after surgery.

"It hit me — I really have cancer."

"For me, cancer was the thing that I didn't want to talk about a lot," she said. "I wanted to be at work so I didn't have to think about it."

While Hughes pulled in, Cromwell seemed bent on finding answers. "I'm glad she's the type of person who can take this on," Hughes said of her friend. "If it's not some extremely random universal coincidence — which it seems, how could it be? — then someone needs to figure this out just so people can be mindful of their health."

HIGH SCHOOL CONNECTION

In April 2017, Cromwell set up a Facebook page centered on one element she shared with her two friends: high school.

The Boca Ciega High School Cancer Awareness Page solicits posts from alumni who've been diagnosed with any form of cancer — not just ACC.

"I initially thought it was the school because there were some renovations done in the years we were there," she said, recalling asbestos removal workers garbed in protective gear passing the kids walking through dust and debris. "Since they don't know the cause of adrenal cancer, I guess any and everything can't be ruled out."

That includes the Azalea neighborhood of St. Petersburg where all three women grew up. The area made local headlines in 2008 when Azalea residents Linda and John Swartout filed a class-action lawsuit involving a nearby site that had been home to an electronics manufacturer and a defense contractor for more than 50 years.

News organizations had reported that toxins such as lead, toluene, vinyl chloride, dioxane and trichloroethylene had seeped into the groundwater, raising questions of a "cancer cluster."

The Centers for Disease Control and Prevention (CDC) defines a cancer cluster as:

A greater-than-expected number of cancer cases that occurs within a group of people in a defined geographic area over a period of time.

Suspicions are one thing. Proving a cancer cluster — and finding its cause — is a totally different issue that can take literally years to resolve, if ever.

Through her Facebook posts, Cromwell befriended Cheryl Jozsa, another cancer cluster sleuth. Jozsa's sister Terri was diagnosed with a form of leukemia, and Jozsa became her donor for a bone marrow transplant at Moffitt in 1999. After Terri died, Jozsa learned of other cancer patients in Terri's graduating class at the now-demolished site of the old Bradenton Bayshore High School in Manatee County. Several classmates, like Terri, have died from a variety of cancers. The Manatee County School Board maintains that soil tests near the site have repeatedly turned up negative for contaminants.

It's taken more than a decade of investigating and the help of epidemiologists from the University of North Carolina. But in 2017, Jozsa and her supporters were able to convince the Florida Department of Health to begin collecting data about a possible cancer cluster on the old school site. A report on that data is expected later this year.

Yet Jozsa knows even that may not yield the answers she's seeking.

DATA LIMITS

Start telling the story of multiple people in one location with a rare cancer, and epidemiologists like Peter Kanetsky, PhD, MPH, are liable to react with a combination of excitement and dread.

The chair of Moffitt's Cancer Epidemiology Department, Kanetsky said the excitement comes from thinking about why and how diseases occur within a given population — the essence of epidemiology.

And the dread? "It's knowing that your chances of identifying a cause are slim to none," he said.

Cromwell and her fellow ACC patients were the topic of discussion at Kanetsky's twice-monthly Cancer Epidemiology Teas several times in recent years. These informal gettogethers are open to Moffitt faculty in any clinical or research department who might want to talk through questions or ideas related to epidemiology. Hallanger-Johnson went to discuss these ACC cases despite knowing that Moffitt's epidemiology team doesn't investigate clusters.

"That type of thing is more on the level of the Centers for Disease Control and Prevention or county health departments,"

she explained. "But having a patient [like Cromwell] who is such an advocate to find out 'why' really gets you to pay attention."

The discussion prompted Moffitt epidemiologist Travis Gerke, ScD, to sift through data from the Florida Cancer Data System, a statewide registry of all types of cancers. At least this data could show how many ACC cases are being seen in Florida, county by county, and a spike might confirm cancer cluster suspicions.

Instead, the numbers show the limits of such data.

As Gerke explained, the state registry has a complete data table of all 3.3 million cancer diagnoses in Florida, grouped into five-year "buckets." Specific to ACC, the entire state averaged 20 new diagnoses per year in the most recent time frame — about what you'd expect for a state with 20 million residents.

Break that down by county and the numbers begin to skew, showing one of the quirks inherent in the database. Cases are



Dr. Travis Gerke (left) and Dr. Peter Kanetsky

listed by the county where they are diagnosed. So a county like Hillsborough with the state's busiest cancer center will have higher numbers than a rural county.

To further confound matters, think of Florida's massive snowbird population — people who retire to the sunshine after decades in other states or countries. Whatever they might have been exposed to elsewhere may take years to lead to a cancer diagnosis that gets counted in Florida.

"This really speaks to the challenge of cluster-based research," said Gerke. "People are so mobile these days, moving frequently and usually not staying where they were born or grew up. Unless you have collected fine-grained information about where they've lived over decades, it's really difficult to connect cases to exposures."

Gerke said the data can be filtered to show where a particular patient was born. For instance, the data show that, from 2011 through 2015, the number of Florida-born and Florida-diagnosed ACC patients was just six.

So, while there's no compelling evidence for a cluster of ACC diagnoses in the area where Cromwell and her friends grew up, it also doesn't disprove the existence of a cluster.

"What we can say is limited by the data itself," Gerke explained.
"People who lived in the same neighborhood may have moved,
may have been diagnosed in other states and have had their
adrenal cancer accounted for in another state's registry."

KEEPING A PROMISE

Sometimes, Gerke noted, those most impacted by the suspected cluster will take it upon themselves to gather more specific data, to "build a cohort of data among themselves." That's what Cromwell and a newly energized handful of colleagues are now working on: a website, complete with a tracking map and an online survey to self-report cases of ACC or other cancers among those who've lived in the Azalea neighborhood or attended Boca Ciega High School.

It seemed the least they could do, in memory of one of their own.

Shannon Bossert Jager was just 42 when she passed away on Jan. 6, 2018. She'd battled ACC for seven months. Despite all the chemo, her tumor never shrank enough to be surgically removed. It just kept growing. She left behind an adolescent daughter and two stepdaughters, a loving husband, a grief-stricken family and a huge community of friends who came to know and love her through her years of good work for a variety of nonprofit groups in Pinellas County.

Among the mourners: her best friend Emerald Cromwell.

Cromwell got the news by phone while attending a speech by Erin Brockovich, the cluster crusader whose story became a blockbuster movie of the same name. Brockovich built a legal case against Pacific Gas & Electric Company that, in 1996, resulted in a \$333 million settlement for more than 600 California residents sickened by contaminated water — the largest toxic tort injury settlement in U.S. legal history.

Brockovich had just met Cromwell and Manatee County activist Jozsa and urged them to continue their efforts when the fateful phone call came. It was a sign not lost on Cromwell.

"Shannon's passing really shook up this community," said Cromwell, "and I promised her I would do this. My determination has just grown."

"I miss her every day."



REFERENCES:

One in a million — From NCI: Adrenocortical carcinoma (ACC) is a rare tumor that affects only 0.72 persons per 1 million population.[1]

 ${\bf EDP\ response\ rates - Combination\ Chemotherapy\ in\ Advanced\ Adrenocortical\ Carcinoma\ ...}$

www.nejm.org/doi/full/10.1056/NEJM0a1200966

Class action lawsuit: From The Tampa Tribune — July 27, 2015

"Raytheon bought the 1950s manufacturing facility at 1501 72nd St. N. from E-Systems in 1995 and inherited a site contaminated with toxins such as lead, toluene, vinyl chloride, dioxane and trichloroethylene that had seeped into the groundwater.

Jostes [Commercial Development Company CEO Randall Jostes] said CDC's environmental consultants are satisfied the property is ready to redevelop after Raytheon's substantial remediation efforts, which have been approved by the Florida Department of Environmental Protection. Raytheon will continue to keep and monitor groundwater wells in the area."



AND WHO IS RESPONSIBLE FOR INVESTIGATING?

By Ann Miller Baker

It's a more common fear than you might realize.

More than 1,000 suspected cancer clusters are reported to public health agencies across the nation each year. But what exactly is a cancer cluster — and who is responsible for investigating?

The U.S. Centers for Disease Control and Prevention (CDC) defines a cancer cluster as: A greater-than-expected number of cancer cases that occurs within a group of people in a defined geographic area over a period of time. Each element of that definition includes criteria that must be met before a group of cancer cases can be considered a cluster:

- A greater-than-expected number occurs when the observed number of cases is higher than one would typically see in a similar setting (a group of people with similar age, gender, race, etc.).
- Of cancer cases All of the cases must involve the same type of cancer, or types of cancer scientifically proven to have the same cause.
- That occurs within a group of people The cancers are occurring in a carefully defined population, which may include factors such as race, ethnicity, age or gender.
- In a geographic area —The boundaries must be defined carefully. It's possible to "create" or "obscure" a cluster by selection of a specific area.
- Over a period of time The time period over which the cases occurred.

Obviously, meeting each of these specific criteria requires a level of expertise, time and money. People who suspect a cancer cluster usually turn first to their local public health department. But the responsibility ultimately rolls up to the state department of health. The Florida Department of Health uses 2013 Cancer Cluster Guidelines from the CDC to determine cancer clusters.

The state health department also outlined the steps taken in a cluster investigation in a 2016 publication, "Cancer Cluster Investigations — When exposure to environmental contaminants is suspected." There are many steps, and the agency reviews information as each step is completed to decide whether or not to move on to the next step.

PERSONAL INVESTIGATION

For cancer cluster sleuth Cheryl Jozsa, just getting to the first step has been a 15-year struggle. "It's really frustrating," Jozsa said. "For the average person looking for answers, it's a matter of trial and error. Perhaps there would be more cancer clusters under investigation if the system didn't make it so hard."

Her personal investigation of a possible cancer cluster began in 2003, after leukemia claimed the life of her sister Terri. Jozsa found out that four of Terri's 235 classmates in Manatee County's Bayshore High School class of 1979 also had developed leukemia. Another three developed ALS, an autoimmune disorder more commonly known as Lou Gehrig's disease. Of those seven, only two are still alive today.

Though the school they attended has been torn down and rebuilt on an adjacent site, Jozsa has long suspected the old school's water might have been contaminated by a nearby business. Despite ownership changes, the property has been

"For the average person looking for answers, it's a matter of trial and error. Perhaps there would be more cancer clusters under investigation if the system didn't make it so hard."



Environmental activist Erin Brockovich with Emerald Cromwell and Manatee County cancer cluster sleuth Cheryl Jozsa at an event in Tampa, January 2018.

the subject of multiple court orders from Florida's Department of Environmental Regulation to clean up the site. Efforts are still ongoing.

Jozsa has brought her concerns to the Manatee County School Board more than once over the years. The board maintains that soil tests near the old school site have repeatedly turned up negative for contaminants.

Jozsa said she realizes it's impossible to go back and look at what was in the water and soil near Bayshore High School in 1979. But she also notes that in 1989, suspected toxins were reported in test wells near an underground storage tank housed on the campus of a vocational/technical school adjacent to the old Bayshore High site. She said these same toxins are appearing in soil and water samples to this very day.

When Manatee County commissioners and school board members met in May 2017 to discuss future land use issues for that property, Jozsa and her supporters were able to speak about their cancer concerns. They convinced commissioners to direct the Manatee County Department of Health to initiate data collection on the possible cancer cluster.

Manatee DOH has posted newspaper notices and sent letters to Bayshore graduates from 1985 to date, looking for any cancer cases. Autoimmune disorder rates questioned by Jozsa are not part of the data gathering efforts. The fact-finding portion of the Manatee DOH investigation closed March 28, 2018.

So far, no one from the state or county has asked to see any of Jozsa's data.

While Jozsa and her colleagues await the county's report, state health department publications plainly attempt to limit expectations of any such investigation. The 2016 Cancer Cluster publication states:

"A cancer cluster may be due to chance alone, like the clustering of balls on a pool table... Finding an exact cause is very hard to do. Follow-up studies may take years to complete. They often take a great deal of research and money with no cause ever pinpointed.

Every year, groups of people report more than a thousand potential cancer clusters to public health agencies across the nation. Of these, most do not meet the guidelines for investigation as a cancer cluster. Of those that do, 5 to 15 percent of studies may confirm that the number of cases of a certain cancer exceeds what is expected. Even then, in most cases, science cannot pinpoint a cause."

That won't stop Jozsa and her colleagues from continuing their quest. They intend to take the issue to Tallahassee and/or Washington if need be. "We're not looking for any lawsuits," she said. "That won't bring back those we've lost. But if these toxins are still in the ground, people need to know."



Manatee County cancer cluster sleuth Cheryl Jozsa (right) with her sister, Terri, who died of leukemia in 2003.



$\frac{\text{VOODEN}}{\text{AT MOFFITT}}$

A Roundtable Discussion Among Female Leaders

By Ann Miller Baker

The accolades and numbers make a strong case for Moffitt Cancer Center's commitment to fostering female leadership.

- In March, Moffitt was named one of the 2018 Top 10 Nonprofit Companies for Executive Women by the National Association for Female Executives. The recognition spotlights organizations that identify and advance women through their ranks.
- The cancer center has been on Working Mother Magazine's 100 Best Companies list 10 times.
- Moffitt's 6,000+ workforce is 74 percent female.
- Moffitt's six executive leaders include one notable female: Executive Vice President and Chief Financial & Administrative Officer Yvette Tremonti, who was named 2018 CFO of the Year by the Tampa Bay Business Journal.
- Ten of Moffitt's 27 senior managers are female.
- Of Moffitt's 266 managers, nearly three-fourths are female.

But perhaps the most meaningful endorsements are personal.

"Out of all the different institutions that I trained at and worked at, this was the first place that I really saw women kicking butt," says Asmita Mishra, MD. "And I wanted to be like them."

"I stayed on as faculty because this is the first place I found female leaders that I could interact with. They're working mothers, trying to cure cancer, trying to go above and beyond."

In this issue of Momentum focused on strong women, we gathered Mishra and seven other female leaders throughout Moffitt for a roundtable discussion about women's path to leadership, what Moffitt is doing to elevate its female team members, as well as opportunities to improve those efforts, and what hopes these women hold for female leaders to come.



- Named 2018 CFO of the Year by the Tampa Bay **Business Journal**
- Temple Terrace native, graduate of University of South Florida
- "It's crucial to figure out your passion and what you are good at — they're not always one and the same.'



- Physician leader of the Women in Oncology **Interest Group**
- "Talking about work-life balance as if it's a women's issue is doing our male colleagues a disservice. They want to be present in their families' lives and avoid burnout as much as we do."

Why is female leadership important to an institution like Moffitt?

YVETTE TREMONTI: Given the majority of our workforce is female, it's important that our leadership represents our workforce. We all know that the further you (rise) in any organization, the less women you have.

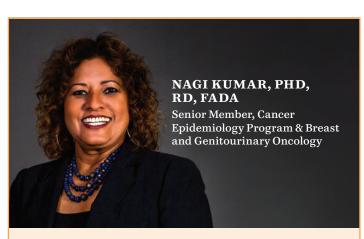
DR. SUSAN VADAPARAMPIL: It's important to have women in leadership so that you're inspiring the next generation, so they're not just writing it off because all they see are (leaders of) a particular gender, a particular race, a particular ethnicity. Instead, they see that really it doesn't matter who you are, it's what you bring to the table that makes the difference.

CATHY GRANT: Diversity has to be intentional, it's never by happenstance. Having female representation of all backgrounds at all levels and in particular in leadership is critically important.

MARIANA BUGALLO-MUROS: It's not just diversity, though. It's what the female leader brings to an organization as far as diversity of thought.

What elements of Moffitt's culture encourage and facilitate female leadership? And what are our opportunities to improve?

DR. NAGI KUMAR: You have to make a deliberate effort to empower women as leaders in research because the time commitment in research is not a 9-to-5 job. It's important to acknowledge that, have empathy and recognize what women contribute, as well as the challenges we face.



- Born and raised in India; 36 doctors (MD, PhD, DDS) among her immediate family
- An original Moffitt Cancer Center hire
- "As a professional, if you see me first as a woman that's on you. I see myself as the sum of my accomplishments."



- Under her leadership, Moffitt attained Magnet[®] status, the highest distinction of the American Nurses Credentialing Center
- As the single mother of a gay son, she is attuned to diversity and inclusion issues
- "From the moment I arrived, I could see that Moffitt's culture embraces diversity. We really walk the walk, not just talk the talk."

DR. SUSAN VADAPARAMPIL: It is more than a full-time job. In research especially, flexibility is on our side. I've always felt I had some latitude to adjust things to where I was at that point in my life. Having a culture and leaders who facilitate that makes a big difference.

MARIANA BUGALLO-MUROS: And there are different ways of showing flexibility. There's the fact that we have the four-day workweek and many part-time positions because not everyone wants to or can work full time five days a week.

JANE FUSILERO: I can tell you where I worked in the past, people there would die for an updated child care center like Moffitt recently opened. When you look at the nursing workforce, regardless of generation, child care is so important. And the fact that this organization has supported it with such a substantial investment can't be overstated.

DR. ASMITA MISHRA: This organization has been very flexible and open to hearing about how we can improve. Two years ago, we started the Women in Oncology Interest Group. Out of all the standalone cancer centers nationwide, Moffitt was the second to think about women's issues and initiate a multidisciplinary group to look at how to promote women throughout the organization — both at the junior and senior levels — because we recognize support is needed at all levels.

DR. NAGI KUMAR: Women mentoring other women is the key. Informal mentors, always keeping an eye out for those who are coming up, onboarding them and showing them it can be done. We can be the senior faculty, doing things that are going to change the world in the future.

"It's really important to talk about a career ladder or some way you can be groomed for that next level."

DR. KAREN FIELDS: But we also need to teach our males to be mentors. And to teach women that a mentor doesn't have to be a female. It just has to be somebody that can teach you something. That can be a role model. That can open the door (to opportunity) for you. And the more our male faculty members are sensitive to their important role in that, the better it is for us.

JANE FUSILERO: It's really important to talk about a career ladder or some way you can be groomed for that next level. It's certainly something that's attractive to new graduates. They're not necessarily into loyalty, but they will stay with an organization if they have the opportunity to move within the organization. And that really means that the organization has to make a concerted effort to help them move through their career in order to keep that talent.

MARIANA BUGALLO-MUROS: If we can see a way of opening doors for them across the institution — as opposed to just thinking upward — they feel like they are getting experience and knowledge and building skillsets.

DR. KAREN FIELDS: In my career, I ended up being on a lot of committees, meeting people from different places in the organization. We shouldn't underestimate how much you can learn and how many opportunities we have to do that for everybody.



- Medical oncologist and researcher specializing in breast cancer
- Founding member of Moffitt's Blood and Marrow
 Transplant Program; one of the translational
 scientists who presented for Moffitt's successful first
 National Cancer Institute designation core grant
- "I knew that if I was going to compete, it was not going to be as a female physician. I just needed to be the best physician."



- Under her leadership, Moffitt's diversity efforts have been honored by the American Hospital Association, DiversityInc, the Human Rights Campaign and Tampa Bay Business Journal
- Born in London and raised in Guyana, South America, until age 8
- "Look at the whole person are their skills transferrable?

 I've transformed myself many times."

CATHY GRANT: One area where we can do better is to really be conscious that not all of our population (travels) that path to leadership at the same pace. Some of us are moving a little slower. Always being conscious of the pace that different groups are making here is critically important.

So it sounds like some of the most meaningful elements of building a culture that fosters female leadership are how we interact with others within the organization. But there's also a strong element of work-life balance issues. And it seems like every roundtable discussion among working women always comes back to work-life balance. Do we as women need to move beyond these discussions?

NAGI KUMAR: I think I'm the one that said we have to stop talking about this ...

(Laughter/women saying "You're not the only one!")

YVETTE TREMONTI: I think maybe it's how we define it. I view work-life balance as being able to address a personal need during work hours. There are things that arise for a working parent that take you away from your job. I look at work-life balance as being able to step away and handle those things. Sometimes, I feel I have balance and sometimes I don't.

"Diversity has to be intentional, it's never by happenstance."



- Only child of Cuban immigrants, born and raised in New York City's Hell's Kitchen
- Has focused H.R. on succession planning to develop future Moffitt leaders from within
- "For me, growing up was not about mentors and role models. It was instilling that hard work and education get you where you want to go."

DR. SUSAN VADAPARAMPIL: What drives me nuts is that it's always (groups of women who wind up talking about this). I don't think it should just be us, you know? When we make it a burden of one person or one group, then it becomes their "thing." It's an important conversation for everybody to have.

DR. KAREN FIELDS: Years ago, I was at a national (female) leadership conference and the agenda included a session on "How to Dress for Success." The women rebelled. It's not on the agenda anymore. That's something we once had to own — and we owned it by ourselves. It would never show up on a group agenda for men.

MARIANA BUGALLO-MUROS: Years ago in Boston, I was hiring for a Human Resources generalist, trying to recruit someone from another hospital. And as part of the very first interview, he said, "I have two sons and I coach baseball. During the season, I need to be able to leave at 3 — not every day, but the days I'm coaching. I'll go home after and finish whatever work I need to do. I'm coaching because that's what my kids are going to remember in the future." And I said I'm 100 percent supportive. You're a professional who knows how to handle the job. When I left there 15 years later, I got a letter from his two sons thanking me for giving him that opportunity.

We are rolling out a new strategic plan, IMPACT 2028, that maps Moffitt's course over the next decade. Ten years from now, what do you hope Moffitt will look like in terms of female leadership?

YVETTE TREMONTI: All my peers are men. I would think we need to see I'm not the only female executive vice president. (Editor's Note: As this edition went to print, Maria Muller was scheduled to join the Moffitt Foundation in December as EVP, President and Chief Philanthropy Officer.)

DR. SUSAN VADAPARAMPIL: Our organization should look like our world. It should look full of women, men, all different races, all different ages. That's what will make us stronger.

MARIANA BUGALLO-MUROS: Right now, we have an incredible CEO who potentially would have decided to retire by then. If so, I'd like to see a slate of candidates including females for that position.

YVETTE TREMONTI: And I think as women leaders around this table, we all need to be sponsors. I think mentors are important. But when I look at all the opportunities I've had at Moffitt, it was because someone sponsored me. Someone believed in me. They took a chance on me and they allowed me to have an opportunity to step out of my comfort zone.

CATHY GRANT: My goal would be for everyone to be able to look at our leadership and see someone there that they can relate to, that looks like them, that has a similar experience. If we continue to work towards that, I think we will accomplish a lot of what everyone has shared in this discussion.



- Born in southern India and moved to Miami at age 4
- Post-doctoral fellowship at the National Cancer Institute in Washington exposed her to teamwork with people from diverse backgrounds
- "Our research requires a level of precision and perfection that is critical to doing great science. The rest of our lives may be less perfect, but still great. Those coming up need to see both perspectives."

BATTLING TOUGH ODDS

How Women in Moffitt's Gastrointestinal Oncology Clinic Are Paving the Way in Pancreatic Cancer Research and Treatment

By Sara Bondell

Arthur Kropp calls himself a two-time survivor.

While serving in World War II, the Navy veteran's fighter plane went down during the Battle of Leyte Gulf, one of the fiercest battles of the war. He and two others were listed as missing in action and survived on a life raft until they were rescued several days later.

And now he is a cancer survivor.

Kropp was diagnosed with pancreatic cancer at 91. Every doctor refused to take him on as a patient because of his age — all but one.

Pamela Hodul, MD, who Kropp affectionately calls "my gal," told him age is just a number and performed his surgery. After all, Kropp was determined to outlive his mother who passed at age 104.

The man who spent an entire military career relying on other men had his life saved this time by a woman. And he couldn't be prouder.

THE BEAST

According to the American Cancer Society, about 55,440 people will be diagnosed with pancreatic cancer in 2018. Only about 11,000 are expected to survive, giving pancreatic cancer the lowest five-year survival rate of any cancer. It's not clear what causes pancreatic cancer in most cases and it is hard to diagnose in early stages.

Only about 20 percent of pancreatic cancer patients are eligible for surgery at the time of diagnosis because most patients have advanced cases. Moffitt Cancer Center is one of the highest volume centers in the United States treating the disease, performing about 100 surgeries annually.

If surgery isn't an option, a patient can be treated with chemotherapy, radiation or a combination thereof. Chemotherapy can be challenging with many side effects and patients may require more attention and follow-up appointments than those fighting other types of cancer. For medical oncologists Rutika Mehta, MD, and Estrella Carballido, MD, a successful treatment plan relies on collaboration.



U.S. military veteran and pancreatic cancer survivor Arthur Kropp (right) chats with fellow veteran and Moffitt team member Dan Hodne at a Veterans Day event.

"We have a great multidisciplinary approach at Moffitt," says Carballido. "All of the different aspects of treatment can be overwhelming for patients, so we work together to meet all their needs, from nutrition to pain management, at once."

Moffitt has a top-notch team fighting pancreatic cancer, and women are at the helm. The Gastrointestinal Oncology Clinic boasts eight female researchers and physicians who focus on the disease. As of this publication, this clinic is the only one at Moffitt that has a woman playing a lead role in every aspect of care: research, pathology, medical oncology, radiation oncology, surgery and supportive services.

"Pancreatic cancer is nonbiased and affects young and old, women and men, and wealthy and poor alike," says Hodul, who performs about 50 pancreatic surgeries a year. "So it's by chance we all happen to be female sharing the same passion for the prevention, treatment and cure of pancreatic cancer."

Even though it's by chance, it is rare. Hodul says she's proud to be working alongside other extraordinary women in a field that is often dominated by men.

"There is equal intelligence and capability between men and women, but I think that compassion and empathy are stronger in women," she reasons. "At my clinic, it's hugs, kisses, tears

"All of the different aspects of treatment can be overwhelming for patients, so we work together to meet all their needs, from nutrition to pain management, at once."

and laughter. We are just free to express our emotions more and I think the patients are more comfortable doing that with women." $\,$

BENCH TO BEDSIDE

Currently, there are no biomarkers to help accurately detect pancreatic cancer at an early, operable stage. Moffitt researchers Karen Mann, PhD, and Jennifer Permuth, PhD, are working to solve the early detection riddle that is critical to improving patient outcomes.

Permuth started her career in genetic counseling, but after meeting countless patients and families affected by pancreatic cancer, she pursued a career in epidemiology so she could develop formal training to design and conduct robust studies to help those affected by or at risk for the disease.

As a founder of the Florida Pancreas Collaborative, a statewide partnership that aims to advance pancreatic cancer research, Permuth is focused on developing a combination of minimally invasive approaches that can accurately detect pancreatic cancer as early as possible. This includes studying incidentally detected pancreatic cysts that can develop into pancreatic

Photography: Kevin Kirby

The women in Moffitt's multidisciplinary Gastrointestinal Oncology team work collaboratively in research, pathology, medical oncology, radiation oncology, surgery and supportive services. Some of the members include (L-R): Drs. Estrella Carballido, Barbara Centeno, Jennifer Permuth, Sarah Hoffe, Karen Mann, Rutika Mehta and Pamela Hodul.

cancer. It's a topic that is close to her heart because her father was diagnosed with a premalignant pancreatic cyst in 2009 and was successfully treated at Moffitt. Permuth hopes to be part of the team that can develop a test to help differentiate cysts that should be removed from those that can be safely monitored.

Permuth is also studying racial and ethnic disparities that have been reported for pancreatic cancer. She was recently awarded more than \$1 million in grants to tackle this understudied and important area.

Mann was recently awarded a \$200,000 grant from the Pancreatic Cancer Action Network to study pancreatic ductal adenocarcinoma, a highly metastatic disease with poor patient outcomes. The study focuses on RNA, a nucleic acid found in all living cells, and if RNA splicing, a process that edits the RNA to alter the message that will be made into a protein, can play a role in disease development.

For both researchers, translation is key. While working in their labs or at their desks, they always have the bedside in mind and how their research will directly benefit patients. They also both participate in the Pancreatic Work Group, a

collaboration of researchers, oncologists, pathologists and personalized medicine specialists who meet every other week to discuss challenges and advancements.

"My goal is to see pancreatic cancer off the map in the future," says Permuth. "I don't want to see anyone dying from it or families worried about developing it."

MENTORING THE FUTURE

When Jessica Frakes, MD, was a radiation oncology resident at Moffitt, she had trouble deciding what specialty to go into because she "liked everything." But it was gastrointestinal oncology that ultimately won her over.

"I think one of the things that drew me to GI was the mentorship that I had, the people who were involved in treating patients," says Frakes.

That includes Sarah Hoffe, MD, the section head of GI Radiation Oncology at Moffitt. Frakes says she was drawn to Hoffe's excitement, enthusiasm and creativity when it came to dealing with the challenges of GI cancer, including radiation of the pancreas. It's a difficult task since the pancreas sits next to multiple sensitive organs like the stomach and small bowel. Radiation oncologists have to find ways to maximize control of the tumor while minimizing the toxicity to the surrounding organs. The team at Moffitt does that with high-dose radiation called stereotactic body radiation therapy. A collaboration with pathologist Barbara Centeno, MD, revealed up to 10 percent of patients can have a complete or improved response to treatment when this radiation is given prior to surgery.



Dr. Jessica Frakes administers radiation to a pancreatic cancer patient.

Now three years into her career at Moffitt, Frakes says she has recognized an increase in medical students and residents coming to her for advice. "I hope I can be as successful as a mentor as Dr. Hoffe has been," she says. "Cancer in general is changing rapidly and we are learning so much each year. I think having a mentor there to help you sort through the information is the guidance you need early in your career."

Mentorship and collaboration are the groundwork the women are laying when it comes to pancreatic cancer. While they all work individually in their field, they are also working together in a multidisciplinary setting. Even though they may not see changes in the disease during their lifetime, they know they are blazing the trail for others — regardless of gender — to continue to fight for the cure.

They also hope to continue to see changes in the health care landscape. For the first time in history, women outnumbered men in medical school in 2017, according to the Association of American Medical Colleges. At Moffitt, both Hodul and Hoffe have been recipients of the prestigious Dr. Charles C. Williams Physician of the Year Award.

SAVING THE FUTURE

Kropp may not be on active duty anymore, but he's still in a fight of sorts. He's helping other patients battle their fears when it comes to pancreatic cancer treatment.

Hodul once asked him to contact a patient who wasn't sure if he wanted to go through with surgery. Kropp says he was happy to be the reassuring voice on the other end of the line, telling the truth about his gal: "If anyone can help him, she's the only one." Θ

STRENGTH IN NUMBERS

RESEARCH:

Karen M. Mann, PhD Jennifer B. Permuth, PhD, MS

PATHOLOGY:

Barbara Centeno, MD

RADIATION ONCOLOGY:

Jessica M. Frakes, MD Sarah E. Hoffe, MD

MEDICAL ONCOLOGY:

Estrella Carballido, MD Rutika Mehta, MD, MPH

SURGICAL ONCOLOGY:

Pamela Hodul, MD, FACS

NUTRITION:

Erin Gurd, RD, LDN, CNSC Hillary Oneto, MS, RD, LDN, CNCS

SOCIAL WORK:

Kimberley B. Charles, LCSW, CCTSW, CCSW-MCS

Laurie J. Collins, LCSW, OSW-C

NEW CENTER FOR COLLABORATION

Drives Personalized Care



Chinese and Moffitt colleagues celebrate the opening of the Center for Collaboration at China's IPCC in Tianjin at a logo unveiling ceremony. L-R: Dr. Thomas Dilling, Dr. Jhanelle Gray, Tina Mason, MSN, ARNP, Dr. Robert Keenan, Catie Wiernasz, RN, MSN, Dr. Sheng Wei, Mr. Keping Wang, Dr. Daniel Sullivan, Dr. Qiang Li, Madam Ning Ma, Madam Rongxial Niu, Dr. Xiubao Ren, Madam Yongqin Jiang

Seventy miles southeast of China's capitol in Beijing, the future of the nation's personalized cancer care is taking shape in the port city of Tianjin. Now, Moffitt Cancer Center has a physical presence there, as well as a continuing commitment to collaboration.

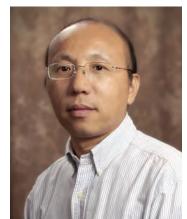
In late June 2018, a Moffitt team traveled to China's International Personalized Cancer Center (IPCC) in Tianjin. The trip culminates years of planning and marks the beginning of future collaborations. A highlight of the trip gathered Moffitt representatives and their Chinese counterparts for a logo unveiling/opening ceremony of the IPCC – Moffitt Center for Collaboration.

"The Tianjin-Moffitt partnership initially was with Tianjin Medical University Cancer Institute and Hospital, a 2,400-bed

hospital in downtown Tianjin. Moffitt continues to maintain relationships with this facility, and recent efforts have expanded to include the IPCC, a 1,000-bed cancer hospital located near the airport," said Moffitt immunologist Sheng Wei, MD. Wei was among the founders of the partnership, which included Bill Dalton, PhD, MD, past president, CEO and center director of Moffitt Cancer Center and founder and CEO of M2Gen, Moffitt's for-profit subsidiary.

The relationship is long-standing. This year, Moffitt celebrates 10 years of partnership with the Tianjin Medical University Cancer Institute and Hospital and five years of partnership with the IPCC.

Daniel Sullivan, MD, associate center director for Clinical Science at Moffitt, also oversees the Tianjin-Moffitt partnership. He says the Moffitt area within IPCC's 1,000-bed cancer hospital will focus on personalized medicine education and training.



Dr. Sheng Wei



Dr. Daniel Sullivan

Since 2008, Moffitt and Tianjin have conducted joint research projects, and graduate students, post-doctoral fellows, physician-scientists and research nurses from Tianjin have come to Moffitt for training.

Over the past several years, Moffitt and Tianjin have developed an even stronger collaborative relationship that furthers both of the institutions' efforts in cancer education and research. A number of Tianjin's fellows, postdocs and nurses travel to Tampa to meet with members of Moffitt to share information and learn from each other. Over the years, executives and faculty of both institutions have exchanged visits. During a 2016 visit, Moffitt President and CEO Dr. Alan List received the Hai River award for his leadership in accelerating this collaboration.

"The partnership focuses on several areas of education, including clinical research, nursing, basic research, and also we do a faculty exchange," said Wei. "Postdocs come to Tampa for a two-year period and they work in a selected lab at Moffitt." The exchange is mutually beneficial as the postdocs perform work at the cancer center while obtaining additional experience. Jointly authored scientific papers are submitted to journals for publication.



Catie Wiernasz, RN, MSN (left), and Madame Ning Ma, chief of the Financial Department of Tianjin Medical University Cancer Institute and Hospital and secretary of the party committee of the IPCC, discuss partnership progress and goals.

"Sheng [Dr. Sheng Wei] is really the glue that keeps this relationship together," said Sullivan about Wei, who graduated from medical school in Tianjin and has been in the U.S. for 27 years.

"Initially, postdocs from Tianjin came to Moffitt for clinical research training," said Sullivan. "Now other people are coming, not just those for research and clinical training, but administrators, IT people, and those coming for personalized medicine training."

"This year, the partnership became more formal, and annually we will be sending teams of clinical doctors including a radiation oncologist, surgeon, medical oncologist and a few other medical professionals to Tianjin," said Sullivan.

"The partnership focuses on several areas of education, including clinical research, nursing, basic research, and also we do a faculty exchange."

The first team to visit Tianjin specializes in thoracic oncology and included surgeon Robert Keenan, medical oncologist Jhanelle Gray, radiation oncologist Thomas Dilling, along with nurse researcher Tina Mason, Sullivan, Wei and Catie Wiernasz, RN, MSN.

A highlight of the 2018 visit was the first IPCC-Moffitt tumor board teleconference, focused on thoracic oncology. While the physician in China presented a case, a Moffitt radiologist in Tampa interpreted the CT scans. A Moffitt pathologist also was able to view the pathology slides that were projected on a screen in China.

The physicians are hoping that through the collaboration there will be more clinical trials at the IPCC taking advantage of newer compounds and technologies, including CAR T, while patients from Tianjin will be referred to Moffitt for specialized care.

"It is important to realize that the IPCC, the 1,000-bed cancer hospital, is located in the Tianjin Free Trade Zone. It is like a city, with about 500 businesses there, and because it is a free trade zone, we will be able to obtain faster approval to conduct clinical trials there," said Sullivan.

Tianjin is located in the eastern part of north China and with a population of 16 million is the sixth largest city of the People's Republic of China. Tianjin Medical University Cancer Institute and Hospital is the birthplace of oncology in China. It has a history of more than a hundred years and has become one of the most famous modernized cancer hospitals worldwide. It is also one of the largest bases for cancer prevention, treatment, training and research in China.

INTERNATIONAL TRAVELER

Advocates for Open Mind



"I don't think there is any way to envision anything that exciting!" Jhanelle E. Gray, MD, says she never dreamed she would be working at a faraway place like Tianjin, China. And it's not as if Gray has never traveled. The Jamaican native has lived in New York and South Florida, and has traveled to Europe, Australia and Asia to attend medical conferences.

But her recent trip to China made quite an impression. Gray was among the Moffitt team visiting the International Personalized Cancer Center (IPCC) in Tianjin to help develop personalized cancer care. The trip culminated years of planning and marked the beginning of future collaborations. This first team to visit Tianjin specializes in thoracic oncology. In addition to Gray, team members included surgeon Robert Keenan, radiation oncologist Thomas Dilling, along with nurse researcher Tina Mason, Daniel Sullivan, MD, Sheng Wei, MD, and Catie Wiernasz, RN, MSN.

A medical oncologist focused on patient care, Gray heads up the clinical research team for thoracic oncology trials at Moffitt. She says the trip to Tianjin has further expanded her horizons. With impressive infrastructure and "absolutely cutting edge care," Gray says, "if you are in China, the IPCC is where you want to go for cancer treatment."

"Clinical research is all about a global approach, a more international approach," said Gray. "We tend to be very U.S.-centric, and I think it is good to go out with an open mind, see how things are done at other sites, and bring back what you've learned, impart what you know. Both sites have a collaborative environment and now we need to act."

This is about building friendships and setting the foundation for future collaborations.

For example, there is opportunity to learn about how tumors develop and respond to treatment, based on mutations less frequently seen in the United States. In China, the patient population has a higher prevalence of EGFR [epidermal growth factor receptor]-mutant non-small cell lung cancer, notes Gray. This mutation occurs in about 60 percent of the patients in China; whereas the mutation occurs in about 10 to 20 percent of the U.S. population.

"So even though both institutions treat lung cancer, the patient population differs," said Gray. "Within the EGFRmutant population are areas where we

can learn things from China as they also have a vast database."

Gray had barely returned home before she began planning a collaborative clinical trial to study the impact on sequential immunotherapy and radiation therapy that will be open at Moffitt as well as at the IPCC in China. It will be her first clinical trial shared between Moffitt and the IPCC.

Gray's life could have taken a different path. As an undergraduate, she majored in chemistry with a backup plan to be a chemical engineer if she did not get into medical school. She completed medical school as well as an internship and residency at Cornell University Medical College in New York where she has "lots of family," followed by a fellowship at Moffitt in 2004. She has been a faculty member at Moffitt Cancer Center since 2007.

Planning, determination and flexibility have helped propel Gray's personal life and career forward.

"I've been very blessed with doing what I love." $\,$

Asked what advice she would give to another physician, researcher or medical professional if offered the opportunity to go to Tianjin or elsewhere outside the U.S. to work in collaboration, Gray immediately replied, "I would say 100 percent go! Absolutely! You learn so much. Be open-minded and absorb. I think I'm so much better off for having gone and obtained a better grasp of what's going on in another part of the world. The true vision here is to extend our global impact through collaborations."

While some at this stage in their careers might think they have reached their limit, there's much more still in the sights of Tina Mason, MSN, ARNP, AOCN, AOCNS.

Mason started with Moffitt Cancer Center 21 years ago as an oncology clinical nurse specialist and obtained her post-master's certificate as an oncology nurse practitioner from the University of South Florida College of Nursing. Her responsibilities as a resource for inpatient, outpatient and perioperative areas evolved, propelling her to a new position as nurse researcher in 2017. Not content to simply "practice at the top of one's license," as many U.S. health care professionals say, Mason currently is pursuing a PhD in Nursing Research at the University of South

In 2018 she earned the Nursing Excellence in Community or Global Outreach Award, a Moffitt nursing award; it was one of her many honors. She has served as co-author or lead author on almost 20 professional papers.

She says travelling with her Moffitt colleagues to China's International Personalized Cancer Center (IPCC) in Tianjin this summer was a career highlight. "There is a professional obligation to continue growing. Embracing opportunities will help with that," said Mason. "But also you have a professional obligation to share your knowledge with others, and to receive knowledge from others. I felt that this trip did both."

Mason was impressed with the premier facility in Tianjin, where she was able to give seven presentations and participate in discussion boards where the two institutions shared ideas. "It was a peer exchange, being considerate of cultural perspectives, mutually learning from each other," Mason said.

While there, a reception team worked with Mason to translate and to make sure she found the places she needed to be. "I saw two patients in an outpatient setting. And I saw numerous inpatients."

She says it's important that nursing was built into the partnership plan between Moffitt and IPCC. "I really appreciate that nursing was included. It is the largest work force. And nurses are there [in the hospital] 24 hours."

Quiet, strong and dedicated, Mason knew at a young age she would become a nurse. She even worked with a school nurse as part of an elective course during her early years. "For a long time, I was fascinated with the immune system and how it relates to cancer," she recalled, thinking back to the fifth grade when a teacher had the students write their own obituaries. "Looking back, very morbid. But in that, I put 'cure for cancer.' I don't know where that came from. No one

in my family had cancer. [It was] nerdy; science," she laughs.

While in nursing school, Mason's career aspirations included working at a National Cancer Institute designated or a top cancer institution. She earned a Bachelor of Science in Nursing at Mount Saint Mary College, followed by a Master of Science in Nursing at Yale School of Nursing. Her husband, a Tampa native, initiated their move to Florida. "So I was very fortunate that we had Moffitt here in Tampa, and the cancer center was working toward NCI designation when I got here. We got the designation shortly after I arrived."

To Keep Growing



Although Mason has vacationed in the Caribbean, Europe and Canada, she says travelling in her profession was something she had never thought of. "I'm glad Moffitt is reaching out globally beyond the state of Florida," she said.

And she would love to return to Tianjin, as there was so much more to discuss. "The week went by fast; it was jam packed. I look forward to future collaborations and the prospect of doing a nursing research study together. Even if I can't physically be there, we could collaborate via email and teleconferencing."

To anyone else given the opportunity to work abroad in a similar capacity, Mason said, "I would definitely say: Go! Go!"

With her enthusiasm and extensive training, it's plain to see why Mason was a valuable addition to the Moffitt-IPCC visiting delegation. Θ

Chinese Postdoc Takes to Precision Medicine



WHEN YONGZI CHEN, PHD, ARRIVED FROM TIANJIN, CHINA, TO TAMPA TO WORK AT MOFFITT AS A POSTDOC, she immediately noticed how cordial the people were. "They were really nice and helped me a lot through the process of orientation," Yongzi said.



L-R: Drs. Y. Ann Chen, Yongzi Chen and Brooke Fridley

It was a warm beginning for a two-year stay. Yongzi came to Tampa as part of the partnership between Moffitt and Tianjin, in which postdocs from her country work at Moffitt on joint research projects. Each year Moffitt trains approximately 10 postdocs from Tianjin. So far, more than 60 have trained at Moffitt Cancer Center.

Her viewpoint on achieving success in her science career? "Working with smart people and pushing yourself to do the things you like is good for your career."

This strong woman indeed pushed herself to leave what was familiar to come to Tampa. Previous travels took Yongzi to a 2009 conference in Sweden and a 2013 visit to Moffitt to learn more about the Total Cancer Care Program. She says even as a child she aspired to travel as part of her work. But this time it was a two-year commitment. Yongzi would need to apply

her past training as an assistant researcher at the Tianjin Medical University Cancer Institute and Hospital, in addition to learning new scientific skills and knowledge while at Moffitt.

Her educational qualifications are impressive, with a BS in biotechnology and a PhD in bioinformatics, along with a command of various computer programming languages and operational systems. Building on her education and experience, her postdoc work at Moffitt focused on biostatistics.

Yongzi developed four individual drug models for breast cancer during her time at Moffitt. As the lead author for an article published in the journal Endocrine Related Cancer, she detailed developing a prediction model using biomarkers from cell line data to predict treatment response for breast cancer patients.

"This is precision medicine, because the research was designed to predict who would or would not respond to chemotherapy treatment," said Yongzi.

Over the last year of her postdoc work at Moffitt, Yongzi also started learning methods associated with the analysis of the microbiome, with research focused on the gut microbiome and its relationship with colon cancer. Her aim is to continue working on this collaboration with her Moffitt colleagues and to gain additional experience in studies dealing with the microbiome.

As this issue of Momentum was in production, Yongzi's time at Moffitt came to an end. She says her Moffitt training has added to her skill set, and she returned to Tianjin with the aim of performing cancer research similar to what she had been doing at Moffitt.

"Before I barely knew anything about statistics, but I learned a lot about it from the people here. In the future, I will apply what I learned to my work and collaborate with more clinicians," Yongzi said.

Back in Tianjin, Yongzi works in the Tumor Biology Lab. Her scientific research concentrates on bioinformatics and biotechnology.

While in Tampa, Yongzi was impressed with the natural beauty of the area, enjoying the open sky and clouds. Back in China on her rare off days you might find her mountain climbing and photographing the vistas from the high mountains in Beijing.

"This is precision medicine, because the research was designed to predict who would or would not respond to chemotherapy treatment."

"I like the feeling [I get] when climbing to the top of the mountain." No doubt Yongzi has many more mountains to climb and many more scientific findings to discover.

MENTORS BECOME FRIENDS

Some mentors grow their relationships with those they mentor beyond that of a tutor, teacher or guru. For Moffitt researchers Y. Ann Chen, PhD, and Brooke Fridley, PhD, their experience mentoring a postdoc from China has yielded close collaboration and longterm friendships with a valued colleague. The colleague is Yongzi Chen, PhD.

Fridley, who chairs Moffitt's Biostatistics and Bioinformatics Department, recalls her first experience as a mentor early in her career. In the summer of 2004 she mentored middle-schoolers through a Girls in Science Workshop involving design of experiments at the University of Wisconsin-La Crosse. "It was a lot of fun, and the girls liked doing the hands-on work," said Fridley. Although Fridley has continued to mentor numerous people with varying levels of education throughout her career, she never thought she would be mentoring a research postdoc from as far away as China.

Fridley credits her own mentor from her days at Mayo Clinic, $\,$

Dr. Mariza de Andrade, who later encouraged her to change her career path and get back into research. At La Crosse Fridley was primarily teaching, which she enjoyed, but her heart was pulling her toward research, which she loved. "It was a strong woman that got me to where I am through mentoring. I would have to credit Dr. de Andrade," said Fridley.

Enter another mentor at Moffitt for Yongzi Chen. Who better to mentor Yongzi than a researcher not only with education and experience in biostatistics but also with firsthand knowledge of the importance of befriending a newcomer making the transition from a faraway place to a new culture?

The same last name is "coincidence" as the two women are not related and Ann Chen hails from Taiwan, where she

earned a BS in Zoology at National Taiwan University. She also worked as a research assistant at the Institute of Biomedical Science, Academia Sinica, Taiwan. Ann Chen later came to the U.S. in 1996, earning an MS in Marine Biology at the University of Charleston, followed by a PhD in Biostatistics and Bioinformatics at the Medical University of South Carolina, all the while working as a research assistant. Now at Moffitt, Ann Chen is an associate member in the Department of Biostatistics and Bioinformatics.

Research mentorship plays a key role in the Tianjin-Moffitt partnership, and the two Chens and Fridley have forged a strong affiliation over the two-year mentorship. It is the expectation of the leaders in China that the postdocs will publish papers as part of the partnership, a task that Yongzi has achieved.

As this issue of Momentum was in production, Fridley and Ann Chen were working with Yongzi Chen to wrap up her existing research projects. They also were planning the refreshments and activities for a department farewell party for Yongzi, whose time at Moffitt was drawing to a close. The mentoring relationship, fostered and nurtured among these three researchers, is likely to continue as the three plan to correspond and collaborate on future projects.

"It was a strong woman that got me to where I am through mentoring."



Drs. Brooke Fridley, Yongzi Chen and Ann Chen collaborate and discuss future projects.

Hugs in Heaven

REMEMBERING MARGIE SCHWERDT

By Ann Miller Baker



"More than once, a patient who'd be here multiple days a week for treatment would come in on their day off just to get Margie's hugs and encouraging words."

When Margie Schwerdt passed from this life on May 11, her brother Lincoln is sure "she threw her arms around God, called Him 'honey,' and asked — 'Now, what can I do to help you?'"

THE REDHEAD WITH THE WORLD'S BEST HUGS offered encouragement and unconditional love to all who passed her post at the Gold Valet Information Desk over the last 10 years. Many knew she was a longtime colon cancer survivor. She readily befriended those she met who were newly diagnosed with the disease, dispensing practical wisdom along with comfort.

But few knew the reason for her absence from the desk early this year. Margie had been diagnosed with cancer again, this time in her lungs. Moffitt Executive Vice President and Chief Operating Officer Jack Kolosky recalled how energized she was when last he saw her on April 20, the day she rang the bell in the Radiation Oncology Clinic to celebrate her final treatment. "Where does all that life energy go?" he asked the hundreds who assembled for a Celebration of Margie's Life held May 22 at the Stabile Research Building Auditorium.

Judging from those who spoke, a part of Margie's boundless energy will remain with each person she touched.

"Margie hugged like she lived: all out," said Dr. B. Lee Green, vice president of Moffitt Diversity, Public Relations and Strategic Communications. For him, each Margie hug would be followed by her straightening his trademark bow tie. "The beauty of Margie is that she treated everyone with love," he added. "And if you loved her back, she'd just love you even harder." He urged us to honor Margie by embodying her spirit of love and respect for everyone we encounter. And he thanked the 22 members of her family in attendance, including husband Paul and son Michael, for sharing Margie with Moffitt.

Volunteer John Schwarz sat at the desk with Margie for eight years. He called her "the most genuine person I've ever met." From their post, Schwarz would watch patients arriving for treatment, faces blank with fear and concern. "But once they opened that door and saw Margie, they couldn't help but smile. More than once, a patient who'd be here multiple days a week for treatment would come in on their day off just to get Margie's hugs and encouraging words."

Pam Lowry said she was one of those patients. "Margie was the first person I saw when I came to Moffitt for treatment. She could sense I was terrified, and immediately came over to ask, 'can I give you a hug?' "When Lowry returned two years later as a Moffitt team member, she was able to tell Margie how much that meant. "She became my second mom," Lowry added. "And when I told her about my plan to return to nursing school, she said, 'It's about damn time!"

Other patients, past and current, as well as colleagues from throughout Margie's 17-year Moffitt career, added their own stories. One called her "a healer of healers." Another penned a poem called "Fly Away," for this "rare bird" who communicated with warmth and kindness.

"When my time comes," reflected her brother Lincoln, "I hope they'll be able to say I lived a life larger than myself. Margie did, here at Moffitt. Thank you for giving her the opportunity to reach her full potential."

And if we live well enough to make it to the pearly gates, we'll welcome a hug from heaven's newest greeter.

If you knew Margie or were touched by her story of courage, here's one way to help honor her memory. The 2018 Miles for Moffitt event took place Saturday, Dec. 8, at its new location in downtown Tampa. Runners, walkers and virtual participants joined, with every dollar of event proceeds benefiting lifesaving research at Moffitt Cancer Center.

Margie's colleagues in Moffitt's Patient Experience department were there as Team Heart & Sole, dedicating their participation to her memory. They dubbed their efforts "Miles for Margie." And they extended an open invitation to join them as they walked in memory of their beautiful friend and worked together to end cancer.

As so clearly stated on Team Heart & Sole's donation page, "There is no better way to commemorate Margie's life and the place she held so dear."

While this year's Miles for Moffitt event has already taken place, it's not too late to be part of the "Miles for Margie" fundraising efforts by visiting **support.moffitt.org/MilesforMargie.**

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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NOTABLE

The Richard M. Schulze Family Foundation Outpatient Center was dedicated at the Moffitt McKinley Campus on Oct. 25. The naming recognizes the philanthropy of Richard "Dick" Schulze, founder and chairman emeritus of Best Buy Co., Inc., and his wife, Maureen. Their \$6M gift will impact the patient experience by endowing a chair, accelerating research, and providing unrestricted funding for urgent needs.

Moffitt announced a licensing agreement with MultiVir Inc. to develop a new personalized therapeutic cancer vaccine. The new research partnership could lead to expanded immunotherapy options for patients with many types of cancer. The immunostimulatory therapy was jointly invented by Moffitt scientists and investigators at MultiVir, with the goal of activating cancer-fighting immune cells.

Robert Gillies, PhD, was awarded the World Molecular Imaging Society's highest honor, the 2018 Gold Medal Award, recognizing his contributions to the field of molecular imaging. Gillies serves as chair of the Department of Cancer Physiology and vice chair of Radiology Research at Moffitt.

Moffitt researcher Shelley Tworoger, PhD, published in JAMA Oncology, along with colleagues from Huntsman Cancer Institute and the Harvard T.H. Chan School of Public Health. They reported finding that women who took low-dose aspirin daily had a lower risk of ovarian cancer compared to non-aspirin users. Findings help confirm research published earlier by Tworoger in the Journal of the National Cancer Institute. Tworoger stresses more research is needed and this is something women should discuss with their physician before going on such a regimen.

Visit **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 to find out more.



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