Spring 2014

RUTGERS Cancer Institute of New Jersey Connection

Chipping AWAY:

How retired golfer Val Skinner is chipping away at breast cancer

Director's Corner



AS a National Cancer Institute-designated Comprehensive Cancer Center, Rutgers Cancer Institute of New Jersey prides itself on its strong ability to directly translate scientific and population research into new treatments, education programs and other initiatives that benefit patients and the greater community. The capacity to further explore the areas of cancer and cancer prevention is made possible through a variety of funding mechanisms – from national and state entities to foundations and individuals whose contributions all make an important difference. In this edition of *Cancer Connection*, we are pleased to highlight a few of these partners having a positive impact in the fight against cancer.

As you'll learn in our cover story, Ladies Professional Golf Association veteran Val Skinner made it her mission to find a way to support breast health education initiatives for young women. Some 15 years and \$4.5 million later, her annual LIFE charity golf event continues to attract elite athletes and corporations to raise awareness and funding for programs put forth by the Cancer Institute's LIFE Center. In our Forefront section, you'll read more on how funding agencies like the National Cancer Institute are helping Cancer Institute of New Jersey investigators develop and propel cancer clinical trial offerings across the nation as well as fund further exploration into the needs of cancer survivors.

Individuals play a key role as well, not only in funding the research but in participating in clinical trials. Some may ask, "Does my participation *really* help?" Yes, it does. Just ask Gail Williams, whose husband Herbert was the first to take part in a unique clinical trial designed here at the Cancer Institute that attacked his cancer by directly injecting a vaccine into his pancreas (*page 24*).

Another example from the grass roots level is the Hugs for Brady Foundation which receives support from individuals, families and small businesses. The Foundation is helping to advance precision medicine research at the Cancer Institute that aims to further personalize treatments for the youngest of cancer patients (*page* 22). Our Development Office works to ensure resources like these are available to fuel our work. Cancer touches the lives of everyone in some way. It truly takes the help of many to achieve the goals we have set forth in beating this disease. We hope through the stories in this edition of *Cancer Connection* you will be inspired to join us as we strive to accomplish this mission.

Sincerely,

Robert S. DiPaola, MD

Director, Rutgers Cancer Institute of New Jersey

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Rutgers Cancer Institute of New Jersey Connection









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Forefront

News from the front lines at Rutgers Cancer Institute of New Jersey

Changing Behavior

Why do some young women frequently use indoor tanning beds, even though they know it can increase their chances of developing melanoma and other forms of skin cancer? And what can be done to help convince them to reduce that risk? These are questions **Jerod L.**



Stapleton, PhD, (*left*) a behavioral scientist at Rutgers Cancer Institute of New Jersey, aims to answer with the help of a nearly \$700,000 grant (K07CA175115) from the National Cancer Institute. While previous re-

search on this topic indicates a 'mood boost' and achieving a 'healthy glow' as reasons to to hit the tanning bed, Dr. Stapleton, an assistant professor of medicine at Rutgers Robert Wood Johnson Medical School, will explore why frequent indoor tanners view this behavior as meaningful, socially important, and useful. The aim is to develop a web-based behavioral intervention that will encourage frequent users to consider the reasons behind their use of tanning beds, reshape their knowledge about tanning frequency and promote alternatives to this practice.



Innovative Design

Precision medicine, or the movement to 'personalize' cancer treatments, has grown significantly over the past few years, with researchers making advances in identifying targeted therapies and understanding what drives them. Physicianscientists at Rutgers Cancer Institute of New Jersey are aiming to build on that momentum with the development of innovative early-phase clinical trials examining genomic and therapeutic biomarkers.

Supporting this effort is a \$4.25 million grant (UM1CA186716) from the National Cancer Institute. The initiative led by Cancer Institute of New Jersey Director **Robert S. DiPaola, MD**, includes the University of Wisconsin Carbone Cancer Center and aims to provide patients in New Jersey and nationwide with access to new targeted therapies through clinical trials. Another aim of the initiative is to Physician-scientists at Rutgers Cancer Institute of New Jersey are aiming to build on the momentum made over the past few years with the development of early-phase clinical trials examining genomic and therapeutic biomarkers, as well as develop management approaches that will further streamline the clinical trial process and make it more efficient.

develop management approaches that will further streamline the clinical trial process and make it more efficient. The funding also will help strengthen the Cancer Institute of New Jersey's emphasis on its clinical research program.

A Sharpened Focus

Clinical trials examining the safety and benefits of new and combined cancer treatments are helping to advance the pace of discovery at a more rapid rate than in years past. What if the scientific breadth involved in these studies could dig deeper? What if the process to conduct such trials were further streamlined in order to increase the number of participants?

With a focus on those aspects, Rutgers Cancer Institute of New Jersey recently welcomed Howard L. Kaufman, MD, FACS (below), as Associate Director for Clinical Science. In this role, Dr. Kaufman oversees all aspects of clinical research including how resulting discoveries translate from the laboratory bench to patient bedside. But as Kaufman notes, that process goes a step further, as the nature of clinical trials has shifted dramatically in recent years. "Rapid advances in cancer immunotherapy and genomic analysis are enabling more precise and personalized treatments. With that, we can further examine how these new therapies are impacting patients through clinical trials and take that information back to the laboratory for fine tuning," said Kaufman, who is also chief surgical officer at the Cancer Institute of New Jersey and a professor of surgery at Rutgers Robert Wood Johnson Medical School.

Kaufman, who is nationally recognized for his work in cancer immunology, is a recipient of major grant awards from the National Institutes of Health and National Cancer Institute and most recently was the associate dean at Rush Medical College and director of the Rush University Cancer Center in Chicago.

An App for that

Imagine if cancer

survivors could better manage their healthcare needs through a couple of clicks on their laptop or smartphone? Rutgers Cancer Institute of New Jersey researcher **Shawna V. Hudson, PhD** (*below*), was awarded a \$3.2 million grant (R01CA176838)



from the National Cancer Institute (NCI) to develop a web and mobile application and a health coaching education component to help them stay on track with post-treatment care.

According to the NCI, there are nearly 13.7 million cancer survivors in the United States. Approximately 70 percent of survivors have other health issues that require a comprehensive approach to the management of their care once they complete their treatment, as some of these conditions may have been uniquely impacted by cancer therapy. Despite this, studies have shown that cancer survivors do not receive preventive care and chronic disease management at recommended intervals. Dr. Hudson, who is also an associate director for research at Rutgers Robert Wood Johnson Medical School, will work with colleagues from across Rutgers

University to address a lack of psychosocial tools for this population for this purpose.

Similarly, an \$824,000 grant (K07CA174728) from the NCI will support Cancer Institute of New Jersey behavioral scientist **Katie Devine, PhD** (*below*), in her exploration of how mobile technology



might help adolescents and young adults who are survivors of childhood cancers.

Studies have shown that survivors of this age group are at risk for cardiovascular disease due to treatment effects that might present themselves later in life. Physical activity may help to reduce this risk. Dr. Devine, who is also an assistant professor of medicine at Robert Wood Johnson Medical School, will examine how a mobile app could help these survivors keep up with exercise goals and improve their cardiovascular fitness, muscle strength, fatigue and other quality of life factors relating to health. The technology would be complemented by interventions brought forth in a weekly group fitness program.

Forefront

Target Acquired

New aim is being taken against a genetic variation found in a quarter of Caucasians and in 12 percent of Caucasian breast cancer patients, as investigators at Rutgers Cancer Institute of New Jersey examine treatment implications for this variation.

Arnold J. Levine, PhD, a resident member at the Cancer Institute of New Jersey and professor of pediatrics; and biochemistry and molecular biology at Rutgers Robert Wood Johnson Medical School; and Kim M. Hirshfield, MD, PhD (below), a medical oncologist at the Cancer Institute and assistant professor of medicine at Robert Wood Johnson Medical School, are building on previous research that led to the identification of this new gene product as a result of two cancer-causing genes being fused together.



One of the genes regulates tumor suppression function and DNA repair proteins involved in cancer formation and cancer cell behavior. The other gene is involved in protein movement within a cell, thus affects cell function. When fused together, the result is a variation in the human genome. Its impact on protein activity further sheds light on why some cancers have difficulty maintaining the integrity of their DNA.

Two sets of drugs have been identified that could be useful in the treatment of cancers with this fusion variation. A recently-awarded \$240,000 grant from the Breast Cancer Research Foundation will support laboratory study of these agents and their impact on targeted therapy.

Faculty Feature



Darren Carpizo, MD, PhD, FACS, is a surgical

oncologist in the Gastrointestinal (GI)/Hepatobiliary Oncology Program and the Liver and Bile Duct Cancer Care Program at Rutgers Cancer Institute of New Jersey and an assistant professor of surgery at Rutgers Robert Wood Johnson Medical School.

Dr. Carpizo oversees the surgical management of patients with liver, bile duct and pancreatic cancers and also leads a team of researchers that study developmental therapeutics in cancer. Disease recurrence following surgery for cancers of the GI tract is a significant clinical problem. In the case of pancreatic cancer, studies (ie: Allen et al. *Annals of*

Surgical Oncology 2011) have shown that more than 75 percent of patients who undergo complete removal of their tumor experience recurrence of their disease making chemotherapy their only treatment option. Recurrence can only be improved with more effective anti-cancer drugs.

Q: What type of research is your laboratory involved with that aims to improve outcomes for patients with pancreatic cancer?

A: My laboratory is engaged in studies in both the basic and translational science arenas. On the basic science front, we are focusing on the p53 gene, which is the third most frequently found mutation in pancreatic cancer. We recently discovered a drug that targets this gene and restores its proper function in cancer cells. By doing so the drug selectively kills cancer cells in laboratory models. We are currently applying this drug to laboratory models engineered to develop pancreatic cancer in an effort to determine its potential for patients. This work is made possible in part through the Pancreatic Cancer

Action Network, National Cancer Institute and through the many donors who support the Cancer Institute. In the area of translational science, we are concentrating on a class of drugs known as Hedgehog inhibitors, which are being examined in clinical trials for various types of cancer (including pancreatic). In laboratory models engineered to develop pancreatic cancer, these drugs have been shown to "melt" away the dense scar tissue in the tumor and provide better blood flow in the tumor for the delivery of chemotherapy. I am the principal investigator of a clinical trial testing one of these Hedgehog inhibitors in which we are giving the drug to patients with resectable pancreatic cancer in order to determine if indeed the drugs work this way. This study is sponsored by Novartis Pharmaceuticals.

Clinical Trials Corner:

Q: Why are current chemotherapies not effective for pancreatic cancer?

A: There are a number of reasons for this that deal with the inability of cancer drugs to reach their target. Pancreatic cancers have a hard, scar-like consistency to the tissue that limits blood flow through the tumor and so drugs are not able to be delivered effectively. In some cases, there are tumors that have acquired mutations that make them insensitive to chemotherapy drugs, and the most commonly mutated gene in pancreatic cancer, KRAS, has proven to be very difficult to target with a drug.

Q: What is a focus in developing the next generation of anti-cancer drugs?

The focus will be on four things: 1) Identifying the genetic mutations in a tumor and matching a particular therapy for those mutations. This is the concept of precision or personalized medicine. 2) Identifying areas of tumor biology that expose weaknesses in pancreatic cancer cells. One example of this came about through studying the metabolism of pancreatic cancer cells. It has been learned recently that pancreatic cancer cells have a distinct metabolism from normal cells. It is believed that these differences can be exploited with new drugs. 3) Finding a drug that targets the most commonly mutated gene in pancreatic cancer, KRAS. 4) Discovering new drugs that will trigger the body's immune system to recognize the cancer and attack it.

Carpizo's research in these areas is supported by the National Institutes of Health (1K08CA 172676-01A1), National Cancer Institue, Sidney Kimmel Foundation for Cancer Research, Pancreatic Cancer Network, and Harrington Discovery Institute at University Hospitals Case Medical Center.



Short Course

Patients receiving radiation treatment following breast cancer surgery typically can expect seven to eight weeks of treatment. But if therapy is compressed into a single week, or less, with multiple treatments given each day – an

approach known as accelerated partial breast irradiation (APBI) – there is reason to believe that patient comfort and convenience can be enhanced. At Rutgers Cancer Institute of New Jersey, radiation oncologist **Atif J. Khan**, **MD** (*right*), has been examining this possibility through a clinical trial, looking at dosing schedules that are shorter than those commonly given with APBI.

Early findings from the first group of women were published in the April 2013 print edition of the Annals of Surgical Oncology and showed favorable results. Adverse affects were minimal. Results from the

second group are being analyzed and enrollment of the third group will begin in the near future.

Carolyn Brown, a 77-year-old retired nurse and active grandmother of three, is one of the patients who decided to try this treatment in the spring of 2013 after having surgery to remove her early-stage breast cancer. "I was leery at first but realized the precise targeting of the treatment would have great benefit. The short time frame in which I received the treatment also was a plus, as I was able to resume with my regular activities in no time," said Brown, who likes to walk regularly and is especially busy with her eight-year-old granddaughter.

"It's about quality of life for the patient," says Dr. Khan, who is also an assistant professor of



radiation oncology at Rutgers Robert Wood Johnson Medical School. "Having the ability to safely offer a course of treatment that leads to positive outcomes and allows the patient to return to a normal lifestyle in a quicker fashion is ideal."

For more information on this and other clinical trials offered at Rutgers Cancer Institute of New Jersey, visit cinj.org/clinical-trials.

"Where I grew up, it was about people living a good life and having a sense of doing whatever you could to help others," says Val Skinner (center), with Sandra McIntyre (left), and Deborah Toppmeyer, MD (right), in front of the LIFE Center at Rutgers Cancer Institute of New Jersey.

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Chipping Away at Cancer

When you talk to Val Skinner, one thing is quite evident. She is a people person. Immediately engaging and with a radiant smile, she greets you like an old friend. Converse with her for a while and you'll notice she exhibits a 'drive' of sorts – quiet and reserved at times, but at others it is a gentle force. Her initial passion on the golf course from a young age was always a drive to succeed – a drive to reach the next level. Now a veteran of the Ladies Professional Golf Association (LPGA), this 53-year-old long-time sports commentator still exhibits this drive – but it's more on a path to educate – a path to help – against the toughest of opponents – breast cancer.

Such determination started long ago, growing up as a child in the Midwest. "Where I grew up, it was about people living a good life and having a sense of doing whatever you could to help others," says Skinner. It was an edict by which she chose to live, and by the time she was a young adult, she began using her sport as a means to help others. Early in her career, she was involved with an initiative that used golf as a way to help underserved children. "I remember working

with one particular boy – connecting with him and watching him evolve through a sport that provides order, structure, integrity, and honesty," she says. "I enjoyed what I was able to give to this young boy through golf; it really was a moment of pause for me." While she didn't know it at the time, it was a moment that would help set the stage for something much larger – an initiative that ultimately would help those with and without breast cancer at Rutgers Cancer Institute of New Jersey and beyond.

Up Close and Personal

E veryone knows someone who has been touched by cancer, and for Skinner, her introduction to this sometimes deadly disease hit extremely close to home, as she watched her very close cousin and her best friend from high school engage in their own individual battles with breast cancer. But Skinner's next experience with the disease was unexpected and raw.

As Skinner tells the story, in 1989 a dear friend of hers, fellow LPGA player Heather Farr, discovered a lump in her breast. Thinking a diagnosis of breast cancer wasn't even an option considering she was only 24 years old, Farr and her physician decided to wait on further exploring the lump until the current tour wrapped up a few months later. Unfortunately by that time, Farr had advanced-stage breast cancer. She fought a courageous battle and died in 1993. "Heather's death changed the LPGA tour in ways I can't even describe. What comes with playing is an unflappable attitude that you can do anything – then all of a sudden, you see your friend in a vulnerable state. The reality for all of us on the tour (a number of young women) was that what happened to Heather could happen to any one of us," says Skinner.

Before she passed away, Farr told Skinner "don't ever forget this," and charged her with what Skinner says felt like a Herculean task at the time of helping young women understand that they have the power to learn more about their breast health. Skinner couldn't process at that moment what that meant or how she would accomplish that task, but she made it her personal mission to live up to that challenge.

A Mile in Her Shoes

A few short years later, Skinner had her own scare with breast cancer – having found a lump. A recent elbow surgery at Robert Wood Johnson University Hospital led to a recommendation to visit the Cancer Institute of New Jersey for a follow-up on her breast. "Just like many women, I sat there frightened, thinking of the 'what ifs.' But having been told of the comprehensive team approach there, seeing the compassionate way patients were being treated and feeling confident of my doctor's presentation of my situation, I felt comfortable and felt the Cancer Institute was a place that was making a difference in people's lives," she recalls. Fortunately for Skinner, she checked out fine, but she knows not everyone hears those words of relief. It was that day in the waiting room that an idea formed in her mind – an idea that would build upon Skinner decided to use golf in sharing Farr's message and set the bar high. Having spearheaded fundraising events for numerous charities benefiting women and children since the late 1980s, Skinner had experience from which to draw, and in 2000 the LIFE (Ladies Professional Golf Association In the Fight to Eradicate breast cancer) Event charity golf outing was established. "Launching the LIFE Event was such a proud moment," Skinner remembers. "I felt like the generation of LPGA pros so affected by Heather's death could start healing thanks to what we were able to accomplish together with our sport. It changed our perspective forever."

For the past 14 years, this pro-am event has brought together the most elite golfers on the LPGA tour and other golfing enthusiasts to raise money and awareness for breast cancer and breast health initiatives. As one of the Val Skinner Foundation's benefactors, the Cancer Institute's LIFE Center has received \$4.5 million since the event's inception to support education programs and initiatives. Based on her positive experience at the Cancer Institute, Skinner knew the center needed to play a major role in translating the mission of her foundation to reality.

Young Women's Initiative

S kinner called for meetings with the Institute's leadership and director of the breast program Deborah L. Toppmeyer, MD. Skinner asked Dr. Toppmeyer where the greatest need was for young women like Farr. "Educating young women about their breast cancer risk even in the absence of a family history and how they can modify this risk," Skinner recalls Toppmeyer saying. It was at that point the two began to work closely on clinical and educational programs tailor made to young women.

Through the relationship with the Cancer Institute of New Jersey, coupled with that of Susan G. Komen for the Cure (the national charity of the LPGA at the time), Skinner helped launch a national campaign in 2000 known as the "Young Women's Initiative" that focused on educating women about their breast health. As a vehicle to reach this import demographic, 'Komen on the Go,' an educational mobile unit focused on breast health, was conceived. This campaign kicked off on the New Brunswick campus of Rutgers University. "You gain momentum when you start to see young women come up to you and say 'no one has been thinking of us," Skinner



says. "We were changing the conversation. We wanted young women to understand more about their breast health and to be taken seriously if they expressed a concern."

Looking for a brick-and-mortar vehicle to meet this need, Skinner partnered with the Hereditary Oncology Prevention and Evaluation (HOPE) Program at the Cancer Institute. As a component of the HOPE Program, The LIFE Center was established in 2002 to recognize the support and advocacy of the LPGA and the Val Skinner Foundation. Today the LIFE Center is dedicated to providing young women with information about breast cancer education, prevention and treatment. It features a multidisciplinary team of medical oncologists, surgeons, genetic counselors, nurse practitioners, social workers, and other healthcare professionals devoted to addressing the specific needs of young women with and without breast cancer through research, counseling, testing services and education programs. Through the continued support of the Val Skinner Foundation, LIFE Center satellites have been established across the state at affiliate hospitals within the Rutgers Cancer Institute of New Jersey Network to expand the outreach of this program.

As part of the Young Women's Initiative, the partnership of the Val Skinner Foundation with The LIFE Center and Rutgers School of Public Health contributed to the development of an innovative educational program called BioCONECT. A science-based curriculum,

Val Skinner surrounded by fellow LPGA athletes at the 2013 LIFE Event.

BioCONECT has been offered to more than 200 high school teachers impacting thousands of students in New Jersey and South Carolina since 2008. The interactive program looks at the biology and genetics of breast cancer through the eyes of fictitious teenage twins, whose mother is diagnosed with the disease. Students learn about breast health, breast cancer, cancer genetics and prevention through the twin's website and blog as well as interactive lessons lead by the teacher.

"Awareness is critical. While BioCONECT is designed to expand students' knowledge of genetics and cancer development, the curriculum also focuses on risk reduction strategies that they can implement now that will have an impact in the future – lessons we hope they will share beyond the classroom with family and friends and future generations to come," says Toppmeyer. Toppmeyer helped create the curriculum and is the director of both the LIFE Center and Stacy Goldstein Breast Cancer Center at the Cancer Institute. "Thanks to the Val Skinner Foundation and because of Val's dedication to this cause, the LIFE Center is able to deliver a multi-faceted educational, clinical and research program that can empower young people to be more pro-active about their health." Skinner's continued drive to help isn't limited to providing funding sources and attracting star athletes and corporations to lend their support to this cause. It goes much deeper. It is very personal. "Having watched what Heather went through – having had my own scare – I do whatever I can to help other women oneon-one," she says.

A Storm of a Different Kind

Sandra McIntyre is someone who has experienced Skinner's outstretched hand. Diagnosed in 2011 with Stage II breast cancer, McIntyre was discussing her options with a friend – who happens to be a neighbor of Skinner's. The friend told Skinner of McIntyre's plight and Skinner recommended McIntyre and her family meet with members of the breast center at the Cancer Institute for a second opinion. "When she's dealing with you, nothing else is on her plate," the 64-year-old McIntyre recalls of her first interaction with Skinner. "She told me about the team approach at the Cancer Institute and made me feel comfortable. And after meeting with Dr. (Laurie) Kirstein, who took her time and explained every aspect of the cancer and possible procedures, I felt very confident in the care I would receive there."

Laurie J. Kirstein, MD, FACS, breast surgical oncologist at the Cancer Institute and assistant professor of surgery at Rutgers Robert Wood Johnson Medical School performed a mastectomy on McIntyre in November 2011. Four months and six chemotherapy treatments later with follow-up visits to the Cancer Institute, McIntyre has been cancer free since the spring of 2012.

A member of the fire police in her Jersey shore community of Mantoloking, McIntyre was able to continue with lifesaving first responder duties a few months later during a devastating storm with the same name – Sandy – thanks to positive treatment outcomes.

"To think that someone who was a stranger to me would take the time to help in this way is extraordinary," says McIntyre, who adds "more good" has come out of the experience than expected including a new friendship with Skinner. Skinner couldn't agree more. "You never know whose life you may touch or how that person may touch your life," she says. In fact, during Superstorm Sandy, McIntyre offered for Skinner to reach out to her for information related to the storm if she needed. Skinner evacuated her shore-area home and called McIntyre once the storm had moved through to see how she was and how the region was faring. When Skinner called, she had no idea that at that moment, McIntyre herself was waiting to be evacuated from her own flood-ravaged home while watching part of her neighbor's house float by. But McIntyre calmly took the call. "What an amazing woman," Skinner says of McIntyre. "She was my calm before the storm, my calm during the storm and my calm after the storm. Knowing the 'personal storm' she had just been through with her diagnosis and treatment and how she exhibited such grace and courage in ensuring the safety of others during this time was just incredible to me. I am honored to know her and to be her friend."

"I feel very fortunate," says McIntyre. "While I would hope no one finds themselves with a diagnosis of breast cancer, it is good to know there are people like Val out there willing to help."

That personal concierge treatment isn't reserved only for those faced with breast cancer. Skinner through the years also has referred patients with prostate, kidney and other cancers to the Cancer Institute. She says it comes with the extreme confidence that the Cancer Institute delivers world-class care and has the ability to advance cancer discoveries all under one roof. "I've seen firsthand what the doctors and researchers do here," she says. Because of that strong belief, Skinner's foundation has helped fund key aspects of some of the Cancer Institute's scientific endeavors as well.

The treatment advances made in breast cancer since Heather Farr waged her battle are substantial as a result of a better understanding of the complex biology of the disease. This has led to an enriched pool of clinical resources including unique targeted therapies. This 'personalized' approach to cancer treatment also known as 'precision medicine' is a major research focus of the Cancer Institute that Skinner also has generously supported.

"When you give a talented physician-scientist a small grant for a pilot project, it can lead to larger funding opportunities for research that will advance the field. So, even if it's the smallest of gifts, consistency in giving is incredibly important," notes Skinner.

"The LIFE Center's clinical, research and educational programs are enabling young women to be more proactive about cancer risk and breast health," states Toppmeyer, who also is a professor of medicine at Robert Wood Johnson Medical School. "Val's philanthropic nature, dedication and extraordinary passion for this cause motivates clinicians, researchers, and educators to continue making strides that will impact the lives of young people. By transforming the Val Skinner Foundation's mission statement into a reality, the next generation of young adults will be empowered to advocate for themselves and others. This ultimately is Heather Farr's legacy, passionately crafted by Val Skinner with the help of LPGA friends and fellow professionals."



Family Ties Revisited

Candice Naber (above) with photos of her father, half-brother and grandmother. With the exception of her young niece (pictured far left), all have been affected by a polyp disorder that could become cancerous if left untreated. young woman faces lifelong complications from a genetic disorder that produces hundreds to thousands of colon polyps that threaten to turn malignant over time. A team of specialists at Rutgers Cancer Institute of New Jersey grapples with the challenge of preventing cancer and providing therapies for other complex conditions associated with familial adenomatous polyposis (FAP).

BY EVE JACOBS - PORTRAITS BY NICK ROMANENKO

Support System: Candice Naber credits her husband Wayne and cherished family pet Cookie, with getting her through some tough days.

he Candice Naber who greets me at the door of her home in early February bears little resemblance to the very young woman whose wedding picture hangs prominently on her dining room wall. Seven years later and 70 pounds lighter, she has newly blond hair and sports a vibrancy and determination not apparent in the framed portrait of her earlier self.

Fate has dealt the 28-year-old a number of powerful blows to the gut in the last couple of years. Familial adenomatous polyposis (FAP for short) is the name of the genetic disease that knocked Naber down; and each time she fought to get back up on her feet, it sent her reeling backwards again. Yet here she sits telling her story without one tear or angry word, without one hint of "why me" or "poor me." She is determined to keep on clearing those hurdles and helping others with FAP to do the same.

The first signs of FAP often come on between the ages of 15 and 20, but may not at first produce symptoms. Hundreds and sometimes thousands of polyps can develop in the colon, and if not removed, "inevitably some will turn cancerous," says David August, MD, chief of surgical oncology at the Cancer Institute of New Jersey and part of the team that has taken care of Naber for the past few years. The only way to stop these polyps from forming, and subsequently turning cancerous, is to remove the colon and the rectum. "The entire bowel is at risk," explains Dr. August, who is also a professor of surgery at Rutgers Robert Wood Johnson Medical School.

A Unique Bond

AP is an autosomal dominant disorder, meaning one copy of the mutated gene inherited from one parent is all it takes to set the ball rolling. Naber's grandmother on her father's side had FAP; her father and half-brother have it too. Despite the threat of cancer stalking each of them, the young woman says her grandmother lived a long life and died of unrelated causes, and her father and halfbrother are "doing fine. My paternal grandmother had three children, Michael, Nancy and Sam, but Michael was the only one to inherit the gene," says Naber. "Nancy has three kids, all FAP free, and Sam has two children, also FAP free."

The first step to taming FAP is early screening and diagnosis. When a parent has the disorder, experts recommend a gene test—requiring a blood sample in order to sequence the gene—at about age 15. For those with no known family history but who have abdominal pain or rectal bleeding, a colonoscopy may be prescribed; and if the telltale polyps are spotted, the gene test would be step two, explains August.

Before the gene test became readily available, colonoscopy was

the primary screening tool. Naber postponed the screening that her parents proposed when she was 13. "I did not want a colonoscopy," she states.

And she postponed it again when she started having minor symptoms in her early 20s, attributing them to other causes. "I thought maybe I had hemorrhoids," she says of the first symptom she experienced, which was a small amount of rectal bleeding. A couple years later, she had abdominal pain that she self-diagnosed as a gall bladder attack. But her discomfort was bad enough to send her to her father's gastroenterologist. Her family history raised suspicion that she had a more serious condition, and in December 2011, she agreed to have the colonoscopy she had turned down a dozen years earlier.

Multiple polyps lining her colon were discovered, and Naber had to grapple with the fact that she had inherited the faulty family gene for FAP. "I knew my family history and what this could mean," she says. "I remember my father was always sick when I was a young child."

She needed a surgeon and she decided that she would get the best care at a hospital based within a large university system. Naber initially went for a consult to a renowned New York hospital and was impressed with the facility. "It was big and nice-looking and shiny," she recalls, "but I was shuffled from one doctor to the next, and at the end, I saw the surgeon who would have done the surgery for only two seconds. I was upset. It felt so cold and impersonal." Her husband Wayne works in Highland Park, and Naber knew that by choosing the Cancer Institute in New Brunswick, just a five-minute drive from there, she would be close to her husband's job and also gain the advantages of a university-based medical center.

Team Approach

But why would someone who is cancer-free choose to go to a facility specializing in cancer treatment? August says centers like the Cancer Institute are particularly well equipped to care for patients with FAP, since the disorder's manifestations demand the coordinated efforts of a highly skilled team. From the genetics group that walks FAP patients and their families through the ups and downs of learning about and coping with their inherited disorder to the nurses who teach patients how to care for their abdominal openings after surgery to the nutritionists who help often-very-young individuals learn what to eat with a gastrointestinal system gone awry, "they are all very important," says August. Surgeons, social workers, gastroenterologists, medical oncologists and others round out the team.

For Naber, as for most young people with FAP and actually those of any age, the surgeries to head-off cancer are radical and distressing. While she was aware that a proctocolectomy (removal of the colon and rectum) and ileostomy, the surgical rerouting of waste through a quarter-size opening in the abdominal wall, would prevent cancer down the road, it was tough to accept. "I was very down about the ileostomy. It was very emotional for me," she says.

Her paternal grandmother, Geraldine, diagnosed with the disease in her 30s, had permanent ileostomy surgery in 1974. Her father, Michael, was diagnosed in his 20s when he was serving in the Army and had a permanent colostomy bag after surgery. But times have

What is a Desmoid Tumor?

desmoid tumor is a rare tumor which arises from connective tissue involved with muscle formation. While it does not have the ability to spread throughout the body, it can grow into nearby tissues and bones, causing significant pain and interfering with normal body function.

According to the National Library of Medicine (U.S.) Genetics Home Reference, desmoid tumors affect an estimated two to four people per million worldwide, occurring in individuals aged six to 40. Those with desmoid tumors are more likely to have elevated hormone levels, abnormalities in the genes and



proteins that control connective tissue growth and a history of excessive polyp formation in the intestine, like those with familial adenomatous polyposis (FAP). While this tumor is associated with FAP, it usually develops more sporadically.

As mentioned in our adjacent feature story, surgery is a main

treatment for this type of tumor, but even if it is completely removed, it has a high risk of regrowing. "Chemotherapy and radiation are usually reserved for those who aren't a candidate for surgery, but we need to know what to do in situations when surgery is not an option or when risk of recurrence is high. It is for this reason that more research is needed into therapies that will provide better outcomes for these patients," said **Janice Mehnert, MD** (*above*), a medical oncologist who evaluates patients with desmoid tumors and leads research activities in the Melanoma and Soft Tissue Oncology Program at Rutgers Cancer Institute of New Jersey. She also is an associate professor of medicine at Rutgers Robert Wood Johnson Medical School. changed, in this case very much for the better. Her older half-brother Christopher was diagnosed at age 16 and had a proctocolectomy with surgical reconstruction to provide a storage place for stool.

Naber had a proctocolectomy and a temporary ileostomy on May 1, 2012. Colorectal surgeon Nell Maloney Patel, MD, assistant professor of surgery at Robert Wood Johnson Medical School, did the procedure robotically – another recent advance that has benefited patients enormously by reducing pain and trauma and cutting down recovery time. In July of that year, the ileostomy was "reversed." Surgeons created a "pouch" out of small intestine to provide a storage place for stool, and reconnected it to the anus and sphincter muscles of the anus, restoring bowel function.

"It was tough," says Naber, "but I made it through OK." Young and in generally good health, her physical recovery was quick, her emotional recovery harder. As soon as she was given the OK by the surgeon, the young patient swam every day – exercise she credits with boosting her physical and mental health.

But the surgeries did not end there. On December 12, 2012, Naber had her second surgery known as a Whipple procedure that removes the small intestine and part of the bile duct and pancreas.

"Years ago, all individuals with FAP died of colorectal cancer, many at a young age," explains August, who is also the co-director of the Cancer Institute's Gastrointestinal/Hepatobiliary Program. "Now we know there are other manifestations of the disorder that require watching and treatment. We know, for instance, that we need to do surveillance of the duodenum [small intestine], where polyps often form." Precancerous polyps did form in Naber's small intestine, which prompted the need for a Whipple procedure.

"I had no complications from the surgery and I was back driving in six weeks. By May, I was 100 percent back to normal. I cannot say enough about Dr. August. He's amazing," says Naber.

Unexpected Setback

fter recovering, the young woman resumed her normal life until September 2013, when she got sick again. Fever and pain sent her to the emergency room, where she was diagnosed with one desmoid tumor at the site where the Whipple procedure had been done. (A second desmoid tumor was found by August at the time of the surgery.)

August says that individuals with FAP are at high risk for desmoids, which he describes as "locally aggressive scars. If you look at them under a microscope, they are scar tissue. And they often arise where tissue has been stimulated." "FAP is not well known and getting information from people who have gone through it is very important," Candice Naber says. "I'll be glad if I can help even one person."

While scar tissue sounds benign, August says desmoids don't act in a benign fashion. They grow quickly, often becoming quite large, and can even turn deadly when they threaten to constrict vital organs, such as the lungs, or infiltrate the retroperitoneum, part of the abdominal cavity, where they can wrap around the kidneys or abdominal aorta, or tether the intestine. While not considered metastatic because they do not spread to distant sites like many cancers, desmoids are "challenging," according to August, because they infiltrate the surrounding space and also tend to recur.

August removed the desmoids from Naber's abdominal area, but he says she is "clearly at risk for more of these tumors in the same area." While surgery is an option if that happens, he explains that "the more surgery you do, the more difficult it gets. And sometimes they grow in areas that are difficult to get to."

But there are other avenues available. Again, says the surgeon, the goal for the treatment team is prevention – in this case, preventing more desmoids from forming. Systemic hormonal therapy and chemotherapy are sometimes successful in stopping the growth of recurrent desmoids, although cure may not be possible. Janice Mehnert, MD, a medical oncologist at the Institute, is the specialist in this field (see sidebar). But if Naber does form more desmoids, "we will do the surgery to remove them," August says.

Looking Ahead

B ottom line, he says, "It's important for people to know that with a genetic disorder like FAP, nothing has changed today because you found out that you have an abnormal gene. You have already been living with this. Now we have the information that actually empowers us to move forward."

Clearly moving forward is Naber, a young woman who enjoys her life and doesn't obsess about her disease. "I try to take it in stride," she comments. Her husband, whom she met in eighth grade and started dating in eleventh, has been steadily by her side and she returned to work as a nanny in early March, a job she loves. She joined an online support group called the Whipple Warriors and another for desmoid patients that help her deal with the anxieties concerning these new facets of her disorder.

Naber is a fighter – not cantankerous in the least but not willing to be bullied into submission by her disease. She wants to tell her story to *Cancer Connection* readers, even though she admits to some discomfort disclosing the most personal details of the battle to regain her health. "FAP is not well known and getting information from people who have gone through it is very important," she says. "I'll be glad if I can help even one person."

A Black Diamond Challenge

n the world of skiing, the 'black diamond' is known as an extremely difficult course to conquer. Having faced her own black diamond challenge of sorts is ski enthusiast Virginia Borromeo, who battled both breast and ovarian cancers and is back on the slopes.

t is a bleak day in January 2014, during what some New Jerseyans are calling 'the granddaddy of all winters.' A foot of snow blankets the ground and continues to fall fast and furiously. During this bout of frigid weather, most people hunker down indoors. But not 68-year old Virginia Borromeo. Despite the fact that she had breast implant surgery just three short weeks ago, she's outside in full storm gear shoveling the snow and ice off her driveway.

"Whew! That snow is heavy," the retired pediatrician says with a smile. "I've been out there all morning. I didn't think it would take so long." When asked where she finds the energy to shovel snow so soon after having major surgery, she replies, "I don't let cancer stop me from doing anything I want to do."

Dr. Borromeo, a resident of Old Bridge, New Jersey, knows only too well the challenges posed by cancer. She's battled it twice. Twenty years ago it was breast cancer — the reason why she got breast implants last January. Then in September 2011, it was ovarian cancer. "For me, breast cancer was easier to deal with than ovarian cancer," says Borromeo. "I'm thankful that the second time around, I have the support of a fantastic surgeon and a great facility at Rutgers Cancer Institute of New Jersey."

Borromeo's battle with cancer began in 1995. At the time, the busy mother of two ran a solo medical practice in Sayreville. An avid runner and sports lover, she was also training for the New York City Marathon in what little spare time she had. "I had run the marathon two years earlier and it was a fantastic experience. I wanted to do it again," she says.

Out for a two-hour practice run one day, she noticed her breasts were sore afterward. "I thought maybe my bra didn't provide enough support," she says. "But later, while I was watching TV, I felt the lump. Even though it was small, I knew it wasn't good."





When she went for the mammogram, it was the magnification films that confirmed the cancer. She had a lumpectomy followed by chemotherapy which was optional since the cancer was found to be early-stage. "I wanted to do everything I could to improve my prognosis," she notes. Radiation completed the treatment.

Her health was fine for several years. She cared for her patients, ran, played tennis, and got seriously hooked on skiing, "and all this with a slight heart arrhythmia!" she states. She joined a ski club right around the time she was diagnosed with breast cancer. Meeting a host of new friends, she skied her way around Europe and out West, and even began organizing some of the club's ski trips. When she retired from her medical practice a few years ago, she had even more time for skiing.

Round Two

O n a routine checkup in December 2010, her oncologist suggested testing her for the BRCA genetic mutation. Women carrying this mutation are at greatly increased risk of getting breast and ovarian cancer at some point during their lives. Borromeo tested positive for the BRCA2 mutation. She began exploring the possibility of having a prophylactic mastectomy. This procedure, the removal of all remaining breast tissue, dramatically reduces future breast cancer risk. She also considered having a hysterectomy, as well as a total removal of the ovaries and fallopian tubes. She planned to do these procedures just after the busy ski season.

Shortly thereafter, Borromeo started experiencing abdominal bloating and indigestion — common symptoms of ovarian cancer. She went to her primary care physician in September 2011. A colonoscopy and other tests were negative, but a CT scan confirmed the diagnosis. Her primary care physician referred her to Darlene Gibbon, MD, chief of gynecologic oncology at the Cancer Institute of New Jersey and associate professor of obstetrics, gynecology and reproductive sciences at Rutgers Robert Wood Johnson Medical School.

As a physician, Borromeo is no stranger to health crises. She just never expected them to hit so close to home. "I was shocked, but not shocked," she says. "I'm a doctor — I knew my symptoms were worrisome. After all the cancer treatment I'd been through, it wasn't really such a surprise. At first I was pretty devastated. I didn't want to think about it. But I rallied."

"That's one of Virginia Borromeo's exceptional qualities and part of the reason she's come through her treatment so well," says Dr. Gibbon. "She lives life to the fullest and has a great, can-do attitude." Gibbon suspected that Borromeo's cancer was fairly advanced. "Ovarian cancer is stealthy, with symptoms that are often attributed to other health problems," the physician continues. "That's why it's commonly diagnosed in advanced stages." Treatment would be immediate and aggressive.

Borromeo had surgery, called cytoreductive debulking, less than a week after her first visit. "In debulking, we remove as much of the tumor as possible," Gibbon explains. "The goal is to leave behind no tumors larger than one centimeter." This was the case with Borromeo, whose cancer was advanced, at Stage IIIC.

Post-surgery, Borromeo discussed chemotherapy options with Gibbon, with whom she's on a first-name basis. She describes her physician as "just like a dear friend, as well as an excellent surgeon who knows her specialty inside and out. She's always there for her patients and even gave me her cellphone number. Once when I was due for a chemotherapy treatment but couldn't reach her office after Superstorm Sandy, I called her cell. She got right on it and arranged everything herself."

Women with advanced ovarian cancer are at increased risk for disease recurrence, so Borromeo was treated with intraperitoneal chemotherapy (IPC). "IPC therapy is optimal for patients with minimal residual disease," says Gibbon. "Medication is delivered directly into the abdominal cavity through a surgically implanted catheter."

"Based on randomized Phase III clinical trials, this therapy offers improved progression free and overall survival," says Gibbon, who became interested in her specialty after a favorite aunt lost a tough battle with ovarian cancer. Unlike other surgical specialists, gynecologic oncologists are trained to both operate and administer chemotherapy. "Our group of physicians provides the full spectrum of care from start to finish," says Gibbon, who is board-certified not

Clinical Trials: Saving Lives Every Day

while Virginia Borromeo did not enter a clinical trial, she greatly benefitted from them," says **Darlene Gibbon, MD** (*below*). "Every treatment she received was based on studies that women across the country participated in."

As one of the National Cancer Institute's designated cancer centers, Rutgers Cancer Institute of New Jersey has a strong clinical trials program and is able to provide access to trials not available elsewhere. The Cancer Institute of New



Jersey currently enrolls more than 3,000 patients a year in such studies.

Dr. Gibbon's gynecologic oncology team at the Cancer Institute works closely with the Gynecologic Oncology Group (GOG), a national organization that aims to promote clinical and basic science research in the field of gynecologic malignancies. The introperitoneal therapy used to treat Borromeo is based on GOG studies.

Gibbon is also part of the Cancer Institute's Phase I/Investigational Therapeutics Program, which develops new methods for cancer treatment. Through this group, patients with a variety of malignancies have access to new and promising therapeutics. "We work closely with patients and utilize precision medicine, testing tumors for mutational changes and providing treatments based on these changes," says Gibbon.

"When I was a fellow, therapy options were limited, so when cancer recurred we had little to offer," she adds. "Now we have new drugs, innovations, and surgical approaches that help people live longer, leading to the treatment of ovarian cancer as a chronic disease."



only in obstetrics and gynecology and gynecologic oncology, but also in palliative care and hospice medicine, which she says enables her to provide optimal care.

Back on the Slopes

Plans for Borromeo's prophylactic mastectomy had to be backburnered while she underwent treatment. But one activity she would not defer was skiing. "I was running a trip to Italy that was scheduled for right after the third cycle of my chemo," she says. "I told Darlene I was going no matter what. She just smiled and said, 'Take lots of pictures.'"

The first day she was in Italy, Borromeo took to the slopes for four hours. "I overdid it and exhausted myself," she admits. "After that, I still skied every day, but not as much. It was great therapy. And I did take great pictures." One month later, after completing the fourth of six cycles of chemotherapy, Borromeo ran another ski trip out west, to Banff Lake Louise in Canada.

With all her patients, Gibbon emphasizes a focus on quality of life. "I stress the importance of making every day count, in spite of your diagnosis," she notes. "Throughout Virginia's treatment, she's continued to be active, to ski, and to travel. She's living her life."

Borromeo, who would much rather talk about her travels than her treatment, says, "This past year has been quite a journey, but I'm feeling great now." Skiing aside, she's had to put other activities on hold until all her surgery is behind her. "I haven't been able to run much. I used to play tennis, and I'd recently taken up golf. I had to put all that aside while I dealt with cancer. But I'm doing well now and it feels great to be back to normal. That's why shoveling the snow was a pleasure...well, almost."

In June 2013 Borromeo proceeded as planned with the prophylactic mastectomy, which was performed by Laurie Kirstein, MD, FACS, breast surgical oncologist at the Cancer Institute. Dr. Kirstein also heads the Cancer Institute's breast surgery fellowship program, implemented to help ensure more surgeons are trained in the specialty of breast cancer and breast disease. That month Borromeo also had the CA125 blood test, which checks for markers for ovarian cancer. The test was normal. A month later she had reconstructive surgery.

Post-cancer, life is good: with skiing, travel, and strong support from her two grown children. On her ski trips she enjoys hitting the slopes with her significant other, Ralph Calello. She also has a circle of friends "who get me out for movies, dinner, Broadway shows, brunch, you name it. We have a great time."

In February, Borromeo left on yet another trip, this one to Val Thorens resort in France's famous Les Trois Vallees. "The skiing was great," she enthuses. "It's the most beautiful place you can imagine.

"I'm already preparing for my next trip, to Taos, Mexico," she continues. "It's going to be wonderful!"

NATIONAL CANCER SURVIVORS DAY CELEBRATION





Keynote Speaker:

Valisia LeKae Broadway Star and Cancer Survivor

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THE PATH IS SLIGHTLY DIFFERENT. THE GOAL IS EXACTLY THE SAME.

The Cancer Institute of New Jersey is now part of one of the nation's largest research universities, a move that enhances the institute's core mission of improving the prevention, detection, treatment, and care of patients with cancer through the transformation of laboratory discoveries into clinical practice.

When you give to the Cancer Institute, you can still designate your gift to support the same programs and initiatives. And now your contributions, which are channeled through the Rutgers University Foundation, also support *Our Rutgers, Our Future,* the university's historic \$1 billion fundraising campaign.

Contact the Cancer Institute Development Office at 732-235-8614 or visit cinj.org/giving to learn more. RUTGERS Cancer Institute of New Jersey



Difference Making A



The Hugs for Brady Foundation has received thousands of donations since toddler Brady Wells lost his battle with leukemia. Now, the foundation is helping to fund a promising new way of treating cancer.

DEBORAH

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BY



he money started arriving long before Sherrie Wells DC'96 (*above, center*) and

Michael Wells *(above, second from left)* knew what to do with it.

Their adored toddler—bright, funny Brady, who had never suffered so much as a cold in his first 13 months—was newly hospitalized with leukemia, and family, friends, and even strangers who had read Michael's blog were offering best wishes,



forming prayer groups, and sending unsolicited donations.

"To be honest, I could not spend it," Michael says. "So, how much is my baby worth?' is what I kept thinking."

A year later—after the six grueling rounds of chemotherapy, the failed stem-cell transplant, the wrenching farewell to a beloved little boy whom modern medicine couldn't save—the Wellses used their hard-won experience with childhood cancer to launch the Hugs for Brady Foundation.

In the past three years, aided by hundreds of volunteers and thousands of small donations, Hugs for Brady has raised more than \$600,000 to fund research in the under-resourced field of pediatric cancer, and to support families whose children have cancer.

Its largest gift to date is a three-year, \$300,000 pledge to Rutgers Cancer Institute of New Jersey, whose new precision medicine initiative seeks to uncover the genetic mutations propelling individual cancers and to choose therapies targeting exactly those mutations.

One hundred patients with rare cancers, or with cancers that responded poorly to conventional therapy, have already been treated under the protocol. Five pediatric cancer patients have been among them, and the Hugs for Brady gift will help fund the expensive, personalized treatment for more children.

Although precision medicine is still new, doctors say targeted cancer treatments could eventually become standard. Even patients who won't benefit today may provide DNA that will pave the way for future advances.

"Our primary aim is to help the patient in front of us," says Shridar Ganesan, MD, PhD, associate director for translational science at the Cancer Institute and principal investigator of the precision medicine clinical trial. "But we also want to be able to make sure that we learn as much as we can about these diseases."

Personalized therapies weren't available when Brady Wells fell ill in 2009 with a rare, hybrid form of leukemia that resisted standard treatments.

"That's what we do most of the time now: we have a patient with cancer, we give them what we think is going to work," says Brady's oncologist, Richard Drachtman, MD, interim chief of pediatric hematology/oncology at the Cancer Institute. "But if we can actually give In his final weeks, "we made what we thought would be Brady's wish list," Sherrie says. Brady rode a pony, went to his first movie, visited the Great Adventure safari park. He blew the horn during the five-minute train ride between the Princeton and Princeton Junction stations. And three weeks before his

Richard Drachtman, MD, interim chief of pediatric hematology/oncology at the Cancer Institute (below left), was Brady Wells's oncologist. He is collaborating with Shridar Ganesan, MD, PhD, associate director for translational science and principal investigator of the precision medicine clinical trial.



them something that we know is going to work based on what they have, that's really a pretty nifty thing."

Brady's failed treatments kept him hospitalized for months, while his parents struggled to entertain him with a rotating cast of toys. He rode through corridors in a wagon jerryrigged to carry an IV pole, wearing a baby-size surgical mask to screen out life-threatening germs. But nothing worked. After 11 months, he went home for good. second birthday, he died in his mother's arms.

"The grief would be here whether I did this or not," says Sherrie, who runs the foundation out of the Wellses' central New Jersey home while caring for the twin boys the couple welcomed two years after Brady's death. "I just feel better that I know that I'm making a difference. No parent should have to go through it. No child should have to go through it."

- Reprinted courtesy of Rutgers Magazine 2014



It Takes a Community...

According to the

American Cancer Society, it is expected that more than 7,200 women in New Jersey will be diagnosed with breast cancer this year and nearly 1,300 will die from the disease. The Jattrude Fogarty Trust is committed to



Trustees Suzanna Hot, Esq. (far left) and Alexis Tucci, Esq. (far right) present Shridar Ganesan, MD, PhD, and Michelle Walker of Rutgers Cancer Institute of New Jersey a check for \$50,000 from the Jattrude Fogarty Trust.

improving these statistics. Since 1996, the Trust has funded \$620,000 in breast cancer research at Rutgers Cancer Institute of New Jersey. "It's been very rewarding to know that these funds have helped the Cancer Institute maintain a pipeline of innovative research and leveraged the attainment of large scale grants," notes Alexis Tucci, Jattrude Fogarty Trustee. Shridar Ganesan, MD, PhD, associate director for translational science at the Cancer Institute, emphasized the importance of philanthropy. "Private support is critical to sustaining a strong research program. I received a research award funded by the Jattrude Fogarty Trust and it allowed me to gather the preliminary data needed for me to obtain a National Cancer Institute research grant," he said.



Coming Together in the Fight for One

NO one knows best about the comprehensive and collaborative care needed to fight cancer better than **Gail Williams** (*above*). Her husband Herbert was diagnosed with pancreatic cancer in

2010. When they first found out, 'Bert' Williams (*right*) looked at the diagnosis as a death sentence, but his wife of some 30 years said, "We can fight this."

With a diagnosis of pancreatic cancer, which only carries a fiveyear survival rate of six percent, an 'all hands on deck' approach

is needed. At **Rutgers Cancer Institute** of New Jersey, a cross-disciplinary team of surgical, medical and radiation oncologists and many others works collaboratively. Scientists, especially, play a critical role. Ironically the couple just read in the local newspaper that a unique clinical trial tackling this tough disease had opened at the Cancer Institute, and Mr. Williams was found to be a suitable candidate.

The trial, informally known as PANVAC, involves a series of vaccinations to ramp up the body's own defenses to fight pancreatic cancer. Typically vaccines are given in the skin surface of the arm or leg, but in this case therapy is given through multiple injections directly into the pancreas itself. The vaccine is delivered through a specially-created tube device that enters



Mrs. Williams recalls.

Edmund Lattime, PhD, is a researcher and associate director of education and training at the Cancer Institute and co-lead investigator of the clinical trial who helped develop the science behind it. Elizabeth Poplin, MD, a medical oncologist and co-director of the Gastrointestinal/Hepatobiliary Oncology Program at the Cancer Institute is the clinical lead on the study. With their expertise and that of nurses, technicians and many others, Mr. Williams received comprehensive care all under one roof. "We had been elsewhere," says Mrs. Williams, "but we didn't want Bert to be just a number. And there were other trial options, but we didn't want the chance of him receiving a placebo. With this trial and the incredible team of dedicated and knowledgeable people at the Cancer Institute, we knew we were at the right place at the right time."

Bert Williams responded favorably to this unique treatment for three years. During that time word of the trial spread, and he received calls from other pancreatic cancer patients nationwide who wanted to know more about his experience. Always the "cheerleader," according to Mrs. Williams, her husband counseled others about their battles with the disease, telling them pancreatic cancer is not necessarily a death sentence as he once thought.

As someone who thoroughly enjoyed life, Bert Williams told his wife the day be-

ment allowed us to learn more about how to make this therapy more effective so that one day it can become a standard of care," noted Dr. Lattime, who is also a professor of surgery at Rutgers Robert Wood Johnson Medical School.

The trial has since enrolled all the patients intended, and the research team is compiling its findings. Gail Williams says it is imperative that such research continue. "Public attention surrounding pancreatic cancer is not as widespread as it is for other cancers, like breast or prostate. Bert's response to this treatment shows that progress can be made, but more funding is needed to support research," she said. "A precious three years were given to us. It is a gift that should be afforded to others." Just as Mr. Williams benefited from the generosity of others who helped fund the PANVAC research, Mrs. Williams and



Gail Williams (bottom row, center) and family celebrating the life of her husband Bert at the Rutgers Cancer Institute of New Jersey Annual Award of Hope Gala this past fall.

fore he passed away in March 2013 that he truly had "done it all," including being a mentor to his six children, their spouses and 15 grandchildren. While leaving a legacy for them, he may not have realized the gift he also would leave for future patients. "The willingness of Mr. Williams to be the first to participate in this novel treather children are looking to 'pay it forward.' They are considering setting up a charitable organization dedicated to supporting pancreatic cancer research.

"Without everyday heroes like Bert Williams, clinical advances in cancer research would not happen," noted Dr. Poplin, who is also a professor of medicine at Robert Wood Johnson Medical School. "And without everyday champions like Gail Williams, not many would know of the support needed to make those advances a reality."

Everyday Community Heroes

A special thanks to schools and community-based organizations throughout the state whose dedicated efforts have supported cancer research, patient care, community outreach and patient and family services at Rutgers Cancer Institute of New Jersey.

Gifts up to \$30,000

- AHEPA
- Fifth District Cancer Research Foundation

Gifts up to \$10,000

- C & C Club of Somerset Run
 Somerset
- Joshua's Closet
 North Plainfield

Gifts up to \$5,000

- Shark River Yacht Club
 Neptune
- ATAK Club at Edison High School (Assertive Teens Against Cancer) Edison
- Nutley High School Football Alumni Golf for a Cure
- East Brunswick Public Schools
 Denim Days
- Stephen A. Cox Foundation Newton

Gifts up to \$2,500

- Sayreville Bombers Boys Soccer
 Sayreville
- Milltown School
 (Quarters for the Cure)
 Bridgewater

Gifts up to \$1,000

Somerville Elks Lodge #1068
 Bridgewater

Special Gifts

- David's Touch Foundation
 Holiday Toy Delivery
- New Brunswick Police Department Holiday Toy Delivery
- Carly Loves Kids
 Holiday Toy Delivery

Rutgers Cancer Institute of New Jersey Network Spotlight



The Rutgers Cancer Institute of New Jersey Network includes 15 hospitals across the state. Together, the Cancer Institute of New Jersey and the Network hospitals provide cancer care to more than one third of the state's cancer patients. Network hospitals offer their patients access to the latest cutting-edge cancer therapies and state-of-the-art cancer care available only at NCI-designated Cancer Centers and their networks, while helping patients remain close to home. For more information, visit cinj.org/network.

Atlantic Health Opens Phase III Ovarian Cancer Clinical Trial

Atlantic Health system is enrolling patients in the NOVA (Niraparib Ovarian) clinical trial to treat ovarian cancer. The Carol G. Simon Cancer Centers at Morristown Medical Center and Overlook Medical Center in Summit, New Jersey are the first in the state to offer this Phase III clinical trial, which will evaluate the safety and efficacy of niraparib, an inhibitor of poly ADP-ribose polymerase (PARP).

PARP inhibitors are an area of increased research focus for clinical investigators, as PARP proteins are involved in repairing single-strand breaks in DNA. If patients have mutations in cancerrelated genes, such as BRCA1 and BRCA2, PARP will play a role in accelerating the growth of these mutated genes. Drugs that inhibit PARP disrupt the replication of mutated BRCA1 and BRCA2, thus killing cancerous cells.

"There is substantial hope amongst researchers and oncologists that PARP inhibitors may help patients with ovarian cancer live longer," says **Brian Slomovitz, MD, MS, FACOG**, director of oncology research at Atlantic Health System and principal investigator of the trial at Morristown and Overlook Medical Centers. "In previous studies, this investigational drug demonstrated promising data for patients with high-grade serous, platinum sensitive, and relapsed ovarian cancer," says Dr. Slomovitz, who is

Expansion Allows Shore Cancer Center to Better Care for the Community

Whenever

Donna Cericola, RN, OCN, looks at The Cancer Center at Shore Medical Center, she sees a way of providing hope for the members of her community. It's what led her team of physicians, nurses and staff to ensure that the Cancer Center became a peaceful healing environment that represents the gold standard in patientcentered care to those battling cancer.

also associate director of the **Women's Cancer Centers** at both Morristown and Overlook Medical Centers.

In previous studies, tumors in patients with germline BRCA1 or BRCA2 mutations were particularly sensitive to treatment with a PARP inhibitor. As many as one in 400 individuals carry an inherited BRCA mutation, which significantly raises the risk of breast and ovarian cancer.

Patients with high-grade serous, platinum sensitive, relapsed ovarian cancer are eligible to participate, although other criteria must be met. Those interested in participating in the trial can call 973-971-5569. In 2013, Cericola, Administrative Director of the Shore Cancer Center, spearheaded the next stage of Shore Cancer Center's evolution, embarking on an expansion project to better serve southern New Jersey's cancer population. At the beginning of October, the Cancer Center unveiled its new third-floor Medical Oncology Suite.

"We take great pride in providing stateof-the-art, patient-centered care to patients and families coping with a cancer diagnosis," said Cericola. "This new floor was designed to broaden our ability to care for the members of our community in a soothing environment that best promotes healing."

The centerpiece of the 3,600-squarefoot, \$1.3 million project is an eight-bay infusion therapy suite. Each bay features a television and is spacious enough to comfortably accommodate a patient's family member or friend while still affording privacy for consultations with physicians. Additional features of the expansion include three exam rooms, a family waiting room, nutrition center and a fully-equipped pharmacy with a fulltime oncology pharmacist.

The Shore Cancer Center offers a comprehensive approach to care that combines exceptional clinical treatment with patient comfort and convenience. A highlight of the Cancer Center's multi-



disciplinary approach are weekly roundtable sessions that bring together surgeons, oncologists, radiologists, nurses and patient navigators to determine a patient's best course of treatment.

Since 1987, the Cancer Center has been recognized by the American College of Surgeons Commission on Cancer (CoC) for meeting that organization's stringent standards for patient care. In June of 2013, Shore was awarded the CoC's "Three Year with Commendation" accreditation award for excellence.

For more information about the Shore Cancer Center, call 609-653-3585 or visit ShoreCancerCare.com.

Homefront

A close up look at the lives of faculty and staff members at Rutgers Cancer Institute of New Jersey and what is important and of interest to them outside of work.

> RUTGERS Cancer Institute of New Jersey



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Together at Home...and the Office

They say 'absence makes the heart grow fonder,' but what are the chances of having a strong, healthy relationship when you live together AND work together? Pretty good – according to three couples who work at **Rutgers Cancer Institute of New Jersey**.

For instance, pharmacist Stacey Lisi, PharmD, BCOP, who is involved in the clinical care of patients, and her husband Adam Lisi, PharmD, involved more on the IT end of the pharmacy in handling electronic medical records, say there are only positives to the arrangement. "It is definitely nice to see each other during the day and there is a level of assurance and security in knowing where the other person is throughout the day," they say. "Also, if things come up emergently - like one of our children getting sick at school - we can discuss it and address it right away rather than waiting for one another to respond with a text or phone call."

Eric and Kathy Singer agree. "I find it much easier and less stressful to know that I can drop in and see Kathy when it's been a tough day," says **Eric Singer, MD, MA**, a urologic oncologist who has a research focus on prostate and kidney cancers. Wife **Kathy Singer, MS, RN, ANP-BC**, a nurse practitioner in the Hematologic Malignancies Program sees other benefits too. "Not all couples can see how their partner conducts himself at work. That is a side of Eric I am lucky to see," she says.

"We fully relate to each other's accomplishments and challenges, which is a substantial source of support – it makes us closer," say researchers **Hatem Sabaawy, MD, PhD**, and **Sharon Pine, PhD**. They did point out one 'con' – but not necessarily a bad one: "We joke all the time that we hear each other's good news from colleagues before the end of the day," they note.

While delivering patient care and working in active research labs can lead to erratic schedules, all three couples, who have children under the age of 10, are devoted to family life when they're home. "We have learned over the years to leave work issues at work, and to make our home a refuge and a sanctuary where we rest," says Stacey Lisi. Other tips? "Find mutual interests or hobbies that are not work related and keep a great sense of humor," says Dr. Pine. And probably the best piece of advice for couples whether they work together or not says Kathy Singer is "communicate."

Adam and Stacey Lisi:

- Met while working as pharmacists at Robert Wood Johnson University Hospital
- Together for 11 years; married for eight
- 2 sons: Sam (7) and Jack (4)
- **Hobbies:** spending time with their children and cooking together
- Interesting fact: their older son, Sam, was born on Valentine's Day, which they say "is very special to us as a couple."







Hatem Sabaawy and Sharon Pine:

- Met during graduate school at New York Medical College
- Married for 10 years
- 1 son: Aiman (9) and a cat named Hunter
- Hobbies: playing soccer and spending time outdoors
- Interesting fact: as a family they like to hike on trails throughout New Jersey and frequent a river bed in which they have found many shark's teeth and sea fossils from over 70 million years ago.

Eric and Kathy Singer:



- Met while working at the University of Rochester Medical Center
- Together for 10 years; married for seven
- 2 children: Caroline (4) and Ethan (3)
- **Hobbies:** cooking, spending time with family, being outdoors, and taking day trips to New York City and Philadelphia
- Interesting fact: they took dance lessons as a marriage preparation exercise. "It was a new experience for both of us and required trust, teamwork and communication. It's a lot like working together."



DEBBIE VOGEI



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Celebrating 10 Years!

On the Road to a Cure

Logging thousands of miles and raising \$1.2 million for research at Rutgers Cancer Institute of New Jersey since its inception, the Century for the Cure charity bike ride is marking its 10th anniversary this year. Learn how you can take part in this year's September 14 event: cinj.org/centuryforthecure.