RUTGERS
Cancer Institute
of New Jersey
RUTGERS HEALTH

Spring ■ 2017

# CANCER Connection

## Counting his Blessings:

*A positive attitude, deep faith and a multidisciplinary treatment approach are helping* **Thomas Hebert** *battle stage IV colon cancer.*

# Director's Corner

JOHN O'BOYLE

Cancer research and treatments have evolved tremendously over the last few decades; however, there is still much work to be done – including enhancing care delivery for patients. As one of 47 National Cancer Institute-designated Comprehensive Cancer Centers across the nation – and the only one in our state – Rutgers Cancer Institute of New Jersey has an obligation to serve the cancer needs of our citizens. As you'll learn throughout this edition, it's something we can accomplish best through collaborations and partnerships. Collaborative, integrative care delivery is the new norm, and as I begin my role as director of Rutgers Cancer Institute, I want to share with you my vision of how this effort can be carried out *(page 6)*.

Building upon our longstanding relationship with our flagship hospital **Robert Wood Johnson University Hospital** we now have the ability to reach more patients across our densely populated state together with the **RWJBarnabas Health System**. For instance, Forked River resident Thomas Hebert was afforded access to interdisciplinary care with various specialists all on one campus to treat his advanced stage colon cancer *(page 14)*. But as you'll also learn in this issue, our responsibility is not only to the people of New Jersey and the region but beyond. When told surgery was not an option to treat his metastatic prostate cancer, Hubert Bertmaring searched until he found a clinical trial available here at Rutgers Cancer Institute – 4,500 miles away from his Alaskan home *(page 26)*. And thanks to the recommendation of a family member, Sukhminder Lehar got the laser ablation treatment she needed to address a recurring brain tumor – having moved from Louisiana to be closer to her care team at Rutgers Cancer Institute *(page 20)*.

Our collaborations in research are equally important. As you'll read in our Faculty Feature *(page 4)*, **Joshua Rabinowitz, MD, PhD**, and other Princeton University scientists work seamlessly with Rutgers Cancer Institute investigators as members of our consortium cancer center to explore the cellular function of metabolism and how it relates to cancer. And thanks to funding from supporters including the U.S. Department of Defense, National Cancer Institute, V Foundation, St. Baldrick's Foundation, Breast Cancer Research Foundation and many others, our collaborative efforts in both clinical and basic science research are helping to advance new discoveries.

It's an exciting time in cancer research and care delivery for our state and beyond. With your continued support, I know we will continue making great progress in these areas.

Sincerely,

**Steven K. Libutti, MD, FACS**
*Director, Rutgers Cancer Institute of New Jersey*
*Vice Chancellor, Cancer Programs,*
*Rutgers Biomedical and Health Sciences*
*Senior Vice President, Oncology Services, RWJBarnabas Health*

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# Forefront

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

## Stress Reliever

**Thanks** to $2.4 million in funding, Rutgers Cancer Institute of New Jersey resident research member **Wenwei Hu, PhD** *(below, left)* is embarking on two related projects examining the impact of stress on cancer development involving the most frequently mutated gene in human tumors – p53. The p53 protein plays a central role in preventing cancer development, as loss of its tumor suppressor function has been shown to contribute greatly to this outcome.

STEVE HOCKSTEIN

One project, supported by a $1.8 million award (R01CA203 965) from the National Cancer Institute, aims to explore how chronic stress impacts cancer development, especially in cancers containing a mutation in p53. "Mutated p53 proteins often accumulate to high levels in tumors leading to increased activities that can increase tumor development," notes Dr. Hu, who is also part of the Genome Instability and Cancer Genetics Research Program at Rutgers Cancer Institute. The aim is to identify molecular targets that would disrupt the effect of chronic stress on cancer development.

The other project, supported by a $596,250 Breakthrough Award (W81XWH-16-1-0358) from the U.S. Department of Defense through its Breast Cancer Research Program, will examine the role of chronic stress specifically in breast cancer development. Hu, who is also an associate professor of radiation oncology at Rutgers Robert Wood Johnson Medical School, will explore how chronic stress impacts breast cancer risk with the aim of identifying a foundation that can guide prevention strategies. ■

## Aiming for a Quicker Recovery

**Post**-operative recovery and length of hospital stay are critical things to consider when having major surgery. A drug known as alvimopan, commonly given to reduce the side effects of strong post-surgery pain medications, has been found to reduce the length of hospital stays for patients who have undergone major gastrointestinal or bladder cancer procedures. A researcher at Rutgers Cancer Institute of New Jersey explored whether alvimopan would have a similar impact on patients undergoing retroperitoneal lymph node dissection (RPLND) surgery for testicular cancer and found use of this drug may facilitate gastrointestinal recovery and have other benefits.

Rutgers Cancer Institute urologic oncologist **Thomas L. Jang, MD, MPH, FACS**, performed the RPLND procedure on 29 patients from 2010 to 2016. Data on those who received alvimopan was prospectively collected and compared to a historical cohort of patients who did not receive the drug. Eight of the 29 men received alvimopan. The median hospital stay for men receiving alvimopan was four days when compared to six days for those who did not receive the drug. The median time to return of expelling gas in the alvimopan cohort was two days when compared to four days for those who did not receive alvimopan, while the median time to first bowel movement for those given alvimopan was 2.5 days when compared to four days for those who did not receive the drug. Dr. Jang, who is also an assistant professor of surgery at Rutgers Robert Wood Johnson Medical School, notes the aim is to validate these findings through a randomized controlled clinical trial at Rutgers Cancer Institute in the near future. ■

*Results of the work were presented at the February 2017 Genitourinary Cancers Symposium (co-sponsored by the American Society of Clinical Oncology, American Society for Radiation Oncology and the Society of Urologic Oncology).*

## Following Up

**For** more than a decade, there has been a focus on involving primary care providers in the follow-up care of cancer survivors. A study by Rutgers University and Harvard Medical School investigators examines current literature on this subject and finds despite a number of proposed care models, there is limited information on the role that primary care providers play in this follow-up care. "With more than 15.5 million cancer survivors in the United States – most of whom are five years or more beyond active treatment – it's an important topic to explore," notes Rutgers Cancer Institute research member **Shawna V. Hudson, PhD** *(above)*, who is the senior author of the work published in the January 2017 issue of *The Lancet Oncology* (Lancet Oncol 2017; 18:e30–38) as part of a series of five papers on 'Cancer Survivorship in the USA.

STEVE HOCKSTEIN

***"With more than 15.5 million cancer survivors in the United States — most of whom are five years or more beyond active treatment — primary care providers and the follow-up care of cancer survivors, is an important topic to explore."***
***— Shawna V. Hudson, PhD***

"Eventually most cancer survivors who are successfully treated will need to receive additional follow-up care outside of the cancer setting for late and long-term effects of cancer and its treatments. Ideally primary care physicians should remain a part of a patient's clinical care throughout their cancer experience for management of other chronic conditions and other types of health maintenance; however, we know this is not often the case," says Dr. Hudson, who is also an associate professor and research division chief in the Department of Family Medicine and Community Health at Rutgers Robert Wood Johnson Medical School. She adds future research on this subject should focus on survivorship care across diverse settings and explore care aspects other than treatment late-effects, such as prevention, screening, and the impact of co-morbidity on rehabilitation and quality of life. ■

*Along with Hudson, the other authors on the research are Larissa Nekhlyudov, MD, MPH, Brigham & Women's Hospital, Harvard Medical School; and Denalee O'Malley, MSW, Rutgers Robert Wood Johnson Medical School and Rutgers School of Social Work. O'Malley was supported through a Doctoral Training Grant in Oncology Social Work (DSW-13-279-01) from the American Cancer Society. Hudson was partially supported by grants R01CA176838 and R01CA176545 from the National Cancer Institute.*

## Update for Good Health

**Earlier** this year, Rutgers Cancer Institute of New Jersey joined with the nation's 68 other National Cancer Institute-designated Cancer Centers in supporting recently revised recommendations for the human papillomavirus (HPV) vaccination.

Why is this important? Cervical cancer is almost always caused by the high-risk types of the human papillomavirus, which nearly every sexually active person will be exposed to in their lifetime. People with healthy immune systems are able to clear the virus, but when the high-risk strains "hijack" or infect specific cells of the cervix it can lead to abnormal cell growth and precancerous changes. Over time and with persistent infection, this leads to cervical cancer. HPV infection and therefore cervical cancer could be prevented by vaccination. There are now two FDA vaccines approved for males and females between ages nine and 26. According to the latest recommendations from the Centers for Disease Control and Prevention (CDC), children younger than 15 should receive two doses of the vaccine six months apart and those over age 15 are should complete a three-dose series.

"Remember, by quitting smoking, vaccinating against HPV, undergoing regular Pap smears and protecting yourself against sexually-transmitted diseases, you can help reduce your risk to developing cervical cancer," notes Rutgers Cancer Institute gynecologic oncologist **Ruth Stephenson, DO**, who is also an assistant professor of obstetrics, gynecology and reproductive sciences at Rutgers Robert Wood Johnson Medical School. She cautions that HPV infection can also lead to penile, anal, and throat and mouth cancers. According to the CDC, incidence rates of HPV-associated cancers have continued to rise, with approximately 39,000 new HPV-associated cancers diagnosed each year in the United States. ■

RON WYATT PHOTOS

**Joshua D. Rabinowitz, MD, PhD** *is a research member in the Cancer Metabolism and Growth Program at Rutgers Cancer Institute of New Jersey and a professor in the Department of Chemistry and the Lewis-Sigler Institute for Integrative Genomics at Princeton University. The Rabinowitz Laboratory studies metabolism and, along with Rutgers Cancer Institute colleagues, explores the impact of this cellular function as it relates to cancer. He shares more about his work.*

**Q: What is metabolism and why is this important to study?**

**A:** Metabolism is the process of turning the foods that we eat into usable energy and biochemical building blocks. While most of us think about metabolism in terms of "can I afford to eat that piece of cake," in reality metabolism affects every aspect of our biology. Indeed, the first selective chemotherapeutic agents targeted metabolism, and modern metabolic inhibitors play a major role in current cancer treatment.

**Q: What are some hurdles in exploring this area and how are you and your lab addressing these challenges?**

**A:** Despite the universal role of metabolism in health and disease, after the discovery of DNA, for many decades metabolism was considered an outdated research topic. The pathways were known, and learning them in biochemistry class was not fun, so why study it? Of course, the main reason is metabolism's importance. But at the same time, we needed to make studying metabolism exciting again. To this end, my lab has developed tools that measure many metabolites simultaneously and that dynamically track nutrients as they pass through metabolic pathways. These tools have dramatically accelerated metabolic discovery – for example, helping to identify a previously ignored metabolite called 2-hydroxyglutarate as a major cause of leukemia and brain cancer. Discoveries of this type have made cancer metabolism one of the most exciting fields over the past decade.

**Q: How does cellular metabolism relate to cancer and how are you working with your Rutgers Cancer Institute colleagues on achieving a better understanding of this process?**

**A:** To survive, cancer cells rely on metabolism to provide energy and oxidative defense. To grow, they need a broad diversity of building blocks. We want to starve cancer of metabolic products that it needs to survive and grow. And, when certain cancers rely on production of odd-ball metabolites like 2-hydroxyglutarate, stop them from making these. Inhibitors of 2-hydroxyglutarate production are nearing Food and Drug Administration approval for leukemia.

A lot of our work within Rutgers Cancer Institute focuses on a particular metabolic process that cancer uses to survive when times get rough, which involves the cancer cells actually eating parts of themselves. This process of self-eating ("autophagy") was the topic of the 2016 Nobel Prize in medicine. Rutgers Cancer Institute Chief Scientific Officer Eileen White, PhD is a world leader in autophagy research, and together we are trying to figure out how autophagy contributes to cancer survival.

**Q: What do you hope your work will yield over the next five to ten years?**

**A:** The first great scientific success in the treatment of cancer was antifolates. This class of drugs remains important in treating cancer, but has substantial side effects. We are in hot pursuit of more specific antifolates and hope to have such agents into clinical trials within the next five years. At the same time, given the urgency of helping patients with cancer, we're looking to employ existing metabolic therapies – and perhaps even dietary interventions – in combination with chemotherapy or immunotherapy in a rational and scientifically informed way. ■

*Dr. Rabinowitz' work is supported by grants from numerous agencies including the National Cancer Institute (R01CA 163591) in which he is a co-principal investigator with Rutgers Cancer Institute Deputy Director, Chief Scientific Officer and Associate Director for Basic Science Eileen P. White, PhD.*

# *Clinical Trials Corner:*

## Is a Clinical Trial Right for Me?

**The** landscape of clinical trials is ever changing. With the advent of new therapies that target the immune system as well as the molecular vulnerabilities of individual tumors, physicians are referring patients for clinical trials earlier in the course of their disease. As well, patients are increasingly motivated to seek clinical trial options as part of their treatment plan. The development of new treatments begins with the process of clinical research, the key to improving the lives of those who are living with this disease. As one of the nation's 47 Comprehensive Cancer Centers as designated by the National Cancer Institute, Rutgers Cancer Institute of New Jersey maintains a strong commitment to clinical research.

Clinical trials occur in multiple phases. After a promising drug or compound is developed in the laboratory, the first step of moving information from 'bench to bedside' is an early phase clinical study, such as a phase I clinical trial, which assesses the safety of new agents in patients. Once safety is established, phase II clinical trials examine antitumor activity in a particular disease type. In general, phase III clinical trials compare a new treatment to an established therapy that is already standard. However, if drugs are particularly promising they may be granted specific designations by the U.S. Food and Drug Administration (FDA) to accelerate their development. Indeed, this decade has seen larger phase I clinical trials that have led to certain classes of FDA approval and earlier, more widespread access of new medicines.

***"Many of the successes we have experienced in cancer treatment are the direct result of clinical trials.... These developments would have been impossible without a devoted community of physician scientists, and the patients who inspire us daily, including those who volunteer to be part of a clinical study."***

Clinical trials are different from standard therapy. New agents may have unpredictable side effects, and rates of cure and survival are often not known in drugs being tested in clinical studies. However, clinical trials are often offered to patients when the standard therapies that are available work very poorly, or are shown to be ineffective. As well, clinical trials provide access to developing therapies at an earlier stage. Clinical trials are also important to others living with cancer, as the questions answered by these trials often move the field forward and optimize treatment approaches.

Many of the successes we have experienced in cancer treatment are the direct results of clinical trials. For instance, prior to 2011 the only approved drugs to treat advanced melanoma were chemotherapy, which nearly always failed patients, and interleukin-2, which induced durable responses in only a small percentage of patients. Today, at least eight new therapies for treating melanoma have been FDA approved, resulting in improved patient survival and quality of life. These developments would have been impossible without a devoted community of physician scientists. However, the real heroes are the patients who inspire us daily, including those who volunteered to be part of a clinical study.

Only you and your physician can decide if a clinical trial is right for you. Your healthcare team should offer a complete discussion of the risks and benefits, and the schedule of treatments should be explained in detail. Your complete medical history and list of medications will be reviewed to ensure that it is safe for you to participate. Finally, you will be given the opportunity to ask all of your questions, such as why the trial is being done and how participation is expected to impact your quality of life. ■

**For more information on cancer clinical trials offered at Rutgers Cancer Institute, visit cinj.org/clinical-trials.**

JOHN O'BOYLE

***Janice M. Mehnert, MD, is the director of the Phase I/Investigational Therapeutics Program at Rutgers Cancer Institute. Dr. Mehnert is an expert in developmental therapeutics and translational clinical trials, as well as in the treatment of advanced skin and soft tissue tumors. She is also an associate professor of medicine at Rutgers Robert Wood Johnson Medical School.***

CANCER Connection is published by
Rutgers Cancer Institute of New Jersey's
Office of Communications and Public Affairs

195 Little Albany Street • New Brunswick
New Jersey • 08903

Phone: 732-235-7940 • cinj.org

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Cover Photo: Nick Romanenko

Design: Barbara Walsh Graphic Design

# A New Era in Cancer Care

**The GPS mishap causing a delayed arrival to a Newark television studio didn't bother Steven K. Libutti, MD, FACS one bit. He had more significant things on which to focus. The new director of Rutgers Cancer Institute of New Jersey and senior vice president of Oncology Services at RWJBarnabas Health had only been on the job for five days and had hit the ground running upon his early January 2017 arrival – meeting with faculty and staff, touring facilities and taking the time to reach out to the public through an interview on NJTV news. His message was an important one – the tremendous responsibility Rutgers Cancer Institute has as New Jersey's only National Cancer Institute (NCI)-designated Comprehensive Cancer Center in delivering integrated cancer care.**

The NCI designation is currently held by only 46 other cancer centers across the country – and with many states having more than one such center, there are a number of states that don't even have one. Rutgers Cancer Institute is the only such center in New Jersey and has been charged with the responsibility of serving the state and beyond for a number of years. On-site research that translates to clinical care is a key hallmark of the designation. "Research is the act and art of asking and answering questions. NCI Comprehensive Cancer Centers are in the business of observation and asking and answering questions to better our ability to deliver cancer care to our patients," notes Dr. Libutti.

BY MICHELE FISHER ■ PORTRAITS BY JOHN O'BOYLE

He adds that despite the progress made in the last 50 – and even last 10 – years, there is still much work to do – especially since New Jersey ranks high in cancer incidence, with approximately 50,000 new cases each year and 16,000 deaths according to the American Cancer Society. "We have a lot to learn about the biology of cancer, how to better screen for cancer and prevent cancer from occurring. The answer to one question will lead to three more to ask. We embrace and integrate all the components of understanding and making progress with cancer. Rutgers Cancer Institute is really a wonderful example and paradigm of how we can do that best."


**Rutgers Cancer Institute of New Jersey Director Steven K. Libutti, MD, FACS, with anchor Mary Alice Williams on NJTV News sharing his vision on integrated cancer care delivery.**

## *Built on Science*

Having spent 14 years at the NCI – which is part of the National Institutes of Health (NIH) – studying neuroendocrine tumors (see sidebar), Libutti is quite familiar with the concept of marrying science and clinical practice. "One of the things I loved most when I was at NIH was that my laboratory and office were down the hall from the clinic and operating room. The message that cancer research and care are two sides of the same coin and each empowers the other to be better was really demonstrated physically at the NCI with the close proximity of the science in the laboratory and clinical care delivered just around the corner," he says.

A frequent visitor to other cancer centers around the country, he points out that Rutgers Cancer Institute is the closest to what he experienced when at the NCI – "laboratories asking important questions that are right down the hall from clinics where patients every day are receiving novel treatments that stem from these laboratories." Libutti notes this proximity allows for interaction between scientists and clinicians in a way that "each helps to inform the other and becomes more than the sum of those two parts. Rutgers Cancer Institute really embodies what I believe is the concept of an NCI-designated cancer center – paying attention to and supporting both the clinical and basic science missions."

Libutti also stresses that Rutgers Cancer Institute is a magnet to which other investigators interested in cancer research across Rutgers University and Princeton University are drawn. "We interact with investigators elsewhere doing related work and enhance their ability to progress their own science." He mentions that "multiplier effect" is also seen in other ways. For instance, he notes that a 2014 economic impact analysis showed that for every dollar invested through state funding, Rutgers Cancer Institute delivers 13 dollars in value back to the state. This number has continued to improve through the years. "By virtue of that investment and the talent we have," he says, "we can improve, enhance and expand cancer research efforts at Rutgers, Princeton, other New Jersey universities, and beyond."

The collaborations beyond Garden State borders include joint research projects with pharmaceutical companies, national cooperative groups and other NCI cancer centers on clinical trials. Rutgers Cancer Institute also works with the Big Ten Cancer Research Consortium – cancer centers associated with Big Ten universities – on developing unique clinical trials utilizing talents, resources and patient populations from across the consortium. Similar to that is membership in the Oncology Research Information Exchange Network® (ORIEN), in which NCI centers, healthcare systems and other partners are taking part in a unique non-treatment study designed to create a centralized database of clinical and molecular data that can be utilized to find better ways to treat cancer.


# *Labor of Love*

Along with his leadership roles at Rutgers Cancer Institute of New Jersey, RWJBarnabas Health and Rutgers Health, Steven K. Libutti, MD, FACS is part of a vast team of clinicians and scientists aiming to further unlock the mysteries of cancer through research. For more than two decades, Dr. Libutti has explored neuroendocrine tumors – focusing on what is known as the tumor microenvironment including tumor blood vessel formation.

"I was at the National Institutes of Health in 1995 to complete a surgical oncology fellowship and only planned on spending two years there before heading back to New York to start my practice. After collaborating with other investigators on an area known as tumor angiogenesis, you could say I was 'bit by the research bug' and ended up staying for 14 years," notes Libutti.

Tumor angiogenesis is the study of blood vessel formation in tumors. Tumors require a blood supply to the cell to enable growth and critical functions such as waste removal. His early work looked at characteristics of tumor blood vessels as a target for anti-cancer therapy. "Most cancer researchers were only focused on the tumor cell at that time and were missing an opportunity by not studying blood vessels and cells that line the inside of blood vessels – endothelial cells," he recalls. Libutti's research also included examination of the tumor microenvironment, which is the cellular environment of the tumor containing blood vessels, immune cells, fibroblasts, lymphocytes and other types of cells that play an important role in helping tumors grow and spread.

Tumor microenvironment and tumor angiogenesis were basic science interests, but at the same time, he was developing a clinical interest in neuroendocrine tumors. "As a surgical oncologist, I operated on a number of organs – thyroid, pancreas, liver, and others – and became more interested in tumors of the neuroendocrine system." Abnormal growths that can occur anywhere in the body, neuroendocrine tumors begin in specialized cells and have the ability to secrete hormones. The Libutti Laboratory focuses on studies of development and growth of neuroendocrine tumors in various models and strategies to develop new therapeutics to treat these tumors.

"I labored to achieve a synergy between my laboratory interests and clinical interests so that I didn't feel like I was neglecting one or the other," he reflects. "For instance, if I was in the laboratory, I knew I was studying disease to help me become more effective at treating that disease. When I was in clinic or the operating room, I was learning about disease first hand by treating it and perhaps by acquiring samples or specimens to bring back to my laboratory to learn even more." ■

## Integrated Care

Along with scientific collaborations, Libutti points out clinical collaborations, such as those with RWJBarnabas Health are equally important, adding there has been a shift in recent years from event-based medicine to population-based or integrated medicine. He says a more proactive stance of getting out into the community and identifying risk for various conditions like heart disease, diabetes, cancer and others is becoming more commonplace and results in the need for comprehensive healthcare networks that are more accessible to patients.

Rutgers Cancer Institute is no stranger to a comprehensive care delivery model that spans multiple locations. Through the years, the institute has offered patients across the state unique care and access to clinical trials through a network of hospitals. The institute has had a long-standing relationship with its flagship hospital Robert Wood Johnson University Hospital, an RWJBarnabas Health facility. Rutgers Cancer Institute is an important part of this system-wide approach, which Libutti calls "the new norm. Integrated care delivery is here to stay."

How does it work? RWJBarnabas Health has a network of 11 acute care hospitals with a service area of five million people across the state. Together, RWJBarnabas Health and Rutgers Cancer Institute have an ability to reach more patients statewide to bring them novel treatments and clinical trials. "This approach also integrates and enables access to interdisciplinary care, pulling all practitioners together into teams that focus on specific regions of the body allowing patients to see everyone at once," describes Libutti.

"This approach enables us to assess which location can best handle a patient's particular oncology needs. We can then rapidly navigate that patient to the part of our program that is best equipped for them to have the best possible outcome and the most convenient for the patient. You can't do that in a single location. A system partnership allows for our joint presence to be amplified and to create a seamless connectivity enabling patients to travel no more than 20 minutes from where they live to get exceptional care. Our mission is to not only ensure an exceptional level of care but also ensure our research touches everywhere we practice," he explains.

That "everywhere" could expand even further into the community under the Rutgers Health umbrella, which encompasses the clinical entities of Rutgers University. As the Vice Chancellor for Cancer Programs under Rutgers Biomedical and Health Sciences, Libutti envisions novel partnerships with community practices. "Some 85 percent of cancer care is delivered by community oncologists. Those practitioners need to be invited into our system so that we can partner together to better deliver care to our patients."

## Balancing Act

Even within its own hallways, Rutgers Cancer Institute continually strives to go above and beyond its service levels. Libutti shares that enhancements in palliative or supportive care, as well as survivorship are forthcoming, and there's a goal to create a neuroendocrine tumor center of excellence. Some enhancements were instituted almost immediately following his arrival. "The worst three words you might hear in your lifetime are 'you have cancer.' If you're diagnosed with other conditions like diabetes or hypertension, you can manage your illness with medicine or other treatments and expect to be okay – but with cancer, many think the worst. It's a huge burden. What patients need is a plan and a passionate, optimistic oncologist. The key is to make that connection as soon as possible," emphasizes Libutti.

**Rutgers Cancer Institute is the closest to what Dr. Libutti experienced when at the NCI – "laboratories asking important questions that are right down the hall from clinics where patients every day are receiving novel treatments that stem from these laboratories." Libutti notes this proximity allows for interaction between scientists and clinicians in a way that "each helps to inform the other and becomes more than the sum of those two parts. Rutgers Cancer Institute really embodies what I believe is the concept of an NCI-designated cancer center – paying attention to and supporting both the clinical and basic science missions."**

He adds that the biology of cancer is such that, in many cases, the tumor has been present for much longer than the patient has known it to be there. "In these cases, immediate care is not measured in days or weeks, thus the *biology* of cancer allows for more time to plan a course of treatment. Unfortunately, that doesn't take into effect the *psychology* of cancer. Once a patient knows he or she has cancer, he or she wants it removed immediately," notes Libutti. With that, at Rutgers Cancer Institute, new timelines of care were put into place. New patients likely will be seen within 48 hours, and treatment started within one to two weeks. "Longer than that time frame may be acceptable based on biology, but based on psychology, it is not."

*Steven K. Libutti, MD, FACS, at a recent Rutgers men's basketball game.*

## Down Time

As you read in our main feature, Steven K. Libutti, MD, FACS wears a number of hats pertaining to his roles at Rutgers Cancer Institute of New Jersey, RWJBarnabas Health and Rutgers University. But along with the moniker of healthcare leader, he's also known as a rocker, tinkerer and history buff – along with devoted husband and dad.

- **What book is on your nightstand now?** Legends and Lies: The Patriots *by Bill O'Reilly about our nation's founding fathers. I'm a history buff.*
- **What's on your iPod?** *I'm a major classic rock enthusiast and played as a drummer in bands my whole life. I'm in a Chicago phase right now, but I also like Led Zeppelin, The Who, Eric Clapton, Cream, and Jethro Tull. While I'm a '70s classic rock guy, I also like more modern stuff from bands like 3 Doors Down.*
- **If you weren't in the oncology field right now, what would your dream job be?** *Definitely a drummer, but I also like to tinker – so maybe something with robotics, engineering, or electronics.*
- **Favorite 'Jersey' spot?** *I haven't developed a favorite just yet, but I did live in Fort Lee for a few years and my dad owned a restaurant in Carlstadt – part of the Meadowlands – called 'Pratos,' which is Italian for 'meadow.' My wife and I had our wedding reception there.*

He and wife Mary, a pediatric physical therapist who specializes in treating children with developmental delays, have been married for 26 years. The couple has three children: 24-year old daughter Christina, who is an account executive in the fashion industry; 21-year old daughter Melissa, who is a senior at Wake Forest University studying English and journalism and waiting to hear from law school; and 14-year old son Michael, who – like dad – loves history, also plays ice hockey, and as dad points out "will root for any team that I'm against!" Libutti is used to this sports rivalry, especially in football as Mary (who hails from Philadelphia) is an Eagles fan, while Libutti is a Giants fan. During his NIH years when Libutti and family were living in Maryland, husband and wife decided they needed a neutral team for which to cheer, thus their "together team" turned out to be the Ravens. He says it was a decision that still helps keep harmony in their home to this day! ■

And once patients are scheduled, the healthcare "team" pulls out its playbook and gets to work. "I firmly believe cancer care is a team sport, and there needs to be a number of players on the team," Libutti says. While he notes patients themselves need to be engaged, the time from diagnosis to first consult visit can seem like an eternity, thus extra support is needed. That is why he aims to expand the number of nurse navigators at Rutgers Cancer Institute – a concept he deployed while he was Director of the Montefiore Einstein Center for Cancer Care in New York with much success. "The nurse navigator is the quarterback of our team. It's usually a nurse practitioner who is the first person a patient will meet when they come for that first visit."

Once the initial appointment is set, the nurse navigator reaches out to the patient to educate them on what to bring to their first visit – scans, test results and the like. And by having the nurse navigator talk to the patient and assess what is known about the diagnosis, the patient can be scheduled to see multiple practitioners on the same day. The aim is to coordinate all patient information so that all specialists involved in the patient's care can talk about the case in a tumor board meeting on the same day the patient is seen so that a treatment plan can be created. "There is nothing more empowering for a patient than to meet with cancer specialists and leave with a plan," he says matter-of-factly. "It immediately addresses the psychology of the diagnosis helping the patient to perhaps be more accepting of the appropriate timeline in which to effectively treat the cancer. If you can do that well, I think patients have a better experience and outcome. It's not just cancer treatment, but rather cancer *care*," he emphasizes.

Never losing sight of the 'care' component, Libutti stresses the care teams at Rutgers Cancer Institute and RWJBarnabas Health go above and beyond to "wrap the blanket around patients and provide treatment, care and programs necessary to lift the cancer burden off their shoulders." While Libutti says objective measurements for achieving the goals he has put in place include adhering to timelines of care, as well as the number of scientific papers published, grants awarded and programs developed across the system, the ultimate measure will be something much more meaningful. "I'm always challenging myself and our team. The ultimate measure is when patients say 'the only place to go for cancer care is Rutgers Cancer Institute and RWJBarnabas Health.' While I will know that's when we're hitting the mark, we'll never stop at making things better." ■

# *Introducing Rutgers Health*

Just a few years ago, Rutgers did not have a medical school, it did not have a dental school, and it most certainly did not have upward of 1,000 physicians and other health care professionals treating patients in specialties as diverse as maxillofacial surgery and radiation oncology. Yes, Rutgers scholars have tackled health care policy and problems for years, even discovering the first effective treatment for tuberculosis in 1943, but the university was not a hub of academic health care.

That all changed in 2013, when much of the former University of Medicine and Dentistry of New Jersey was integrated into Rutgers. Now Rutgers has not just one medical school but two – New Jersey Medical School and Robert Wood Johnson Medical School – as well as other schools devoted to medical research, providing care, and training health care professionals, from dentists to nurses to physician assistants. The change was a momentous one for Rutgers, but in some respects it was just the start of a transformation now taking shape with the creation of **Rutgers Health**.

Rutgers Health, announced last spring, is the clinical arm of the university, and it includes Rutgers health care practitioners – doctors, dentists, nurses, pharmacists, psychologists, and allied health professionals.

"Rutgers Health will bring together the critical missions of all university clinical activities under one umbrella," says Rutgers University President **Robert Barchi, MD, PhD**, a neuroscientist and neurologist. There's a simple proposition at the heart of Rutgers Health, and it's this: Let's keep people healthy. With the Affordable Care Act and other changes in the health care landscape, a newfound emphasis is being placed on preventative care, as well as shifting the focus from fee-based services to value, quality of care, and the patient experience.

And Rutgers Health aims to be at the forefront. "The business model for health care is changing nationwide," says **Brian L. Strom, MD, MPH**, executive vice president for health affairs and chancellor of **Rutgers Biomedical and Health Sciences**, who is overseeing the development of Rutgers Health. "We are very quickly moving from volume to value."

Rutgers Health is also one of the first academic health care provider organizations in the nation to integrate a full range of health-related specialties – including medicine, dentistry, pharmacy, nursing, and clinical psychology – in addition to fields such as neurology, surgery, cardiology, and oncology.

The organization includes three key components: Rutgers Health as the clinical arm of the university, serving as a brand for all Rutgers patient care and services; Rutgers Health Group, which will be developed as a statewide faculty practice, comprising more than 1,000 Rutgers-based physicians, dentists, and other clinicians; and Rutgers Health Network, which will encompass the teaching hospitals, community centers, medical groups, wellness centers, and other affiliated entities and partners providing quality care through their relationship with Rutgers – all with one goal in mind: keeping people healthy. ■

**Brian L. Strom *(left)*, MD, MPH, executive vice president for health affairs and chancellor of Rutgers Biomedical and Health Sciences (RBHS) and Vicente Gracias, MD, senior vice chancellor of clinical affairs for RBHS and president of the Rutgers Health Group.**

***To learn more, visit rutgershealth.org.***

*— Portions excerpted from 'Rutgers Magazine,' Spring 2016.*

PHOTO BY: NICK ROMANENKO

# Counting his Blessings

*On a summer day in 2015, Thomas Hebert should have been on top of the world. Fifty-five years young, he'd recently retired as head custodian of the Brick Township schools. Embracing his new life with gusto, he and his wife Ginny indulged in their love of fishing in the bay near their home in Forked River, New Jersey. They took leisurely spins on their boat and soaked up all that was wonderful about the Jersey Shore. But the euphoria of retirement abruptly evaporated when Hebert was diagnosed with stage IV colon cancer.*

That morning, Hebert walked out the doors of Rutgers Cancer Institute of New Jersey in a state of disbelief. He'd just met with his team of physicians, who outlined an ambitious treatment plan, at the same time gently letting him know his cancer was so serious that he might not survive the treatments.

As he waited for the valet to retrieve his car, Hebert noticed a woman pulling a small boy in a wagon. The woman was clearly distraught. Hebert overheard her telling her companion that the child's white count was dangerously low, but she was having difficulty obtaining coverage for blood transfusions. "He's very sick," she said forlornly. "I don't know if he's going to make it."

"When I saw this child, my whole outlook changed," recalls Hebert. "I thought: Yes, I have cancer, and that stinks. But I've lived a great life with many blessings. This little boy hasn't even had a chance at life yet. At that moment I stopped feeling

BY MARY ANN LITTELL

*"Ginny said no more excuses: now that I was retired I had to start taking better care of my health. I just wish I'd done it sooner," says Thomas Hebert with daughter Samantha and wife Ginny at a favorite fishing spot near their Forked River home.*

sorry for myself and resolved to fight my hardest to get better. And I also was determined to try and help that child. Something good would come out of this." This positive attitude, combined with a deep faith, sums up Hebert's outlook. Brimming with optimism, no obstacles, not even cancer, will keep him from living life to the fullest. Even his doctors are impressed with his resilience and resolve.

A big, strapping man, Hebert has always enjoyed good health. His father was not so fortunate: he died of multiple myeloma in his 50s. The family's roots are in Canada. As a child, Hebert lived first in Elizabeth, then 'down the Shore,' where he got his first job at a boatyard. He was only 15. "I told them I was 16, because I knew they wouldn't hire a 15 year old," he laughs. "From the time I was a kid I've loved being around the water—boating, fishing, the beach. The only problem in our marriage is that Ginny's so much better at fishing than I am. She always beats me!"

"What can I say? It's a gift," Ginny banters back, smiling at her husband. The couple's devotion to each other is obvious and Hebert credits his wife for saving his life. She went for a routine colonoscopy in late summer 2015 and insisted he get one too. She even made him an appointment, paying a nonrefundable deposit. "Ginny said no more excuses: now that I was retired I had to start taking better care of my health. I just wish I'd done it sooner," he says soberly.

The colonoscopy showed that Hebert had cancer in the sigmoid colon, the area closest to the rectum, and would need immediate treatment. Hebert was shocked, since he never had any symptoms. He and his wife began researching treatment centers and learned about Rutgers Cancer Institute. "We were impressed with the staff's great credentials and team-based approach," says Hebert. "As an added plus, it was close to home – so we made an appointment."

In August 2015 Hebert consulted with medical oncologist Elizabeth



PHOTO BY: NICK ROMANENKO

PHOTO BY: JOHN O'BOYLE

Poplin, MD, co-director of the Gastrointestinal/Hepatobiliary Program, and surgical oncologist Darren Carpizo, MD, PhD, director of the Liver Cancer and Bile Duct Cancer Care Program. Both are faculty members at Rutgers Robert Wood Johnson Medical School. They're part of a multidisciplinary team that includes medical, surgical, and radiation oncologists, interventional radiologists, gastroenterologists, and other highly skilled medical and nursing specialists.

*Salma Jabbour, MD (below left); Elizabeth Poplin, MD (below center); and Darren Carpizo, MD, PhD, are part of a multidisciplinary team that includes medical, surgical, and radiation oncologists, interventional radiologists, gastroenterologists, and other highly skilled medical and nursing specialists.*

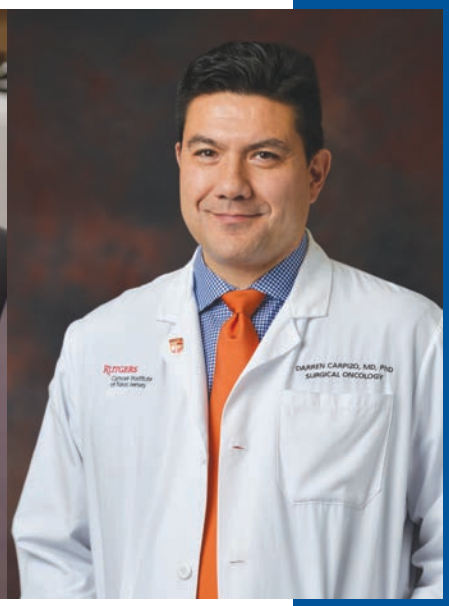


PHOTO BY: JOHN O'BOYLE

Further testing and a CT scan revealed even worse news: the cancer had metastasized to Hebert's liver and was advanced at stage IV. "Mr. Hebert's liver tumor was exactly where you would NOT want a tumor to be – in the center of the liver, next to major blood vessels," says Dr. Carpizo. "Additionally, the tumor was large – a bit over five inches at the largest diameter. These factors meant the tumor was not resectable, or removable by surgery. When we can't remove disease, a patient's overall prognosis is significantly worse. When we can remove disease the five-year survival rate is approximately 45 percent, and one in five patients will be cured."

Historically, treatment options for such patients were poor, but new combinations of chemotherapy and the addition of targeted

## *In the Lab*

Rutgers Cancer Institute of New Jersey's **Darren R. Carpizo, MD, PhD**, is not only a surgical oncologist with the Gastrointestinal/Hepatobiliary and Liver and Bile Duct Programs, but he is also a scientist exploring the mechanisms behind the p53 gene – the most commonly mutated gene in human cancer. Thanks to funding awarded recently from the Breast Cancer Research Foundation, Dr. Carpizo will build upon his previous research examining a drug compound that restores tumor suppressor function of p53. The aim is to provide a foundation for the development of a new type of anti-cancer drug.

The drug compound being examined has the ability to activate a program that selectively kills cancer cells with a common p53 mutation while leaving normal cells undisturbed. The mechanism behind this action is characterized as a zinc metallochaperone and is considered novel. Carpizo aims to determine the application of zinc metallochaperones in breast cancer. One form of breast cancer called "triple negative" is known for its biological aggressiveness and lack of effective chemotherapy options. Preliminary data generated by Carpizo and colleagues suggest that zinc metallochaperones have activity and that breast cancers with a mutation in the BRCA1 gene are particularly sensitive to zinc metallochaperones.

"By further examining zinc metallochaperones on other p53 mutants that are similarly structured, we have an opportunity to increase the potential pool of patients that could theoretically benefit from zinc metallochaperones resulting in broad activity against all cancer types. I am grateful to the Breast Cancer Research Foundation for its support of this work," notes Carpizo. ■

*The laboratories of Stewart Loh, PhD, at SUNY Upstate Medical University and Rutgers Cancer Institute Associate Member David Augeri, PhD, from Rutgers Translational Sciences at Rutgers University are collaborating on the work with Carpizo.*

PHOTO BY: NICK ROMANENKO

chemotherapy have improved outcomes, which was good news for Hebert. "Our immediate goal was to shrink the cancer we could see in his colon, liver, and lymph nodes, and also the microscopic bits of colon cancer that we could not see that might exist somewhere in his body," explains Dr. Poplin.

## A Multidisciplinary Approach

The first part of Hebert's treatment plan called for systemic chemotherapy, which circulates through all parts of the body. Poplin would administer a combination drug called FOLFOX, plus an additional medication, panitumumab – given based on the results of genetic testing – to shrink the tumors. If this treatment was successful, the colon tumor would be removed and Carpizo would implant a hepatic artery infusion (HAI) pump in Hebert's abdomen. The size of a hockey puck, the pump has a vessel leading right into the liver to deliver targeted chemotherapy.

The pump is particularly helpful in patients with colorectal cancer with liver metastasis because liver metastases from colorectal cancer get much of their blood supply from the hepatic artery. Therefore, hepatic artery infusion is an effective way to deliver therapy. "Systemic plus HAI chemotherapy often leads to a better response of the liver disease, compared to systemic chemotherapy alone," says Carpizo. "We use the pump for patients who are initially unresectable, with the hope that the pump will shrink tumors enough to make them resectable."

The systemic chemotherapy did its job and in January 2016 Hebert had his colon cancer removed robotically by colorectal surgeon Nell Maloney Patel, MD, who is an assistant professor of surgery at Rutgers Robert Wood Johnson Medical School. In the same seven-hour procedure performed at Robert Wood Johnson University Hospital, the flagship hospital of Rutgers Cancer Institute, Carpizo implanted the HAI pump.

From January to May 2016 Hebert received chemotherapy via the pump 24/7. He admits the treatment was difficult. "It tired me and I had a lot of pain, but I'm a tough Canuck. I pressed on and saw it through. Dr. Poplin did a fantastic job – that lady is a super-brain. She always keeps you informed." He adds that everyone involved in his treatment provided tremendous support. One of the nurses, Joyce Plaza, RN, BSN, OCN, even gave Hebert her personal cellphone number. "She always took our calls, even on her days off," states Hebert. "That's above and beyond."

Imaging studies done in summer 2016 brought great news: the liver tumor had shrunk. It was only one and a half inches at its largest diameter and could now be resected. In August 2016 Carpizo removed half of Hebert's liver. "The tumor was still on the hepatic vein," notes Carpizo. "We removed as much as we could but a small positive margin of cancer remains."

The remaining cancer would be treated with radiation, so Carpizo left small metal markers to indicate its location. "These markers provide a guide for us to deliver radiation therapy very precisely," explains Rutgers Cancer Institute radiation oncologist Salma Jabbour, MD. She and Carpizo met beforehand so he could review the plan for radiation therapy, one of the advantages of treatment in a multidisciplinary team setting.

*One of the nurses involved in Thomas Hebert's treatment, Joyce Plaza, RN, BSN, OCN (below left), with Elizabeth Poplin, MD, gave Hebert her personal cell phone number. "She always took our calls, even on her days off. That's above and beyond," he says.*

Hebert received five treatments of stereotactic body radiation therapy (SBRT), given to treat microscopic disease and eradicate any remaining cancer cells. "SBRT is very targeted to a small area, avoiding healthy tissue," says Dr. Jabbour, who is also an associate professor of radiation oncology at Rutgers Robert Wood Johnson Medical School. "It's quite effective in treating liver cancers."

PHOTO BY: JOHN O'BOYLE

## Looking toward Tomorrow

Hebert is finished with treatment for now. His medical team is pleased he is doing so well. The pump remains in place and he'll be closely monitored for any recurrence. Patients with liver cancer have a 75 percent chance of recurrence, most commonly in the first two years after surgery, says Carpizo. "Eighty-five percent of all patients with a Stage IV liver cancer are not candidates for surgery," he adds. "But this therapy has expanded the number of people who can have surgery to remove their cancer, which significantly improves their prognosis."

Hebert says he would not have made it through the treatment without the support of Ginny and their two grown children. He's feeling better every day, but tires easily and has some physical restrictions. "I can only do about 25 percent of what I used to do, but I don't think about it," he says. In November 2016 his son Tom and daughter-in-law Emily had a baby. "I'm glad I'm here to enjoy Bailey, my first grandchild," says Hebert, adding that his daughter Samantha, who has high-functioning Asperger syndrome, prays for him every night.

Hebert hasn't forgotten the little boy he saw on his first visit to Rutgers Cancer Institute. Early in Hebert's treatment a blood drive was held for him at Forked River Baptist Church. Over 200 pints were collected, much more than he needed. He arranged to have the donated blood sent to help pediatric patients at Rutgers Cancer Institute; Robert Wood Johnson University Hospital; and Children's Specialized Hospital, all in New Brunswick. In winter 2016 the church held a second blood drive to benefit children. Hebert plans to make the drive an annual event.

*"I can only do about 25 percent of what I used to do, but I don't think about it," notes Thomas Hebert (above), who recently finished treatment for stage IV colon cancer. . . ."I'm grateful to be alive and in a position to give back and help others."*

"The nurse who ran the blood drive says 200 pints of blood can help at least 300 children," says Hebert. "She was so appreciative she wanted to put my name on a plaque. I told her a plaque was fine, but asked her to engrave 'God' on it, not my name. I'm grateful to be alive and in a position to give back and help others. 'God' gets all the credit, not me." ■

PHOTO BY: NICK ROMANENKO

# Fighting Back FROM Brain Cancer

**As a nurse with years of experience, Sukhminder Lehar knows the symptoms of serious illness. So when she began having throbbing headaches and double vision, she felt sure something was seriously wrong with her brain. But her primary care physician didn't take her seriously. Lehar had to raise her voice to be heard. "I did my training at a cancer hospital in India, so I knew my symptoms could mean cancer," she says. "Headaches like the ones I was having are not a minor matter. Fortunately I'm not shy about speaking up for myself."**

BY MARY ANN LITTELL



PHOTO BY: NICK ROMANENKO

This fighting spirit has kept Lehar going throughout her long ordeal with cancer. But even more important to her survival, she says, was finding Shabbar Danish, MD, a neurosurgeon and chief of neurosurgical oncology at Rutgers Cancer Institute of New Jersey, and learning about the amazing technology of laser ablation, a minimally invasive approach to treating difficult brain tumors. "Dr. Danish is the best, he's a superstar," says Lehar. "Before I went to him I felt so alone, overwhelmed with worry. But now I'm not alone. He's the whole reason I'm here in New Jersey."

## *Gathering Clues*

Lehar's illness began in 2008. She and her husband Ranjot lived in Louisiana and were expecting their first child, conceived through *in vitro* fertilization. Throughout her pregnancy Lehar had frequent headaches, nausea and vomiting. She powered through, assuming she'd feel better after the delivery. In October her daughter Tamanjot was born prematurely at 26 weeks. The infant faced an extended stay in a neonatal intensive care unit (NICU).

Unfortunately Lehar did not get the relief she'd hoped for. Her headaches became much worse, radiating down her neck. She went for daily massages, which helped. But once she got up from the table, the headaches returned. Anxious about her baby and her own health, she went from the NICU to her primary care physician's office. "I told my doctor there must be something in my head, a tumor or abscess, that is causing this pain. And I cannot keep any food down," she says. "He said it was hormonal and to give it time. I asked for a CT scan but he said my symptoms didn't warrant it."

Lehar's physician eventually gave her a prescription for migraine headache medication. Waiting in the car for her husband to fill it, she became so ill that she vomited and collapsed in the pharmacy parking lot. A concerned bystander asked if he should call an ambulance. "This was my breaking point," she says. "I went back to my physician and we had a big-time argument. He told me to go to the emergency room, but I said I wasn't leaving without a prescription for a CT scan. Finally he gave me one, but made the appointment for two weeks away. I said, 'I will be gone by then.'"

She went straight to the hospital. "I'd worked here before and saw a technician I knew, someone from India like me. I said, 'Please help me. I need a CT scan.' He squeezed me in the next morning." The CT scan confirmed her worst fears: she had a tumor in the right frontal lobe of her brain. Surgeons removed it that same day. It was a Grade III astrocytoma, a rare, serious tumor requiring aggressive treatment. "I was terrified," she says. "I didn't know if I would recover. And I had a newborn."

Lehar had a complicated recovery. In and out of consciousness, her brain swelled and she had a second operation to remove blood clots. Gradually she regained her strength. After 33 rounds of chemotherapy and five rounds of radiation, Lehar finally felt better. She returned to work and enjoyed doting on Tamanjot, who was thriving.

Unfortunately, an MRI done in June 2014 showed a recurrence of the tumor. Her neurosurgeon said a second surgery would be extremely risky and could leave her deaf, blind, and possibly paralyzed. She went for a second opinion at a cancer treatment center in Texas, where physicians told her they could safely remove the tumor in an open procedure. "They scheduled me for surgery, but I cancelled," says Lehar. "I was too afraid."

**Shabbar Danish, MD *(above)*, neurosurgeon and chief of neurosurgical oncology at Rutgers Cancer Institute and director of the Laser Ablation Program at Robert Wood Johnson University Hospital, performed two laser ablation procedures on Sukhminder Lehar *(right)*.**

**"Dr. Danish is the best, he's a super-star," says Sukhminder Lehar. "Before I went to him, I felt so alone, overwhelmed with worry. But now I'm not alone. He's the whole reason I'm here in New Jersey."**

PHOTO BY: NICK ROMANENKO

## A Ray of Hope

Her husband's cousin lives in New Jersey and is a nurse at Robert Wood Johnson University Hospital (RWJ), the flagship hospital of Rutgers Cancer Institute. She'd frequently called to check on Lehar's health. She put Lehar in touch with Dr. Danish, who is director of the RWJ Laser Ablation Program. "I'm thankful to our cousin – she really pushed me to come here," says Lehar. She sent her MRIs and medical records to her sister-in-law, who brought them to Danish. He reviewed them with Rutgers Cancer Institute's tumor board and they agreed she would be a candidate for laser ablation.

Years ago, Lehar had lived in New Jersey and worked at RWJ. "I know it's an excellent hospital," she says. "I started feeling more optimistic." She came to New Brunswick to meet with Danish, who offered the options of open surgery or laser ablation. "I asked him what he would recommend for a family member. He said laser ablation. I told him, just give me a date and I'll be there."

Recurrences are common in many types of brain cancer and are difficult to manage, says Danish, who is also an associate professor of neurosurgery at Rutgers Robert Wood Johnson Medical School. "We know that if you remove the tumor, patients do better," he explains. "But that is complicated when a patient has already had open brain surgery, plus radiation and chemotherapy. There are only so many times you can open the skull before you have issues with wound healing and infection. The advantage with the laser is that the tumor is removed through a minimally invasive procedure."

The laser emits light energy that destroys tumors with heat, which can be pinpointed so it will not damage healthy tissue. "With new technology, we can watch the process in real-time," Danish notes. "We're very experienced in using this technology. Since the laser was approved in 2009 we've done almost 250 laser ablation procedures, more than any other center in the U.S. We are the only center in New Jersey offering it on a regular basis."

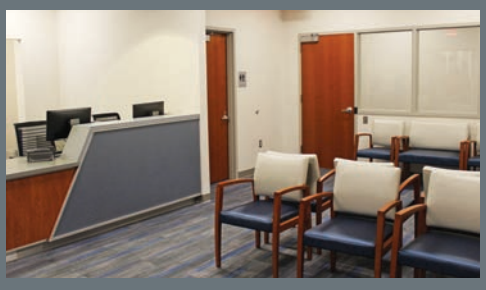
**"I'm thankful I'm here to raise my daughter," says Sukhminder Lehar *(right)*, with her husband Ranjot. "I'm in very good hands and just taking things one day at a time. I have tremendous trust in Dr. Danish, Rutgers Cancer Institute of New Jersey, and Robert Wood Johnson University Hospital."**

Lehar's laser ablation was performed in August 2014. "The procedure begins with a navigational MRI – putting the patient's brain images into a GPS system," explains Danish. "In the operating room we place the laser into the part of the brain we are targeting. All it requires is a two millimeter opening in the skull. The patient moves back to the MRI, where the tumor is ablated with real-time MRI guidance. Recovery is quick and patients usually go home the next day."

Amazed at how good she felt after the surgery, Lehar returned to Louisiana. She was back to work in two weeks and no further treatment was required. She had regular MRIs and Danish reviewed them. "He said if something happened, we would address it," she says. The thought of a recurrence was never far from her mind. So in November 2015 the family relocated to New Jersey, accompanied by Lehar's mother, to be closer to her care team.

## A New Location for Busy Clinical Programs

**Rutgers Cancer Institute of New Jersey's Brain and Spine Tumors Program, Head and Neck Program, Advanced Neurosurgery Program and Neuropsychology** have a new home. Patients now have access to innovative care at a new campus location at nearby 10 Plum Street in New Brunswick. The programs that specialize in the treatment of cancers, as well as non-cancer diagnoses, feature experts including neurosurgeons, neuro-oncologists, otolaryngologists, head and neck surgeons, radiation oncologists, neuropsychologists, nurses, and rehabilitation specialists all in one location. ■



***For additional information, visit: cinj.org/plumstreet.***



PHOTOS BY: DEBBIE VOGEL

**"For all physicians to be in one location means that patients can see more than one involved doctor at the same visit, thereby making more efficient use of their time and energies," notes Robert Aiken, MD (left), director of neuro-oncology at Rutgers Cancer Institute and another member of Sukhminder Lehar's care team.**

## *In Good Hands*

In June 2016 an MRI showed another recurrence of the same tumor. In August she had a second laser ablation. The surgery was followed by chemotherapy, which is being administered by Robert Aiken, MD, the director of neuro-oncology at Rutgers Cancer Institute and associate professor of medicine at Rutgers Robert Wood Johnson Medical School. A great advantage of Rutgers Cancer Institute is the team approach to coordination of care across multiple disciplines.

Lehar is on a regimen of temozolomide, an oral chemotherapy that has been effective in treating some brain cancers. She takes the drug for five days every four weeks. "The chemotherapy is hard," she admits. "I am very tired and somewhat nauseated while I'm taking it, but once the cycle is over I feel pretty good – well enough to be working two days a week."

"Laser ablation is new, so there is much we don't know about its long-term impact," says Danish. "What we do know is that it has made a tremendous impact on the quality of life for patients with difficult or recurrent brain tumors. They can come to the hospital, have laser ablation, and stay just one day. They quickly return to their normal life, whatever that may be. If they had to have open surgery, the hospital stay would be longer, the recovery much more difficult, and we deal with other potential complications." Danish continues to monitor Lehar for recurrence. "She is doing very well and the tumor is under control. If something else happens, we'll address it."

"I'm thankful I'm here to raise my daughter," says Lehar. "I'm in very good hands and just taking things one day at a time. I have tremendous trust in Dr. Danish, Rutgers Cancer Institute of New Jersey, and Robert Wood Johnson University Hospital." ■

PHOTO BY: DEBBIE VOGEL

PHOTO BY: NICK ROMANENKO

# *Helping* Those *Near and Far*

A native of Germany who was transferred by his employer to New York City at age 20, spent 30 years living in the Carolinas and moved to his current Alaskan home in the early 2000s, **Hubert 'Hugh' Bertmaring** is no stranger to travel. It was while spending time at his vacation home in Arizona during a regular check-up with his physician that he learned he had prostate cancer. The diagnosis would eventually lead to more travel for this 68-year old outdoorsman – back to the East Coast and Rutgers Cancer Institute of New Jersey for a clinical trial.

BY MICHELE FISHER

PORTRAITS BY NICK ROMANENKO

It was in late 2014 that a cause for concern with Bertmaring's health arose, as his Arizona doctor at that time told him his prostate specific antigen (PSA – a protein released by the prostate that when found in elevated levels in the blood could be an indicator of prostate cancer) level was at 26.0 ng/mL. A measurement of 4.0 ng/mL and below is considered normal for most men. A tissue biopsy came back negative and Bertmaring was told to come back in six months for a re-check. A former commercial fisherman and seafood quality program manager, Bertmaring now works part time auditing the wild and sustainable seafood supply chain and travels North America extensively for his job. This is in between leisurely visits with his grown sons in Arizona and Pennsylvania and wife Christina's grown children in Oregon and in Anchorage, Alaska – a few hours away from their home near the city of Kenai and the Kenai River, a body of water known to sports fishing enthusiasts where a world record 97-pound, 4-ounce king salmon was caught. Bertmaring himself boasts a 62-pound king salmon catch, noting he loves to fish and hunt whenever possible in his beautiful surroundings. "With its cold, short winter days, Alaska reminds me of northern Germany where I grew up. The air is clean and the land is spacious. It's a beautiful state," Bertmaring shares. Coupled with his active outdoor lifestyle, his busy schedule didn't bring him back to Arizona for his re-check until a year later in November 2015. It was then he learned of the diagnosis.

**Hubert "Hugh" Bertmaring, a former commercial fisherman, who loves to fish and hunt, boasts catching a 62-pound king salmon near his home in Anchorage, Alaska.**

**"I looked at overall survival for men with metastatic disease who had a prostatectomy and found some international studies that had encouraging results," says Bertmaring. "Rutgers Cancer Institute had the type of clinical trial I was looking for, and after researching Dr. (Isaac) Kim and learning he has performed more than 1,500 robotic prostatectomies throughout his career, I felt it was the right option for me."**

Within a few weeks he was receiving androgen deprivation – or hormone – therapy. It is a standard of care treatment that lowers the level of hormones that cancer cells need to grow. Surgery to remove the cancer and the prostate (prostatectomy) is also common for localized disease that has not spread beyond the prostate, thus Bertmaring was preparing to undergo such a procedure in late February 2016. It was during pre-surgery testing that a bone scan indicated metastasis – the cancer had spread to his bones. This was unfortunate news for Bertmaring, as prostatectomy is not standard care once the cancer spreads. His surgery was cancelled and a chemotherapy regimen, another common treatment option for patients with metastatic prostate cancer, was planned. Told he might live four to five years with metastasis, Bertmaring went home to Alaska and endured five months of therapy. "I actually felt good and even built another full bathroom in our log cabin during that time! My PSA came down to 2.6, and I was quite pleased with that, but a month after stopping chemotherapy, my levels rose to 3.2," he recalls. Not comfortable with the rising number, Bertmaring started doing some research and learned there have been cases in which men diagnosed with metastatic prostate cancer have undergone a prostatectomy.

"I looked at overall survival for men with metastatic disease who had a prostatectomy and found some international studies that had encouraging results," he shares. Familiar with clinical trials that test new drugs or procedures, and in many cases may be the only treatment option available beyond a standard therapy that has failed, Bertmaring started checking major cancer centers on the West Coast of the continental U.S. for a surgery trial in which he could enroll. Finding none, he scoured ClinicalTrials.gov and discovered one at Rutgers Cancer Institute testing the feasibility of what is known as cytoreductive prostatectomy in men with newly diagnosed metastatic disease. Cancer typically doesn't travel well, but Bertmaring didn't think twice about


**Hugh Bertmaring**, an optimistic outdoorsman, was looking forward to resuming his favorite pastimes after robotic prostatectomy. Within a month of undergoing the procedure at Rutgers Cancer Institute of New Jersey, he and his wife Christina completed a 5K walk near their Arizona vacation home.

the 4,500 mile distance. "Rutgers Cancer Institute had the type of clinical trial I was looking for, and after researching Dr. (Isaac) Kim and learning he has performed more than 1,500 robotic prostatectomies throughout his career, I felt it was the right option for me," he says. He made a call and by September 2016, Bertmaring flew to New Jersey for testing to see if he was a candidate for the clinical trial. After qualifying, he was scheduled for surgery a few weeks later.

## Working the Plan

Isaac Yi Kim, MD, PhD, is the chief of urologic oncology at Rutgers Cancer Institute who manages the care of prostate cancer patients through surgery, including robotic, laparoscopic and conventional procedures. He also conducts prostate cancer research and is the principal investigator of the clinical trial in which Bertmaring took part. "Systemic therapy and hormone therapy are effective at first for men with advanced or metastatic prostate cancer, but eventually the cancer becomes resistant to these drugs and they stop working. And surgery is typically not recommended for men with metastatic disease.

**"As a National Cancer Institute-designated Comprehensive Cancer Center, Rutgers Cancer Institute has a responsibility to explore and test new treatment modalities for all types of cancer. Along with everyday heroes like Mr. Bertmaring who willingly participate in clinical trials, we are able to further advance our understanding of this collection of diseases," says Isaac Yi Kim, MD, PhD *(above left)*, who greets his patient during the photo shoot for this story, prior to a scheduled follow-up visit.**

Through our trial we want to see if adding surgery to remove as much of the cancer as possible along with the prostate prior to administering hormone therapy and/or chemotherapy is better than or just as good as systemic therapy by itself," explains Dr. Kim, who is also an associate professor of medicine at Rutgers Robert Wood Johnson Medical School. "There is some evidence that the combination of surgery followed by additional therapy may prolong survival in prostate patients with metastatic disease."

Using a joystick to maneuver tiny surgical instruments from a console in a space adjacent to the actual operating room at Robert Wood

Johnson University Hospital – the flagship hospital of Rutgers Cancer Institute – Kim used a robotic device to remove Bertmaring's prostate and 31 lymph nodes from his groin area. Patients who undergo a robotic prostatectomy versus conventional surgery typically have less blood loss and shorter hospital stays. The robotic procedure also boasts a quicker recovery of urinary and sexual functions. It was concerns over these latter quality of life issues that other doctors shared with Bertmaring as possible risks to consider. Bertmaring was told that it might take between a month and a year to fully regain these functions, but he notes he felt "back to normal" some six weeks later after having the robotic procedure with Kim, who is quick to note not everyone recovers in the same timeline.

**Patients who undergo a robotic prostatectomy versus conventional surgery typically have shorter hospital stays and boast a quicker recovery. Bertmaring had no complications after his robotic procedure with Dr. Kim. He felt "back to normal" and ready to take advantage of the great fishing near his Alaskan home.**

## Back to Work and Play

Overall, Bertmaring had no complications from the surgery and pain was minimal. "After the pain medication wore off, I was a bit sore, but I expected that," he says. Despite being released relatively quickly, Bertmaring was urged to stay in town for 10 days to make sure he would be okay for travel. An avid fast walker, a 250 yard stroll around the hotel where he stayed during that time was tough at first, he says, but he knew it would get easier. Along with hunting, fishing and working out, this outdoorsman was looking forward to resuming another favorite pastime. "I asked Dr. Kim how quickly I could get back to playing golf. I was happy when he told me only three weeks," Bertmaring muses. Within a month, he and Christina completed a 5K walk near their Arizona vacation home.

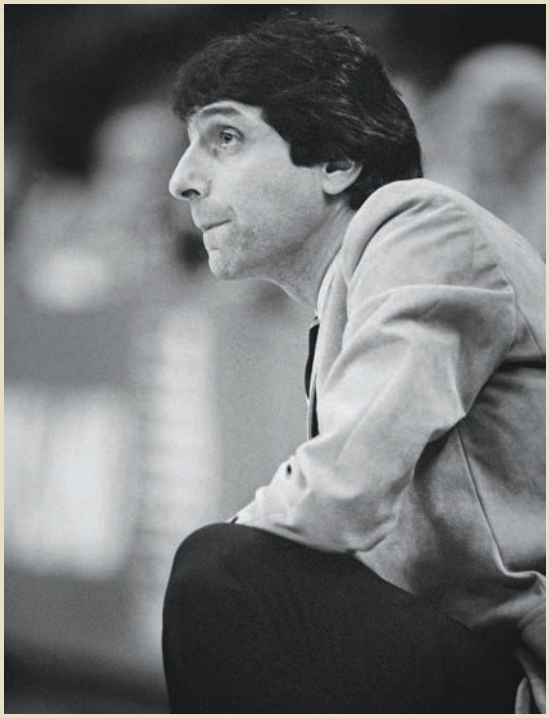
As part of the treatment protocol, Bertmaring will take hormone therapy for as long as it will work. His last treatment injection given in November 2016 will last for six months. Bertmaring's post-surgery PSA level was at 0.2, and during a visit with Kim earlier this year, he learned that number dropped even more to 0.1. He also will have regular check-ups including blood work every few months over the next three years, noting he is happy to be in the "good hands of Dr. Kim and the Rutgers Cancer Institute team." But Bertmaring is equally pleased that Kim and colleagues communicate directly with his doctors in Alaska and Arizona so that he can have his care managed wherever he is. Thinking about what it means to take part in a clinical trial, Bertmaring reflects the experience was very positive. "I hope my participation gives reassurance to someone else going through something similar. Everyone is different and needs to judge their case based on their own needs, but physically, I felt good and it was right for me. I feel very optimistic going forward."

"As a National Cancer Institute-designated Comprehensive Cancer Center, Rutgers Cancer Institute has a responsibility to explore and test new treatment modalities for all types of cancer. Along with everyday heroes like Mr. Bertmaring who willingly participate in clinical trials, we are able to further advance our understanding of this collection of diseases," adds Kim. "Our mission of fighting cancer is not border specific. As this story illustrates, the research being conducted at Rutgers Cancer Institute not only impacts those who live in New Jersey and the region, but also beyond." ■

# Making A Difference

## Full Circle

**For** more than a decade, the V Foundation for Cancer Research has supported the investigational efforts of New Jersey's only NCI-designated Comprehensive Cancer Center to advance its goal: victory over cancer. Most recently, Rutgers Cancer Institute researcher **Michael L. Gatza, PhD**, was awarded a $200,000 V Scholar Grant, which supports research projects initiated by young faculty early in their careers. Dr. Gatza's project is examining a cell pathway in triple-negative breast cancer to identify what regulates the messaging in this pathway so that personalized therapeutic strategies can be developed for treatment.



ROGER WINSTEAD

***Jim Valvano on the sidelines.***

The V Foundation's ties to Rutgers, however, date back to 1964 when founder Jim Valvano (nicknamed Jimmy V) played point guard for the Rutgers men's basketball team. In his final season, Valvano led the team to a third-place finish in the exclusive 1967 National Invitation Tournament.

Valvano's professional career also be-

## Fine Tuning the Message

As you read above, Rutgers Cancer Institute of New Jersey researcher **Michael L. Gatza, PhD**, is the recipient of a $200,000 V Scholar Grant that is helping to support his exploration of a cell pathway in triple-negative breast cancer. The goal: to identify what regulates the messaging in this pathway so that tailored treatment strategies can be developed. Thanks to this support from the V Foundation and other funders, Dr. Gatza is learning more.

"Each breast tumor contains a unique set of genetic mutations that contribute to tumor growth and response to treatment. This means that each patient will respond differently to specific anti-cancer drugs. Triple-negative breast cancers are an aggressive form of breast cancer. Treatments used for this disease often do not work and may have harmful side-effects; therefore, we need to better understand what mutations cause these tumors. This knowledge will allow us to develop new therapies, personalized for each patient, to improve breast cancer treatment," notes Gatza, who is part of Rutgers Cancer Institute's Genome Instability and Cancer Genetics Research Program and senior investigator.

Gatza and colleagues examined what is known as the PI3K/Akt pathway inside cells. This pathway is active in triple-negative breast cancer and is responsible for driving various cell functions including cell growth and survival. When the PI3K/Akt pathway is active in other forms of cancer, it often responds to drugs targeting this pathway but triple-negative breast tumors are often resistant to these drugs. "These drugs may not work for these patients because few mutations are present in genes that are known to regulate this pathway. It was our aim to understand what regulates PI3K/Akt messaging in triple-negative breast cancer," says Gatza, who is also an assistant professor of radiation oncology at Rutgers Robert Wood Johnson Medical School.

Using genomic analysis of more than 1,000 breast cancer patients, Gatza and colleagues from Rutgers and Lineberger Comprehensive Cancer Center at the University of North Carolina at Chapel Hill, determined that SOX4 is mutated in a large percentage of triple negative breast cancers and showed that this gene regulates PI3K/Akt signaling. "While the precise mechanisms by which SOX4 activates PI3K signaling in breast cancer remain unknown, our data suggest that an emphasis should be placed on elucidating these methods. Our data also suggest that SOX4 may represent a novel therapeutic target and/or biomarker for current therapies in the PI3K-family," adds **Gaurav Mehta, PhD**, who is a post-doctoral researcher in the Gatza Laboratory and is the lead author of recently published research on this topic. ■

*Results of this research were published in the February 2017 online edition of 'Breast Cancer Research and Treatment' (DOI 10.1007/s10549-017-4139-2).*

gan at Rutgers as the coach of the freshman basketball team. Following that, he continued his passion for coaching, most notably as head coach at North Carolina State University where his team claimed the 1983 NCAA Championship, before moving on to become a broadcaster for ESPN and ABC Sports.

At the age of 46, Valvano was diagnosed with bone cancer, but he refused to let that diagnosis define him. A few short months before his passing, Valvano was presented with the Arthur Ashe Courage and Humanitarian Award at the 1993 ESPY Awards. During his inspirational acceptance speech, he joined forces with ESPN to announce the formation of the V Foundation for Cancer Research, whose motto is "Don't give up . . . Don't ever give up!"®

"V Scholars are awarded grants through an intensely competitive evaluation by the V Foundation's Scientific Advisory Board," said Joseph Moore, MD, medical director of Duke Raleigh Cancer Hospital and member of the V Foundation's Scientific Advisory Board. "It is very gratifying that Dr. Gatza's award is given to an institution so dear to Jim's heart. He would be ecstatic!" Since its inception, the V Foundation has awarded over $170 million in cancer research grants nationwide, including a near $1 million to Rutgers Cancer Institute through the years.

This year marks the 50th anniversary since the 1967 team's legendary moment in Rutgers basketball history, an ideal time to honor Jim Valvano's legacy: unifying his unforgettable history at Rutgers University with his passion and drive to eliminate cancer by funding cutting-edge research efforts, thereby supporting the mission of the foundation he co-founded. Together, with support from the V Foundation for Cancer Research, Rutgers Cancer Institute continues to fight to achieve victory over cancer. ■

## Thank you, St. Baldrick's!

**Childhood** cancer patients depend on clinical trials to find better, safer cures that can prevent lifelong damage as a result of radiation and chemotherapy. Thanks to a $50,000 infrastructure grant from the St. Baldrick's Foundation, Rutgers Cancer Institute of New Jersey will be able to expand access to its clinical trials for the youngest of patients.

Despite the increase of childhood cancer survival rates in the last two decades, adolescent and young adult (AYA) patients have had minimal improvement in cure rates. Contributing to this statistic is the AYA population's low numbers of participation in clinical trials. Funding from the grant will ensure that more AYA patients can be treated by clinical trials with the most innovative drugs and therapies available at Rutgers Cancer Institute.

"Enabling access to clinical trials for more adolescent and young adult cancer patients is critical, as many in this population may not qualify for the adult clinical trials that could benefit them, despite their young age. Conversely, some young adults whose care may be best understood and managed by a pediatric practitioner may not be eligible for applicable pediatric protocols," notes Rutgers Cancer Institute of New Jersey Pediatric Hematology/Oncology Section Chief **Richard Drachtman, MD**, who is also a professor of pediatrics at Rutgers Robert Wood Johnson Medical School. "This grant will afford our clinical research nurses the additional time and resources needed to explore specific trials and match AYAs so that they can achieve the most benefit from their cancer treatment. We thank the St. Baldrick's Foundation for its generous support in helping our team address this challenge." ■

St. Baldrick's FOUNDATION
Conquer Childhood Cancers

## Kudos

NICK ROMANENKO

**The Hugs for Brady Foundation awarded the 2017 Dr. Randy Siegel Medical Humanitarian of the Year honor to the Pediatric Hematology/Oncology Program at Rutgers Cancer Institute of New Jersey and the staff of the Inpatient Pediatric Hematology/Oncology Unit and Child Life Program at The Bristol-Myers Squibb Children's Hospital (BMSCH) at Robert Wood Johnson University Hospital. The award presented at the foundation's March gala event was accepted by Richard Drachtman, MD, section chief of the Pediatric Hematology/Oncology Program at Rutgers Cancer Institute and professor of pediatrics at Rutgers Robert Wood Johnson Medical School. Dr. Drachtman is also the director of the Regional Comprehensive Sickle Cell Center at BMSCH and the principal investigator for the Children's Oncology Group at Rutgers Biomedical and Health Sciences. Drachtman and team were recognized for their efforts in fighting pediatric cancer.** ■

# Making A Difference

## Honoring their Journey

**As** you enter Rutgers Cancer Institute, a series of frosted glass panels line the stairway to the second floor. These panels are engraved with the names of those we have lost to cancer, honoring their journey and memorializing their lives – creating our Memorial Wall.

***"We all want to have an impact on the world – to make a difference. We want the people dearly loved by us to be remembered by others. The Memorial Wall accomplishes both – and it makes a difference in the lives of future patients." — Rutgers Cancer Institute Social Work Manager, Barbara Hale, MSW, LCSW***

DEBBIE VOGEL

Selecting how to remember a loved one is a very personal choice. Many families choose to direct gifts to Rutgers Cancer Institute in the name of their loved one or to fund an area that is critical to the mission of the Cancer Institute – such as research, treatment, patient education or other program. When memorial gifts total $2,500 or more, families may elect to include the name of their loved one on the Memorial Wall and attend a special dedication ceremony. Through this act of generosity, families create a legacy in their loved one's name – the result is support of research that translates into novel treatment options as well as programs that span the many facets of a cancer patient's journey. ■

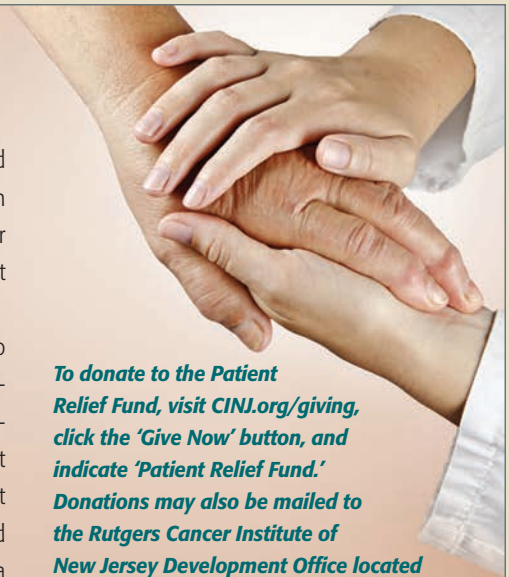
***To learn more, visit cinj.org/giving.***

## Patient Relief Fund

**Cancer** devastates all patients and their families and can easily create hardships among the strongest and most economically secure families. For some patients, these hardships, if ignored, could prevent them from getting the treatment they require. The Patient Relief Fund at Rutgers Cancer Institute of New Jersey, consisting totally of philanthropic dollars, helps to meet the urgent needs of patients in financial crisis.

A cancer diagnosis and the subsequent treatment are disruptive to the patient, their social network, and their finances. There are the obvious expenses of treatment, including copays and deductibles, as well as many associated expenses, such as transportation and dependent care. Many patients and families experience a significant change in income due to disability, reduced hours, or loss of employment, which may also impact insurance benefits and coverage.

The Patient Relief Fund was developed to offer resources to those in need. The program seeks to provide a bridge until the patient can access other, more permanent resources. There is also a flexible dollar limit to maximize the number of people helped and to reduce the likelihood of creating a sense of dependency or entitlement. Expenses that could be covered by the Patient Relief Fund include medications, copays, durable medical equipment and supplies, transportation, and household expenses. ■



***To donate to the Patient Relief Fund, visit CINJ.org/giving, click the 'Give Now' button, and indicate 'Patient Relief Fund.' Donations may also be mailed to the Rutgers Cancer Institute of New Jersey Development Office located at 120 Albany Street, Tower One, Suite 305, New Brunswick, NJ 08901 – make checks payable to 'RUF-CINJ' and indicate 'Patient Relief Fund' in the memo section. For questions, please call 848-932-8013.***

# Partner Spotlight

## A Visit from Congressman Donald M. Payne, Jr., to Rutgers Cancer Institute of New Jersey at University Hospital


PHOTOS BY: DEBBIE VOGEL

Representatives of the American Association for Cancer Research (AACR), Rutgers Cancer Institute of New Jersey and University Hospital attended a recent roundtable with Congressman Donald M. Payne, Jr. The roundtable discussion highlighted collaborative efforts that have resulted in significant advances in cancer research, using the example of early detection and prevention in colorectal cancer, the importance of robust and sustained funding for lifesaving medical research, and other important issues such as access to care and cancer disparities. "As healthcare leaders we often devote much of our energies into studying advanced stage disease. However, we can make a greater impact on saving lives if we focus more on identifying and addressing cancer at an earlier stage or preventing it altogether with an emphasis on screening, early detection and education. We should also strive to address challenges such as medical literacy, cultural sensitivity, access and availability with regard to cancer screenings in the community," noted Rutgers Cancer Institute of New Jersey Director **Steven K. Libutti, MD, FACS**. Following the discussion, Congressman Payne toured the laboratories, treatment infusion area and patient library at Rutgers Cancer Institute of New Jersey at University Hospital in Newark. ■

***Above, from left: Karen Knudsen, PhD, AACR Science Policy and Government Affairs Committee member and director, Sidney Kimmel Cancer Center at Thomas Jefferson University; Justin Sambol, MD, senior associate dean for clinical affairs, Rutgers New Jersey Medical School; Congressman Donald M. Payne, Jr.; John N. Kastanis, MBA, FACHE, president and chief executive officer, University Hospital; Steven K. Libutti, MD, FACS, director, Rutgers Cancer Institute of New Jersey; Susan Goodin, PharmD, interim director, Rutgers Cancer Institute of New Jersey at University Hospital; Bruce G. Haffty, MD, chair, radiation oncology, Rutgers Cancer Institute of New Jersey. ■ Left: Congressman Donald M. Payne, Jr. (left), learns more about research being conducted in the laboratory of Ian Whitehead, PhD.***

# Survivors' CORNER

## David August, MD

In early November, 2015, **David August, MD**, interim chief of the Division of Surgical Oncology and Chief of the Section of Gastrointestinal Surgery at Rutgers Cancer Institute of New Jersey, noticed some swollen lymph nodes in his right neck. He had a viral syndrome the week before, so he thought it was just a reaction to the cold symptoms he had just experienced. Nevertheless, as a cancer surgeon with more than 30 years of experience, it also crossed his mind that the swollen lymph nodes could be a sign of something more serious. As he would do for any of his patients with similar finding, Dr. August reassured himself that it was likely not significant, but that if it persisted for more than three weeks it should be checked out. When the enlarged lymph nodes had not gone away, he closely followed his own advice (even though he otherwise felt fine) and sought attention from one his colleagues to further evaluate the condition.

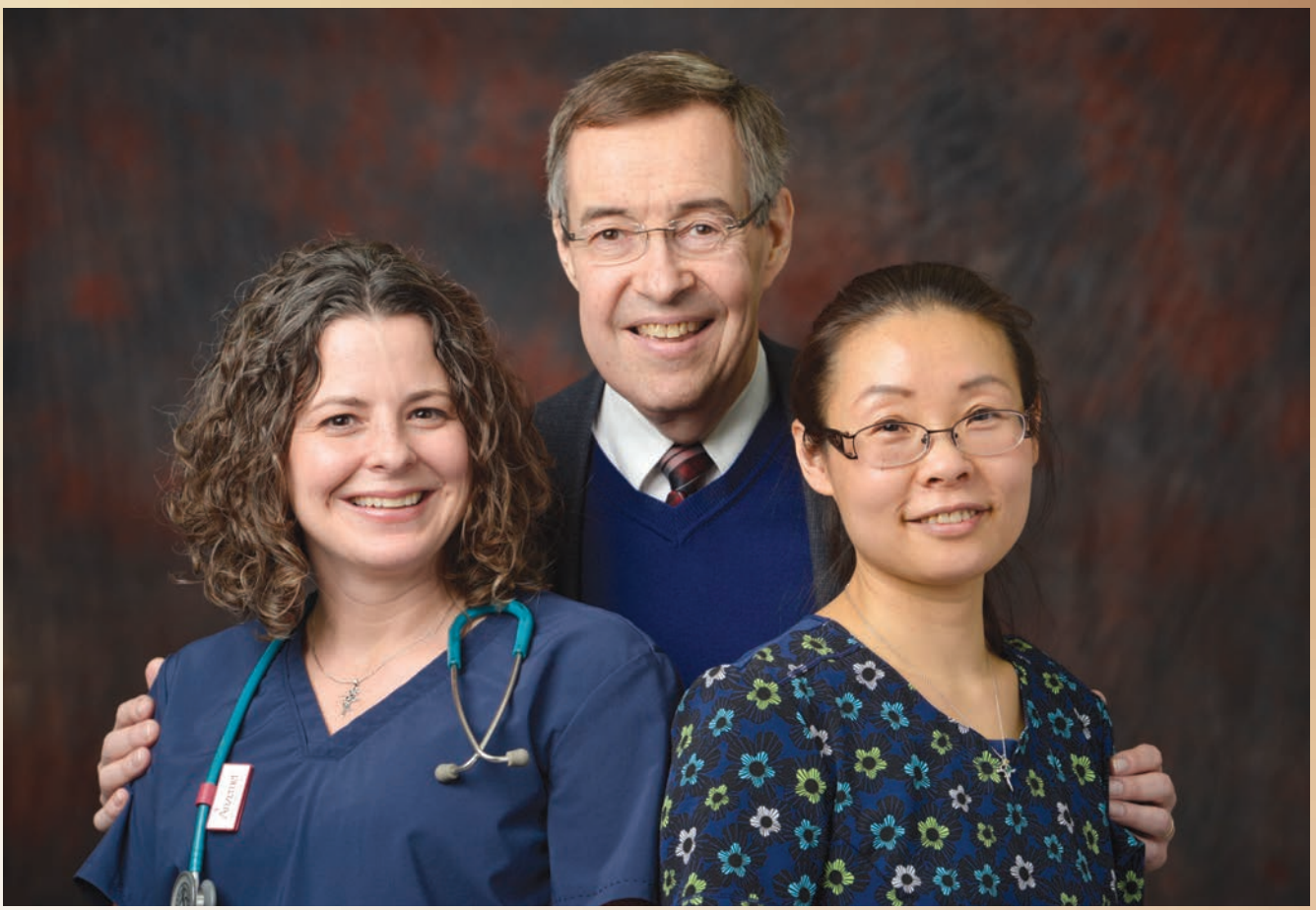
**Stanley Trooskin, MD, FACS**, a head and neck endocrine surgeon with Rutgers Robert Wood Johnson Medical Group, suggested a minimally invasive, ultrasound-guided, fine-needle biopsy – the result of which revealed carcinoma. August was stunned, but without skipping a beat, asked the crucial question, "Where did it come from?" Carcinoma cells do not develop in lymph nodes. They spread to lymph nodes from a cancer at another site. Was this "regional disease," or did it represent incurable "metastatic disease" from a distant site such as the pancreas or stomach (ironic, as these are two organs that August often operates on to help cure cancers in his patients).

Further evaluation showed that the primary tumor arose in a salivary gland near his right cheek. These tumors are rare but are potentially curable with the combined use of surgery, radiation therapy, and chemotherapy. That's exactly the approach designed by his treatment team, which included head and neck surgeon **Soly Baredes, MD**, from Rutgers New Jersey Medical School; Rutgers Cancer Institute interim Associate Director for Clinical Science, **Joseph Aisner, MD**, who "captained" the team and administered postoperative chemotherapy; and Rutgers Cancer Institute radiation oncologist **Sung Kim, MD**, who specializes in both the treatment of head and neck cancers and in the use of proton beam radiation therapy. Proton beam therapy is a new technology available in only a few centers in the tri-state area (including Rutgers Cancer Institute and its flagship hospital Robert Wood Johnson University Hospital) that can precisely focus the therapy on the area at risk for cancer recurrence without injuring surrounding tissues. The team, which also included two Rutgers Cancer Institute nurses who were August's primary chemotherapy infusion specialists, **Kira Lynn Voitle, RN, BSN, OCN** and **Yuk 'Agie' Wong, RN**, saw him through the bulk of his therapy over the next eight months. He notes it was a difficult time for him, as he was often exhausted and could not work, but he has now returned to his surgical and leadership duties full time. He recently completed a treatment regimen of a monoclonal antibody that specifically targets any cancer cells that still remain. The use of this antibody was suggested by the results of a genomic analysis of his tumor, a service provided through the Precision Medicine Program at Rutgers Cancer Institute.

August, who also is a professor of surgery at Rutgers Robert Wood Johnson Medical School, shares some insight about his journey.

**Q:** *You have shared the phrase, "you have cancer," numerous times throughout your career – what went through your mind when those words were said to you?*

**A:** I think this is where my training and background as a cancer specialist made it easier for me than for many of my patients. Once I overcame the initial shock, I was able to immediately focus on what needed to be done. And I knew that as a member of Rutgers Cancer Institute, I was in the best place to assemble the right team to assure that I received the best care possible. And for me, they were the 'Dream Team.' I knew well their expertise. What I then knew only second hand, but now have seen up close, is their compassion and commitment to their patients. They have been there every step of the way with my family and me. The physicians, nurses, and staff have always wanted to know how I am doing, not my cancer, but me! And knowing them as well as I do, I am certain they treat all of their patients that way, not just me. And I would be remiss if I didn't acknowledge perhaps the most important member of my 'Dream Team,' my wife, Barbara. She has been with me every step of the way and bore the brunt of my frustrations and struggles. I can't imagine how patients get



NICK ROMANENKO

***David August, MD and two of his 'extended family' members, Kira Lynn Voitle, RN, BSN, OCN (left) and Yuk 'Agie' Wong, RN, who saw him through the bulk of his chemotherapy.***

through a cancer diagnosis and treatment without a strong family partner.

**Q:** *What kind of advice do you share with your patients and did you find yourself heeding that advice?*

**A:** Follow the advice that I myself followed. Choose the right experts to take care of you. Be open and honest with your family. Prepare for the worst but be confident that things will turn out well.

**Q:** *Now that you've gone through this experience, do you think you approach your patients differently?*

**A:** I am often asked this question, and I think my personal experience has reinforced the approach that I have tried to take with my patients over the years. Perhaps the additional lesson that I have learned is to listen to my patients about the "small stuff." Yes, there are big life and death issues involved with cancer, but often it is the little things that are the most frustrating. For example, I can't wait until I can eat a bagel again without having jaw pain! It is a trivial thing in the big picture, but when I can do that I will know that my life has returned to near normal. I try to let patients express their frustrations and hopefully alleviate some of their concerns to improve their overall sense of well-being. ■

JOHN O'BOYLE

*August shares that some treatment side effects have made it difficult for him to get outside on his bicycle (many of his patients know him as a 100-mile a week biker!). With that, he is looking forward to warm spring days to resume bicycling, and is hoping to participate in the 'Century for the Cure' charity bike ride that supports Rutgers Cancer Institute on October 1. He also adds his cancer experience has helped him and his wife Barbara focus on the importance of family, noting recent trips this past fall and winter to visit their youngest son, Eitan, at Duke University, and their oldest son, Sandy, in Minneapolis. They're also looking forward to visiting with their middle son, Harry, who is graduating from Lehigh University this spring. And already having visited 49 states in the U.S., August is certain that a trip to Hawaii to finish the list will be planned in the near future.*

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## Scarlet Strong

*Showing service and leadership both on and off the court, members of the Rutgers men's basketball team along with Coach Steve Pikiell spent some time with patients this past winter in the pediatric hematology/oncology clinic at Rutgers Cancer Institute of New Jersey.*

PHOTOS BY: DEBBIE VOGEL