

RUTGERS

Cancer Institute
of New Jersey

RUTGERS HEALTH

Summer ■ 2017

CANCER *Connection*

*Strong Faith =
Strong Finish:*

*A cancer-causing virus
from a blood transfusion was
no match for a pregnant
Sandrine Holloway-Davis.*



Director's Corner



A diagnosis of cancer is never easy, but to face it alone can be more than a challenge. We at **Rutgers Cancer Institute of New Jersey, Rutgers University** and **RWJBarnabas Health** understand that. That understanding is evident in a recently announced letter of intent between Rutgers University and RWJBarnabas Health to create a premier academic health care system – one that is dedicated to leading-edge research and world class health and medical education. But most important, this new venture will provide high-quality patient care that will transform and advance health care in our state including oncology care. It is why we continue to focus on the delivery of integrated cancer care between Rutgers Cancer Institute and the 11 RWJBarnabas Health facilities across the state through our expanded partnership.

For example, if a patient is eligible for a clinical trial or other treatment offered in New Brunswick but they live far away, we'll explore how that therapy may be administered closer to home. Conversely, our community partners know that when their patient needs the comprehensive offerings that a National Cancer Institute-designated cancer center can provide, they know we're here and ready to help.

Our cover story of Sandrine Holloway-Davis, who had a rare virus hardly seen in the United States, illustrates this. Upon realizing a diagnosis of HTLV-1, doctors at **Monmouth Medical Center**, an RWJBarnabas Health facility, recommended Rutgers Cancer Institute as one of the few places in the tri-state area that could manage the unique treatment and bone marrow transplant that was required for her resulting lymphoma (page 8). Postal carrier Patrick Keeley was enjoying work and his Ocean County dream home with his fiancée when he was diagnosed with esophageal

cancer. Following surgery at **Robert Wood Johnson University Hospital**, an RWJBarnabas Health facility, the 90-minute trip each way for chemotherapy treatment was not practical, so our team worked with colleagues at **Community Medical Center in Toms River**, an RWJBarnabas Health facility, to ensure he received the care he needed, when he needed it (page 19).

Our broad reach not only focuses on treatment but prevention and research as well. Thanks to efforts by **Rutgers Cancer Institute of New Jersey at University Hospital**, those in the Newark and greater Essex County region will have access to free breast and cervical cancer screenings through a 'See, Test and Treat' event this fall (page 23). And thanks to supporters like the **Val Skinner Foundation** and those who give toward the annual 'Century for the Cure' bike ride, **Middlesex County Pancreatic Cancer 5K Walk/Run** and numerous golf outings, we are able to help explore new avenues in cancer research and treatment.

Rutgers Cancer Institute together with RWJBarnabas Health represents a broad constellation across our state. While each location shines in its own way, we are committed to collaborating with one another to ensure the residents of New Jersey and beyond are receiving world class care close to home.

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*

RUTGERS

Cancer Institute
of New Jersey

RUTGERS HEALTH

Steven K. Libutti, MD, FACS

*Director
Vice Chancellor, Cancer Programs,
RBHS and Senior Vice President,
Oncology Services,
RWJBarnabas Health*

David A. August, MD

Interim Chief, Surgical Oncology

Joseph R. Bertino, MD

*Senior Scientific Advisor to
the Director*

Kevin Coyle

Chief Financial Officer

Shabbar Danish, MD

Chief, Neurosurgical Oncology

Richard Drachtman, MD

*Interim Chief, Pediatric
Hematology/Oncology*

David J. Foran, PhD

*Chief Informatics Officer
and Executive Director,
Biomedical Informatics*

Shridar Ganesan, MD, PhD

*Associate Director for
Translational Science and Chief,
Molecular Oncology*

Susan Goodin, PharmD

*Executive Director,
Statewide Affairs*

Bruce G. Haffty, MD

*Chief of Staff and Chair,
Radiation Oncology*

Isaac Yi Kim, MD, PhD

Chief, Urologic Oncology

Amanda M. Laird, MD, FACS

Chief, Endocrine Surgery

Edmund C. Lattime, PhD

*Associate Director for
Education and Training*

Sharon Manne, PhD

*Associate Director for
Cancer Prevention, Control
and Population Science*

Janice Mehnert, MD

*Director, Phase I and
Investigational Therapeutics*

Lorna Rodriguez, MD, PhD

*Director, Precision Medicine
and Interim Chief,
Gynecologic Oncology*

Roger Strair, MD, PhD

Division Chief, Blood Disorders

Antoinette M. Stroup, PhD

*Director, New Jersey State
Cancer Registry*

Linda Tanzer

*Chief Administrative and
Operating Officer
and Associate Director for
Administration and Planning*

Deborah L. Toppmeyer, MD

*Chief Medical Officer and
Chief, Solid Tumor Oncology*

Eileen White, PhD

*Deputy Director,
Chief Scientific Officer and
Associate Director for
Basic Science*

Steven Zheng, PhD

*Division Chief,
Cancer Pharmacology*

CANCER Connection

Summer ■ 2017



In This Issue ■ Features:

8 Strong Faith = Strong Finish

An uncommon virus contracted through a blood transfusion led to a challenging cancer diagnosis for Sandrine Holloway-Davis while in the middle of pregnancy. Specialists at Rutgers Cancer Institute of New Jersey worked with her to tackle her disease.

By Michele Fisher

14 An Individualized Fight against Lung Cancer

Tailored treatment through an 'out of the box' approach by a multidisciplinary team at Rutgers Cancer Institute of New Jersey enabled retiree Jim Hufnagel to battle advanced stage lung cancer following a misdiagnosis of 'frozen shoulder.'

By Mary Ann Littell



19 Back on the Route

A gastrointestinal 'inconvenience' turned out to be a lifesaver for postal carrier Patrick Keeley. With the help of an expert team at Rutgers Cancer Institute of New Jersey to address his esophageal cancer, he's now back to his route.

By Mary Ann Littell



■ Departments:

2 Forefront

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

23 Partner Spotlight

Improved access to cancer screenings and services is the aim of the upcoming 'See, Test & Treat' event at Rutgers Cancer Institute of New Jersey at University Hospital in Newark.

24 Making a Difference

News on how giving and service are making a difference in the fight against cancer at Rutgers Cancer Institute of New Jersey.

28 Survivor's Corner

More than 250 cancer survivors and guests shared an afternoon with Rutgers women's basketball coach C. Vivian Stringer at the Rutgers Cancer Institute of New Jersey annual Cancer Survivors Day Celebration this past June.

Forefront

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

Kudos!

Congratulations

to the New Jersey State Cancer Registry at Rutgers Cancer Institute of New Jersey and the New Jersey Department of Health, for recently achieving three major awards! The registry, led by **Antoinette Stroup, PhD, Lisa Paddock, PhD**, and **Stephanie Hill, MPH, CTR**, collects and analyzes cancer incidence and survival data across the state.

It was honored with the North American Association of Central Cancer Registries Gold Certification for achieving the highest standard for complete, accurate and timely data to calculate standard cancer incidence statistics. The registry also captured the Centers for Disease Control and Prevention National Program of Cancer Registries Registry of Excellence Honor. It was one of 19 state and territorial cancer registries to be recognized for meeting the highest standards for quality data among a pool of 48 registries.

A first place honor was given to the registry for the National Cancer Institute Surveillance, Epidemiology and End Results (SEER) Program Data Quality Profile for meeting – and in some cases, exceeding – all 14 benchmarks for SEER Program registries including completeness and accuracy. “NJSCR is pleased to share this distinction with all the cancer registrars and facilities across the state that work very hard to submit high quality, timely data,” notes Dr. Stroup. ■



We're Growing!

Reaffirming

its commitment to growth and excellence, **Rutgers Cancer Institute of New Jersey** continues to recruit outstanding faculty to enhance program areas. The following lists those who have joined us over the past 18 months. Additional information on these individuals, who are also faculty members at **Rutgers Robert Wood Johnson Medical School**, can be found at cinj.org.



Nrusingh Biswal, PhD, Medical Physicist, Rutgers Cancer Institute and Assistant Professor of Radiation Oncology, Division of Radiation Physics, Robert Wood Johnson Medical School.



Subhajyoti De, PhD, Systems Biologist, Rutgers Cancer Institute and Assistant Professor of Pathology, Division of Medical Informatics, Robert Wood Johnson Medical School.



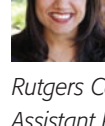
Alexandre Buckley de Meritens, MD, Gynecologic Oncologist, Rutgers Cancer Institute and Assistant Professor of Obstetrics, Gynecology and Reproductive Sciences, Division of Gynecologic Oncology, Robert Wood Johnson Medical School.



Abhishek Dwivedi, MS, Medical Physicist, Rutgers Cancer Institute and Instructor of Radiation Oncology, Division of Radiation Physics, Robert Wood Johnson Medical School.



Dennis Cooper, MD, Co-Director, Blood and Marrow Transplant Program, Medical Oncologist, Rutgers Cancer Institute and Professor of Medicine, Division of Blood Disorders, Robert Wood Johnson Medical School.



Miral Grandhi, MD, Surgical Oncologist, Gastrointestinal/Hepatobiliary Program, Rutgers Cancer Institute and Assistant Professor of Surgery, Division of Surgical Oncology, Robert Wood Johnson Medical School.



Lara Hathout, MD, FRCPC, Radiation Oncologist, Rutgers Cancer Institute and

Assistant Professor of Radiation Oncology, Division of Clinical Radiation Oncology, Robert Wood Johnson Medical School.



Daniel Herranz-Benito, PhD, Researcher, Rutgers Cancer Institute

and Assistant Professor of Pharmacology, Division of Cancer Pharmacology, Robert Wood Johnson Medical School.



Linda Hipps, MD, FACOG, Gynecologist, Rutgers Cancer

Institute and Assistant Professor of Obstetrics, Gynecology and Reproductive Sciences, Robert Wood Johnson Medical School.



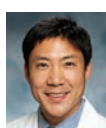
Jasdeep Hundal, PsyD, ABPP-Cn, Director of Neuropsychology and Neuropsychologist, Rutgers

Cancer Institute and Assistant Professor of Medicine, Division of Medical Oncology, Robert Wood Johnson Medical School.



Yanying Huo, PhD, Supporting Scientist, Rutgers Cancer Institute and

Instructor of Radiation Oncology, Division of Radiation Cancer Biology, Robert Wood Johnson Medical School.



Thomas Jang, MD, MPH, FACS, Urologic Oncologist, Rutgers Cancer

Institute and Assistant Professor of Surgery, Division of Urology, Robert Wood Johnson Medical School.



Maria Kowzun, MD, Surgical Oncologist, Stacy Goldstein Breast

Cancer Center, Rutgers Cancer Institute and Instructor of Surgery, Division of Surgical Oncology, Robert Wood Johnson Medical School.



Shicha Kumar, MD, FACS, Surgical Oncologist, Stacy Goldstein Breast

Cancer Center, Rutgers Cancer Institute and Assistant Professor of Surgery, Division of Surgical Oncology, Robert Wood Johnson Medical School.



MiJung Kwon, PhD, Supporting Scientist, Rutgers Cancer Institute and

Assistant Professor of Medicine, Division of Medical Oncology, Robert Wood Johnson Medical School.



Amanda M. Laird, MD, FACS, Chief, Section of Endocrine Surgery and Surgical

Oncologist, Rutgers Cancer Institute; and Associate Professor of Surgery, Division of Surgical Oncology, Robert Wood Johnson Medical School.



Steven K. Libutti, MD, FACS, Director, Rutgers Cancer Institute; Vice

Chancellor for Cancer Programs, Rutgers Biomedical and Health Sciences; Senior Vice President, Oncology Services, RWJBarnabas Health; and Professor of Surgery, Robert Wood Johnson Medical School.



Usha Malhotra, MD, Medical Oncologist, Gastrointestinal/

Hepatobiliary Program, Rutgers Cancer Institute and Assistant Professor of Medicine, Division of Medical Oncology, Robert Wood Johnson Medical School.



Hannah Oh, ScD, MPH, Population Scientist, Cancer

Control Program, Rutgers Cancer Institute and Instructor of Medicine, Division of Medical Oncology, Robert Wood Johnson Medical School.



Coral Omene, MD, PhD, Medical Oncologist, Stacy Goldstein Breast

Cancer Center, Rutgers Cancer Institute and Assistant Professor of Medicine, Division of Medical Oncology, Robert Wood Johnson Medical School.



Lindsay Potdevin, MD, Surgical Oncologist, Stacy Goldstein Breast

Cancer Center, Rutgers Cancer Institute and Assistant Professor of Surgery, Division of Surgical Oncology, Robert Wood Johnson Medical School.



Ruth Stephenson, DO, FACOG, Gynecologic Oncologist, Rutgers Cancer

Institute and Assistant Professor of Obstetrics, Gynecology and Reproductive Sciences, Division of Gynecologic Oncology, Robert Wood Johnson Medical School.



Irina Vergalasova, PhD, Medical Physicist, Rutgers Cancer Institute and

Assistant Professor of Radiation Oncology, Division of Radiation Physics, Robert Wood Johnson Medical School.



Joseph Weiner, MD, Radiation Oncologist, Rutgers Cancer Institute and

Assistant Professor of Radiation Oncology, Division of Clinical Radiation Oncology, Robert Wood Johnson Medical School.



Xiaoqi Xie, MD, PhD, Supporting Scientist, Rutgers Cancer Institute and

Instructor of Medicine, Division of Medical Oncology, Robert Wood Johnson Medical School.



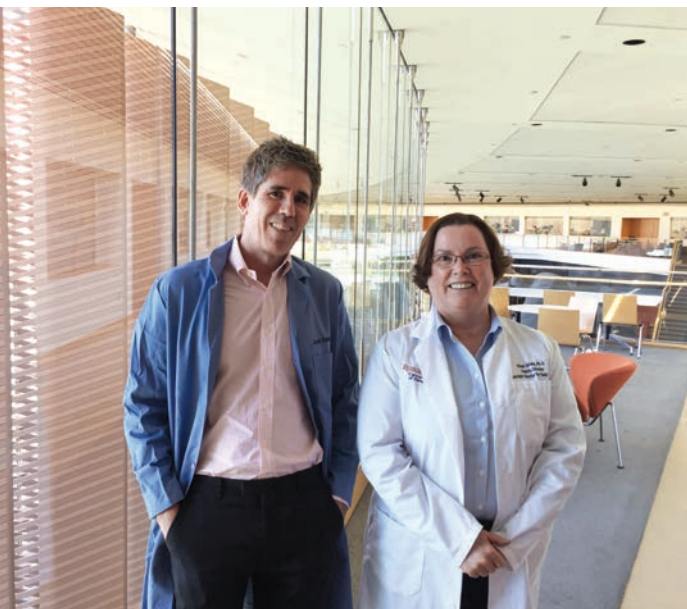
Ziqiang Yuan, MD, Supporting Scientist, Rutgers Cancer Institute and

Assistant Professor of Medicine, Division of Medical Oncology, Robert Wood Johnson Medical School.



Energy Source

Tumors require fuel for growth and obtain this nutrition from the body of the patient in which they reside. This fuel comes in the form of proteins, amino acids, lipids, sugars and other metabolites, which are used to synthesize the building blocks for new cancer cells and to help maintain normal cellular functions. The demand for fuel is most likely higher in cancer cells than most normal tissues, which has led researchers to question: What specific fuels are important for cancer cells? Where do they come from? What are they used for? Can the dependency of tumors on nutrients supplied from the host be therapeutically exploited?



The laboratories of **Eileen White, PhD** (above, right), deputy director, chief scientific officer, and associate director for basic science at Rutgers Cancer Institute of New Jersey and distinguished professor of molecular biology and biochemistry in the School of Arts and Sciences at Rutgers University; and **Joshua D. Rabinowitz, MD, PhD** (above, left), professor in the Department of Chemistry and Lewis-Sigler Institute for Integrative Genomics at Princeton University, aim to answer these questions with the support of a \$2.24 million competing renewal of a grant (R01 CA163591) awarded from the National Cancer Institute.

The research will focus on melanomas and lung cancers caused by mutations in genes known as K-ras and Braf. ■

Welcoming Amanda M. Laird, MD, FACS

Rutgers Cancer Institute of New Jersey is pleased to announce the arrival of **Amanda M. Laird, MD, FACS** (right) as Chief of the new Section of Endocrine Surgery in the Division of Surgical Oncology at Rutgers Robert Wood Johnson Medical School, where she is also an Associate Professor in the Department of Surgery. In collaboration with Rutgers Cancer Institute Director **Steven K. Libutti, MD, FACS** and **Stanley Trooskin, MD, FACS**, chief of general surgery at Rutgers Robert Wood Johnson Medical School, she is leading the creation and operation of a new **Endocrine and Neuroendocrine Tumor Program at Rutgers Cancer Institute**.

Dr. Laird most recently was at Montefiore Medical Center and Albert Ein-

stein College of Medicine where she joined the faculty there as an Assistant Professor in the Department of Surgery in 2012 and served as Director of Endocrine Surgery.

Dr. Laird treats endocrine tumors of the thyroid, parathyroid glands, and adrenal glands. These tumors are uniquely different as they may secrete hormones in excess and may occur as a part of a familial genetic syndrome. She also treats neuroendocrine tumors which have similar characteristics and may occur anywhere throughout the body.

Working closely with a multidisciplinary team that includes surgical oncologists, endocrinologists, medical oncologists, nuclear medicine radiologists, radiation oncologists, nurses, and genetic counselors, Dr. Laird provides coordinated care for patients and tracks their

A New Program

The Endocrine and Neuroendocrine Tumor Program at Rutgers Cancer Institute of New Jersey offers a multidisciplinary, comprehensive approach for the full spectrum of treatment for these unique tumors including medullary thyroid cancer, parathyroid tumors, adrenal tumors and hormone-producing adrenal tumors, adrenocortical cancer and others.

Our team of endocrine surgeons, neurosurgeons, surgical oncologists, endocrinologists, medical oncologists, radiation oncologists, radiologists, nurses, social workers, and genetic counselors collaborate to ensure that each patient is cared for with an individualized approach, providing the most advanced treatment options available. Our clinicians also work closely with our scientists on basic, clinical and translational research activities in an effort to advance our understanding of these unique tumors and provide patients with access to the latest clinical trials and novel therapies.

Since some endocrine and neuroendocrine tumors may occur together within genetic syndromes, we also offer both genetic counseling and a full spectrum of testing, as well as social services support as part of our patient-centered approach. ■

Clinical Trials Corner:

Exploring New Treatments for Pediatric Cancer Patients

Pediatric and young adult patients who have Hodgkin lymphoma that has come back or is resistant to initial treatment can achieve remission and even cure with secondary treatments such as gemcitabine-based chemotherapies followed by a stem cell transplant.

Investigators from the Children's Oncology Group, including **Richard Drachtman, MD** (*below*), clinical section chief of pediatric hematology/oncology at Rutgers Cancer Institute of New Jersey, examined the safety and response rate of two chemotherapy drugs – gemcitabine and brentuximab vedotin – when combined. Dr. Drachtman, who is also a professor of pediatrics at Rutgers Robert Wood Johnson Medical School, shares more:



DEBBIE VOGEL

outcomes as part of clinical research that helps guide advancements in treatment options. Her surgical expertise is in both traditional open methods as well as in minimally invasive techniques.

"What I love most about the field of endocrine surgery is that there is not a 'one size fits all' approach to the care of my patients – an individualized treatment plan is developed for each patient and their tumor type," notes Dr. Laird.

Dr. Laird serves on several committees for both the American Association of Endocrine Surgeons and the Association of Academic Surgeons. Her clinical research has yielded peer-reviewed publications, reviews, book chapters, and both national and international presentations. ■

Q: Why examine this particular combination?

A: We already know that nine percent of patients with Hodgkin lymphoma will have a complete response when treated with gemcitabine. For those with Hodgkin lymphoma that is resistant to initial therapy or has recurred, 34 percent will have their cancer disappear when treated with brentuximab vedotin. We hypothesized that by combining these two treatments, we would see the cancer disappear in at least 60 percent of these patients.

Q: How was the study structured?

A: Between April 2013 and August 2016, 42 patients aged 30 or younger were enrolled (median age 17.4 years) in a clinical trial at Rutgers Cancer Institute and other locations. Thirty-five patients had primary refractory disease or very early relapse. Participants were given gemcitabine and brentuximab vedotin along with a glycoprotein that stimulates stem cell growth. The median duration of therapy



NICK ROMANENKO

was four, 21-day cycles. Patients were evaluated after every two cycles.

Q: What did you find?

A: Out of 40 patients that could be evaluated, 23 had their cancer disappear within four cycles of treatment. Out of those 23, 19 patients had a complete response after two cycles of treatment. Overall a 68 percent complete response rate was seen, which greatly exceeds complete response rates of gemcitabine and brentuximab vedotin when given individually.

Q: What are the implications of these findings?

A: These findings support further examination of this treatment combination. Results of future clinical trials testing these agents could lead to the development of new therapy options for this patient population. ■

The work was presented as part of a poster presentation at the American Society of Clinical Oncology Annual Meeting in June.

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

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

Director of Communications and Public Affairs / Executive Editor:
Candace E. Botnick, MS

Managing Editor / Writer: Michele Fisher

Contributing Writer: Mary Ann Littell

Cover Photo: Jody Somers

Design: Barbara Walsh Graphic Design



DEBBIE VOGEL

Dr. Hanft completed his medical degree at Stanford University, where he also undertook research in neural stem cells while funded by the Howard Hughes Medical Institute. His residency training in neurological surgery was done at Columbia University in New York City, the Neurological Institute of New York and Columbia-Presbyterian Hospital. While a resident, Dr. Hanft's focus was on the surgical management of brain tumors. He then completed a one year fellowship in neurosurgical oncology at the University of Miami, where he continued his focus on brain tumors including pituitary tumors at one of the highest volume brain tumor centers in the country. Dr. Hanft then joined the faculty at Rutgers where he has continued this emphasis on high quality surgery, performed at Robert Wood Johnson University Hospital, an RWJBarnabas Health facility, for tumors of the brain and spine. He shares more about his work.

Q: What are your aims as a brain and pituitary tumor expert?

A: I strongly believe that our current system at Rutgers Cancer Institute allows us to

Simon Hanft, MD is a neurosurgeon who directs the Minimally Invasive Brain Tumor Program as well as the Pituitary Tumor Program at Rutgers Cancer Institute of New Jersey. He specializes in the surgical removal of brain and spine tumors, making use of the latest in technological advances to access these tumors through the least invasive approaches. Dr. Hanft, who is also an assistant professor of surgery at Rutgers Robert Wood Johnson Medical School, works with radiation oncologists to utilize gamma knife radiosurgery for those tumors that do not require traditional surgery.

become the model for how these kinds of tumors are treated. We offer a multitude of specialists in one location, under one roof, who are experienced in handling brain and pituitary tumors. There is more to a brain tumor than just surgical removal, and at Rutgers Cancer Institute we have the neuro-oncology and radiation oncology specialists that are integral to treating and managing these tumors over the long term.

I expect to lead Rutgers Cancer Institute in becoming the highest volume center in New Jersey for tumors of the brain and spine. We have essentially accomplished this already for pituitary tumors, a subset of benign brain tumors. We are quite possibly the highest volume center in the state for these tumors, which we approach through the nose with a high-definition camera known as the endoscope. I perform these surgeries jointly with my otolaryngologist colleague, **Kianoush Sheykholslami, MD, PhD, FACS**, who is the director of the Head and Neck Surgery Program. Our minimal approach often leads to shorter hospitalizations and reduced complications.

Q: What should a patient expect if they are diagnosed with a brain or spine tumor and are referred to you?

A: This kind of diagnosis is obviously a shock to the patient and a real life-altering

moment, but by no means is such a diagnosis a death sentence. We spend considerable time discussing the tumor and all of the possible ways to treat it – including non-surgical options. Patients never leave here feeling uninformed. Since we have all treatment options available, we don't endorse one option over another, which can happen at institutions that don't offer laser ablation or gamma knife, for example.

I emphasize to patients the importance of performing safe, well-informed approaches to these tumors. We really do adopt the Hippocratic "first, do no harm" approach to brain tumors here, and I want patients to understand that we are making recommendations with safety at the forefront of our collective thinking.

Q: What are you most proud of since you became a faculty member here?

A: I think the overall high quality of care we provide and the trust that we have earned from doctors in the community and hospitals around us, and of course that same trust extends to the patients who have come here and had great outcomes. I believe that patients can tell this is a thorough, honest place where we care about doing the right thing.

A New Nursing Leader

Rutgers Cancer Institute of New Jersey has named **Janet Gordils-Perez, DNP, RN, ANP-BC, AOCNP** (below) as its new Chief Nursing Officer. Dr. Gordils-Perez previously served as Director of Oncology Nursing and came to Rutgers Cancer Institute in 2004 from Memorial Sloan-Kettering Cancer Center, where she was an adult nurse practitioner and a clinical research nurse.



DEBBIE VOGEL

"Over the past 13 years, Dr. Gordils-Perez has had a tremendous impact on our clinical operations. She works tirelessly to assure that the nursing program at Rutgers Cancer Institute is exemplary and supports an efficient practice," notes Rutgers Cancer Institute Chief Medical Officer **Deborah Toppmeyer, MD**, who is also a professor of medicine at Rutgers Robert Wood Johnson Medical School.

In her new role, Gordils-Perez is responsible for treatment nursing, advanced practice nursing, pediatric nursing, social work, medical health technician support, and nursing/patient education. She oversees 150 clinical and administrative staff. ■

Style Factor

Can use of hair products have an impact on breast cancer risk for women? That is a question explored by Rutgers University investigators and colleagues from Roswell Park Cancer Institute.

"Evidence from previous studies, including some in animal models and some epidemiologic studies, suggest that exposure to some compounds found in hair products may be a risk factor for developing cancer. But studies done to date have been in limited populations, have focused mostly on hair dyes, and have yielded mixed findings," notes the study's lead author **Adana A.M. Llanos, PhD, MPH** of Rutgers Cancer Institute of New Jersey and Rutgers School of Public Health. With that, Dr. Llanos and colleagues examined use of hair dyes, hair relaxers and cholesterol-based hair products in African-American and Caucasian women. The work appears in the June 2017 online issue of *Carcinogenesis* (<https://doi.org/10.1093/carcin/bgx060>).

The study examined 4,285 African-American and Caucasian women with and without breast cancer aged 20 to 75. They were recruited from New York City and ten New



Jersey counties through 2014 and were participants in the Women's Circle of Health Study. The New Jersey State Cancer Registry was involved in identification of breast cancer cases in New Jersey. Sociodemographics were collected and probable breast cancer risk factors, including family history and lifestyle exposures were established. Breast tumor characteristics from breast cancer patients in the study also were examined.

Investigators found use of dark brown or black hair dyes was associated with a 51 percent increased overall risk of developing breast cancer among African-American women and a 72 percent increased risk of estrogen receptor positive breast cancer among African Americans. They also found use of chemical relaxers or straighteners was associated with a 74 percent increased risk among Caucasians.

"These findings provide support of a relationship between the use of some hair products and breast cancer risk," adds Llanos, but she cautions that there is a need for further examination. ■



This work was supported in part by grants from the National Institutes of Health (P01 CA151135, R01 CA100598, R01 CA185623, P30 CA072720 and K01 CA193527), U.S. Army Medical Research and Material Command (DAMD-17-01-1-0334), the Breast Cancer Research Foundation, and a gift from the Philip L. Hubbell family.



Strong Faith = Strong Finish

In 1980 the assassination of Beatles legend John Lennon and the eruption of Mount St. Helens grabbed headlines in the United States. Delivered with less fanfare was news that a virus known as human T-lymphotropic virus (HTLV-1) was identified — understandably so, as it was found to be prevalent in other parts of the world including Japan, Africa, South America and the Caribbean — not in the U.S. Known to infect T cells (a type of white blood cell), HTLV-1 is commonly transmitted through blood transfusions or breast feeding and can cause leukemia and lymphoma. Screenings for HTLV-1 in donated blood didn't take place in the U.S. until 1988. In Jamaica those screenings started in 1989 — too late for a little girl born in that island nation four years earlier.

Now 32 years old, Sandrine Holloway-Davis recalls how she first learned she had HTLV-1. It was in February 2013 after coming out of a weeklong sedation following the emergency delivery of her first and only child at 29 weeks. It was an unbelievable result, as Holloway-Davis had always been healthy and physically active, even as a child growing up

on her family's farm in a rural, mountainous area of Jamaica. "We had a lot of land — always running up and down — always outside," she recalls. "I always ate a lot of fresh fruit and enjoyed the fresh air. I never felt so poorly. They said pregnancy was the trigger. I learned many Jamaicans have the virus and are asymptomatic until something traumatic happens."

BY MICHELE FISHER ■ PORTRAIT BY JODY SOMERS



When Holloway-Davis was born, she had jaundice and received a blood transfusion not knowing it contained the HTLV-1 virus that would remain dormant in her body until her pregnancy. She enjoyed good health while on the island and through her early years in the U.S., having first come to New Jersey as a student at Georgian Court University to work on her BS/MBA.

She met Henry Odell Davis III – ‘Odell’ as he is called by most – a professional musician who played at the university’s annual gala. They met via Facebook “when it was only for college students,” she notes. He was attending school at the time for a degree in computer science. Their mutual friends on social media let her know Odell was a “very nice guy.” The two hit it off, and as they journeyed into life as a newly married couple, they settled in Oakhurst near the shore in Monmouth County given Holloway-Davis’ love of the beach. What they didn’t know at the time was three years into their marriage they would face the biggest test of their lives.

Bittersweet Challenge

While ecstatic about finally expanding their family, “I didn’t think pregnancy was for me,” Holloway-Davis recalls about

how poorly she felt heading into 2013. She didn’t want to risk having a lot of tests and just wanted to “at least get the baby to 30 weeks.” She was willing to endure whatever was necessary “and whatever was wrong with me, we could fix after.” On the day of Super Bowl 2013, Odell returned from playing out of town. His mother stayed with Holloway-Davis in his absence. After hardly eating and being in a severely weakened state, this mother-to-be was taken to the emergency room at Monmouth Medical Center, an RWJBarnabas Health facility.

At first it was thought she simply needed fluids, but after further assessment the doctors “took off like wildfire, and it was a race against the clock,” she recalls being told. On the next day, which was their anniversary, Odell was told by the medical team that “we can save your wife, save your child, or try to save them both.” The decision was obvious to this young husband – try to save them both. “I was told he went to the bathroom and prayed and cried. I call him ‘Samsonian’ (referring to the biblical man of strength). I don’t know how I could have endured this without him,” reflects Holloway-Davis.

Sedated, she was soon rushed in for an emergency cesarean section. She delivered her little girl, Arya, at 29 weeks and five days –

just shy of the 30 weeks she was hoping to reach. Despite weighing only 2 pounds and 13 ounces, the baby was fine and placed in the neonatal intensive care unit at Monmouth Medical Center. A week later, Holloway-Davis came to, not even remembering she was pregnant until she felt the incision in her pelvic area. Knowing that Arya was in good hands and her husband was there every day playing gospel music and reading to both mother and baby, Holloway-Davis knew she would be okay.

She finally learned the origins of HTLV-1 from her doctor, and they talked about next steps: chemotherapy and a bone marrow transplant from another donor (allogeneic) to treat the lymphoma that developed. "At that point, I didn't care about where it came from. I just wanted to know what to do to get rid of it," recalls Holloway-Davis.

She was soon released and underwent six cycles of chemotherapy and had her marrow tested for a transplant. Luckily, she was a candidate. "I thought 'good, this is over.'" But it was only the beginning. The task was on to find a match for the transplant and the center that would manage this unique procedure and post care. Given a recommendation of a center in northern New Jersey, one in Manhattan or Rutgers Cancer Institute of New Jersey in the central part of the state, the choice was easy.

Meeting a Mensch

Her doctor told her about Roger Strair, MD, PhD, chief of the Division of Blood Disorders at Rutgers Cancer Institute, and the expertise of the Hematologic Malignancies Program and Blood and Marrow Transplant Program teams that work in concert with one another at Rutgers Cancer Institute and Robert Wood Johnson University Hospital. "He told me Dr. Strair is a 'mensch.' I never heard that word before," Holloway-Davis shares. But after meeting Dr. Strair in July 2013, she quickly learned how that endearing term exactly described this consummate professional and all around 'good guy.'

"Mrs. Holloway-Davis' case is unique to say the least," notes Strair, who is also a professor of medicine at Rutgers Robert Wood Johnson Medical School. "When she arrived at Rutgers Cancer Institute, she presented with a lymphoma that is associated with the HTLV-1 virus. Only a small percentage of patients infected with the virus ever develop lymphoma. Over the 20 plus years I have been at Rutgers Cancer Institute, our team has managed about 20 cases of HTLV-1 associated lymphoma."

As with any bone marrow transplant "finding a match can be chal-

lenging," shares transplant coordinator Jackie Manago, RN, BSN, BMTCN as a number of donor genetic features need to be as identical as possible. Manago also points out that "identifying a match for those of Caribbean descent can be problematic in part as there is a great genetic heterogeneity spread amongst a relatively small population." "They were very honest with me," Holloway-Davis recalls. "They made no promises about finding a match." But in two weeks, an acceptable candidate was found.



"Mrs. Holloway-Davis' case is unique to say the least," notes Roger Strair, MD, PhD (above, center), with Mary Kate McGrath, MSN, RN, APN-C, OCN, BMTCN (above, left) and Jackie Manago, RN, BSN, BMTCN (above, right). All are members of the Blood and Marrow Transplant Program team that cared for Sandrine Holloway-Davis.

The Big Blast

Still fatigued from her initial chemotherapy regimen, her immune system was at risk. "I remember the doctors telling me that I needed to be careful. I couldn't receive flowers – couldn't change my daughter's diaper. I thought 'What kind of mother am I going to be if I can't even change my child's diaper?'" But Holloway-Davis didn't let any negativity creep in. Her family stepped in to help and she concentrated on getting well.

Next was the transplant chemotherapy – "the big blast," as she calls it – to rid the body of any remaining cancer cells and prepare the body to receive the donated marrow. The self-proclaimed "island girl" feeling "blessed and ready to fight" came upon part of the process that presented a challenge. "During the orientation I was told I could not be in the direct sun (following the transplant) – that hit me. Losing my hair? Didn't matter. Graft-versus-host disease? Didn't

Music to their Ears

The hallways of the recently opened ninth floor of the **East Tower** that houses the **Blood and Marrow Transplant and Hematologic Malignancies Programs** as well as the same-day chemotherapy unit at **Robert Wood Johnson University Hospital** echo with what is hoped will become a familiar sound: the



ringing of the “end of treatment” bell. When a patient’s treatment is completed he or she has the opportunity to celebrate by ringing this bell, signaling such sentiments as “Success” and “Today, I am stronger.”

The bell was graciously donated by 24-year old **Aaron Lassin** (left) and his family. In 2015 Lassin was diagnosed with stage 2 nodular sclerosis classical Hodgkin lymphoma. He started treatment in November and finished in April 2016. *Cancer Connection* took a moment to sit with Lassin to discuss the family’s inspiration behind its contribution of the bell.



■ **Whose idea was the bell?** *My mom mentioned it — at the beginning of*

treatment. She had heard about something similar at another center and thought it would motivate me to get through treatment.

■ **What was your inspiration for gifting the bell?** *I am lucky enough to have a huge support group that got me through treatment and celebrated the accomplishment with me when it was over. Some are not as fortunate. I wanted to create an atmosphere where people can recognize the patients who have conquered this difficult time. When the bell is rung, it's like they are ringing away their woes, and others who are present can rejoice and be part of that celebration.*

■ **What motivated you to get through treatment?** *I made sure to remain positive and exude a happy attitude. It's amazing how your inner spirit will match what you do externally to be positive.*

■ **What advice can you share with patients currently undergoing treatment?** *Keep going. Keep fighting. Stay positive. There is light at the end of the tunnel.*

■ **What do you hope the bell will symbolize for patients?** *The end of treatment symbolizes the beginning of a new chapter. Ringing the bell signals getting on with your life — on to happier and healthier times. ■*

bother me. But I love the beach. I always dreamed about going to play with my child outside.” Holloway-Davis made sure to address that concern by wearing a very high SPF sunscreen and a large hat whenever outdoors.

The transplant itself (a procedure similar to giving/receiving blood) was uneventful. But another downside to the process was the 30-day inpatient, post-transplant regimen. She had acute graft-versus-host disease — a common transplant complication in which the new immune system from the donor cells attacks parts of the host body — but she recovered. The toughest part during that post-transplant hospital stay was that Arya, who just turned 6 months old, wasn’t permitted to come in her room — 30 days of not holding her baby girl. “I would just look at her and Odell through the little window of the door in the Bone Marrow Transplant Unit. Sometimes I had a mask on (to protect her from germs). I was hoping Arya would at least remember my eyes.”

Unfortunately within six months she had a recurrence. Strair felt Holloway-Davis would benefit from another transplant. “It is very rare to receive a second transplant after the disease relapses following an initial transplant,” notes the doctor. The same marrow previously collected was used, but Holloway-Davis had to endure “the big blast” again. She wasn’t rattled.

“I trusted them (Strair and team). I trusted them through and through. I knew from the beginning they weren’t going to sugar coat anything, and they would tell me things as they were. I appreciated that, because I was able to mentally prepare for whatever might come. Hope for the best — prepare for the worst,” she confidently shares. Arya was approaching her first birthday, and after undergoing the second transplant it was another period without her in her arms — but worth the wait. Despite the challenges of the past several months, Odell had finally finished his degree. “Three months after my second transplant, I went to his graduation bald as ever but happy as ever with Arya at my side,” Holloway-Davis joyfully shares.

The 5 F’s

Strong in her faith, she recalls writing “Strong Faith = Strong Finish” on her white board in the hospital room. She kept it there as inspiration during her times in the transplant unit, knowing that her family, friends and community were praying for her.

During one of her post-transplant stays, Holloway-Davis was craving some dishes native to her homeland. A family in the area with close Jamaican ties learned she was in the transplant unit and came



calling most evenings with home-cooked meals and great conversation. “I was so appreciative, I could cry.”

Faith, family, friends, food, “and fun,” chuckles Holloway-Davis, who is very eager to point out the positives of the experience – the five F’s. “My room was the ‘party room’ with some form of entertainment. Some days I would put on my iPod and walk up and down the hall with my ‘side kick’ (her mobile intravenous pole) and get my exercise playing high-energy gospel music. Everyone would just look at me and laugh!” Keeping in good spirits, she would take pictures of whatever was hanging from her “side kick” and post them to social media labeling the “platelets as pineapple juice, the stem cells as guava juice and the blood as sorrel – a Jamaican holiday favorite!”

But the best medicine has been her little girl – “Dr. Davis,” this mother says proudly. Told that depression could be a treatment side effect, Holloway-Davis says “not a chance with Arya around. She gets out her toy doctor bag. We bought her a real pink stethoscope. ‘Mommy, stick out your tongue, take a deep breath.’ It’s a riot. I can’t wait until she’s older so I can tell her all that has happened and have her understand the contribution she made to my healing. It’s incredible.” And at 4 years old, Arya “has not yet been tested for HTLV-1,”

“I love the beach. I always dreamed about going to play with my child outside,” shares self-proclaimed “island girl” and Jamaica native Sandrine Holloway-Davis, pictured above with husband Odell and daughter Arya.

notes mom, but knowing her own journey, it is definitely on the family’s radar.

“I don’t know when remission happened,” adds Holloway-Davis, “it just happened,” although she says it’s been a little more than a year. Taking 17 medications a day, she follows up with Strair and his team once a month for now. Like the “soldier” her father raised her to be, she battles treatment complications like cataracts caused by steroids that help manage graft-versus-host disease.

She notes emotional and mental challenges too. But she’s pushing toward that “strong finish” and a day when she can share with Arya the lessons she learned through this experience and the values she holds dear: “a positive attitude, kindness, generosity, support, gratitude and ownership – because at the end of the day, you’re responsible for your own health.” With that, she notes she’s grounded here with her family and extended family of Strair and team, “Odell gets job offers from as far away as California. He politely declines, saying ‘No, my wife’s doctors are here. We’re not leaving.’” ■





Individualized **FIGHT** *against* *Lung Cancer*

Entering his 60s, Jim Hufnagel expected to have the aches and pains of growing older: stiffness on waking up, a few muscle twinges after golf or gardening, sore feet following a brisk walk. Sure enough, they arrived like clockwork.

What he didn't anticipate was pain that wouldn't go away. At first it was just inconvenient—a dull, nagging ache in his left shoulder. But the pain escalated. Eventually it became difficult to put on a shirt or jacket. "Finally I decided to have it looked at," says Hufnagel.

It's almost impossible to imagine: a seemingly innocuous sore shoulder evolves into a diagnosis of terminal lung cancer a year later. The details of this roller coaster ride are permanently etched in Hufnagel's memory. After a long search to find out what was wrong, he found his way to Rutgers Cancer Institute of New Jersey, where he received the expert care he needed. At times he wasn't sure he'd survive the cancer or the treatment.

B Y M A R Y A N N L I T T E L L

P O R T R A I T B Y J O D Y S O M E R S



Now 71, Hufnagel doesn't look like a man who's battled cancer. The retired AT&T executive is upbeat and exuberant, sharing his joie de vivre with his wife Pam, a marketing director at AT&T Wireless. With homes in Basking Ridge and Cape Cod, Massachusetts, this close-knit couple is all about enjoying time with family and friends and escaping to the Cape whenever they can. But seven years ago they were focused on something entirely different: trying to find the cause of his pain.

The first orthopedist Hufnagel saw in May 2010 diagnosed frozen shoulder. Hufnagel had cortisone injections and physical therapy, but the pain continued to get worse. Forget tennis, golf, walking his two big dogs, and other activities he once enjoyed. Medications didn't help. He couldn't sleep and had little appetite. When he stepped on a scale, he was alarmed to find he'd lost 20 pounds.

"In February 2011 we took the trip of a lifetime to South Africa, but I was in severe discomfort," he recalls. Returning home, he sought answers. Over the next several months he saw numerous orthopedic surgeons, a pain management specialist, three teams of physical therapists, a chiropractor and an acupuncturist. He had numerous X-rays, ultrasounds, and MRIs.

Jim Hufnagel, above with his wife Pam, never lost his determination, not just to recover, but to regain his life. "I'm fortunate that Pam was there to be my rock and my advocate."

One surgeon suggested shoulder surgery. Another said Hufnagel needed a spinal fusion. With so many conflicting opinions, Hufnagel was reluctant to undergo major surgery that might or might not make a difference.

"I did physical therapy, aquatic therapy, you-name-it therapy," he says. "I was taking morphine too." By mid-June the pain was unrelenting, and Hufnagel also noticed a lump over his left clavicle. He went to an urgent care center. "The doctor didn't like what he was seeing," he says. "After all the high-end specialists I'd been to, finally an urgent care doc forced the issue by insisting I get a CT scan."

The scan showed an enlarged lymph node and Hufnagel was referred to an oncologist for a biopsy. "He called me in to review the results several days ahead of our scheduled appointment, saying he had to go out of town," recalls Hufnagel. "He gave me no clues and didn't tell me to bring Pam."

The oncologist bluntly delivered devastating news: Hufnagel had metastatic squamous cell carcinoma of the lung, stage 4. "He said

there's no cure—all they can offer is palliative care," he says. "We were in total shock." Hufnagel, a longtime smoker, had quit five years earlier. Cigarette smoking is the number one risk factor for lung cancer, and in the U.S., is linked to nearly 90 percent of lung cancers, according to the Centers for Disease Control and Prevention.

The Hufnagels saw another oncologist to discuss treatment, but she offered no options other than palliative care, "to try to buy time until hopefully medical science might find a cure," says Hufnagel. "But I was determined to fight this."

They began researching various options for care, including major cancer centers in New York City. Then a friend told them about Rutgers Cancer Institute of New Jersey. "If Jim could be treated, having a world-class center close to home would be a real plus," says Pam Hufnagel. As an added benefit, one of Hufnagel's two adult sons lives in New Brunswick, where the Institute is located.

In July the Hufnagels met with medical oncologist Joseph Aisner, MD, and radiation oncologist Salma Jabbour, MD. Dr. Aisner is the co-director of the center's Lung Cancer/Thoracic Oncology Program, a multidisciplinary group offering the most advanced treatments for cancers of the lung, pleura, and mediastinum. Dr. Jabbour's subspecialty is lung cancer.

The two physicians agreed Hufnagel's case was unusual and complex. The cancer was seen in three areas around the lung, but the originating primary tumor was not seen in the lung itself. The origin of his cancer thus was not certain, but nevertheless they believed this was a lung cancer. This can be important, as cancers from different organs sometimes require different therapies.

Aisner and Jabbour thought Hufnagel might benefit from new thinking about the approach to his cancer. Despite the finding of stage 4 disease, the amount of metastases appeared limited and confined to only one organ. Rationalizing single-site metastases represents a smaller cancer burden, they hypothesized that more aggressive treatment could be better controlled and the outcome might be more positive than palliative care for stage 4 disease.

"Finding no primary tumor, we made the assumption that it was

stage 3 primary lung cancer and treated him accordingly," adds Jabbour. "It was exciting to be able to offer him this option."

Aisner first treated Hufnagel's pain with slow-acting and long-acting medicines, including a fentanyl patch in order to 'even out' the pain control. "From that point on I was pain-free," says Hufnagel. "I felt confident about these doctors. I'm pretty sure I remember Dr. Aisner saying, 'We can cure you.' But Dr. Aisner remembers saying, 'I *think* we can control your cancer.' Whatever he said, I had no doubt I was going to make it."

A unique aspect of Hufnagel's care is that the physicians "customized" simultaneous chemotherapy and radiation therapy to make

it more tolerable without reducing the effectiveness. "In our approach," says Aisner, "we use a chemotherapy combination usually given every three weeks, reduce the dose so that we can give it weekly (to the same total dose), and then give it for seven weeks dur-

"I learned you must go to the right place with the right doctors," says Jim Hufnagel. "I'm grateful to medical oncologist Joseph Aisner, MD (above), and radiation oncologist Salma Jabbour, MD (below), for granting me a wonderful and much longer life than I originally hoped for."



ing the ongoing radiotherapy. This strategy maximizes the interaction between the chemotherapy and radiotherapy, but also minimizes toxicity. We've found this a very effective approach to allow us to give full therapy."

In a previous study Aisner and Jabbour treated patients first with chemotherapy to assess the tumor's responsiveness. If the cancer was responsive, they proceeded to a more aggressive approach, including the addition of surgery and/or radiotherapy. Their review of this experience showed treatment outcomes and survival far in excess of what is normally seen in stage 4 disease treated for simple palliation.

Before starting combined chemotherapy and radiation treatment, Hufnagel received two rounds of chemotherapy to see whether the disease showed evidence of response. It did.

Thus began his long, grueling summer. He became ill with fevers, disorientation, shortness of breath, weakness, and a bad cough. A



severe case of esophagitis, caused by the radiation therapy, hindered his ability to eat and he lost more weight. He soldiered through the treatment, making many trips to the Emergency Department at Robert Wood Johnson University Hospital and spending much of the summer on the oncology ward there.

"He developed an organizing pneumonia—one that's not infectious or viral," says Jabbour. "Its cause is unclear. It's quite rare and can be difficult to diagnose. It made him very sick." Thoracic surgeon John Langenfeld, MD, the other co-director of the Lung Cancer/Thoracic Oncology Program at Rutgers Cancer Institute, performed a VATS (video-assisted thoracoscopic surgery) biopsy, a minimally invasive procedure to verify that this represented a treatment effect rather than disease.

"Between the pneumonia and the cancer treatment, I didn't always know what was going on," says Hufnagel. "I'm fortunate that Pam was there to be my rock and my advocate. I also had the support of our two sons and our families, as well as our large network of friends. They brought homemade cookies and so many meals that we had to commandeer a neighbor's freezer." The couple kept everyone informed through a free website where people can create blogs to share updates about serious health issues.

"People make a difference—people like RWJ nurse Theresa Goldstein, who guided us through the ER," adds Pam. "That help was

Today, Jim Hufnagel is cancer free, enjoying a favorite spot in Cape Cod with his family (above).

heartwarming. One of the positive aspects of Rutgers Cancer Institute is its synergy with the hospital—having that linkage for medical records as well as for Dr. Aisner and Dr. Jabbour to be informed and involved when Jim was admitted."

Hufnagel never lost his determination, not just to recover, but to regain his life. Today, he's cancer-free, though with diminished lung function. While he can't exert himself in heat and humidity, he's strong and active. He and his wife walk their dogs and enjoy sunny days at the Cape with their two young granddaughters. They recently traveled to Portugal, where they walked a few miles each day. More trips are planned too.

He still thinks about the year he lost seeking a proper diagnosis. "I learned you must go to the right place with the right doctors," he says. "I'm grateful to Rutgers Cancer Institute and RWJ for granting me a wonderful and much longer life than I originally hoped for."

While there are no guarantees that the cancer won't return, he recently returned for his five-year checkup. His physicians are happy with his state of health. "Yes, it's true—he had a rough time getting to where he is now," says Aisner. "But we had the idea that he might do a lot better with aggressive therapy, so we took the chance. We thought it was worth the side effects. And now, so does he." ■

A middle-aged man with short, graying hair and a friendly smile is leaning on a wooden fence. He is wearing a dark blue zip-up jacket over a light blue t-shirt. Behind him is a large, clear blue swimming pool. The pool deck is paved with light-colored stones, and the background is filled with lush green plants and trees, suggesting a well-maintained garden or backyard.

Back on the Route

We've all heard the U.S. Postal Service's unofficial motto: *"Neither snow nor rain nor heat nor gloom of night stays these couriers from the swift completion of their appointed rounds."* If you quoted this mantra to 57-year-old Patrick Keeley, he'd probably applaud. Foul weather never kept this letter carrier from doing his job, but a diagnosis of stage 2 esophageal cancer almost stopped him in his tracks.

BY MARY ANN LITTELL
PORTRAIT BY NICK ROMANENKO

Approaching the holiday season in 2014, Keeley showed no signs of serious illness. The native New Yorker had relocated to Manchester, New Jersey, 11 years ago, transferring from the Staten Island Post Office, where he worked for 19 years, to the Lakehurst Post Office. He and his fiancée Linda Mancini, a 'Jersey girl,' bought their dream home, complete with gardens, an in-ground pool, and a Tiki bar. "I like to take a dip after work on hot days," says Keeley. "We sit by the pool, putter in the garden and I do some woodworking. It's relaxing."

The only sign that something was amiss was frequent, persistent diarrhea, which began suddenly. Strong and fit from walking his 4-mile postal route every day, Keeley hadn't noticed any lack of energy, but this 'bug' he'd picked up was inconvenient and uncomfortable, forcing him to make frequent bathroom stops. "I learned the location of every men's room in every community center along my route," he observed.

He saw a gastroenterologist, who did a colonoscopy and other tests. When the results were normal, the physician suggested doing an endoscopy to examine the upper digestive system. "He didn't see how my upper GI tract could be the cause of my problem, which was at the 'other end,' so to speak," says Keeley. "But he wanted to check it out."

"I'm fortunate to have started this process with a super-careful doctor who did a test others might not think of," he notes. After the endoscopy, the gastroenterologist showed him a suspicious spot on the images. He asked the couple to come to his office first thing the next morning. That's when they learned Keeley had esophageal cancer.

Contemplating his frightening diagnosis, Keeley worried how the news would affect his mother and adult son, as well as Mancini's two grown children. Keeley's father died of prostate cancer at 62, causing the family tremendous grief. His son's mother (Keeley's ex-wife) died of multiple myeloma almost a year ago to the day. "Losing his mom was devastating," says Keeley. "Now he worried about losing me too."

Fortunately for Keeley, improved treatments have boosted survival rates. Almost 20,000 new cases of esophageal cancer are diagnosed every year, many more in men than in women. During the 1960s and



Patrick Keeley and fiancée Linda Mancini in their favorite backyard spot.



1970s, only about 5 percent of patients survived at least five years after being diagnosed. Today, some 20 percent survive beyond five years according to the American Cancer Society. The five-year survival rate of people with esophageal cancer that has not spread beyond the esophagus is about 40 percent, according to the American

Association for Thoracic Surgery.

Additional tests revealed that Keeley's cancer was contained within the esophagus. He was referred to Rutgers Cancer Institute of New Jersey for further treatment. In late November he met with David August, MD, interim chief of the Division of Surgical Oncology and chief of the Section of Gastrointestinal Surgery.

"Because of the early nature of his cancer, it's not surprising he was asymptomatic," says Dr. August. "One of the difficulties of esophageal cancer is that symptoms often don't show up until it's advanced." August told Keeley he'd need an esophagectomy: surgery to remove the esophagus. He planned to do a transhiatal esophagectomy, where surgeons operate through small incisions in the throat and abdomen, rather than opening the chest.

"There are a number of ways to do an esophagectomy," explains August, who is also a professor of surgery at Rutgers Robert Wood Johnson Medical School. "Some involve opening the chest, some do not.



Patrick Keeley learned more about his cancer by connecting with others through social media. “We became more hopeful, and it helped to know we weren’t alone,” he says.

With the transhiatal approach, we stay out of the chest, limiting pulmonary complications. The same risk factors for lung disease are present in esophageal cancer — smoking and drinking alcohol. Therefore, many patients requiring esophagectomy don’t have great lungs.” Keeley is not a smoker and has only an occasional beer or glass of wine.

At many medical centers, a single surgeon performs transhiatal esophagectomy. However, at Rutgers Cancer Institute, August does the procedure along with John Langenfeld, MD, co-director of the Lung Cancer/Thoracic Oncology Program at Rutgers Cancer Institute and associate professor of surgery at Rutgers Robert Wood Johnson Medical School. “We’ve operated together for almost 20 years with great outcomes,” says Dr. Langenfeld.

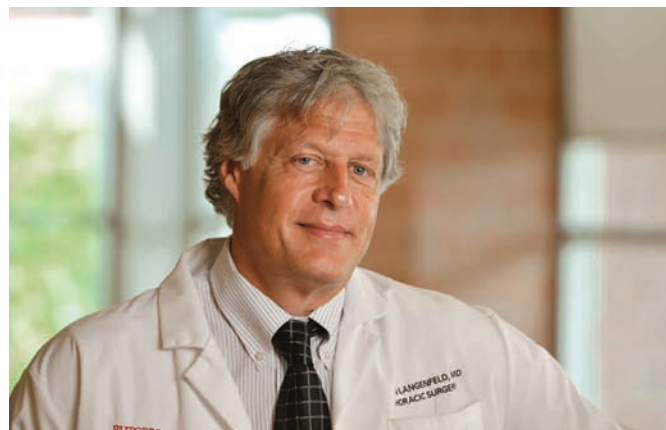
“Our approach offers the benefit of two surgeons with expertise in both the chest and abdomen,” adds August. “We’ve long been the highest-volume team in the state and are proud of our record of success.”

Through a Facebook group, Keeley learned more about his cancer and connected with others coping with the disease. “We became more hopeful, and it helped to know we weren’t alone,” he says.

August too felt optimistic that Keeley would come through well.

“From day one he was committed to doing everything he could to heal,” says August. “Also, and this is purely my own observation, post-men are among the patients I’ve had who recover most quickly from surgery. Maybe it’s because they’re on their feet and active all day long. To stay with this work, even in the worst weather, you have to enjoy it. I’ve noticed these folks just want to get back to work.”

Keeley’s surgery was performed in January 2015 at Robert Wood Johnson University Hospital. The four-hour procedure is like a surgical



“Our approach offers the benefit of two surgeons with expertise in both the chest and abdomen,” says David August, MD (top), interim chief of the Division of Surgical Oncology and chief of the Section of Gastrointestinal Surgery, who performed Keeley’s transhiatal esophagectomy along with John Langenfeld, MD, co-director of the Lung Cancer/Thoracic Oncology Program (bottom). “We’ve long been the highest-volume team in the state and are proud of our record of success.”

symphony. While August frees up the stomach through an abdominal incision, Langenfeld operates through the neck, cutting the esophagus and leaving a small portion in the throat. The esophagus is pulled down through the chest into the abdomen, passing through the hia-

tus, an opening in the diaphragm. It is cut off of the stomach and the stomach is then moved up through the chest to the neck, where it is reconnected to the remaining esophagus. A temporary feeding tube is inserted and remains in place during recovery.



Now cancer-free, Patrick Keeley appreciates the small things in life, like tending to his roses.

Post-surgery, Keeley's recuperation wasn't easy. The diarrhea showed no signs of abating, even becoming worse with the tube feedings. Shortly after returning home, he had a fit of coughing that damaged his throat incision. His neck and face swelled and he was rushed back to the hospital. "My face looked like a watermelon," Keeley recalls. "It was so bad that a couple next to me in the examining area asked to be moved."

August says this problem is not uncommon, considering the major changes made to the digestive anatomy. "The stomach doesn't like to be all the way up in the neck," he explains. "And for many reasons, the esophagus does not heal very well. So there's a risk of leakage from the incision. When that happens, we open it and let it heal on its own."

Gradually Keeley became strong enough to begin chemotherapy and radiation. Because Rutgers Cancer Institute is a 90-minute drive from his home, these services were provided in nearby Toms River, at Community Medical Center, an RWJBarnabas Health facility. "The medical and radiation oncologists at Rutgers Cancer Institute are an integral part of our team, but sometimes it's advantageous for pa-

tients to receive this care near home," explains August. "In that case we work closely with community physicians so patients receive the best care in the setting that's most appropriate for them."

Keeley tolerated the chemo well and was back on his route even before finishing the treatments. He opted for the earliest radiation appointment so he could deliver the mail afterward. Ever upbeat, he says, "Having cancer has a plus side. I used to weigh 245 pounds; now I weigh 182. I eat whatever I want and never gain weight. I stick with small portions and sometimes have trouble swallowing. A few glasses of water helps get the food down. That's the way it is now, and it's fine with me."

Langenfeld explains that the surgery hinders a patient's ability to eat. "The stomach becomes a conduit, keeping the food passageway intact. Food passes to the stomach via gravity, so it may take longer. We advise patients to eat smaller, more frequent meals, and most do well."

"Many of our gastrointestinal cancer patients have difficulty eating," adds August. "It's one of the reasons why a multidisciplinary approach is important, to be sure patients maintain a healthy weight. Even when patients do well with their cancer, if we don't stay on top of these other problems, quality of life is impacted."

While Keeley's weight was stable, his diarrhea continued. He finally found the answer from Rutgers Cancer Institute dietitian Kristin Waldron, RD, CSO, a member of the Gastrointestinal Oncology Program. "She thought it might be caused by my pancreas not digesting fats properly," says Keeley. "I now take medication and the diarrhea is pretty much under control."

In late 2015 Keeley had another setback. He began experiencing seizures – both mild ones and a grand mal seizure that occurred while he was at work. "That scared the heck out of everyone and they called 911," he says. Initially there were concerns that the cancer had spread to his brain, but tests ruled that out. The cause of the seizures remains unknown. He has been diagnosed with epilepsy and is under the care of a neurologist. Anti-seizure medication keeps the condition under control.

Cancer-free now, nothing stops Keeley from his appointed rounds. His prognosis is good, says August: "While there's always a significant risk of this cancer recurring, most recurrences occur within two years. He's passed the two-year mark and is doing well."

"What we do here is a team effort," August adds. "It's part of our culture at Rutgers Cancer Institute. As a member of this team, there's nothing more satisfying than helping our patients." ■

Partner Spotlight

See, Test & Treat

Along with our broad reach across the state through our partnership with RWJ Barnabas Health, **Rutgers Cancer Institute of New Jersey** continues its focus on enabling improved access to advanced cancer treatment and prevention options to the resi-



dents of the greater Essex County region. Through a recently established partnership with University Hospital in Newark, Rutgers Cancer Institute is also expanding its cancer outreach programs to the community.

Over the past year, **Rutgers Cancer Institute of New Jersey at University Hospital** has initiated a number of community outreach and education programs to serve the diverse population of this area. Cancer education and awareness sessions are planned in collaboration with local houses of worship. Other events, such as the planning of a Latino Cancer Summit and current Bodega Outreach Initiative, also focus on cancer risk and prevention and the development of action plans to improve access to care.

"For some members of our community, these outreach events may be the only ex-



PHOTOS BY: JOHN O'BOYLE

posure they have to learning about cancer prevention," says **Susan Goodin, PharmD**, interim director of Rutgers Cancer Institute of New Jersey at University Hospital.

Along with prevention and education, Dr. Goodin notes bringing research and increased access to cutting-edge cancer treatments also are part of the mission at Rutgers Cancer Institute of New Jersey at University Hospital. "Having access to novel therapies through clinical trials only offered at National Cancer Institute-designated centers such as Rutgers Cancer Institute in New Brunswick can be life altering for some patients," notes Goodin, who is also a professor of medicine at Rutgers Robert Wood Johnson Medical School and executive director of statewide affairs at Rutgers Cancer Institute.

"We also are conducting research in order to better understand our diverse population. Along with developing a comprehensive profile of the greater Newark community, we're examining care delivery processes that influence how patients are transitioned

from primary care providers to oncology care providers in this region. Such findings will help us fill important knowledge gaps in defining Newark's population, cancer burden and health care access challenges," she adds.

Building on the outreach component, a free cancer screening and community health education event called '**See, Test & Treat**' is planned at Rutgers Cancer Institute of New Jersey at University Hospital (205 South Orange Avenue, Newark) this fall. The event will offer screenings for cervical and breast cancers for women ages 21 to 64 that are uninsured or underinsured, with most test results being available the same day. Colorectal screening kits also will be offered for men and women who qualify, and prostate health information will be available for men. Health literature, children's activities, refreshments, giveaways and interpreter services also will be featured at the October 14 event. ■

To learn more and register for the 'See, Test & Treat' event, call 973-972-0496.

Making A Difference



The annual Century for the Cure bike ride that supports **Rutgers Cancer Institute of New Jersey** is gearing up for another successful event with an aim of raising \$350,000 this year to add to the \$2 million already raised since its inception 13 years ago. Registration for this year's October 1 event, which features route options of 100, 62, 40 and 25 miles, is open at centuryfortheCure.com. Many know the story of **Scott Glickman** (above, right), the founder of the ride who battled stage 4 non-Hodgkin lymphoma nearly two decades ago and decided to 'give back' to Rutgers Cancer Institute by starting the ride. Through the years, so many others became involved. Learn more about why they ride in their own words:

Robert Rose, husband of Hodgkin lymphoma survivor

My wife Courtney was diagnosed with Hodgkin lymphoma in 2002, and was treated and cared for by an incredible team of doctors, nurses and social workers led by **Dr. Roger Strair**, chief of hematologic malignancies and the **Blood and Marrow Transplant Program at Rutgers Cancer Institute**. She has been in remission ever since. In 2010, I had the great honor



of riding alongside Dr. Strair and meeting many of the wonderful people on his team. It was a life changing experience, to say the very least, and I will be forever indebted to all of them. I dedicate every single mile that I ride to Courtney and to my mother-in-law, Susan, and my mother, Helen, who also had their own battles with cancer. I also dedicate the ride to the incredible doctors, nurses, and staff at both Rutgers Cancer Institute and RWJ, who became like family to us. Their exceptional level of care, compassion, and support made each and every day a little bit easier to deal with in the face of this horrible disease. If cancer has affected your life in any way, shape, or form please consider donating to this worthy cause and sharing my story with your loved ones. ●

Chris Gaffney, Hodgkin lymphoma survivor

In 2010 I was diagnosed with Hodgkin lymphoma. I finished my treatment in December of the same year, and have



been cancer-free since. I started cycling in 2014, and as I was looking for an event to try for my first long organized ride, I came across *Century for the Cure* and Scott's story. I immediately felt a connection. The ride was the perfect event, as I was looking for a way to give back and I wanted to prove to myself and others that having had cancer does not define you or restrict you in any way. During my first year I was riding alone and I was taken under the wing of a complete stranger who helped me along for most of the ride. We have done many more events since then but *Century for the Cure* is one of our favorites. There is a powerful feeling to contribute to such a great cause; it really changes your outlook on life. You are not powerless, you are not helpless, and you can actually make a difference by riding. I love that the proceeds go to research, and that we can raise awareness of the work being done to find a cure. ●

Mike Jones, MD candidate, Rutgers Robert Wood Johnson Medical School

My initial connection to the cancer community began right before college when a high school classmate was diagnosed with cancer. This left an extraordinary impact on me, as everyone I knew was beginning their next chapter in life, but my classmate was at home receiving cancer treatment. I soon became involved with an organization that provides support to young adults affected by cancer, but I



wanted to bring more awareness to this population. My connection to the cancer community grew immeasurably in 2013 and 2015, as I cycled across the United States, a cumulative 8,692 miles, raising money and awareness for young adults with cancer.

Currently, I am a second-year medical student at Rutgers Robert Wood Johnson Medical School and joined *Century for the Cure* to continue giving back to the cancer community. As a student, I have an opportunity to conduct my own research, and I have seen directly how researchers at Rutgers Cancer Institute are on the front



lines of developing innovative therapies that could shape the future of cancer treatment. The money raised by the ride goes directly to this research, directly to changing the future of medicine. Cancer is a disease that changes lives, but together so can we!

●

Helene Greenberg, RN, BSN, pediatric hematology/oncology treatment nurse, Rutgers Cancer Institute of New Jersey; and Century for the Cure Rutgers Cancer Institute team captain

I heard about *Century for the Cure* from a patient's father. He was training hard to participate in the ride, knowing the funds would go directly back to Rutgers Cancer Institute to potentially helping his child. This was very inspirational, and since I have been riding for years I decided to join the cause



the following year. It is a powerful experience to ride with those who have been affected by this disease and to witness the comradery between our staff and some of their former patients. *Century for the Cure* marries my two passions:

nursing and biking. The ride has been a great way for us to celebrate the hard work that goes into the event and the funds raised for cancer research. ●

Kamran Rafieyan, long-time rider

I was historically a casual cyclist, putting in 20 to 30 miles on weekends during the



warmer seasons. A friend pulled me into one of the bigger charity rides and the whole thing just felt somewhat large, impersonal, and inefficient. It was also for a cause that wasn't really close to home for me. My father and other family members were battling cancer at the time, and so I did some research to find a ride with that focus. I stumbled across *Century for the Cure*, which is based right in my hometown of Warren, and I was immediately drawn in by the story. Here was a ride where the founder and organizer is a cancer survivor, and dollars raised by each rider go directly to support cancer research.

I started out with the 40-mile ride and within two years worked my way up to the 100-mile ride, which is



the greatest physical accomplishment of my life. I'm still slow and steady and take a good seven to eight hours to complete the whole race. It's not about going fast though, it's about raising money for

cancer research, and everybody involved is extremely supportive. When it gets really tough during the ride, what motivates me is to think of my father, who passed away a few years ago and who was in pain every day for a long time. *Century for the Cure* is my way of trying to make a difference in the battle against cancer. ●

Helmut Zarbl, PhD, research member, Rutgers Cancer Institute of New Jersey Cancer Metabolism and Growth Program; professor of environmental and occupational medicine, Rutgers Robert Wood Johnson Medical School

In January 2016 I was involved in a serious car accident (not on my bicycle, thankfully!). I was on my way to work when someone stopped suddenly in front of me to make an illegal left turn. The SUV I was driving was totaled and I sustained serious neck injuries. Although my neck is sore I am back...it feels good to ride again, because the cause is just too important to worry about some discomfort. I need to ride for my dad, for friends and family members suffering from various forms of cancer. It affects so many of us and the need for research dollars has never been greater. My ride this year is dedicated to my brother-in-law Steve who is battling lung cancer. ■



Along with multiple route options, there are also options to register as a 'virtual' rider or volunteer. Learn how you can participate at the October 1 event at centuryfortheCure.com.

Making A Difference

Olympic Caliber Heroes

Another successful LIFE

Event by the **Val Skinner Foundation** this past June has resulted in \$400,000 being raised for **Rutgers Cancer Institute of New Jersey** and associated programs. This includes patient services at the



LIFE Hero Kriss Fierro (above, second from left) with **LPGA notables** (from left) **Gaby Lopez, Alejandra Llanaez and Val Skinner.**

LIFE (LPGA pros In the Fight to Eradicate breast cancer) Center; the **Gene Express Project** as part of the Val Skinner Foundation's support of precision medicine research; and the **MARSH Grant for Life** that supports triple-negative breast cancer research. In addition, the Foundation awarded the final installment of its \$750,000 commitment to support the **Decoding Cancer** platform that launched in coordination with Discovery Education – a platform that incorporates a high school cancer biology curriculum developed by faculty at Rutgers Cancer Institute and Rutgers School of Public Health.

The 18th annual LIFE Event featured



Skinner, a longtime LPGA pro who now plays the Legends Tour and is the driving force behind the creation of **Rutgers Cancer Institute's LIFE Center**, which is dedicated to education and the needs of young women with breast cancer. Skinner was joined this year by fellow LPGA

players – including eight 2016 Olympians. Olympic gold-medal winning ice skater and cancer survivor Scott Hamilton was named a LIFE Hero alongside **Kriss Fierro**, diagnosed with breast cancer in 2014 at age 34 and recognized at the event for her tireless efforts in support of

For(e) Prostate Cancer

This past spring, the **Westlake Men's Golf Association** held its 13th annual golf outing to benefit Rutgers Cancer Institute of New Jersey and raised a record \$24,600.



Proceeds from the event support prostate cancer research by **Isaac Yi Kim, MD, PhD**, chief of urologic oncology at Rutgers Cancer Institute. Dr. Kim (center), who is also an associate professor of surgery at Rutgers Cancer Institute of New Jersey is pictured with event organizers **Larry Vaccarino (left)** and **John Kline (right).** ■



IPI EVENT PHOTOGRAPHY NY

Hope Prevails

Golfers enjoyed perfect weather at the annual **Eleanor's Hope for Pancreatic Cancer Golf Outing** this past spring. This year, the group raised more than \$38,000 (and counting!) in support of pancreatic cancer research at Rutgers Cancer Institute of New Jersey. ■



Rutgers Cancer Institute. Despite the challenges of ongoing chemotherapy while raising her family, she wakes up with a positive attitude each day and a desire to help other survivors and patients at Rutgers Cancer Institute. You may remember Fierro as our cover story in the summer 2015 issue of *Cancer Connection*! ■

A Purple Passion

More than 230 participants took part in the **9th Annual Middlesex County Pancreatic 5K Run for the Cure and Cancer Awareness Walk** this past spring.

Freeholder Director Ronald Rios (*foreground left, in photo right*) joined Freeholder Shanti Narra (*center, in photo right*) and 18th District State As-



semblyman Robert Karabinchak (*above, right*) for the official ribbon cutting to kick off the celebration. This year's event raised \$23,000 for pancreatic cancer research at Rutgers Cancer Institute of New Jersey, bringing the cumulative total raised to more than \$130,000. ■

Making A Difference

Grand Tour

Students from the **Care to Walk Club at North Brunswick High School** visited **Rutgers Cancer Institute of New Jersey** this past spring to learn how funds raised during their annual 5k walk/run event will be put to use. Students enjoyed a behind-the-scenes look at the **Sabaawy zebrafish laboratory** and the laboratory of Rutgers Cancer Institute medical oncologist **Kim Hirshfield, MD, PhD** (below, back row, left), who



conducts breast cancer research and precision medicine exploration. Dr. Hirshfield, who is also an assistant professor of medicine at Rutgers Robert Wood Johnson Medical School and participated in the most recent 5K, explained to the students that the \$15,000 they raised will help advance breast and ovarian cancer research. Over the last 18 years, the Care to Walk Club has raised \$150,000 for Rutgers Cancer Institute. ■



Life Lessons on and off the Court

More than 250 guests attended Rutgers Cancer Institute of New Jersey's annual Cancer Survivors Day Celebration at the Hyatt New Brunswick in June. Rutgers women's basketball coach **C. Vivian Stringer** (below) served as this year's keynote speaker and shared with the audience her life experiences including a bout with breast cancer and personal triumphs and adversities that have inspired her to rise above. ■



PHOTOS BY: KIM SOKOLOFF



Rutgers Biomedical and Health Sciences
Rutgers, The State University of New Jersey
195 Little Albany Street
New Brunswick, New Jersey 08903



Follow us on social media : [facebook.com/TheCINJ](https://www.facebook.com/TheCINJ) : twitter.com/RutgersCancer : [linkedin.com/company/the-cancer-institute-of-new-jersey](https://www.linkedin.com/company/the-cancer-institute-of-new-jersey)

A Warm Reception

Breast cancer survivors Diana Boardman (left) and Kriss Fierro (right) reunite with Eddie Vargas, a greeter at Rutgers Cancer Institute of New Jersey during the center's annual National Cancer Survivors Day luncheon this past spring. Rutgers women's basketball coach C. Vivian Stringer was the keynote speaker sharing an inspirational story about her own battle with breast cancer and other life challenges. Learn more on page 28.

PHOTO BY KIM SOKOLOFF

