







Personalized Medicine: Creating a Precision Paradigm

magine being told as a cancer patient that your disease is not responding to the standard therapy usually given for your type of cancer, but that because of a particular genomic mutation, a clinical trial may offer some hope with a drug designed specifically to target that abnormality. Investigators working on the precision medicine initiative at the Cancer Institute of New Jersey have undertaken a genomic analysis study which could illuminate more options in developing personalized and precise treatments for cancer patients. It is believed that some rare and poor prognosis cancers that currently have limited treatment options may harbor genomic changes that can potentially be treated with specific targeted therapies. Through Next Generation Sequencing and data analysis of DNA in tissue samples, researchers aim to identify these changes in order to guide treat-

Instead of a "one size fits all" approach, precision medicine drills down to the tiniest of details when it comes to examining molecular and genomic information. The aim is to identify changes and patterns in individual cancers that may influence

therapy outcomes. The study is an option for patients for whom standard therapy is not effective. In this study, a genomic analysis of the patient's tissue samples is conducted to determine exact gene abnormalities potentially responsible for their particular cancer. The goal is to pinpoint what drives the growth of cancer cells.

Shridar Ganesan, MD, PhD, associate director for translational science at the Cancer Institute of New

Jersey, is heading the research. "In recent years we have learned that cancers that arise in one organ, such as breast cancer or lung cancer, are not just one disease, but rather a collection of distinct diseases with varying responses to different treatment strategies. We therefore need to examine many features of each cancer to better classify it and identify effective treatment," notes Dr. Ganesan, who is an associate profes-

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A New Look!

eginning July 1, a new visual identity will be associated with the Cancer Institute of New Jersey as we integrate with Rutgers, The State University of New Jersey. While we will have a new look to our signage, educational materials and more, patients and families can be assured of the same excellent care and other services to which they are accustomed. Our location, contact information and website address will remain the same. And you may still donate to the Cancer Institute of New Jersey to support our programs (see page 15).

RUTGERS

Cancer Institute of New Jersey

Uncolyte

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Director's Corner

s the Cancer Institute of **New Jersey** officially integrates within Rutgers University on July 1, the public will see a new visual identity for our



center. Most importantly, the July 1 date also will mark the beginning of enhanced collaborations and relationships that will greatly benefit our patients, our state and the field of cancer research.

As outlined in our cover feature, our precision medicine team is engaged in cutting-edge research that examines genomic changes in individual cancers with the aim of identifying patterns that could help in better personalizing the type of treatment given. As investigators from the Cancer Institute of New Jersey begin to collect, analyze and store this data, Rutgers researchers are partnering with us and will play an integral role in genomic analysis and computational biology for this

We continue to build upon our existing collaborations with Rutgers. Through the Cancer Institute of New Jersey Foundation, Rutgers Professor of Cell Biology and Neuroscience **Dr. Lori Covey** was recently awarded one of the first Century for the Cure Research Grants to further pursue study of new therapies for chronic lymphocytic leukemia. Dr. Covey's work builds upon a foundation of research involving laboratory models from the Cancer Institute of New Jersey. It is this sharing of knowledge and resources that will continue to move cancer research forward resulting in more rapid discoveries.

Along with research, promoting cancer prevention and education are part of our core mission at the Cancer Institute of New Jersey. These efforts are not possible without the help of collaborations within our greater community. As you'll read on pages 9 and 11, long-time supporter Johnson & Johnson continues to help make programs possible that help address health priorities impacting community residents. And as you'll learn in our **Survivor's Corner**, a father's journey in battling sarcoma helped inspire his teenage son to develop a unique fundraising effort to support cancer research.

As Henry Ford once said, "Coming together is a beginning, staying together is progress, and working together is success." As the Cancer Institute of New Jersey and the Cancer Institute of New Jersey Foundation come together with Rutgers University on July 1, expanded collaborations will continue to enhance our collective progress, which ultimately will lead us along a path of success in advancing cancer research and delivering world-class patient care.

We hope to have your support as we embark on this journey.

Sincerely,



Director, the Cancer Institute of New Jersey; Associate Dean for Oncology Programs and Professor of Medicine, UMDNJ-Robert Wood Johnson Medical School

Cigarette Relighting Tied to Tough Economy

Institute of New Jersey have found that an accelerating trend of smokers relighting cigarettes is related to economic factors, and the practice has implications for tobacco dependence treatment and policy.

In these difficult economic times, increasing numbers of smokers have been smoking fewer cigarettes per day but are relighting the end portion of the cigarette that is typically discarded. Investigators explored this behavior, examining a cross-sectional sample of 496 smokers seeking treatment from the Tobacco Dependence Program, which is supported by the Cancer Institute of New Jersey, the School of Public Health and the Robert Wood Johnson Medical School and provides help on quitting tobacco use through treatment, education, research, and advocacy.

What researchers found was that 46 percent of the sample reported relighting cigarettes. This group was found to smoke on average, fewer cigarettes per day – 16 versus 20 - than the group that did not relight.

A reduction in the amount of cigarettes smoked per day may sound positive, but there is more to the story, according to Michael Steinberg, MD, MPH, FACP, a

member of the Cancer Institute of New Jersey and director of the Tobacco Dependence Program, who is the senior author of the research. "Despite those engaging in the relighting practice smoking fewer cigarettes, there is no estimated reduction in their exposure to toxins," says Dr. Steinberg. "In fact, smokers who relight cigarettes may be at higher risk of lung cancer and chronic bronchitis. That is something of which policy makers need to be aware," noted Steinberg, who is also an associate professor of medicine at Robert Wood Johnson Medical School and an associate professor of health education and behavioral science at the School of Public Health.

Significantly higher rates of relighting were found among females, African-Americans, and smokers who are divorced, widowed or separated. The behavior was more prevalent among smokers who started at a younger age, have fewer cigarettes per day, smoke menthol cigarettes and wake up at night to smoke. Other factors significantly related to relighting include being unemployed, sick or disabled, or having a high school degree or less.

Study results were given during the



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sor of medicine and pharmacology at UMDNJ-Robert Wood Johnson Medical School.

Unlike previous genomic analysis efforts at the Cancer Institute of New Jersey, which have taken six or more months to complete, advances in Next Generation Sequencing technology have improved turnaround time to one month or less. This type of response enables investigators to put theory into practice almost immediately. If certain biomarkers or "drivers" are identified through the process, the findings are discussed at a weekly meeting of the precision medicine tumor board, which is comprised of clinicians, basic scientists, pathologists, systems biologists and those with computational expertise. The team can then decide quickly if the sequencing results suggest new therapy options, which could include enrollment in a clinical trial that is testing a novel drug.

"This rapid shift from laboratory bench to patient bedside is a hallmark of the expertise and resources found at a National Cancer Institute-designated Comprehensive Cancer Center such as the Cancer Institute of New Jersey," notes Lorna Rodriguez, MD, PhD, director of the precision medicine initiative at the Cancer Institute of New Jersey. "We are now trying to determine if this approach will give clinicians an opportunity to offer new treatments or guided enrollment into clinical trials in a timely fashion and ultimately improve outcomes for our patients," added Dr. Rodriguez, who is also a professor of obstetrics, gynecology and reproductive sciences at Robert Wood Johnson Medical School.

Tougher Criteria May be Needed for African Americans Considering Prostate Cancer Surveillance

esearch from the Cancer Institute of New Jersey suggests that more stringent criteria may be needed for African American men with prostate cancer when considering active surveillance of the disease. The findings, published in the March online version of Urology (doi: 10.1016/j.urology.2012.12. 046) found that the prevalence of advanced stage cancer in African American men who were considered to have a low-risk prostate cancer on initial consultation but chose to undergo a radical prostatectomy was nearly twice that of Caucasian men. These findings of more advanced disease, confirmed through analysis of tissue specimens collected during surgery, suggest that the definition of low-risk prostate cancer should not be the same for African American and Caucasian men.

Recent studies have shown that just monitoring prostate cancer without aggressive intervention can be a viable treatment option for men with low risk disease. However, because African American men tend to have more aggressive disease than Caucasian men, it is unclear whether the same criteria for active surveillance should be applied to African American patients. Investigators at the Cancer Institute of New Jersey further explored this issue.

A retrospective analysis was performed using data from men who underwent a radical prostatectomy by surgeons at the Cancer Institute of New Jersey and

Johns Hopkins medical institutions between 1997 and 2011. Out of 1,536 African American men identified, 320 men met eligibility criteria for active surveillance based on University of California – San Francisco (UCSF) and National Comprehensive Cancer Network (NCCN) guidelines. For comparison, 608 Caucasian men were identified, with 334 men meeting eligibility criteria under UCSF and NCCN guidelines.

Investigators found that the rate of higher grade disease in African American men believed at first to have very low risk prostate cancer based on the UCSF and NCCN guidelines was slightly higher (37.2 to 46.0 percent) but not significantly different from that of Caucasian men (33.5 to 39.2 percent). However, the risk of *advanced* stage disease was almost twice as high in African

Americans (19.4 percent) as in Caucasians (10.1 percent). Advanced stage is defined as T3 or greater, which indicates growth outside of the prostate. In other words, among patients who are believed before surgery to have low risk disease, African Americans are twice as likely as Caucasians to have what is in fact advanced prostate cancer.

Isaac Yi Kim, MD, PhD, chief of urologic oncology at the Cancer Institute of New Jersey and associate professor of surgery at Robert Wood Johnson Medical School, is the senior author. "As part of more stringent active surveillance criteria, we recommend a lower PSA cutoff and/or a single positive biopsy core be considered as inclusion criteria, although further study is needed," noted Dr. Kim.

The study was supported in part by the Marion and Norman Tanzman Foundation, Jon Runyan's Score for the Cure, the National Research Foundation of Korea (2012-0000476) and the Rural Development Administration, Republic of Korea (PJ0081952011). Don't forget! The annual Prostate Cancer Screening/Education Event sponsored by the Cancer Institute of New Jersey and Robert Wood Johnson University Hospital will be held September 22 - 24from 5:00 p.m. to 8:00 p.m. each night at the Cancer Institute. To register,

call 1-888-MD-

(1-888-637-9584).

RWJUH

FACULTY **FEATURE John Langenfeld, MD**

John Langenfeld, MD, is the co-director of the Thoracic Oncology Program at the Cancer Institute of New Jersey. He is also the acting chief of the Section of General Thoracic Surgery and an associate professor of surgery at Robert Wood Johnson Medical School.

nince coming to the Cancer Institute of New Jersey and Robert Wood Johnson Medical School in 1999, Dr. Langenfeld has devoted his career to improving the survival of patients with lung and esophagus cancers. Building on his clinical experience from Memorial Sloan-Kettering Cancer Center he established a center of excellence to treat patients with thoracic malignancies. He says his teams' success stems from a collaborative effort between the Cancer Institute of New Jersey, Robert Wood Johnson Medical School and Robert Wood Johnson University Hospital (RWJUH) the Flagship hospital of the Cancer Institute of New Jersey – in providing an outstanding thoracic surgery program, which includes superior nursing and a broad range of medical experts to assist in the care of patients. Dr. Langenfeld notes the collaborative effort has been demonstrated in the outstanding results he has had on his surgical patients.

He has also dedicated himself to improving patient outcomes through thoracic research, which includes clinical applications. The Cancer Institute of New Jersey was part of a national trial, which demonstrated that CT screening for lung cancer improves survival in smokers. Dr. Langenfeld's recent



research shows that low-dose steroids improve survival in patients who develop respiratory compromise after a pulmonary resection. Since the national lung cancer-screening trial showed a survival benefit to patients, there are plans to continue this screening program at the Cancer Institute of New Jersey and RWJUH and expand to RWJUH Hamilton.

In other thoracic research, the Langenfeld laboratory identified that the bone morphogenetic protein 2 (BMP2) is highly expressed in the majority of lung cancers. The BMP2 protein enhances the growth, survival, and spread of lung cancers. Dr. Langenfeld's recent work suggests that novel inhibitors of the BMP signaling pathway represent potential new drugs to treat patients with lung cancers. His present research aims to optimize a strategy to use these novel agents to treat cancer with the hope of bringing these compounds to be tested in clinical trials in the near future.

Examining Lung Cancer

haron Pine, PhD, a researcher at the Cancer Institute of New Jersey and assistant professor of medicine at Robert Wood Johnson Medical School has been awarded a two-year,

\$80,000 dollar research grant from the Prevent Cancer Foundation.

The funding will support study on the early detection and prevention of lung cancer.

Smoking is the most common risk factor for developing lung cancer. According

to the U.S. Department of Health and Human Services, the risk of developing lung cancer is about 23 times higher in male smokers and 13 times higher in female smokers, as compared to life-

r and the same of the same of

long nonsmokers. Research has shown that certain genetic factors may predispose some individuals to be more susceptible to developing cancer than others, particularly after being exposed to tobacco smoke or environmental pollutants. Dr. Pine and colleagues will explore changes in DNA – one's genetic code – within the energy generating portion of the cell, known as the mitochondria.

The mitochondrial genome is highly susceptible to DNA damage in the form of content changes and mutations, and once damaged, has limited ability for DNA repair. Recent studies suggest that mitochondrial DNA content and mutations increase in some people who are exposed to tobacco smoke, thus serving as possible markers to identify those with higher sensitivity to cancer-causing compounds in tobacco smoke. Pine's team will determine if certain changes in mitochondrial DNA can help identify especially sensitive individuals in three categories – current smokers, who have the highest risk of lung cancer overall, former smokers and those who have never smoked.

Meet Our Pharmacy and Nursing Teams:

Nurses Explore Enhanced Methods of Improving Patient Care

hey are key members of the healthcare team who face ongoing challenges on how best to provide optimum care to patients affected by cancer. Oncology nurses at the Cancer Institute of New Jersey continually strive to improve patient care and have recently explored various methods on how to improve patient care. Their research was presented earlier this spring at the Oncology Nursing Society's (ONS) Annual Congress.

Knowing that fatigue is one of the most common side effects of cancer treatment, nurses identified ways to improve documentation of fatigue management interventions. Leah Scaramuzzo, MSN, RN-BC, AOCN, associate director of nursing and patient education, and Jane Fischer, RN, BSN, OCN, CCRC, a research nurse clinician, led the effort, which included adding a specific prompt in the patient's chart for nurses to inquire about fatigue, as well as the identification of exercise resources to be shared with patients.

Disruption of a proper sleep regimen is common in cancer patients (Roscoe, et. al., *Oncologist*, 2007) with cancer patients having twice the incidence of sleep disturbances experienced by the general population. Between 30 and 75 percent of cancer patients report sleep disruptions that contribute negatively to their quality of life.

At the Cancer Institute of New Jersey, modifications to the electronic nursing documentation tool were made, and nurses were educated on the importance of encouraging patients to complete a self-assessment on current sleep patterns as well as incorporating interventions into nursing practice, ultimately improving patient outcomes. Director of Oncology Nursing Services Janet Gordils-Perez, MA, RN, APN-BC, AOCNP, led the effort along with colleagues Carla Schaefer, BSN, RN, OCN, Jacquelyn Lauria, MS, RN, APN-BC, AOCNP and Patricia Dennigan, BSN, RN, OCN.

Oral chemotherapy treatments

have become more common in recent years due to their convenience for patients. But because of that ease of delivery, the patient must assume a greater responsibility for making sure the drugs are taken as prescribed. To make that process easier for patients and to improve adherence to the treatment schedule during clinical trials, nurses created a patient-friendly toolkit, which includes a color-coded pill diary, calendars specific to a patient's treatment



regimen, and an education sheet that reviews safe handling procedures

Yuk (Aggie) Wong, RN, BSN, OCN, MA, led the effort along

Pharmacy Expertise Expands

ne of the hallmarks of a National Cancer Institute-designated Comprehensive Cancer Center like the Cancer Institute of New **Jersey**, is the unique oncology expertise exhibited by its clinical team - including pharmacists. As the only such center in the state, the Cancer Institute demonstrates this excellence by having four pharmacists certified as Board Certified Oncology Pharmacists (BCOP). The BCOP certification is held by only 1,095 pharmacists in the nation - the highest concentration of which (29) are from New Jersey.

Less than two decades old, the BCOP certification has become the gold standard for which to strive for pharmacists in the oncology field. As cancer therapies become more personalized, the complexities of cancer treatment continue to grow. Equipped to understand such intricacies, pharmacists who are BCOP certified have an in-depth appreciation of clinical skills and therapeutic management and are proficient in pharmacy guidelines, standards and policies in the oncology setting.

Oncology pharmacists are responsible for ensuring both safety and accuracy in administering both intravenous and oral chemotherapies. But their daily schedule also involves meetingwith patients during their initial treatment visit and during follow up-visits. Along with educating patients about the therapy they will receive, the pharmacists review the dosing schedule and provide a comprehensive assessment of other medications and supplements they may be taking.

Board certified oncology pharmacists are found in different settings, including community hospitals, but their role at an NCI-designated Comprehensive Cancer Center is

more far reaching. At the Cancer Institute of New Jersey, pharmacy team members have experience in pain management and supportive care, and even participate in research. They also have the ability to interact directly with the patient, their doctor, nurse and other members of the care team about the patient's specific treatment needs.

While an important goal for the individual pharmacist, Michael P. Kane, RPh, BCOP,



Above, from left: Yuk (Aggie) Wong, RN, BSN, OCN, MA, Pamela Scott, RN, OCN, and Heather Camisa, RN, BSN, OCN

Left: Leah Scaramuzzo, MSN, RN-BC, AOCN, left, and Jane Fischer, RN, BSN, OCN, CCRC

with colleagues Pamela Scott, RN, OCN, and Heather Camisa, RN, BSN, OCN.



BCOP certified oncology pharmacists at the Cancer Institute of New Jersey. From left: Pulkita Patel, PharmD, BCOP; Susan Goodin, PharmD, FCCP, BCOP; Michael Kane, RPh, BCOP; and Stacey Lisi, PharmD, BCOP.

director of Oncology Pharmacy
Services at the Cancer Institute of
New Jersey, says the BCOP certification is also an important reflection of
the center. "While it is not a mandatory certification, we strongly encourage
those on our team to strive for this
level of excellence. It shows our level
of commitment as an institution to
patient care," he said.

CLINICAL OrialS CORNER

Cancer Institute of New Jersey, clinical research is key to providing comprehensive cancer care. Cancer clinical trials are medical studies that test new treatments and new or better ways of using existing therapies for cancer, although some studies are aimed at cancer prevention. With more than 140 active clinical trials, the Cancer Institute of New Jersey is leading the way toward uncovering new methods of cancer treatment and prevention.

Exploring Indicators of Early Breast Cancer Development in African American Women

he Cancer Institute of New Jersey is working together with its System Partner Meridian Health on a non-therapy research study that examines factors related to the early devel-

opment of breast cancer in African American women. Investigators will explore how these factors compare to those in Caucasian women.

Compared to



Caucasian women, African American women are more likely to be diagnosed with breast cancer at a younger age and at a later stage, and often have more aggressive features associated with a poor outcome. The reasons for these differences remain unknown. Through the Women's Circle of Health Study, investigators are exploring the influence of health and lifestyle factors on the early development of breast cancer in African American women through interviews with study volunteers from nine counties across the state. African American women aged 20 to 75 who are newly diagnosed with breast cancer are eligible to participate, though other criteria must also be met.

Women meeting the eligibility criteria will be asked to give demographic and medical information, as well as reproductive, lifestyle and diet histories. A saliva sample will be also collected for genetic analyses.

The study is being offered at the Cancer Institute of New Jersey and Meridian Health facilities. It is being conducted in collaboration with the **New Jersey State Cancer Registry** and **Roswell Park Cancer Institute** and is supported by the National Cancer Institute (P01CA151135-01 – Ambrosone, Bandera).

For more information on how to take part in the Women's Circle of Health Study call 732-235-8806 or e-mail wchstudy@umdnj.edu.





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opportunities to move!





neighbors. Of course, having fun is the best way to exercise. Take a walk, go swimming, shoot baskets, and hit a tennis ball. These are fun and easy things to do that are nearly free in many communities.

Strategies for success

- Schedule exercise into your week. You may think you don't have any time but look carefully and you will find it.
- Set a goal and then cut the goal into small pieces.



A big goal makes most of us stop in our tracks but feels more manageable when it is broken down.

• Find an exercise partner, whether family, friend or a work buddy. It is someone to answer to, get support from and celebrate success with.

While you are out there, don't forget to put on sun screen and carry it with you so you can reapply. Drink a lot of water to replace lost fluids. Eat enough to take you through the activity but don't use it as an excuse to overeat.

Moving your body improves overall health, reduces the risk of cancer and lifts your mood. You deserve good care and it is yours to take!

— Barbara Hale,
MSW, LCSW, is
the manager of the
Social Work
Department at the
Cancer Institute of New Jersey.



 30 to 60 minutes a day, five days a week is recommended

- It is best to mix it up. Use your muscles (strength training) and get your heart and lungs working hard (cardiovascular exercise)
- Some activity is better than nothing so don't let the details stop you!

But I don't exercise!"

oing to the gym and running? Sure, they are great for someone else, but not you. But you can still get fit! Just expand your thinking – you can incorporate exercise into almost anything you do. Use the stairs, pull weeds using your triceps, move quickly when cleaning, go up and down on your toes while waiting in line, stand straight and tighten your belly muscles when talking with

Language Adaptation Key in Development of Skin Cancer Interventions for U.S. Hispanics

U.S. Hispanics who speak English are less likely to engage in skin cancer prevention practices and more likely to put themselves at risk for skin cancer as compared to Spanish-speaking Hispanics who live in this country. Investigators from the Cancer Institute of New Jersey say their findings show a need to consider linguistic acculturation – the way one adapts to the multiple languages to which he or she is exposed – in developing interventions for this population. The study, led by Elliot J. Coups, PhD, a behavioral scientist at the Cancer Institute of New Jersey, appeared in the April print edition of JAMA Dermatology (doi:10.1001/ jamadermatol.2013.745).

U.S. Census figures show that Hispanics are the fastest growing racial/ethnic group in the country. Even though Hispanics have a lower incidence of melanoma skin cancer than non-Hispanic Caucasian individuals, they are more likely to be diagnosed with melanoma at an earlier age and at an advanced stage, according to the National Cancer Institute. Researchers say for those reasons it is important to target Hispanics for skin cancer prevention interventions.

The study participants were 788 Hispanic adults residing in Arizona, California, Florida, New Mexico or Texas who were drawn from a nationally representative panel of individuals known as KnowledgePanelLatino, Mey which is administered by the research company GfK Custom Research, LLC (GfK). The participants completed an online survey in English or Spanish about skin cancer prevention and risk behaviors, and provided information on how often and how well they speak English and Spanish.

Demographic information also was collected.

Overall, as compared to Spanishspeaking Hispanics, Englishacculturated Hispanics reported being more likely to engage in behaviors that put them at a higher risk for developing skin cancer (sunbathing, indoor tanning) and less likely to protect themselves by seeking shade and wearing protective clothing.

Hispanics with a strong command of both languages were found to engage in skin cancer prevention behaviors at a lower level than Spanish-speaking Hispanics, but at a higher rate than English-acculturated Hispanics. But with regard to risk behaviors, bicultural participants were found to engage in these practices at levels similar to English-speaking Hispanics.

Along with consideration of linguistic acculturation in developing interventions, Dr. Coups, who is also an associate professor of medicine at Robert Wood Johnson Medical School, says the results also highlight the need to include issues related to culture, race and ethnicity in dermatology training programs.

To further address the needs for this population, Coups and colleagues are embarking on a project to develop and test a program to promote sun-safe behaviors among Hispanic outdoor laborers — a project made possible with the commitment of Johnson & Johnson to help address health priorities impacting community residents.

The study was supported by funding from the Cancer Institute of New Jersey (Coups) and the National Cancer Institute: K07CA133100 (Coups) and K01CA131500 (Hudson).

Survivora CORNER

the inspirational story of a cancer survivor. For this edition, we are pleased to profile 50-year-old
Doug Susan, an attorney and compliance director, who was diagnosed with sarcoma in 2008. As part of his treatment, Doug underwent surgery, which was followed by brachytherapy and chemotherapy for about six months. He has been cancer free ever since.

Doug Susan

You were very active with your family prior to learning you had cancer. How much of an adjustment did you have to make with those activities during treatment and how did you keep your spirits up?

 Having been a • competitive athlete in my youth, I always enjoyed participating with my son Stephen and his friends in informal sports activities (pickup games of basketball, football and baseball). I also assisted coaching his youth teams. During treatment, some physical limitations and fatigue prevented me from participating in strenuous activities or attending most of his sporting events and karate practices. However, Stephen always made some time each day so that we could bond over video games. Since my remission, some physical limitations still exist. However, I take great joy in being able to see him participate in sporting events such as football and track and field.



Through all this,
Stephen (now in high school,
but was 11 when you were
diagnosed) said he learned that
"life is fragile" and started a
campaign collecting video games
to raise money for research at
the Cancer Institute of New
Jersey (see page 18). How does
that make you feel to know that
he was moved in this way?

• I was extremely
• touched by
Stephen's actions, particularly
since I had no prior knowledge that he was engaging in
the fundraising activity. His
campaign serves as a fine
example of assisting in a charitable endeavor and an easy
means for other youth to
donate to a worthy cause.
Stephen learned that "life is
fragile." We both have learned
that love is strong.

You have been cancer free for nearly five years now. What life-lessons did you walk away with from having had this experience?

• I have come to • more fully treasure that the great things in life, the things that are most important, are simple; the love of family and friends, the ability to get up in the morning and see a sunrise, the ability to care for oneself and others.

oug credits his family as a constant source of inspiration and notes the doctors and staff at the Cancer Institute of New Jersey and Robert Wood Johnson University Hospital are a continuing motivation in his recovery. A long-time Rutgers University football season ticket holder, Doug is glad to be back enjoying some of the simpler pleasures of life, including attending sporting events and engaging in weight lifting, tai-chi, poetry and reading. He is especially looking forward to celebrating his 20th wedding anniversary with wife Jamie in 2015, Stephen's graduation from high school, and "the privilege of growing older."

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Educating Youngsters About Dangers of Tobacco and Excess Sun Exposure

he Cancer Institute of New Jersey Office of Community Outreach is working to deliver a cancer awareness and prevention curriculum to pre-teens and teens in the greater New Brunswick area. The Cancer Awareness Youth Educator Badge Program, an innovative curriculum made possible in partnership with Johnson & Johnson, aims to educate more than 600 children about the

dangers of tobacco use and excess sun exposure and how they can reduce their cancer risk. Educator teams of two will engage in group activities with children aged 11 to 14, while using tailored lesson plans, visual aids and age-appropriate handouts designed by science and

education experts at the Cancer Institute of New Jersey and in the greater community.

EDUCATOR

Amanda Medina-Forrester, MA, MPH, a program development specialist at the Cancer Institute of New Jersey says it is critical to reach this age group. Skin cancer is the most commonly diagnosed cancer and research shows that exposure to ultraviolet radiation as a child or teen can increase a person's risk for developing skin cancer in adulthood. Cigarette smoking is the number one risk factor for lung cancer, according to the Centers for Disease Control and Prevention. The 2010 New Jersey Youth Tobacco Survey indicated that 14 percent of high school students were smokers, with evidence suggesting that many of these students may have started tobacco use in middle school.

"It is during the middle school years where youngsters start to become more independent and start making their own decisions, some of which may put them at risk. Some of these decisions could be influenced by peer pressure or simply a lack of knowing the harms and effects of their actions," said Medina-Forrester. "Through this program, we can help equip young people with the information they need so that they can make better choices and learn to lead a cancer preventative lifestyle." Medina-Forrester was part of the team that developed the "train-the-trainer" curriculum. Volunteer trainers have been sharing the program with area youth throughout the spring and will continue through the fall.

Community organizations interested in delivering the program to their youth are welcome to apply to serve as host sites. To learn more, contact Amanda Medina-Forrester at 732-235-9571 or at medinaay@umdnj.edu.

Systems Biologist Joins the Cancer Institute of New Jersey

Elke K. Markert, PhD

xpanding a vital component of its research enterprise, the Cancer Institute

of New Jersey is welcoming systems biologist

Elke K. Markert, PhD, to its Center for Systems

Biology. Dr. Markert, who has an extensive mathematics background, was most recently at the

Simons Center for Systems Biology at the Institute for Advanced Study in Princeton.

Systems Biology is a comprehensive approach to examining large data sets that range from single cells to the patient and his or her disease as a whole. With large quantities of this genetic information gathered directly from clinics and laboratories at the Cancer Institute of New Jersey, researchers continually collect, package, store

and analyze these data. The ultimate goal in interpreting the information is to identify

patterns that might shed light on how cancer develops – which in turn can help scientists identify novel treatment options. This is done through a variety of means including com-

putational science.

Markert, an assistant professor of medicine at Robert Wood
Johnson Medical School, complements these extensive research efforts. Along with cancer genetics and the development of cancer, her focus includes comprehensive analysis of how gene expression translates into operational structures within the cell and how that information is integrated

with other types of genetic and

molecular data.

Kudos!



ongratulations to Dr. Darlene Gibbon, chief of gynecologic oncology at the Cancer Institute of New Jersey, who was named as one of the "2013 Women of Excellence" by the Union County Commission on the Status of Women. Dr. Gibbon was recognized by members of the Union County Freeholder Board at a recent event for her expertise in the field of medicine. From left: Freeholders Bette Jane Kowalski and Vernell Wright, Dr. Gibbon, Freeholder Vice Chairman Christopher Hudak and Freeholder Chair Linda Carter.



Welcoming a New Affiliate: Shore Medical Center

hore Medical Center has become the latest affiliate to join the Cancer Institute of New Jersey Network of hospitals. Shore and its nationally-recognized Cancer Center become the first in Atlantic County to provide patients facing a cancer diagnosis with access to the Cancer Institute of New Jersey's state-of-the-art clinical and research capabilities.

As an affiliate, Shore Medical is able to offer its patients enrollment in Cancer Institute of New Jersey clinical trials while having them receive care and treatment locally at the Somers Point facility. Shore's patients also will receive access to community education, outreach and other services provided by the Cancer

Institute of New Jersey that complement the medical center's comprehensive cancer program.

"Shore is proud to become an affiliate of the Cancer Institute

of New Jersey," said Shore President and CEO Ron Johnson. "This groundbreaking organization has a demonstrated history of clinical and research excellence, so members of our community can feel confident that they are receiving the very best in cancer care. This partnership represents the natural evolution of Shore as the premier cancer care provider in southern New Jersey."

Robert Wood Johnson University Hospital Receives Outstanding Achievement Award

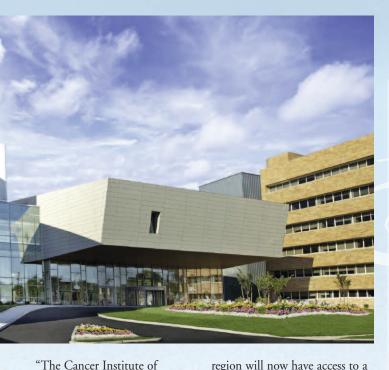
obert Wood Johnson
University Hospital's
(RWJUH) Cancer Program, in partnership with the
Cancer Institute of New Jersey,
the Robert Wood Johnson
Medical School and private
physicians in the community,
has received the Outstanding
Achievement Award from the
American College of Surgeons
(ACS) Commission on Cancer.

RWJUH, which is the flagship hospital of the Cancer Institute of New Jersey, is one of only two National Cancer Institutedesignated cancer programs in the nation to achieve this honor.

"Earning this national distinction is clear evidence that this remarkable cancer team offers residents of our state and region the finest cancer treatment available anywhere in the United States," says RWJUH and Robert Wood Johnson Health System President and CEO Stephen K. Jones, FACHE.

Molly Gabel, MD, chair of the RWJUH Cancer Committee, director of the Cancer Institute of New Jersey Network and associate professor of radiation oncology at Robert Wood Johnson Medical School adds, "We are proud to be part of an academic medical campus that excels in several key cancer program standards and offers patients groundbreaking cancer treatment innovation, technology, research and clinical trials."

Established in 2004, the Outstanding Achievement Award is designed to recognize cancer programs that strive for excellence in providing quality care to cancer patients.



New Jersey is proud to welcome Shore Medical Center into our statewide network of hospitals that provides patients access to the very latest clinical trials and cancer care right in their own communities," said Cancer Institute of New Jersey Director Robert S. DiPaola, MD. "Shore's Cancer Center has distinguished itself as a leader in providing exceptional cancer care, and we look forward to working closely with the Shore team in delivering cutting-edge therapies to patients in southern New

"Through this affiliation with the state's National Cancer Institute-designated Comprehensive Cancer Center, I am pleased that we are expanding our exceptional cancer resources to the southern part of our state," said New Jersey Health Commissioner Mary E.

Jersey and beyond."

O'Dowd, MPH. "By pairing Shore's cancer program with the Cancer Institute of New Jersey's vast clinical and research capabilities, residents in this

region will now have access to a wider array of cancer care resources."

New Medical Director for Carol G. Simon Cancer Centers

ric Whitman, MD, has been promoted and selected to serve as medical director of Atlantic Health System's (AHS) Carol G. Simon Cancer Centers and the oncology service line.

In this role, Dr. Whitman will provide physician leadership to improve quality, expand the depth and breadth of services and improve efficiencies in oncology services at all AHS campuses. Whitman and Lydia



Nadeau, director, Oncology Services, AHS, will work together to build on a

strong foundation for oncology services. They will be supported in this endeavor by **Steven Papish**, **MD**, medical director, Morristown Medical Center campus, and **Dennis Lowenthal**, **MD**, medical director, Overlook Medical Center campus, and will continue to collaborate with Newton Medical Center and **Michael Gallagher**, **MD**, director, Sparta Cancer Center.

Whitman articulated a compelling vision to unify the cancer centers and create truly differentiated services.

"I plan to continue to develop our cancer center into a worldclass institution," Whitman said. "Amid the opportunity and challenge of implementing the Affordable Care Act, our cancer centers will become leaders in the adoption of evidence-based, cost-effective, personalized cancer care."

Since joining AHS in 2004, Whitman has served as the founding director for the Atlantic Melanoma Center and the medical director for the Atlantic Center for Research. He will remain in these roles and will continue as acting research officer for AHS.

Special Recognition

As New Jersey's only
National Cancer
Institute-designated
Comprehensive Cancer Center,
the Cancer Institute of New
Jersey is committed to delivering
cutting-edge therapies in the
form of clinical trials statewide
and beyond. One of the ways
this is accomplished is through
the Cancer Institute of
New Jersey Oncology Group
(CINIOG) which is comprised

(CINJOG), which is comprised of physicians from our Network of hospitals throughout the state. While the latest trials are offered at the Cancer Institute of New Jersey, many of our Network hospitals also accrue patients to these studies. In 2012 CINJOG accrued 800 patients

to clinical trials - doubling the

amount from 2011.

Special recognition goes out to the top four accruing hospitals:

- Cooper University Hospital: 198 patients
- Somerset Medical Center: 176 patients
- Jersey Shore University Medical Center (JSUMC): 103 patients
- Ocean Medical Center: 103 patients

JSUMC and Ocean Medical Center are part of Meridian Health, which is a System Partner of the Cancer Institute of New Jersey. As a System, Meridian Health enrolled 300 patients to clinical trials in 2012.

A New Role



ristine Delnevo,
PhD, MPH, director of the Center for
Tobacco Surveillance &
Evaluation Research at
the School of Public
Health, was recently
named as co-leader of

the Cancer Prevention and Control Program at the Cancer Institute of New Jersey. A nationally-recognized expert in tobacco control, Dr. Delnevo will be responsible for developing population-based research that fosters collaborative, multi-disciplinary and translational research to reduce the burden of cancer and improve the quality of life for cancer patients, survivors and those who are at risk for developing cancer. Delnevo, who is also a professor and chair of health education/behavioral science at the School of Public Health, is author or co-author of numerous publications and serves on the editorial board of the *American Journal of Health Behaviors*.

A **New Aim**for **Breast** Cancer **Prevention**

ladimir Belyi, PhD, a systems biologist at the Cancer Institute of New Jersey and

an assistant professor of medicine at Robert Wood Johnson Medical School, along with a colleague at the University of Louisville, was awarded \$200,000 from the National Breast Cancer Coalition to study whether breast cancer may be caused by a virus. Dr. Belyi notes that about eight percent of cancers are caused by a virus. He wants to take a closer look at breast cancer. Belyi will examine DNA in hundreds of breast cancer tissue samples for irregularities that could indicate the presence of a virus. If such a link can be established, the aim is to create a vaccine that would halt the virus.

The Cancer Institute of New Jersey Recognized by Oncology Nursing Society

he Cancer Institute of New Jersey has been named as the recipient of the 2013 Oncology Nursing Society's (ONS) Employer Recognition Award in the medium size employer category. The honor acknowledges institutions that support the vision, mission and values of the nursing organization.

"As a National Cancer Institute-

designated Comprehensive
Cancer Center, the Cancer
Institute of New Jersey is dedicated to research, treatment, prevention and education. From being on the front lines of patient care to helping drive clinical discoveries and beyond, our oncology nurses play a critical role in upholding each one of those pillars every day, and we are proud to support them," said Robert S.
DiPaola, MD, director of the Cancer Institute of New Jersey.

"Our team is dedicated to excellence and is able to provide that distinct level of service in part thanks to the support and commitment of the Cancer Institute of



The nursing team at the Cancer Institute of New Jersey

New Jersey," noted Director of Oncology Nursing Services

Janet Gordils-Perez, MA, RN, APN-BC, AOCNP. "Our center's leadership recognizes the value and expertise of the resources and training opportunities offered through ONS, and because of this support, our nurses continue to excel in delivering quality programs and care, which ultimately translate into improved outcomes both for our patients and the community at large."

Artistic Flare





special thanks to the Art Department faculty at East Brunswick High School and Churchill Junior High School for sharing some of their student's artwork earlier this spring at the Cancer Institute of New Jersey. From painted self-portraits, charcoal drawings, silk screening, ceramics and other mixed mediums, more than 60 pieces were showcased throughout the center.



Robert S. DiPaola, MD Director

Susan Goodin, PharmD Deputy Director and Assistant Director for Clinical Science

Edmund C. Lattime, PhD Deputy Director and Associate Director for Education and Training

Joseph Aisner, MD Associate Director for Clinical Science

David A. August, MD Chief, Surgical Oncology

Linda Barker

Chief Administrative Officer and Associate Director for Administration and Planning

Joseph R. Bertino, MD Chief Scientific Officer

Kevin Coyle

Executive Director of Finance

Richard Drachtman, MD Interim Chief, Pediatric Hematology/Oncology

David J. Foran, PhD

Chief Informatics Officer Executive Director, Bioinformatics and Computational Imaging

Darlene Gibbon, MD Chief, Gynecologic Oncology

Bruce G. Haffty, MD Chair, Radiation Oncology

Isaac Yi Kim, MD, PhD Chief, Urologic Oncology

Sharon Manne, PhD Chief, Population Studies

Lorna Rodriguez, MD, PhD Director, Precision Medicine

Karen Shapiro, MBA, MPH Associate Director of Operations

Roger Strair, MD, PhD Chief, Hematologic Malignancies/Hematopoietic Stem Cell Transplantation

Deborah L. Toppmeyer, MD Chief Medical Officer Chief, Solid Tumor Oncology

Eileen White, PhD Associate Director for Basic Science

Helmut Zarbl, PhD, ATS Associate Director for Public Heath Science

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and Public Affairs
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Oncolyte • Cancer Institute of New Jersey Foundation News

Message from the Chair of the Foundation Board of Trustees



ver since its inception, the Cancer
Institute of New
Jersey Foundation has partnered with dedicated individu-

als and organizations to build a strong fundraising program to support the research and clinical work at the Cancer Institute of New Jersey. We are well positioned to seize the new and expanded philanthropic opportunities created with the integration of the Cancer Institute of New Jersey and Rutgers University. To create the best synergies, the Cancer Institue of New Jersey Foundation will be merging with the Rutgers University Foundation effective July 1. With this change, the Cancer Institute will establish a development office and continue to have a fundraising staff dedicated solely to securing philantropic support for the priorities of the Institute and stewarding our donors and friends. Below are answers to some of the commonly asked questions our team has received. If you have additional questions, please feel free to contact our office.

On behalf of the Board of Trustees of the Cancer Institute of New Jersey Foundation, I thank our donors, volunteers and friends for their incredible generosity and commitment over the years to building a world-class cancer center in New Jersey. Your continued support will ensure we remain at the forefront of cancer research, treatment, prevention and education.

After July 1, can I still designate my gift for the Cancer Institute of New Jersey?

Subha 1. B-X

Yes! You can certainly still designate your gift for the Cancer Institute of New Jersey as you have in the past. The Cancer Institute of New Jersey continues its dedicated mission of improving the prevention, detection, treatment, and care of patients with cancer.

What happens to the donation I already made to the Cancer Institute of New Jersey?

Your past gift will continue to support the Cancer Institute of New Jersey and its amazing work.

After July 1, to whom will I make my checks payable, and where will I send them?

Checks can be made payable to:

CINJ at RUF. Checks can be sent to:

Rutgers University Foundation

Accounting Offices

120 Albany Street, Tower 1, Suite 201

New Brunswick, NJ 08901

Will community events still be part of the Cancer Institute of New Jersey's fundraising efforts?

Yes. Community events will continue to be central to the Cancer Institute of New Jersey's fundraising efforts, including our gala in October!

How will my gift to the Cancer Institute of New Jersey be stewarded in the future?

You will continue to receive communications and regular updates on the critical work the Cancer Institute of New Jersey performs.

If I am a patient of the Cancer Institute of New Jersey, how do I support its work?

A: Visit cinj.org/giving to learn how you can help.

With whom will I work to continue my support for the Cancer Institute of New Jersey?

A: You will continue to work with the same individuals you have in the past.

How do I contact the Cancer Institute of New Jersey's fundraising office?

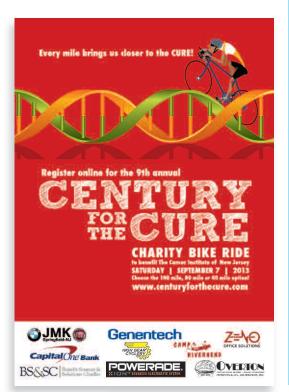
fundraising address and phone numbers will not change. Email addresses will change. After July 1, please send emails to info@CINJ-RUF.Rutgers.edu for more information or call 732-235-8614.



Annual Bike Ride Supports New Hematologic Malignancies Research

he annual Century for the Cure bike ride that has raised more than \$1 million over the past eight years for research at the Cancer Institute of New Jersey is making it possible for new scientific exploration in the area of hematologic malignancies. The inaugural 'Century for the Cure Research Award' was created to enhance basic and translational research not previously focused on in the area of blood cancers. Each award is funded at \$50,000 for one-year with an option to renew at that level for the following year. The initiative is also supported through the Cancer Institute of New Jersey's National Cancer Institute Cancer Center Support Grant.

Registration Open for 9th Annual Century for the Cure



Following a competitive review process of submissions from researchers from the Cancer Institute of New Jersey; Rutgers, The State University of New Jersey; and Princeton University, two awards were given this year. One of the grants was awarded to Shridar Ganesan, MD, PhD, associate director for translational science at the Cancer Institute of New

Jersey and associate professor of medicine and pharmacology at Robert Wood Johnson Medical School, and John Glod, MD, PhD, pediatric oncologist at the Cancer Institute of New Jersey and assistant professor of pediatrics and pharmacology at Robert Wood Johnson Medical School.

Drs. Ganesan and Glod are exploring the role of abnormalities in the mixed lineage leukemia (MLL) gene in the development of infant leukemia. In this type of leukemia, which occurs in very young children, a segment of the MLL gene is fused with another partner gene. This abnormal fusion of two genes then leads to the production of a fusion protein made of parts of each normal protein. MLL fusion partners have been shown to participate in the repair of damaged DNA, and work done in the Ganesan laboratory suggests that the abnormal MLL fusion proteins also incorporate into the DNA repair complex. Through the use of cell models, Ganesan and Glod will examine the effect of MLL fusion proteins on the repair of DNA damage.



"The leukemias that develop as a result of abnormalities in the mixed lineage leukemia gene are typically poor prognosis cancers, which unfortunately have limited response to current therapies. By further understanding the molecular pathways behind these leukemias,

we have an opportunity to develop more effective therapies for these patients," noted Ganesan.

The other project, undertaken by Lori Covey, PhD, professor of cell biology and neuroscience at Rutgers University, focuses on further classifying and developing new therapies for chronic lymphocytic leukemia (CLL) - a cancer that targets white blood cells. CLL, which specifically affects the B cells in the blood, is the most common adult leukemia in the United States. Symptoms of this disease can be lessened with chemotherapy, but currently no established cure exists. Dr. Covey's work specifically examines the role of CD40, an important B-cell marker that plays a critical role in allowing B cells and CLL to grow.

One measure of CLL severity is how well the cells grow when CD40 is triggered. Abnormal activation of this protein's pathway can enhance cell growth and cancer. Using cell models, Covey and colleagues aim to identify whether classification of the CD40 pathway can be further broken down based on iden-

Everyday Heroes

tification of biomarkers. "Further subclassification of this signaling pathway could lead to more precise clinical staging and better prognostic indicators, as

tification of biomarkers. "Further subclassification of this signaling pathway could lead to more precise clinical staging and better prognostic indicators, as well as the development of novel therapies designed to block this pathway and ultimately cancer growth," noted Covey.

Scott Glickman, founder of the Century for the Cure bike ride, knows the importance of cancer research, as he was treated at the Cancer Institute of New Jersey for stage four non-Hodgkin's lymphoma more than 15 years ago. "Tomorrow's advanced cancer treatments depend on the research being done right now. There are still many mysteries when it comes to hematologic malignancies. That is why my wife Aileen and I are more than pleased that through the annual Century bike ride, there is an opportunity to support innovative scientific exploration in this area."

Gifts up to \$50,000:

- Jattrude Fogarty Trust, Long Branch
- Quotes for a Cure, Allstate New Jersey Insurance Company

Gifts up to \$35,000:

- The Power of Pink campaign, BJ's Charitable Foundation
- AHEPA Fifth District
 Cancer Research Foundation,
 The Order of AHEPA and
 The Daughters of Penelope
- Night of Irish Fun and Feasting, Ed McKenna, Jr., Esq., Red Bank

Gifts up to \$15,000:

Care to Walk, North Brunswick
 Township High School
 Care to Walk Club, North Brunswick



Above: The North Brunswick Township High School Care to Walk Club raises \$12,000 for the Cancer Institute of New Jersey.

 Guiness Oyster Festival, Red Bank Development Corp, Red Bank

Gifts up to \$1,500:

- "A Power of One" Walk-A-Thon, Chubb Personal Insurance, Whitehouse Station
- Fundraising Events by
 12 High School Gymnastics Teams,
 North Jersey Gymnastics League,
 Bergen, Passaic, Morris and Essex
 Counties. Member schools: Butler,
 Clifton, Indian Hills, Montclair,
 Pascack Regional, Passaic Valley,
 Ramapo, Randolph, Ridgewood,
 Wayne Hills, Wayne Valley and
 West Milford

Gifts up to \$1,000:

• Walk for Life, Middlesex County College Muslim Student Association, Edison

Gifts in Kind:

- Patient Comfort Bags, Janssen Global Services, LLC, Raritan
- Patient Comfort Bags, Bristol-Myers Squibb Oncology Division, Plainsboro

Sowing the Seeds of a Young Investigator

Bratati Ganguly, PhD

ratati Ganguly, PhD was recently named the Hugs for Brady Pediatric Young

Investigator. The competitive two-year grant, funded by a \$100,000 gift

from the **Hugs for Brady**

Foundation, was awarded to Dr. Ganguly for her exceptional ability and promise in conducting innovative pediatric cancer research. Sherrie and Michael Wells founded the Hugs for Brady Founda-

tion after the death of their 23-month old son Brady Michael in July 2010. "I couldn't be more pleased with the naming of Dr. Ganguly as the first Hugs for Brady Pediatric Young Investigator," noted Sherrie Wells. "Michael and I believe that supporting a young researcher with her talent, intelligence and passion is an important investment that will help

> develop an independent scientist of the future whose work will advance science and benefit children. It is especially meaningful to us that coincidentally the research that Bratati chose is focused on undifferentiated acute leukemia, the disease that took

Brady's life." The Hugs for Brady Foundation is dedicated to bringing about awareness of childhood cancer, helping children with cancer and their families and finding a cure for pediatric cancer.



A Clinical Research Experience for High School Students

uilding off the success of its

Continuing Umbrella for

Research Education (CURE)

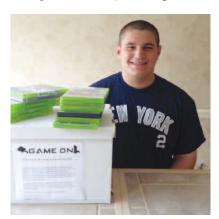
Program that encourages underrepresented minority undergraduate and high school students to pursue careers in healthcare, the Cancer Institute of New Jersey is offering a related program focusing on clinical research. The

Clinical Research Experience for High

School Students (CREHST) program, funded by a generous grant from the

Game on!

nstead of beating animated warlocks, best driving times and sports games, Edison teen **Stephen Susan** is asking his friends and the community to help beat cancer by donating old



video games to support research at the Cancer Institute of New Jersey. As you'll read in this edition's 'Survivor's Corner' (page 10), Stephen was inspired to start the 'Game on!' campaign following his dad's battle with sarcoma. Games donated to the cause are traded in at a local gaming store for cash, which is then donated to the Cancer Institute of New Jersey Foundation. So far, Stephen's efforts have resulted in more than \$3,500 raised!

Rita Allen Foundation,

aims to expose students to the clinical aspect of cancer research and careers available in what is known as STEM (Science, Technology, Engineering, and Math) fields.

The CREHST program was developed with the goal of achieving diversity in the biomedical research workforce. Select high school juniors and seniors who met application criteria and were accepted into the program soon will begin to train alongside physician-scientists at the Cancer Institute of New Jersey. The aim is to

motivate them to pursue college degrees in STEM areas and ultimately choose a career in biomedical research.

Sunita Chaudhary, PhD, director of research education at the Cancer Institute of New Jersey, leads the



CREHST program. "Through the generous support of the Rita Allen Foundation, we are able to provide our mentoring faculty with additional tools and resources to provide a comprehensive clinical research experience for

A Boost for Research

uring a visit to the **Cancer Institute of** New Jersey, AHEPA Fifth District Cancer **Research Foundation Chair** Andrew Zachariades (center) and Board members present a check to Cancer Institute of New Jersey investigators Drs. Vassiliki Karantza and John Glod. The Order of AHEPA and The Daughters of Penelope lead various fundraising efforts that have provided \$237,000 in cancer research funds at the Cancer Institute of New Jersey.



these students. And most importantly, this funding helps the Cancer Institute of New Jersey in fulfilling its education mission in training the next generation of scientists," she noted.

Some of the research projects the students will work on include examining combination therapies for various hematological malignancies, exploring new genetic approaches to the treatment of patients with non-Hodgkin's lymphomas, and looking at signaling pathways in prostate cancer, among others.

Selected students will spend 40 hours per week at the Cancer Institute of New Jersey for the summer, followed by one afternoon per week during the upcoming academic year. Trainees will spend 80 to 90 percent of their time on their research project and take part in additional enrichment activities that focus on general cancer knowledge, the nature of oncology research, experimental design, bioethics, protection of human subjects and scientific writing.



1st and Goal

rea women came out for a day of fun on the gridiron during the Princeton Football Women's Clinic with a goal of raising awareness and funds for breast

cancer programs at the Cancer Institute of New Jersey. Led by Head Coach Bob Surace and his staff, the ladies took part in drills and a friendly skills competition to raise \$4,500.



Special Delivery



special thanks to **Stop and Shop and Peapod Delivery**,
which donated hundreds
of toys and games for some of our
youngest patients. The items will be
distributed to children being treated in

the Pediatric Hematology/Oncology Program, helping to bring smiles year-round. Stop and Shop is also a supporter of the Employee Wellness Program at the Cancer Institute of New Jersey.

UMDNJ-Robert Wood Johnson Medical School

125 Paterson Street New Brunswick, NJ 08901



The Cancer Institute of New Jersey

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Visit www.cinj.org for updates on this year's honorees and details on a spectacular evening highlighting 20 years of patient care at the Cancer Institute of New Jersey.