As unique as one’s ‘John Hancock,’ a genetic ‘signature’ is helping scientists develop a new technique to identify aggressive forms of prostate cancer. Currently, a grading system known as Gleason score determines the severity of prostate cancer, with a high score typically being assigned to those determined to have a poor prognosis. But there are times when men with a low Gleason score still go on to develop aggressive tumors.

Investigators from The Cancer Institute of New Jersey, along with colleagues from the Institute for Advanced Study in Princeton and Chugai Pharmaceutical in Japan, wanted to further understand the molecular characteristics associated with poor prognosis—all through the help of Systems Biology methodologies.

In their study which appeared in the December 27 Proceedings of the National Academy of Sciences (doi/10.1073/pnas.1117029108), investigators started by examining gene expression data from 281 prostate cancer tissue samples from a 2010 Swedish study. In this study, samples from each patient’s tumor were collected by biopsy, stored, and analyzed using a technology known as microarray, by which a sample can be scanned for the expression of thousands of genes using probes—or ‘baits’—affixed on glass slides. The final data published from this study contained the levels of each gene measured in each sample, resembling a vast ‘light field’: green lights for inactive genes, and red lights for active genes. Investigators examined these data looking for patterns that might identify specific tumor characteristics; these patterns can be thought of as traces—or ‘signatures’—of genetic aberrations causing various malfunctions in the tumor cells. The team then looked at the combination of these signatures that were present in each sample.

Researchers identified five prostate cancer subtypes. Three of those groups were determined to have a non-malignant outcome, but the molecular profiles of the other two groups exhibited a distinct high-risk prognosis, as confirmed by clinical outcome data. The data were re-confirmed using a different study set. The authors note, the two study sets differed in patient characteristics including age, ethnicity and treatment regimens, but had comparable molecular features in the two high-risk subtypes.

— Continued on page 4
Using Systems Biology to Improve Patient Outcomes

Director’s Corner

As a National Cancer Institute-designated Comprehensive Cancer Center, The Cancer Institute of New Jersey (CINJ) carries out a wide breadth of scientific investigation that yields a multitude of discoveries. When we collaborate with our consortium partners – Rutgers, The State University of New Jersey and Princeton University – as well as other institutions, we have the ability to not only multiply such findings, but also to translate those discoveries into tomorrow’s treatments at a much more rapid pace.

As you’ll read in our cover story, such collaboration is evident in the field of Systems Biology, which is helping to transform the way cancer researchers work with scientific data. Based on a marriage of math and science applications, this area of study by specialized investigators leads to the identification of better ways to diagnose and treat patients, based on genetic patterns and abnormalities specific to each individual patient. By working with colleagues at the Institute for Advanced Study, and supported in part by Jewels of Charity, CINJ systems biologists are taking translational science to a new level. This effort at personalized medicine is leading to more effective means to help our patients. In fact, our systems biology effort is now part of a large initiative in personalized medicine designated as Precision Medicine, which was recently launched at CINJ. In future issues, we will highlight additional activities of our Precision Medicine team.

Another CINJ collaborator helping propel traditional research upward is Dr. Yibin Kang of Princeton University, who is a member of CINJ’s Genomic Instability and Tumor Progression Program. As you’ll read on page 15, he was recently honored by the American Association for Cancer Research for his role in advancing research on breast cancer metastasis. Also, support from a number of private individuals and entities is arming CINJ investigators with additional resources to tackle breast cancer. Philanthropic collaboration often allows scientific collaboration to reach new heights.

Along with translating scientific discoveries to patient treatments, CINJ is also committed to education and prevention. On page 14, you’ll learn more about efforts by CINJ behavioral scientist Dr. Elliot Coups and Rutgers University psychology professor Dr. Gretchen Chapman, to study the impact of behavioral economic principles on pedometer-based walking interventions. Such findings could help pave the way for new interventions that promote a healthy, cancer-preventative lifestyle.

As Charles Darwin said, “In the long history of humankind, those who learned to collaborate and improvise most effectively have prevailed.” At CINJ, it is our mission to work toward new discoveries. Conducting our research collaboratively with others leads to more rapid groundbreaking results, and we will enthusiastically remain a trailblazer on this path. We hope you will continue to run with us in our commitment to prevail against cancer.

Sincerely,

Robert S. DiPaola, MD
Director, CINJ; Associate Dean for Oncology Programs and Professor of Medicine, UMDNJ-Robert Wood Johnson Medical School
NCI Renews Prestigious Designation, Reaffirming CINJ’s Role as a Statewide Resource

The national designation of the renowned Cancer Institute of New Jersey continues a record of scientific excellence and will usher in a new era of advanced diagnostic and treatment technologies for Garden State residents.”

— New Jersey Governor Chris Christie

The Cancer Institute of New Jersey has been awarded renewal of its Comprehensive Cancer Center designation from the National Cancer Institute (NCI). This prestigious designation, presently awarded to only 41 such centers nationwide, is granted competitively to institutions characterized by the highest comprehensive scientific excellence in cancer research and the ability to bring research discoveries to patients. CINJ is the only NCI-designated Comprehensive Cancer Center in the state of New Jersey.

A rigorous on-site review of CINJ’s scientific programs by the NCI recognized the value of CINJ as a collaborative Consortium Cancer Center; for inclusion of the state’s cancer registry/SEER (Surveillance, Epidemiology and End Results) cancer database at CINJ; for increased collaborative multidisciplinary science; for an increase in securing federal peer-reviewed research funding; and for increased clinical trials for patients throughout the State of New Jersey.

It was also noted that Dr. Robert S. DiPaola, the director of CINJ, optimized the structure of scientific programs to enhance research collaborations and translation to treatments for cancer patients. In addition, Dr. DiPaola has launched new initiatives to capitalize on the tremendous opportunities afforded by changes in cancer research and technology, including multiple statewide efforts, personalized/precision medicine and systems biology.

“I am honored to lead such a distinguished institution that is making discoveries that will quickly impact patient care and cancer prevention,” remarked Dr. DiPaola. “The NCI’s recognition of the high quality of our research programs led by our outstanding faculty and staff reaffirms our stature as one of this country’s leading cancer centers.”

“New Jersey has always been at the forefront of some of the world’s most revolutionary medical innovations, treatments and discoveries,” said Governor Chris Christie. “The national designation of the renowned Cancer Institute of New Jersey continues that record of scientific excellence and will usher in a new era of advanced diagnostic and treatment technologies for Garden State residents.”

By engaging in, and developing research collaborations among scientists from multiple statewide research institutions, CINJ continues to foster opportunities for public-private partnerships with New Jersey’s pharmaceutical and biotechnology industries.

While NCI-designated Cancer Centers are considered the centerpiece of the nation’s effort to reduce disability and death from cancer, they also are heralded as providing great value to the individual states they serve.

“The National Cancer Institute recognizes that CINJ is one of this country’s most innovative cancer centers,” stated UMDNJ Interim President Denise V. Rodgers, MD. “The NCI has reaffirmed what we in New Jersey already know, that CINJ is a vital asset for people throughout this state.”

“CINJ is a leader in the development of new therapies, clinical trials, cutting-edge research and improved patient outcomes for New Jersey residents,” stated Peter S. Amenta, MD, PhD, dean of UMDNJ-Robert Wood Johnson Medical School. “The renewed NCI designation is the culmination of hard work and a true dedication to excellence.”
Using Systems Biology to Improve Patient Outcomes

— Continued from page 1

“Gleason score remains the best indicator of overall prostate cancer survival to date, but if we are able to identify patients with a low Gleason score who, nevertheless, exhibit characteristics for developing an aggressive prostate cancer, clinicians may be able to better manage the disease,” said CINJ resident member Arnold J. Levine, PhD, senior author of the research and professor of pediatrics and biochemistry at UMDNJ-Robert Wood Johnson Medical School. He is also a professor emeritus at the Simons Center for Systems Biology at the Institute for Advanced Study.

In order to do that, investigators need to determine the relevance of this subtype classification for the development of diagnostic methods to influence treatment decisions, including treatment versus follow up and the identification of new targeted therapies. Using Systems Biology, a pilot study is now being conducted at CINJ to determine the suitability of Next Generation Sequencing technologies in reading even more detailed genetic information from prostate tumor samples stored in paraffin wax blocks.

By utilizing shared resources at CINJ (Biospecimen Repository Service, Functional Genomics and Bioinformatics) and the Center for Systems Biology, researchers will be able to reconfirm their findings and further investigate more efficient strategies to achieve this classification. An example of the latter is to identify a set of surface markers on prostate cancer cells that would allow investigators to classify prostate cancer patients into the subtypes uncovered by the gene expression analysis.

With translational science traditionally being an effort “from laboratory bench to patient bedside,” the Center for Systems Biology at CINJ further expands that to “from computer to bench to bedside” with advancing technologies in between.

The Center for Systems Biology is part of CINJ’s new Precision Medicine Initiative known in some circles as “personalized medicine.”

FACULTY FEATURE: Roger Strair, MD, PhD

— Continued from page 1

fundraising activities such as the Century for the Cure bicycle ride and the Two Guys Golf Event, early phase laboratory and clinical studies designed to ease the burden of cancer are underway.

Listening to the Patient

While many patients with acute leukemia have a disease that enters remission with standard chemotherapy, some patients have leukemia that is resistant to treatment or relapses after remission is obtained. Such was the unfortunate situation for one patient two years ago. She was discharged from the hospital to recover from treatment, in anticipation of returning to CINJ to participate in a clinical trial testing a new agent. However, when she returned to CINJ two weeks later, her leukemia had regressed. Detailed analysis of her diet and living conditions raised the prospect that her consumption of an herbal tea prepared by her mother may have played a role. She told us that something amazing had occurred and, we followed her lead. The tea leaves were obtained and tested in the laboratory at CINJ and found to kill leukemia cells. Tragically, the patient’s remission only lasted several months, but the hope is that isolation of the active ingredient in the tea will provide another important tool in the battle against leukemia. In pursuing this, CINJ initiated an ongoing multi-institutional collaborative research project with Dr. Daniel Medina of CINJ and Drs. Edmond LaVoie and James Simon of Rutgers University.

Immune Therapy for Kidney Cancer

Working with Dr. Mark Stein of CINJ’s Genitourinary Group, a new immune therapy for kidney cancer developed at CINJ has been implemented. This treatment utilizes immune cells donated by a close relative. The cells are then treated in the laboratory and given to the patient to help stimulate an immune attack on the cancer. Correlative laboratory studies demonstrate that the donated immune cells likely instruct the patients own immune cells to attack the cancer. This clinical study is ongoing.

A New Therapy for Patients with Leukemia

Several years ago studies revealed that when acute leukemia cells grow in the laboratory they are dependent on a component called “nuclear factor kappa B.” CINJ research studies done in collaboration with Dr. Daniel Medina and Dr. Arnold Rabson, director of the Child Health Institute at UMDNJ-Robert Wood Johnson Medical School, determined that nuclear factor kappa B is inhibited in the leukemia cells when patients take a commonly-used anti-inflammatory drug. In a new study at CINJ, the anti-inflammatory agent is being combined with standard leukemia therapy to determine if the treatment results in molecular changes in the leukemia cell that predict for better outcomes.

Dr. Roger Strair and long-time colleague nurse Jackie Manago.

Dr. Roger Strair and long-time colleague nurse Jackie Manago.
The Cancer Institute of New Jersey clinical research is key to providing comprehensive cancer care to patients throughout the state. With more than 150 active clinical trials, CINJ is leading the way toward uncovering new methods of treatment and prevention of cancer. But what exactly are clinical trials?

Susan Goodin, PharmD, FCCP, BCOP, is the associate director of clinical trials and therapeutics at CINJ, and professor of medicine at UMDNJ-Robert Wood Johnson Medical School. Dr. Goodin works closely with researchers at CINJ to identify scientific trends and to help them develop those laboratory discoveries into treatment options for cancer patients through clinical trials.

We asked her to give us an overview of clinical trials.

Q: What is a clinical trial?
A: Clinical trials are research studies involving people that help investigators find better ways to treat, prevent or diagnose cancer.

Q: What are the potential benefits of taking part in a clinical trial?
A: Individuals may be taking part in a clinical trial, because either there is no standard treatment for their type of cancer or the standard therapy is not working. Being on a clinical trial affords some of the advantage of being treated with effective therapies that perhaps are years away from being available to the general public.

Q: What are the potential risks?
A: As with any treatment regimen, whether it is through a clinical trial or not, there are always risks. Before deciding on participating in a clinical trial, one should have a comprehensive discussion with their healthcare team about potential risks and whether they may outweigh the benefits of the trial.

Q: If one is considering a clinical trial, what types of questions should one ask?
A: Questions about why the trial is being done and its goals, benefits and risks, and how being on the trial will affect daily live. All of these are important considerations when making the decision if a clinical trial is right for you.

Q: Why are clinical trials so important?
A: Many of the treatments we have for cancer and other diseases came as the result of a past clinical trial. Even over-the-counter medications are subject to the clinical trial process. Without this rigorous testing process examining both the safety and effectiveness of new drugs – and most importantly, if we did not have volunteers – we would not have the life-saving therapies we have today.

For more information on clinical trials, visit www.cinj.org/clinical_trials/index.html.
To learn how to take part in a clinical trial, call CINJ’s Office of Human Research Services at 732-235-8675 or e-mail cinjclinicaltrials@umdnj.edu.
Meet CINJ’s Nurses:

Tareai Smith, BSN

Tareai Smith, BSN, is an adult treatment nurse at The Cancer Institute of New Jersey with a particular interest in the treatment of women with gynecologic malignancies. Tareai graduated from Charles E. Gregory School of Nursing, received her BSN from Kean University, and is currently enrolled in Rutgers University’s Advanced Practice Nursing Program.

Unlike many nurses who at a young age knew nursing is a career decision, Tareai Smith realized that nursing was her true calling at the age of twenty when her uncle suggested she go to nursing school. “It was like an epiphany when my uncle brought up the option of nursing school. It was like an epiphany when my uncle suggested she go to nursing school. “It was like an epiphany when my uncle suggested she go to nursing school.

she said. Tareai began her nursing career at Raritan Bay Medical Center in Perth Amboy in 1993 specializing in the treatment of AIDS patients, those suffering from drug and alcohol detoxification, and chronic ventilator patients. “I have always had an underlying interest in oncology throughout my medical career and once the opportunity to work at CINJ presented itself, I took advantage of that chance immediately,” she states.

Tareai has worked at CINJ since 2004 as a staff nurse in the adult infusion area. During that time, Tareai has found her niche in gynecologic oncology. Many women with gynecologic malignancies have to undergo complex surgical procedures in addition to the prospect of having to follow up with chemotherapy and/or radiation therapy. There is also the psychological component related to the ever-present threat of recurrence along with the potential of incurable disease requiring life-long treatment and physical complications. “The ability to educate, treat and develop relationships with these patients and their families is demanding work, but extraordinarily rewarding,” she said.

Tareai has also been an active participant in the Oncology Nursing Society (ONS). She was treasurer of the North Central New Jersey chapter and attends both local and national conferences to keep abreast of changing trends in nursing practice. ONS offers a mentorship program for nurses interested in publishing articles where Tareai was chosen to be mentored. Tareai, along with her mentor, are now awaiting the publication of their article entitled, “Uterine Leiomyosarcoma: An Overview” scheduled for publication in the Clinical Journal of Oncology Nursing® in June.

Welcoming:
Tonya M. Davis, MBA

As a part of the Enhancement of Cancer Services Agreement, Robert Wood Johnson University Hospital (RWJUH) – the Flagship Hospital of The Cancer Institute of New Jersey – has successfully recruited an Executive Director to support a new collaborative group practice known as the RWJ and CINJ Clinical Practice. This new agreement will help to improve patient processes and make CINJ’s clinical enterprise more efficient.

Tonya M. Davis, MBA, comes to CINJ, UMDNJ-Robert Wood Johnson Medical School and RWJUH with extensive experience in administration of physician practices within a complex health system and has a strong background in process improvement, revenue cycle enhancement, physician relations, and contract negotiations. She most recently was at the University of Maryland Greenebaum Cancer Center where she served as the administrator, director, and practice manager for its Oncology Associates Practice; prior to that she spent eleven years at Johns Hopkins Hospital.
When it comes to getting screened for skin cancer, only one in 14 U.S. Hispanic adults is shown to have ever gone through the process, compared to one in four non-Hispanic white adults. Research from The Cancer Institute of New Jersey shows socioeconomic factors such as lack of health insurance and poorer access to healthcare serve as barriers for Hispanics who might otherwise receive this potentially lifesaving check-up. The findings show there is a need to develop interventions to promote skin examinations among Hispanics at risk for skin cancer.

Recent research has shown that, compared to non-Hispanic whites, Hispanics are more likely to be diagnosed at an earlier age and with thicker, more advanced melanoma, the deadliest of all skin cancers.

Prior research has also shown that full body, head-to-toe skin examinations by a doctor may reduce the incidence of thick melanomas that have a poor prognosis. There has been little research reviewing the rate of these examinations among Hispanics in the U.S. CINJ investigators explored the prevalence of skin cancer screenings in this population. Their research appears in the May print edition of *Archives of Dermatology* (doi:10.1001/archdermatol.2012.615).

The study used data from the 2010 U.S. National Health Interview Survey conducted by the National Center for Health Statistics. The study sample consisted of 4,766 adults who had no personal history of skin cancer. Participants indicated their Hispanic national origin, sex, age, level of education, whether they were born in the U.S., the language they generally use when speaking and their skin sensitivity to the sun. They also reported the location where they receive their routine preventive medical care, whether they had healthcare coverage, and whether they ever had a full head-to-toe skin exam by a dermatologist or other doctor.

Of the total participants, only seven percent reported ever having had a full skin examination by a physician. Low exam rates were also noted for those who reported speaking little or no English. Of those who spoke mostly or only Spanish, four percent said they had received a skin exam.

Men, individuals aged 18 to 29, and those with some high school education or less had lower screening rates (six percent, four percent and four percent, respectively). Individuals lacking health insurance also had lower screening rates (three percent), as did those with no source of preventive care (two percent).

Elliot J. Coups, PhD, behavioral scientist at CINJ and associate professor of medicine at UMDNJ-Robert Wood Johnson Medical School, is the lead author of the study. “Although the skin cancer screening rates were higher for several Hispanic subpopulations, the overall rate of screening we found among adult U.S. Hispanics was very low,” noted Dr. Coups. “It is of concern that Hispanic individuals with a language barrier, lower level of education and lack of access to healthcare had especially low screening rates. While additional research is needed, it is clear from this study that this population may greatly benefit from interventions that promote these screenings, particularly for individuals at risk for skin cancer.”

The study was supported by funding from CINJ and the National Cancer Institute.
When you think of the summer season, it’s hard not to think of the hot weather that comes along with it. And what better way to cool off from the summer heat than to snack on the fresh, juicy fruits and vegetables that summer has to offer! New Jersey is known for growing a wide variety of fresh produce that is available for the summer season such as blueberries, tomatoes, peaches, bell peppers, squash, strawberries, and corn, just to name a few.

Along with being delicious, fruit and vegetable consumption plays a key role in good health as well. According to the American Institute for Cancer Research (AICR), the combination of vitamins, minerals, and phytochemicals found in fruits and vegetables has been shown to aid in cancer prevention. Fruits and vegetables are also low in calories. Making fresh produce the main focus for each summer meal can help reduce and maintain a healthy body weight. Eating mostly plant foods, maintaining a healthy weight throughout life, and being physically active everyday are AICR’s guidelines to help prevent cancer. These guidelines can easily be worked into your summer routine.

As summer approaches, be sure to browse the selection of fresh produce available at your local farmer’s market. Think that the only time of year to enjoy the wide variety of fresh produce is during the summer? Thankfully, it doesn’t have to be; try freezing your favorite fruits and vegetables at home, so that you can enjoy the great taste of summer all year round!

Healthy Grilling Tips

Hosting a barbeque is a great way to get friends and family together during the summer season. Try to keep things healthy this summer while still being able to enjoy yourself. As delicious as hamburgers and hot dogs may taste, they are also very high in fat and sodium. Plan on preparing healthier protein options at your next barbeque such as chicken breasts, chicken sausage, turkey tenders, seafood, or veggie burgers. You can even try grilling portobello mushroom burgers as a healthy alternative to meat.
Indoor Tanning: Healthy Glow or Cancer Risk?

A behavioral scientist at The Cancer Institute of New Jersey, Jerod Stapleton, PhD, has a special research interest in the prevention of skin cancer in young people, including study on those who use indoor tanning beds. With swimsuit season here, we asked Dr. Stapleton, who is also an assistant professor of medicine at UMDNJ-Robert Wood Johnson Medical School, about some of the dangers of indoor tanning:

Q: What do you say to those who are only using an indoor-tanning bed to prepare for a special occasion?

A: There is evidence that melanoma risk is increased with just one indoor tanning visit. This means those individuals who use indoor tanning only a few times are putting their skin health at risk. The risk is not just cancer related; tanning can damage the appearance of your skin by causing premature aging.

Q: Are there safer alternatives to using indoor-tanning beds?

A: Many tanning salons offer sunscreen tanning sprays and their employees can work with individuals to assure they get their desired look. Alternately, I encourage people to consider ditching a tan and going with their natural skin color. You can create a great look by choosing clothing that complements your natural tone.

Q: New Jersey is one of only a handful of states that bans tanning-bed use by those under the age of 14. There have been recent efforts to increase that age to 18. Are teens more susceptible to the risks of indoor tanning compared to adults?

A: The link between indoor tanning and skin cancer risk has been shown to be stronger for individuals who began using indoor tanning at a young age compared to those who used indoor tanning as an adult. There is also evidence that UVR exposure during childhood is a strong risk factor for future skin cancers.

Q: What is the concern with indoor tanning beds as it relates to the development of skin cancer?

A: The number one cause of most skin cancers is exposure to ultraviolet radiation (UVR). UVR exposure often comes in the form of sunlight or artificial UVR sources such as indoor tanning beds. Several studies have shown that individuals who have used indoor tanning are more likely to develop skin cancers. A large majority of indoor tanning users are women and many cancer researchers believe the recent increases in melanoma among young women are related to a rise in popularity of indoor tanning beds over the past several years.

When grilling, make every effort to avoid cooking meats at very high temperatures for a long period of time. High temperatures from grilling react with substances in animal proteins to form carcinogenic compounds called heterocyclic amines (HCAs). To help lower HCA levels, avoid blackening your meats or preparing them until they are well done. Be sure to flip food frequently while cooking. Using healthy, flavorful marinades on your meats, like fresh salsa, citrus juices or spices can also help lower HCA levels when grilling.

Try grilling up your favorite vegetables as the perfect side dish for your grilled meats. You can even try making the perfect dessert to your barbecue by grilling your fresh fruit. Throw a wide variety of fresh fruit onto the grill, such as pineapples, plums, bananas, peaches and strawberries to make delicious fruit kabobs.

These small changes you can make this summer season can make a huge and lasting impact on your overall nutrition and life!

— Kristin Waldron, RD, is a registered dietitian at The Cancer Institute of New Jersey.
Oncology nurses at The Cancer Institute of New Jersey have been ‘sharing and caring’ in terms of patient and nursing education and continued specialized cancer care. Education is a key role in delivering the most successful patient care, and the latest research findings from nurses at CINJ were presented through poster sessions and presentations at the Oncology Nursing Society’s 37th Annual Congress in New Orleans held earlier this spring.

One focus at this year’s presentations surrounded enhancing patient safety in the outpatient area during emergencies. CINJ nurses Yuk (Aggie) Wong, RN, BSN, MA, OCN; Janet Gordils-Perez, MA, APN-C; Fenina Morales, RN, OCN; and Kira Lynn Voitle, BSN, RN, OCN, developed a teaching method which includes a step-by-step, hands-on procedure utilizing emergency medications and tools that are included in the ‘code cart’ – a common emergency resource used in the treatment area. A pilot program of the teaching method was developed and can be adapted for use by all nurses in the outpatient setting.

A continued challenge faced by oncology nurses today is providing clear documentation of patient care. To enhance this, CINJ Director of Oncology Nursing Services Janet Gordils-Perez, MA, APN-C, conducted a review of current documentation efforts. She then developed a simplified electronic checklist which prompts nurses to complete in-depth assessments.

Highlighting patient education, CINJ nurse Fenina Morales, RN, OCN, developed a teaching tool for patients regarding the adverse effect cancer treatment has on fingernails and/or toenails. Following a review of current materials, which indicated different methods for assessment, prevention, and management of nail changes, Morales developed a more streamlined education resource.

And sharing expertise with peers is an important form of nursing education. CINJ Associate Director of Nursing and Patient Education Leah Scaramuzzo, MSN, RN-BC, AOCN, led a workshop before thousands of fellow nurses which focused on “Enhancing Symptom Management: A New Approach.”

While out west, you came through a successful bone marrow transplant only to develop a serious fungal infection in your brain. Were you afraid at that time that you had lost your fight?

A: I kept thinking of an interview that famed NFL Hall of Fame quarterback Joe Montana once gave, where someone asked him if he ever felt fear during a big game. He replied that he didn’t fear being placed in such a position – that he was well prepared and trained. I was fortunate then to have a team at the Fred Hutchinson Cancer Research Center, and now at CINJ, where everyone involved in my care had a plan and educated me at every step of the way as to what was to happen with my treatment and with my…
follow-up. Even though the doctors face challenges too, they don't want you to lose the fight, so I knew I was in good hands.

Q: What does being a cancer “survivor” mean to you?
A: Every day that I am able to get out of bed is a good day. Bottom line: it is joy and gratefulness.

Q: What advice do you have for those who are newly diagnosed?
A: If you show a willingness to fight, you will get thrown a life ring. And it helps to surround yourself with family and friends and have a positive attitude. It is amazing what we can do when we are challenged.

When first diagnosed, Steve recalls wife Nadene telling his doctor that they “need to get him better so that he can dance at his daughter’s wedding.” Daughter Shannon was only five at the time, but is soon to celebrate a “Sweet 16.” To mark that occasion, as well as son Matthew’s journey through college, Steve is looking forward to family vacations to Disney World and Italy.

An ‘Outstanding Woman’ Making a Difference

The chief medical officer at The Cancer Institute of New Jersey has been named as one of this year’s 30 ‘Outstanding Women’ by the National Council for Research on Women. Deborah L. Toppmeyer, MD, chief of solid tumor oncology at CINJ who heads a very active breast cancer clinic and conducts clinical research, was selected for her commitment to issues critical to advancing women and women’s health.

Dr. Toppmeyer, an associate professor of medicine at UMDNJ-Robert Wood Johnson Medical School, is an expert in breast cancer, breast cancer genetics and the design and implementation of clinical trials that offer promising new therapies targeted to specific types of breast cancer. Through her role as director of CINJ’s Stacy Goldstein Breast Cancer Center and of the LIFE (LPGA pros In the Fight to Eradicate breast cancer) Center, Toppmeyer helps patients navigate through treatment options while encouraging enrollment in clinical trials.

Sharing a ‘Savannah Smile!’

Brownies from Troop 1215 in Freehold visited CINJ earlier this spring to distribute Girl Scout cookies that were donated to CINJ patients and their families during the troop’s annual cookie drive. The effort was part of the ‘Gift of Caring’ campaign, in which the girls were able to choose their charity of choice as the cookie recipient.
Robert Wood Johnson University Hospital now offers Gamma Knife Perfexion, a non-invasive tool specifically designed to treat lesions and tumors in the brain as well as spinal cord conditions, without harming healthy surrounding tissue and causing discomfort to the patient. RWJUH is the only facility in the central New Jersey Region to offer Gamma Knife Perfexion, which represents the most advanced generation of this technology. The treatment is offered at the state-of-the-art Gamma Knife Center at RWJUH. Since the Center opened in April 2011, the Gamma Knife team has performed more than 100 procedures.

Gamma Knife Perfexion is used to treat a wide range of brain diseases and spinal conditions including:
- Primary and metastatic brain tumors

CINJ Network Hospitals Recognized for Outstanding Achievement

Congratulations to Jersey Shore University Medical Center – part of Meridian Health, which is a System Partner to The Cancer Institute of New Jersey; and to Somerset Medical Center and the University Medical Center at Princeton, affiliates of CINJ, all of which recently received the 2011 “Outstanding Achievement Award” from the American College of Surgeons Commission on Cancer. Established in 2004, the CoC Outstanding Achievement Award is designed to recognize cancer programs that strive for excellence in providing quality care to cancer patients. The award is granted to facilities that demonstrate a Commendation level of compliance with seven standards that represent six areas of cancer program activity: cancer committee leadership, cancer data management, clinical management, research, community out-reach, and quality improvement.

This prestigious honor was only given to 106 cancer-care facilities nationwide this year. Cancer programs only have the eligibility of being reviewed once during a three-year cycle for the award. The Carol G. Simon Cancer Center at Overlook Medical Center, a Major Clinical Research Affiliate of CINJ, was a recipient in 2010.
Advances in medicine come from new ideas developed through clinical research. **JFK Medical Center** in Edison is proud to conduct clinical trials (also called research trials or research studies) in an ongoing effort to discover and deliver more effective treatments to patients. The goal is to translate discoveries made in the laboratory to the patients who will benefit from them, as quickly as possible.

The **JFK Brain Tumor Center** is one of the first centers in the country to commence the ICT-107 trial for newly diagnosed patients with Stage IV Glioblastoma Multiforme (GBM), following resection and chemoradiation. GBM is a mass of abnormal cells that has grown out of control, forming a tumor in the brain or spinal cord. It is usually fast growing and is the most common type of primary brain tumor. JFK has the highest enrollment in the country for this trial, currently with 11 patients.

JFK Medical Center has a team of experts who work tirelessly with patients who may be newly diagnosed or who may have had surgical procedures and may have received chemotherapy and/or radiation, to evaluate the efficacy of various procedures, therapies and/or vaccines.

For more information, please visit: [www.jfkmc.org](http://www.jfkmc.org).
Imagine having someone at your side to help you understand a cancer diagnosis or calm your fears while at the hospital. What about having someone in the recovery room with you after surgery or helping you prepare for chemotherapy treatment? Meridian Health recently introduced an oncology navigator service to help address these types of issues to help improve the patient experience.

Meridian Cancer Care has more than 10 nurse navigators, whose primary role is to offer individualized guidance and support during complex issues. Oncology Nurse Navigators, also known as Patient Clinical Advocates assist with ‘navigation’ across the continuum of care including end of treatment and survivorship services. A Navigator’s role includes:

- Explain and answer questions about diagnosis
- Coordinate testing, treatment and follow-up care
- Assist with scheduling appointments
- Provide referrals to support groups and additional resources
- Help with financial concerns (connecting them with resources)

The Navigators are liaisons between the patient and care teams and work towards timely access to health care services and information; personalized guidance and support and quality cancer care. “Patient-centered, multi-disciplinary cancer care, where the team reaches a consensus before treatment is delivered is the paradigm for Meridian Cancer Care,” according to Mark Krasna, MD, medical director of the oncology service line for Meridian.

Other key members of the outpatient care team assisting patients during their treatments include: outpatient oncology social worker; genetic counselors, clinical research associates, dietitians, rehabilitation services (ST, OT, lymphedema treatment, head and neck soft tissue care, etc), the palliative care team, oncology nurses, and affiliated physicians.

Meridian Cancer Care offers a complete range of services including screenings, diagnostic tests, medical, surgical and radiation oncology treatment options, onsite cancer registry, pre- and post-treatment support groups and clinical research trials. Meridian Cancer Care’s hospitals have each received accreditation from the American College of Surgeons Commission on Cancer and commendation for their cancer programs.
economic principles can be used to enhance the effectiveness of pedometer-based walking interventions. A $100,000 grant from the Robert Wood Johnson Foundation’s Pioneer Portfolio and the Donaghue Foundation was awarded to colleague Gretchen Chapman, PhD, professor of psychology at Rutgers University, to support the work. Out of 330 proposals, the project was one of eight to be funded through the “Applying Behavioral Economics to Perplexing Health and Health Care Challenges” grant.

Susan Goodin, PharmD, FCCP, BCOP, associate director of clinical trials and therapeutics at The Cancer Institute of New Jersey and professor of medicine at UMDNJ-Robert Wood Johnson Medical School, has received the 2012 Award of Excellence from the Hematology/Oncology Pharmacy Association. The association recognized Dr. Goodin for making a significant, sustained contribution to hematology/oncology pharmacy and for providing leadership in supporting or improving this area.

Yibin Kang, PhD, a member of the Genomic Instability and Tumor Progression Program at The Cancer Institute of New Jersey and an associate professor of molecular biology at Princeton University, received the Award for Outstanding Achievement in Cancer Research from the American Association for Cancer Research. Dr. Kang was selected by a prestigious international committee of renowned cancer leaders for his “outstanding work” related to breast cancer metastasis.

A Crown ‘Jewel’ in the Eyes of CINJ

As we edge closer to a day when doctors can easily prescribe targeted cancer treatments based on a patient’s genetic profile, The Cancer Institute of New Jersey is ensuring advancement toward this era of ‘precision’ medicine through the recruitment of unique researchers within its Systems Biology enterprise. Helping CINJ keep that commitment is Jewels of Charity, which recently made a $600,000 gift to the CINJ Foundation to support this effort.

Raising ‘Dough’ to Fight Cancer

In its ongoing effort to support the fight against cancer in the communities it serves, Panera Bread® has raised nearly $70,000 through its Community Breadbox initiative to benefit treatment, research, prevention and education programs at The Cancer Institute of New Jersey. As the designated Community Breadbox Partner for 2011, CINJ was the sole recipient of funds collected in specially-marked coin boxes that sit at the 38 Panera bakery-cafes in central and northern New Jersey. The effort is part of Panera’s Comprehensive Operation Dough-Nation® Program, which has a concentrated focus on giving back to patrons and the communities in which its bakery-cafes are located.

Above: CINJ Director Dr. Robert DiPaola (left), Panera Director of Operations Robert MacEachern, and Panera Local Marketing Manager Angie Greene-Hicks.

Systems Biology involves analyzing large data sets from the molecular, tissue, organ, organism and population levels and requires specially-trained experts in both the biology and the quantitative/computational aspects of the data. These specialized scientists go beyond “crunching” numbers and are integral to framing important questions that must be addressed in cancer research.

“This gift will further enhance the groundbreaking work already taking place at CINJ and will enable CINJ’s physician-scientists to translate their work from the laboratory bench to the patient bedside in a more comprehensive manner thanks to the talents of these highly-specialized new faculty,” said Robert E. Campbell, a board member to both Jewels of Charity and the CINJ Foundation. “With this tremendous support from Jewels of Charity, we are further extending our reach into the realm of personalized medicine, thus hastening the day when every cancer diagnosis and treatment is uniquely suited to each individual.”

The recruited faculty, along with current CINJ leadership, will form the intellectual and scientific core that is part of CINJ’s Center for Systems Biology, which is led by CINJ resident member, Arnold J. Levine, PhD.

Since 1999 Jewels of Charity has invested over $2 million in pioneering research and programs that have helped establish CINJ as one of the nation’s outstanding cancer centers. Their combined gifts have enabled CINJ to leverage other resources into even larger research efforts that were novel and had broad application.
Almost every day we hear or read about the benefits of breast cancer research. Spend just five minutes with Estela Rangel, and you viscerally feel the full impact of what decades of breast cancer research has meant for Estela and thousands of other women. “I am the perfect example of how research has helped someone,” she proclaims. In 1998 and in 2009, new drugs became available “just in the nick of time” to treat Estela’s cancer recurrence and progression, respectively. “I am here 13 years with metastatic disease – bones, lungs, adrenals, lymph nodes – but, I’m here and I’m having a great time,” Estela continues, “So, life is good!”

Private support from individuals and organizations is critical to sustaining a strong research program that creates a pipeline of innovative research, which can be leveraged to obtain large-scale funding. Six recent gifts are advancing breast cancer research with the goal that it may lead to new drugs or treatments – just in the nick of time.

For the second year, The American Hellenic Educational Progressive Association (AHEPA) supported the breast cancer research of CINJ medical oncologist Vassiliki Karantza, MD, PhD, an assistant professor of medicine at UMDNJ-Robert Wood Johnson Medical School, with a $10,000 commitment. Since 2005, AHEPA has invested more than $100,000 in cancer research throughout CINJ.

The Breast Cancer Alliance awarded a $75,000 grant to fund a one-year Breast Surgical Fellowship, which provides surgeons who have completed their general surgery residency with advanced training and experience that prepares them to provide state-of-the-art care specifically for patients with breast disease. Through the program, they learn how to apply a multidisciplinary approach to the prevention, diagnosis, treatment and rehabilitation of breast cancer patients. CINJ fellows also participate in clinical and/or laboratory research with opportunities to design and implement clinical trials. They also train in the basic methodology for conducting those trials.

B.J.’s Wholesale Club continued its support of breast cancer awareness and research with a $43,200 gift earlier this spring. The gift was a result of its 2011 B.J.’s for Pink Campaign, which has generated more than $78,000 for CINJ over the past two years.

A Stitch Fore Time made a $10,000 first-time gift for Breast Pilot Projects. The volunteer organization began with a few ladies knitting scarves and selling them at a Charity Golf Outing. The enterprise now has dozens of knitters who stitch many accessories — all to benefit breast cancer research.
Recognizing a great need to support pediatric cancer research, the Hugs for Brady Foundation has made a $100,000 commitment to fund the Hugs for Brady Young Investigator Award in pediatric hematology/oncology at The Cancer Institute of New Jersey.

No one knows about this need better than Sherrie and Michael Wells, who founded Hugs for Brady shortly after the death of their child Brady Michael in July 2010, just three weeks shy of his second birthday. Brady was diagnosed with acute undifferentiated leukemia – considered a rare form of this disease – and had undergone both chemotherapy and a peripheral blood stem cell transplant. After his passing, Brady’s parents knew they wanted to help ease the pain that many children and families experience with a cancer diagnosis and – just as important – provide resources to help advance pediatric cancer research.

The award will provide a two-year grant to a young academic physician or scientist who shows exceptional ability and promise for doing innovative pediatric cancer research.

“Funding a young investigator helps foster creativity and a passion for the research at hand. It also allows for a certain level of continuity, as an investigator who becomes involved with a certain facet of scientific exploration early on in his or her career is more likely to remain devoted to that particular area of research, thus helping to bring about significant advancements,” said CINJ’s interim Chief of Pediatric Hematology/Oncology Richard Drachtman, MD, who was Brady’s doctor. “We are grateful to the Hugs for Brady Foundation for this support and its continued commitment to children, families, and the fight against pediatric cancer.”

Raising Awareness at 19,000 Feet

For some of us, every day is an uphill battle. However, the majority of us would not even consider physically making an uphill climb as Jonathan Saxe did this past New Year’s Day. Why travel to Africa for a seven day, sixty mile climb to the top of Mount Kilimanjaro, the world’s highest free-standing mountain at 19,341 feet? The usual reasons: adventure, beautiful scenery, a unique experience. But Saxe also saw an opportunity to pay tribute to his father who lost his battle with pancreatic cancer in 2003 and to raise awareness about the disease. Raising over $10,000 from friends, family and colleagues to help further the very promising pancreatic cancer research happening at CINJ, Saxe believes that, “It is our combined support and awareness that will eventually win the fight against cancer.”

Caring Kids with a Creative Flare

Earlier this year, creative youngsters from Campbell School in Metuchen sold hand-made duct tape pencils and bracelets to support the fight against cancer. Excited about raising more than $250 to benefit CINJ, the students are photographed here along with their teacher, Kathleen Keers-Nolde (right) and Leanne Kochy, director of major gifts and special events for the CINJ Foundation.
Irish Fun

A chilled winter evening couldn’t dampen the warm spirit of those attending the third annual Irish Fun and Feasting event, hosted by CINJ Foundation Board Member Ed McKenna. The Two River Theatre in Red Bank once again served as the backdrop for this festive gathering, which featured music, dancing and fun, all to support CINJ!

From left: CINJ Director Dr. Robert DiPaola; CINJ Foundation Board Member Leslie Taylor, New Jersey Congressman Rush Holt, and CINJ Foundation Board Members Colleen Brennan and Ed McKenna.