In Pursuit of
Better Therapies

Clinical trial participant Krista Dornburgh hopes to help future generations fight cancer more effectively

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EXECUTIVE EDITORS

Mitch Creem, M.H.A.
Chief Executive Officer
USC Norris Cancer Hospital and USC University Hospital

Peter A. Jones, Ph.D., D.Sc.
Director
USC Norris Comprehensive Cancer Center

Carmen A. Puliafito, M.D., M.B.A.
Dean, Keck School of Medicine of USC

Jane Brown
Associate Senior Vice President, USC Health Sciences
Public Relations & Marketing

Joe Fried
Executive Director, Communications and Marketing

ASSOCIATE SENIOR VICE PRESIDENTS

Jane Brust
USC Health Sciences Public Relations & Marketing

Ina Fried
Communications and Marketing

CONTRIBUTORS

Ryan Ball, Meghan Lewit, Jon Nalick, Monica Padilla, Sara Reeve, Leslie Ridgeway, Imelda Valenzuela

Carrie St. Michel and Jessica Ogilvie

Janet Morgan, Tina Pakfar, Tonya Strom

BUSINESS MANAGER

Elaine Sawitskas

DISTRIBUTION

Eva Blaauw and Carol Matthieu

GRAPHIC DESIGN

Lime Twig Group

HELPFUL NUMBERS:

For patient appointments with The Doctors of USC, call 1.800.USC.CARE

For USC Norris Cancer Hospital information, call 1.800.700.3956

For information on making a gift to USC Norris, call 323.865.0700

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New Web Pages Enhance Online USC Norris Experience

USC, the Keck School of Medicine of USC and the USC Norris Cancer Hospital have all upgraded their websites in recent months. The websites for both USC hospitals have a fresh, new look. The sites for USC Norris Cancer Hospital and USC University Hospital are now accessible via www.hospitals.usc.edu. Significant improvements were made over the last six months to create new opportunities to experience the USC brand online. These updates include enhanced clinical content and several videos featuring patient success stories.

The USC hospitals Facebook page is also in full swing, attracting hundreds of fans. To participate in the USC Norris Cancer Hospital Facebook page, become a member of Facebook. When you have completed that, or if you are already a member of Facebook, log on to the site and search for USC Norris to find the page with news and postings from patients, faculty and friends.

Annual Festival at Norris Celebrates Life

A pair of novelty T-shirts worn by a couple in the crowd said “A lot of people were thinking ‘Cancer Sucks.’ But there was another message made loud and clear at the 20th annual Festival of Life: ‘There is hope.’” That message was worn on the faces of more than 700 cancer survivors and family members gathered on the USC Health Sciences Campus on June 5.

Held in recognition of National Cancer Survivors Day, the event was hosted by the USC Norris Comprehensive Cancer Center and Hospital. Art Ulene, M.D., a Norris Cancer Center advisory board member and former Today Show medical correspondent, was there for the very first Festival of Life in 1991. He said the event took on a whole new meaning when he received his own cancer diagnosis about 10 years ago.

Back again to ensure this year’s gathering, he said the event is more than a way to honor cancer patients past and present. “It’s a celebration of the extraordinary work being done by the doctors and the researchers who are here,” Ulene stated. “It’s a celebration of the people who have helped us get through an experience with cancer. It’s a celebration of the future, a message of hope to patients in the hospital right now.”

USC TO LEAD PROSTATE CANCER STUDY

Researchers at the USC Norris Comprehensive Cancer Center have received a $12 million National Cancer Institute grant to lead an international project aimed at identifying new biological pathways critical to the development and potential treatment of prostate cancer.

The four-year grant will bring together researchers from 13 institutions across the United States and Europe to identify common gene variants involved in the developmental progression of prostate cancer. Insight into prostate cancer biology will assist in the development of new targets for preventative and therapeutic interventions.

Brian Henderson, M.D., distinguished professor of preventive medicine at the Keck School of Medicine of USC and holder of the Kenneth T. Norris Jr. Chair in Cancer Prevention, will serve as principal investigator for the project.

“The overarching goal is to discover the pathways that drive prostate cancer development and to assess their role in clinical decision making,” Henderson said.

“With this new research collaboration, we hope to move to the next step and look at how we can apply information to treatment and prevention to have a real impact on the disease.”

Researchers Test Less Invasive Breast Cancer Screening

Researchers at the Keck School of Medicine of USC will test whether a set of blood-based biomarkers can assist mammography in the early detection of breast cancer with a $180,000 grant from Susan G. Komen for the Cure.

The grant will fund research into whether specific biomarkers, or minute substances in the blood, can effectively distinguish breast cancer patients from their healthy counterparts and whether an inexpensive, less invasive screening strategy can be developed based on this approach.

“Breast cancer progression is marked by increased levels of a DNA modification, known as DNA methylation, at certain positions in the human genome, and this increase can be detected in the blood from these patients,” said investigator Simeen Malik, Ph.D., postdoctoral research associate at the USC Epigenome Center. “The research will help us detect these differences in the blood, an approach that may be more effective than current image-based screening techniques like mammography since it is based on the underlying biology of the tumor.”

These diagnostic tests could potentially be administered more frequently than mammography, which may result in earlier detection of the breast tumor by six to 12 months, Malik said.

Malik and Peter W. Laird, Ph.D., director of the USC Epigenome Center, will lead the research in collaboration with investigators at the USC Norris Comprehensive Cancer Center and City of Hope National Medical Center. The Komen for the Cure grant is part of $2.8 million in research money Komen is investing in California medical institutions this year alone. These funds are part of a $59 million portfolio of research grants that Komen is funding in 2010 to find the cures for breast cancer and to end the disease.
USC Norris Hosts STOP CANCER Meeting

Members and beneficiaries of STOP CANCER met at USC Norris Comprehensive Cancer Center on April 15 to see how the funds raised by the non-profit, philanthropic organization are being used to further cancer research at USC.

STOP CANCER is dedicated to helping find a cure for cancer by funding research at National Cancer Institute-designated comprehensive cancer centers. The focus of the organization is to provide grants to scientists who are engaged in innovative cancer research and its subsequent clinical applications.

Peter Jones, Ph.D., D.Sc., director of the USC Norris Comprehensive Cancer Center, acknowledged past and present STOP CANCER awardees, noting, “Your support has really played a major role in establishing their careers, and they’ve all gone on to do an amazing job in terms of furthering the fight against cancer.”

Jones welcomed two recently hired USC physicians in attendance: world-renowned hematologist Preet Chaudhary, M.D., Ph.D., chief of the Jane Anne Nohl Division of Hematology and Center for the Study of Blood Diseases and leader of the Leukemia and Lymphoma Program at the USC Norris Comprehensive Cancer Center, and internationally known breast cancer oncologist Debashis Tjaputh, M.D., professor of clinical medicine at the Keck School of Medicine and co-leader of the Women’s Cancer Program at USC.

“As we all know, STOP CANCER has been funding new investigators here for quite some time, and what you do is so important in terms of allowing people to get their careers up and going by alleviating them from the need to get research support right as they’re beginning their careers,” Jones remarked. “This kind of seed support was a brilliant idea of the original founders of STOP CANCER, and it’s been hugely successful.”

More information on STOP CANCER can be found at www.stopcancer.net.

USC Hospitals Open New Outpatient Endoscopy Center

A new outpatient endoscopy center with state-of-the-art equipment and dedicated staff is up and running at the USC hospitals.

The USC Center for Endoscopy opened on March 29 on the second floor of USC Norris Cancer Hospital. Staffed with a team of 12 nurses and patient care technicians, the center caters to outpatient endoscopic needs, such as colonoscopies, liver biopsies and ultrasounds.

“We are very excited about being able to serve our community with this new center,” said Cynthia Leones, manager of the USC Center for Endoscopy. “We’re providing expanded services for all of our patients, and we plan to continue that expansion well into the future.”

Efforts to open the center have been under way since last summer, and with the recent transition of USC Norris Cancer Hospital inpatient services to USC University Hospital, a team of administrators and clinicians were able to convert three of the five former operating rooms at Norris into state-of-the-art endoscopy suites, said Ashley Wageman, USC hospitals manager of administrative operations.

An existing gastrointestinal lab was also outfitted to meet the specific needs of the center and its patients.

“We have a more spacious and comfortable area now to accommodate the growing volume of outpatient procedures,” said Wageman. “That is really beneficial for the safety and experience of our patients and the quality of care provided by our physicians.”

New Molecular Subtype of Brain Cancer Discovered

A study conducted by a collaborative team led by USC researchers may lead to better insight into the clinical outcome for some patients with a particularly aggressive type of brain cancer.

The research also may provide a framework for development of targeted drug treatments.

The research is being conducted by The Cancer Genome Atlas team at the National Cancer Institute and the National Human Genome Research Institute, which is part of the US National Institutes of Health.

“We have identified a subset of patients with a distinct type of GBM that have substantially better clinical outcomes,” said Peter W. Laird, Ph.D., of the USC Epigenome Center, who led the Cancer Genome Atlas team in collaboration with other consortium members. “With this research, we have identified a subset of patients with a distinct type of GBM that have substantially better clinical outcomes, with a median survival time of more than three years from the time of diagnosis.”

Surani, right, with Shingawara (center) and Andy Miller, Executive Vice President of the Lance Armstrong Foundation.

Zul Surani Honored for Leadership in Fight Against Cancer

Zul Surani, program specialist at the USC Norris Comprehensive Cancer Center, has received the 2010 Susan Matsuko Shingawara LiveSTRONG Cancer Control Leadership Award, sponsored by the Intercultural Cancer Council and the Lance Armstrong Foundation. The award recognizes exceptional “leadership in the area of cancer control through the formulation and execution of policies, programs, partnerships and/or research to eliminate the unequal burden of cancer among racial and ethnic minorities and medically underserved populations.” Surani manages the Patient Education & Community Outreach Center, and the Jennifer Diamond Cancer Resource Library at USC Norris.

Surani, right, with Shingawara (center) and Andy Miller, Executive Vice President of the Lance Armstrong Foundation.

Epigenomics is the study of how DNA is packaged and marked to control which genes can be used in a particular type of cell or tissue. The distribution of one of these marks—DNA methylation—is often abnormal in cancer, contributing to the disease process.

The characteristics of epigenetic profiles discovered by The Cancer Genome Atlas team is called G-CIMP (Glioma CpG Island Methylator Phenotype) and was found to occur in many young patients. G-CIMP tumors have other distinctive alterations in their genomic landscape, revealing an interesting association with an acquired mutation in the IDH1 gene.

The Cancer Genome Atlas is a consortium funded by the National Cancer Institute and the National Human Genome Research Institute to map molecular changes found in cancer. The USC Epigenome Center led by Laird is one of the nation’s first research centers focused on the genome-scale study of epigenetics.

“G-CIMP tumors have other distinctive alterations in their genomic landscape, revealing an interesting association with an acquired mutation in the IDH1 gene.”
Yoga practice helps cancer patients relax and gain strength during and after treatment

BY JESSICA PAULINE OGLIVIE

Richman offers classes at the USC Norris Cancer Hospital for people in treatment for the disease and for survivors.

Held in empty conference rooms throughout the hospital, the classes are free and open to all ages and all stages of the illness. Most of the exercises are gentle and easy—sometimes done while sitting in a chair—with a focus on breathing technique.

And Richman stresses that a person’s level of fitness has little to do with how well they do in class. “If you can breathe,” she says, “you can do the yoga.”

Launched in March of 2001, USC’s yoga program for cancer patients began after social worker Susan Rosenson, at the time employed by the university’s School of Social Work, sought a way to honor her mother, who had passed away from pancreatic cancer. Rosenson considered raising money to donate to research but ultimately decided to do something that would have a more immediate impact.

“I wanted the money to go to the social services department, to be used for something for patients,” says Rosenson, who is now retired. “People had asked for yoga.”

With the help of others in her department in 2000, Rosenson started the Lorraine Pepper Memorial Fund which now offers funding not just for yoga, but also for educational and support programs for cancer patients and survivors as well.

Soon after launching the fund, Rosenson met Richman, herself a survivor of thyroid cancer, through a chance encounter. Both women were waiting at a courthouse to be called as jurors, and as they talked, they realized that they shared a common goal; as Rosenson was searching for a teacher to offer yoga to cancer patients, Richman was searching for the same kind of class to teach.

“It was very serendipitous,” says Richman, who had used yoga to ease the stress and anxiety of her own cancer treatment, which she underwent in 1994.

“Before my last treatment, I went to a yoga class in my neighborhood, and when it was finished and we were in that final pose, I started crying,” she says. “There were so many emotions I just hadn’t released. I knew I wanted to get involved and bring this to other people.”

Following that experience, Richman, who had practiced yoga since 1966, began teaching to become an instructor and started teaching later the same year.

The benefits of yoga are both physical and emotional, regardless of whether or not the practitioner has a cancer diagnosis. But for those facing a potentially life-threatening illness, the practice can help in very specific ways.

“Anxiety, fear, stress—all induce the fight or flight response resulting in physiological changes that include increased heart rate, adrenaline release, and higher glucose levels,” Richman writes. “By relaxing and calming our body and mind—that is, the way we focus our attention to the present moment—we come free to concentrate on fighting the invaders that cause disease.”

In addition to cultivating relaxation, yoga helps patients regain balance and range of motion. By incorporating stretching and building strength, the practice also alleviates aches and pains that may build up over the course of treatment.

Y ignes Montoya, 65, has been coming to Richman’s class for over seven years and has experienced the benefits of the program firsthand. Diagnosed with thyroid cancer in 2002, Montoya underwent surgery, radiation and iodine treatments. During her recovery, a social worker suggested that she try the course.

“I felt so down because of my hormones,” she says. “I had a lot of fatigue and aches, my bones were hurting a lot. Little by little, I started improving—the aches went away.”

Now, Montoya never misses a day of stretches and poses, whether at class or at home. “Every day I do the stretching, for a minimum of half an hour,” she says. “It’s very good—the class really helps.”

Open to cancer patients throughout the city, the classes are offered every Wednesday and are kept small—usually 4 to 10 students—allowing each person to get individual attention.

For more information, call USC Norris Social Services at (323) 865-3150.

Our body and mind—rather than fleeing the scene—we become free to concentrate on fighting the invaders that cause disease.”

“Anxiety, fear, stress—all induce the fight or flight response resulting in physiological changes that include increased heart rate, adrenaline release, and higher glucose levels,” Richman writes. “By relaxing and calming
BREAST CANCER IS NOT KRISTA DORNBURGH’S FIRST “DANCE WITH THE DEVIL,” as she puts it. She has endured numerous other medical hardships in her 42 years. Yet when asked to participate in a clinical trial—a process that would lengthen her treatment time with no promise of a personal benefit—at the USC Norris Comprehensive Cancer Center and Hospital, she did not hesitate to enroll.

“I think it took me one minute to make my decision,” says Dornburgh, who was diagnosed with Stage III breast cancer in June 2010. “It felt right in my heart. Someone has to be willing to do it.”

Dornburgh represents a critical and complicated step in the development of new breast cancer therapies: human trials to validate the efficacy of a new drug. Clinical trials are essential in evaluating new methods of treating cancer that have produced promising results in the laboratory. Each clinical trial is designed to answer a research question in a specific population.

“Without [researchers] being able to test and validate new drugs in an efficient manner, it would significantly lengthen the time that it takes for a drug to be approved,” says Debasish (Debu) Tripathy, M.D., co-leader of the Women’s Cancer Program at the USC Norris Comprehensive Cancer Center and Hospital.

And the road to patient use of a new drug for cancer is already extensive. “The typical time, if you look at the history of drug development, has been somewhere in the 10-year range (from discovery to approved patient use),” says Tripathy, who is also professor of medicine, the Priscilla and Art Ulene Chair in Women’s Cancer and head of the section of women’s cancers, Division of Oncology, in the Department of Medicine at the Keck School of Medicine of USC.
the first steps

Long before a drug is ready to be entered into clinical trials, a discovery must be made. Many times, researchers find a new gene, protein or biological pathway that may be targeted as a potential way to treat cancer.

“When we’re thinking of a new drug to use in breast cancer, we obviously want to think of the limitations that current therapies have in order to ask ourselves what innovations and what advances might really make a difference,” says Tripathy, who was part of the original team that brought the now commonly used drug Herceptin into clinical care.

For early stage breast cancer, he says a lot of advances have been made in what drugs to use—mostly because they’re standard drugs like chemotherapy and hormonal therapy that lower the risk of recurrence.

“The problem comes when the cancer spreads. In the U.S., about 15–20 percent of breast cancer patients will get a spread of their cancer at some point. Patients with metastases are rarely cured. And even though we can use drugs that will hold their cancer in check, or maybe even put them in remission in some cases, resistance to therapy almost always develops,” notes Tripathy.

In order to address this issue, he says researchers first need to work to identify ways that patients become resistant to drugs and then find ways to circumvent the process. Tripathy also points to the need to develop better drugs that will kill enough tumor cells at the time of first exposure without developing resistance, so that patients might start to see cures, or at least really significant prolongations in life.

Researchers at USC Norris are seeking to speed up the development process with participation in I-SPY 2, a groundbreaking new clinical trial model that will help scientists quickly and efficiently test the most promising drugs in development for women with higher risk, rapidly growing breast cancers.

full speed ahead

The USC Norris Comprehensive Cancer Center is among 20 leading cancer centers in the U.S. and Canada that will recruit and treat patients as part of the large-scale clinical trial aimed at quickly developing new breast cancer drugs.

The Biomarkers Consortium, a unique public-private partnership that includes the Food and Drug Administration (FDA), the National Institutes of Health, and major pharmaceutical companies, led by the Foundation for the National Institutes of Health, announced the highly anticipated I-SPY 2 trial for breast cancer in March 2010.

“The I-SPY trial is among the most innovative and potentially informative trials testing new therapies and analyzing biological pathways that will lead to more accurate patient selection and could point the way to designing more effective drugs for breast cancer,” says Tripathy, who is the principal investigator of the study at USC and was part of the original team that formulated the concept for the I-SPY trial along with Laura Esserman, M.D., M.B.A., professor and director of the Carol Franc Buck Breast Care Center at the University of California, San Francisco.

The I-SPY 2 trial will employ a groundbreaking clinical trial model that uses genetic or biological markers (biomarkers) from individual patients’ tumors to screen promising new treatments, identifying which treatments are most effective in specific types of patients. In addition, an innovative adaptive trial design will enable researchers to use early data from one set of patients to guide decisions about which treatments might be more useful for patients later in the trial, and eliminate ineffective treatments more quickly.

“USC’s involvement in this trial will expand the array of experimental options available to patients and contribute to this international effort,” Tripathy says.

I-SPY 2 will allow the effectiveness of drugs to be assessed much earlier in the research process, accelerating the time to more definitive trials that are needed for final drug approval. This will result in the ability to identify and develop the most promising and effective drugs in a much more targeted and timely manner.
An area that has received a lot of recent scientific attention is targeting biological pathways that seem to be specific to cancer. This allows treatment to specifically target cancer cells and leave the normal cells alone.

“Our growing understanding of both the genetics and the cellular biology of cancer has allowed us to try different targeted approaches where we use a drug that interferes with a part of the pathway,” says Tripathy. “This is very tricky business because many of these pathways are also used by normal cells, and what you see in the lab may not always reflect what you see in patients.”

To test the approaches, cell line models are often used. These are breast cancer cell lines derived from human patients, but grown in the laboratory. When they are grown outside the body, they tend to acquire other characteristics so that the results seen with drugs aren’t necessarily reliable.

“We need to couple our discovery of new targets very closely to acquire other characteristics so that the results seen with drugs aren’t necessarily reliable.

“We need to couple our discovery of new targets very closely to acquire other characteristics so that the results seen with drugs aren’t necessarily reliable.

“Working with Gill, she is close to doing just that. In the past two years, they have collaborated to develop an antibody that finds GRP78 on the tumor cell surface and inactivates it. Mouse models treated with the antibody showed marked inhibition of tumor growth with no toxicity to vital organs.”

“This sets the stage for us to go through the steps which are necessary to take the GRP78 antibody from discovery and test it in humans,” says Gill.

Those steps include engineering the antibody to be compatible in humans, generating a system where antibodies can be produced in large amounts, making sure the antibody complies with FDA requirements for human testing and testing the antibody for safety. If the resources are available, Gill estimates the antibody may be ready for clinical trials in 16 months.

Gill has also been involved for many years in the study of EphB4, a protein found on the tumor surfaces of almost all breast cancer types. He says EphB4 is critical to the formation of new blood vessels that feed the tumor.

“Clinical trials are the most critical part of drug development,” says Lee. “The difference between a mouse model and a human is a huge leap. Trials are the critical next step in validating the findings of the laboratory and finding power in truth.”

Finding that truth is impossible without the help of patient volunteers willing to participate in trials for the sake of future generations.

“Someday that could be my son [with cancer]. If it helps just one person, it’s worth it,” says Dornbaugh, who has entered a trial that is testing standard chemotherapy and Herceptin with or without Avastin (bevacizumab). Avastin is an antiangiogenic agent, which means it works by stopping the formation of blood vessels that bring oxygen and nutrients to tumors.

“Tripathy, who is also a clinician, says he tells patients that sometimes participating in a trial isn’t going to give them a direct advantage, particularly if they are randomized into the arm that doesn’t receive the treatment—but it will benefit patients in the future. “The other important part about participating in research is that it helps us understand basic biology,” he points out.

Dornbaugh admits that some of her family members were scared by the idea of her participation in a trial. But she can’t find any negatives associated with giving it a try. “I am doing everything I can to increase my odds against recurrence, and this might help,” she says.
USC Norris’ Golden Girl

By Imelda Valenzuela

At 93 years of age, Irene Golden is still hard at work at a job she’s been doing for over 43 years. She works for several hours a day and frequently on nights and weekends—all of which go unpaid. But it’s a job she loves.

“I don’t stop; I work all the time,” says Golden. “I’m just in the groove and I can’t get out of it. It keeps me very busy and it does me a lot of good.”

Golden is the driving force behind Angels West, a philanthropic organization dedicated, since 1991, to raising funds exclusively for the USC Norris Comprehensive Cancer Center. To date, the group has donated over $1 million to USC Norris.

In 1967, Golden and her late husband, Milton, attended a presentation given by a group who was fundraising for a hospital in Denver. Inspired and impressed, the couple decided to form their own charitable organization in Southern California and gathered friends to discuss the idea. With a core group of seven couples, including the Goldens, Angels West was born.

“Don’t ask me now why we did it,” Golden says in jest. “We all looked around and thought, ‘You know what, we are lucky people, we have the wherewithal,’ and we were all at the right age and had the right financial circumstances,” says Golden, who managed a specialty advertising business and whose husband was a sales and marketing executive.

“All of us went out and spoke to our friends and got a lot more people interested in working with us,” says Golden of the grassroots efforts that still form the basis of the organization today.

Angels West initially raised funds for another hospital but, 19 years ago, temporarily stopped its fundraising efforts over a disagreement with that hospital’s use of donations. The change prompted Golden’s husband, whose mother and father died of breast and lung cancer, respectively, to begin researching cancer centers in the area.

We didn’t want to disband,” says Golden. “We wanted to continue with our work of raising money for cancer research, and after all of the investigating that Milton did, we decided that the best place to focus our efforts was for Norris.”

In earlier years, Angels West members held formal dinner-dances at the Friars Club of Beverly Hills, a private, show business club founded by Milton Berle. The group also sold See’s candy and Christmas cards, and even held a bazaar in the USC Norris lobby each December to raise money for cancer research.

Everybody was young and in business and making a good living. The money just poured in then; it was great days,” remembers Golden.

Decades later, Golden admits to an aging and dwindling membership within Angels West and a tough economy in which to raise funds. “The membership has gotten very old, and it’s difficult these days to raise money,” she notes.

Despite the current situation, Golden remains undaunted and relentless in her efforts to raise money for cancer research. As she has done for years, Golden continues to sell entertainment books and tickets to the Pageant of the Masters in Orange County. Historically, Golden sold out of the popular tickets months before the annual August event. But in recent years, she has had leftover tickets. Her reaction? “No problem,” says Golden. “I stand outside of the box office and sell the tickets there. The people who buy the tickets know that they can pay less at the box office, but when I tell them that the extra cost is for cancer research at the Norris, they’re happy to pay the money.”

Golden, who carries USC Norris donation envelopes in her purse, says, “The only way you can motivate people is one on one. The public is very generous; they want to give money, but they don’t know how. We steer them in the right direction and give them an avenue to send their money.”

This year, Golden was able to deliver a $40,000 check from Angels West to Peter Jones, Ph.D., D.Sc., director of the USC Norris Comprehensive Cancer Center.

“Irene is full of energy and an unbelievable gem,” says Jones. “She’s one of the hardest working, most reliable advocates of the USC Norris Center; we need more people like her.”

Dixie Bosely, a fellow member of Angels West who joined in the early 1980s agrees with Jones. “I’ve been doing fundraising for many, many years, and I’ve never met anybody like her in my life,” says Bosely. “She’s just like the Energizer bunny; the lady is amazing in her dynamism and her dedication.”

Golden refers everyone she knows who has been diagnosed with cancer to seek patient care at USC Norris. While she does not draw a salary for her work with Angels West, Golden feels she is paid handsomely. “My compensation is when people call me up and say, Irene, I have the best doctor at USC Norris. You saved my life,” she concludes.

For information on donating to the USC Norris Comprehensive Cancer Center and Hospital through Angels West, call (323) 865-4700.

“The public is very generous; they want to give money, but they don’t know how. We steer them in the right direction.”
A NEW PROGRAM CREATEd at the Keck School of Medicine of USC aims to treat cancer and other diseases by discovering and modulating cellular communication pathways.

The USC Center for Molecular Pathways and Drug Discovery was announced May 11 at a special dinner including members of the USC Norris Comprehensive Cancer Center’s Advisory Board. The center was created by Michael Kahn, Ph.D., professor of biochemistry and molecular biology, Provost’s Professor of Medicine and Pharmacy and co-leader of the USC GI Oncology program, and Heinz-Josef Lenz, M.D., professor of medicine and preventive medicine, associate director of clinical research at USC Norris Comprehensive Cancer Center, Kathryn Balakrishnan Chair for Cancer Research and co-leader of the USC GI Oncology program.

The center sprung from a partnership between Kahn, a research scientist, and Lenz, a clinical translational research investigator, that began more than two years ago with the goal of bringing together basic science and clinical science to develop new drug therapies and rapidly translate them into medical treatments. It was designed in collaboration with the Keck School, USC Norris Comprehensive Cancer Center and the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC.

“The unique aspect to this program is that rather than picking drug targets, we are picking drug pathways,” says Kahn. “Pathways incorporate many different targets simultaneously. It’s like the I-10 Freeway, where there are many exits, or targets. We are trying to shut down the whole freeway.”

Most cancer research has focused on one target at a time. Cancer cells, with their various survival instincts, find ways to bypass single targets that have been shut down. By focusing on networks of targets, the USC Center for Molecular Pathways and Drug Discovery intends to control hubs where disease cells’ pathways intersect, and correct the cells’ communication “maps.”

Lenz calls the new center “a unique marriage between clinical research and basic science, a real bench to bedside approach.”

“We hope this center will be the mechanism, or pipeline, for faster translation of novel promising molecules to bring them into the clinic more quickly,” he says. One of the first products slated to be brought into the clinic from the USC Center for Molecular Pathways and Drug Discovery Center is a drug specifically targeting the Wnt pathway, a network of proteins that is fundamental in the development of all major human organs, as well as an important pathway that is over-stimulated in both liquid and solid tumors.

“We have taken samples from Heinz’ patients and put them into mouse models to show that the Wnt antagonist we developed is effective,” Kahn says. A clinical trial to prove effectiveness in humans is planned to start this fall, he says.

The Wnt pathway is particularly exciting to researchers because of the possibilities it offers to treat so many different diseases and conditions. Laboratory studies have shown that drugs targeting this pathway can affect cancers, respiratory illness, wound healing, and even hair growth. The studies have shown promising results in curing leukemia and promising antitumor efficacy in colon and pancreatic cancer, as well as significant improvement of idiopathic pulmonary fibrosis, which is a scarring or thickening of lung tissue for which there is currently no treatment.

Meanwhile, researchers at the center are identifying more pathways in anticipation of creating drugs to target certain patterns in disease development.

 obtening resources for the new center is a critical factor in its success, say Lenz and Kahn. Donations can make the difference in how quickly a drug therapy is developed and made available to patients. Naming opportunities for the new center are currently available.

“We are doing something unique and completely different than what pharmaceutical companies are doing, and they have billions of dollars to work with,” Kahn says. “Someone with the means to speed up the process could make a critical impact on drug development. Our first agent took nearly 10 years to develop. Speeding up the process by even a few years could make an enormous difference to all the patients who can benefit from these discoveries.”

Lenz says, “The new center can get the right people together to identify inhibitors of pathways critical for diseases, and move forward more effectively.”

The center will be housed in the Eli and Edythe Broad CIKM Center for Regenerative Medicine and Stem Cell Research at USC, scheduled to open this fall.

For information on donating to the center, please contact (323) 865-0700. Or visit http://bit.ly/9AgUUC to watch a video and learn more about the center.
A Standout from the Start

Since joining a select group of board-certified, female urologists, Eila Skinner has been setting herself apart in the challenging field of urologic oncology. 

By Carrie St. Michel

The first question is—Why Urology?

For Eila Skinner, M.D., this unprompted, self-directed query serves as a precipitive strike of sorts because—since becoming the first female to complete the Keck School of Medicine’s urology residency more than two decades ago—it’s a question she’s been asked repeatedly.

The reason behind this curiosity isn’t lost on Skinner, professor of clinical urology at the Keck School of Medicine of USC, as well as director of its urology residency and fellowship programs. “When I first started, there were virtually no women urologists to speak of,” she says. “In fact, I was only the fifth, board-certified, female urologist in the country.”

Skinner hadn’t initially intended to join such a select group. “I really liked surgery, so I assumed I’d go into OB/GYN, which is what women did back in those days,” she says.

As her medical training moved forward, another option came into view via Donald Skinner, M.D. (no relation), who chaired the Keck School’s Department of Urology for 28 years, retiring in 2009.

“He took me under his wing,” she explains, “and convinced me to become a urologist.” She also completed a urologic oncology fellowship under Skinner.

Not only has Eila Skinner never regretted that decision, but in the intervening 20-plus years—all of which have been spent on Trojan turf—the Michigan native has consistently stood out, setting herself apart as a highly respected urologic oncologist, as well as an award-winning professor and pioneering researcher.

Over the course of her career, Skinner has seen the Keck School’s reputation in the urology arena ascend to its position today among the nation’s premier programs. Within this specialty, the Keck School has developed even more specialized expertise. For example, USC is a recognized world leader in radical cystectomy and continent diversion, according to Skinner. This refers to surgical removal of the bladder and creation of a replacement constructed from a piece of the intestine.

Ever humble, Skinner neglects to point out that this position of prominence is peppered with her surgical fingerprints as she is looked to—literally, on a daily basis—for her expertise in invasive bladder cancer and urinary tract reconstruction.

While Skinner also treats kidney cancer, prostate cancer and testis cancer, her practice presently is composed primarily of patients diagnosed with invasive bladder cancer. Whereas a general urologist might see two or three patients per year with this diagnosis, Skinner sees two or three per week; and, more often than not, it’s the most complicated cases that are sent her way.

That’s fine by Skinner, as she enjoys the challenge of cystectomy and finds the “reconstruction side to be very fulfilling.” Adding, “You can make a big difference in patients’ lives. Not only can they be cancer-free, but their quality of life can be preserved.” That’s because the vast majority of Skinner’s patients receive neobladders, thus eliminating the need for an abdominal stoma and ostomy bag, in which a surgical opening is created in the abdomen and urine is diverted into an external bag.

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When Skinner is not in the operating room, she can be found conducting research or working with residents.

Her current research focus parallels her current practice, as she is conducting clinical research related to bladder cancer.

“The biggest project—and it’s one I’m really proud of—is a randomized clinical trial of 500 patients. All of the patients are from USC,” says Skinner.

The study’s purpose is to settle a long-standing debate regarding which of two standard, bladder-reconstruction techniques—the Studer pouch or the T-pouch—results in the most effective neobladder. As Skinner observes, “We have such a large practice that we were in a unique position to answer this question. I’m really excited about it.” Results are expected in two years.

Results are expected in spring 2011 for another study in which Skinner is involved. Spearheaded by a multi-institutional, clinical trial network called the Southwest Oncology Group, the study—which Skinner designed and implemented—is testing the efficacy of a drug called gemcitabine in relation to high-risk, noninvasive bladder cancer. “The goal,” explains Skinner, “is to see if gemcitabine can prevent the need for cystectomy.”

As excited as she is about these unfolding research efforts, Skinner all but sparkles when asked about her role with residents. “I love teaching,” she says, “and I love the relationship with residents and medical students. We’re able to recruit some of the nation’s top students, so we’re surrounded by really smart, young people who keep us on our toes.”

As a three-time recipient of the Keck School’s “Outstanding Teacher Award,” Skinner’s enthusiasm for teaching has not gone unnoticed.

An avid gardener in her off time, Skinner is a nurturer by nature, and residents are no exception as she “sometimes feels like a mother hen.” (With three offspring of her own, Skinner is well practiced.) When her students leave the residency nest, Skinner beams with parental-like pride.

“It’s very rewarding to train outstanding surgeons and populate the world with them. That’s what I’m most proud of,” she says.

For an appointment with Skinner, call (800) USC-CARE.
That NORRIS TOUCH

Remembering her mother’s treatment at USC Norris, a daughter returns for her own cancer care

BY SARA REEVE

Remembering her mother’s treatment at USC Norris, a daughter returns for her own cancer care

BY SARA REEVE

When Arlene Ray’s doctor phoned her on a Friday afternoon, and asked her to come in on Tuesday to discuss the results of her biopsy, she had a bad feeling. “I know then that it was cancer,” Ray says. “Otherwise, he would have told me over the phone. If the test had been negative, he wouldn’t have made me wait all weekend thinking the worst.”

By the time she started asking questions about a large and painful black and blue spot on the back of her knee in February 2009, Ray had already felt the impact of cancer in her life multiple times.

In 1983, her son, then a young man, was diagnosed with hairy cell leukemia. Shortly after his successful treatment and recovery, Ray, who lives in Los Angeles, Calif., was diagnosed with breast cancer. That, too, was successfully treated. After two bouts of cancer in her family, she was convinced that she needed to do something about funding cancer research through STOP CANCER, a non-profit organization that provides grants to scientists pursuing innovative cancer research. “The National Cancer Institute was urging us to fund young researchers and investigators at comprehensive cancer centers,” says Ray. “So we met with people at Norris. We decided to fund young investigators because they told us that those young researchers need the support to be able to stay in research.”

Cancer would appear again in the lives of Ray’s family, when her mother, Lily Ophas, was diagnosed with lymphoma in 1989. According to Ray, the hospital where her mother was being treated had exhausted their treatment options and run out of ideas. That was when Ray’s brother, Lawrence Ophas, M.D., professor of clinical pediatrics and associate dean for graduate medical education at the Keck School of Medicine of USC, suggested taking their mother to USC Norris.

“So in 1989, she was seen by Dr. Ian Douer, and he said, ‘I can help her,’” recounts Ray. “And he did—he gave her good quality time. She had another four to five years.”

Watching her mother’s treatment at USC Norris, Ray was convinced that the hospital offered a different level of care from other hospitals. “I was just amazed at how everyone at Norris handled patients, because I knew it wasn’t the norm,” she says.

After her mother’s successful treatment, Ray decided that she wanted to become even more involved in supporting the work of doctors at USC Norris. Five years ago, she joined the USC Norris Advisory Board, a group of community leaders and philanthropists who help support the mission of the USC Norris Comprehensive Cancer Center and Hospital through fundraising, outreach and education. But she didn’t realize that she was raising money for her own eventual cancer treatment.

When she finally was told in February 2009 that she had lymphoma, her reactions to her second diagnosis of cancer were quite different from the first time, since she had already faced and coped with chemotherapy. “I didn’t feel scared to death, but more like ‘Oh no, not again. Let’s just get the treatment started and aggressively fight this cancer as well,’” says Ray. “Honestly, I felt worse for my family than I did for myself.”

But remembering the care her mother received, Ray knew where to turn for treatment. “The doctor wanted to give me a recommendation for a specialist [at another hospital], but I told him that I didn’t need it,” she says. “My brother was already on the phone to Dr. Douer, who said that I should come in that day. From the moment I went into the hospital, everyone at Norris gave me great hope.”

Throughout her course of treatment, which included intensive chemotherapy, Ray maintained her positive outlook, inspired by the thoughtful professionalism of the USC Norris staff and volunteers.

“As a cancer patient, you are so vulnerable—one wrong word can set you off,” she notes. “But at Norris, from the moment you drive in to the valet, everyone is looking to care for your every need—they really help to provide a pleasant atmosphere while you are being treated for an unpleasant disease. And it’s not like that at other hospitals. They just don’t have that Norris touch.”

A year and a half after her second cancer diagnosis, Ray brings a personal perspective to her support of USC Norris. “The experience sort of gives you a better sense of what life is all about. I feel stronger having come through it all,” she says. “So, did I triumph over cancer? Well, so far, so good. I’ve got my hair back, my energy back and I’m moving forward.”

Ray has words of encouragement and hope for those recently diagnosed with cancer. “If you decide to be treated at USC Norris, you will feel like I do. They have all the tools to help you get through cancer,” she says. “Go to Norris—to me, there is no other place like it.”

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Phases of Hope
Anthony El-Khoueiry, M.D., assistant professor of clinical medicine at the Keck School of Medicine and director of the Clinical Investigation Support Office at USC Norris, and Janice Hall, a colon cancer patient and clinical trials advocate, pose for a photo at Phases of Hope II, an event to highlight the importance of gaining funding for clinical trials at the USC Norris Comprehensive Cancer Center and Hospital.

The event was held June 23 in the Hinderstein Garden. Approximately 75 attendees met to hear the goals and accomplishments of the clinical trial program at USC Norris and to get a firsthand account of clinical trial participation from patients. “The key to curing this disease is research, and research involves clinical trials,” said Hall, who was diagnosed in 2006 with Stage IV colon cancer and has participated in clinical trials.

La Prostate Cancer 5K
Join the USC Institute of Urology on Nov. 21, 2010, at San Vicente Boulevard in Brentwood for the first-ever LA Prostate Cancer 5K. With the money raised through the LA Prostate Cancer 5K, the USC Institute of Urology will be able to create new therapies, develop better screening tools and ultimately eradicate deaths from the disease.

Other than skin cancer, prostate cancer is the most common cancer in men. About one in six men will be diagnosed with prostate cancer during his lifetime. Participate in the Los Angeles Prostate Cancer 5K to celebrate the lives of loved ones lost, to renew your personal battle and to stand united with a community of runners, walkers and enthusiasts dedicated to overcoming prostate cancer.

The 5K event will begin at 8:30 a.m. Children under the age of 14 can participate in a 1K kiddie fun run/walk the day of the event. For more information, or to register for the event, visit www.uscrio.com/ prostate-5k.

Norris Golf Tournament Raises $105K for Cancer Research
The final tallies from the 2010 Swing Against Cancer Golf Tournament are in, and golfers raised $105,000 for unrestricted cancer research at USC Norris Comprehensive Cancer Center.

The seventh annual tournament, held in June at El Caballero Country Club in Tarzana, attracted 95 golfers, including a group of nurses representing the USC hospitals. Additionally, about 150 Norris supporters attended a cocktail reception later that day, where Peter W. Laird, Ph.D., gave an update on the USC Norris Comprehensive Cancer Center, as well as a briefing on the USC Epigenome Center.

The Keck School of Medicine of USC has announced a $24 million gift from media executive and philanthropist Sumner M. Redstone to support cancer research. The research will be directed by urologist David Agus, M.D., professor of medicine at the Keck School of Medicine and director of the USC Center for Applied Molecular Medicine and the USC Westside Prostate Cancer Center.

The donation is part of more than $100 million in previously announced charitable grants that Redstone has awarded to fund initiatives in the United States and abroad. USC has received a portion of the Redstone gift in the form of charitable grants. The remainder of the pledge will be donated over the next three years.

“David Agus is not only an accomplished scientist who is literally changing how we think about cancer, but is also a remarkable physician who brings tremendous skill and compassion to his work with patients,” Redstone said.

“I was fortunate to meet Dr. Agus shortly after I was diagnosed with prostate cancer and since that time, I have benefitted from his expertise. He quite literally saved my life, as he has done for many others.”

Agus is co-leader of the National Cancer Institute-funded Physical Sciences in Oncology Center at USC, which aims to bring physical science researchers, including physicists and mathematicians, together with biological scientists, in hopes of creating new paradigms with which to approach and treat cancer. Agus is a member of the NCI-designated USC Norris Comprehensive Cancer Center faculty.

Agus’ research focuses on the application of proteomics and genomics for the study of cancer and the development of new cancer therapeutics. These advanced technologies reveal valuable information regarding the on and off switches of cancer and the various factors involved in cancer origins, progression and response to treatment. Agus’ clinical responsibilities include the development of clinical trials for new drugs and treatments for cancer.

For more information or to make a gift to the USC Norris Comprehensive Cancer Center and Hospital, visit uscnorriscancer.usc.edu/support/ or call (323) 865-0700.
Genetic Counseling 101

What is cancer genetic counseling?
Cancer genetic counseling assesses the likelihood that an individual or family has an inherited predisposition to certain forms of cancer. It aims to help those affected understand the probability of developing inherited forms of cancer or passing them on to their children, and also to adopt strategies to prevent or detect the disease early when cancer is most treatable.

Certified genetic counselor Charité Ricker, M.S., says that the first step is to perform a cancer risk assessment of the person or family. The assessment involves taking a detailed medical history going back as far as four generations, identifying possible instances of cancer and noting when in a person’s life they first appeared.

The initial counseling session, which lasts under two hours, includes patient education about genes and heredity, probabilities of cancer arising, and the risks, benefits and limitations of genetic testing to confirm the suspected presence of a heritable cancer.

Ricker emphasizes that counseling cannot tell a person whether or not they will get cancer, but only deals in probabilities, which makes some question its value at first. “Some people say, ‘I look at my family’s history and I know there’s something wrong. What difference does it make for me to know if I have [a specific cancer causing] gene?’” Ricker says. “But after counseling, they might learn why the cancer developed to begin with and if they’re at increased risk for future cancers. It can help guide treatment and follow-up and also prevention strategies for second cancers.”

Moreover, she adds, once a condition is identified in a family, family members who are tested for specific genes may find they are free of the cancer-causing gene and can be spared a lifetime of needless worry.

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Who is the most appropriate recipient of cancer genetic counseling?
Individuals who are diagnosed at an unusually young age (usually 45 or younger) or who have more than one kind of cancer—or whose families have a strong history of cancers, especially those striking unusually young people, may want to consider counseling.

“A lot of people overestimate their likelihood of having an inherited cancer—which only account for 5-10 percent of all cancers. Some of the key features of inherited cancers are an early age of diagnosis, multiple cancers in one person, cancer across several generations in the family—usually not just one—and a clustering of specific cancers that can run together,” suggesting a common genetic link, Ricker said.

Where can I get cancer genetic counseling?
Call the USC Norris Comprehensive Cancer Center at (323) 865-0911. Costs of counseling are commensurate with a regular physician office visit. Costs of genetic tests vary by patient insurer. Physician referrals are encouraged, but patients may self-refer.

By including the USC Norris Comprehensive Cancer Center in your charitable gift planning, you’ll be supporting groundbreaking cancer research and truly exceptional clinical care — and building a lasting legacy with the power to make a tangible difference during your lifetime and beyond.

To learn more about charitable gift planning to benefit the USC Norris Comprehensive Cancer Center, please contact Tina Pakfar at 323.865.0700 or by email at tpakfar@usc.edu
Until There's a Cure.  
Fight On.

Your purchase of this special Trojan T-shirt will promote breast cancer awareness while supporting breast cancer research at the USC Norris Comprehensive Cancer Center and Hospital. Thank you for Fighting On for a breast cancer cure!

Available at all USC Bookstores or online at http://breastcancer.uscbookstore.com

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