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 Education —
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Stanford Cancer Institute News

A PUBLICATION FOR PATIENTS AND FRIENDS OF THE STANFORD CANCER INSTITUTE



Susan M. Swetter, MD, Professor of Dermatology

FALL 2011

Targeting Melanoma Making Strides Against a Lethal Disease

The number of Americans dying each year from cancer has been declining for decades. During the same period, however, skin cancer deaths have been on the rise. In fact, incidence rates for melanoma — the deadliest form of skin cancer — have outpaced all other cancers by a wide margin.

This deadly trajectory is especially tragic because skin cancer is among the most preventable cancers. Diagnostic and treatment advances are important, but the vast majority of skin cancers could be prevented by limiting exposure to harmful ultraviolet (UV) radiation.

“Sun protection campaigns have only been in existence for about 20 or 30 years worldwide,” said

Susan M. Swetter, MD, professor of dermatology. “Yet prevention saves the greatest number of lives.”

What is Melanoma?

Cancer of the skin is the most prevalent of all cancers, and though it can occur anywhere on the body, it is most common in areas frequently exposed to sunlight, such as the face, neck, hands and arms.

There are several types of skin cancer, squamous cell carcinoma and basal cell carcinoma being the most common. Melanoma accounts for less than 5 percent of all skin cancer cases, but is by far the deadliest type, estimated to kill 8,790

See **Targeting Melanoma**, page 3

Stanford Cancer Center Renamed Stanford Cancer Institute

The Stanford Cancer Center has changed its name to the Stanford Cancer Institute to better reflect its involvement in the full span of cancer-related activities occurring at the university and medical center. The change also underscores SCI's position as one of five Institutes of Medicine at the medical school.

This issue of *SCI News* introduces an updated design, with new features and more of the engaging, reliable information readers expect. Email us: scinewsletter@stanford.edu.

Photo by Steve Gharfeller, VMS



Message from the Director Change and Hope



This issue of the *Stanford Cancer Institute News* reveals some important changes. As previously mentioned, we've changed our name to the Stanford Cancer Institute. We've also redesigned the *SCI News* to give you a more engaging view of cancer-related activities at Stanford and beyond.

Our feature story involves melanoma. There are different types of skin cancer, but melanoma is by far the most lethal, responsible for approximately 8,700 deaths last year (74 percent of all skin cancer deaths) in the US. A major cause is exposure to ultraviolet radiation from the sun or other sources, including indoor tanning salons.

Dermatology professor, Dr. Susan Swetter believes that use of tanning beds is a likely contributor to the dramatic increase in melanoma cases among Californian girls and young women. She and colleagues at the Cancer Prevention Institute of California and UCSF showed that melanoma rates were greatest in higher socioeconomic status areas, where recreational tanning — both indoor and outdoor — is prevalent. We salute Stanford graduate, California Senator Ted Lieu, for having sponsored a new law that bans minors from using tanning salons. This research and new policy could save thousands of lives in the coming decades.

Now is also a moment of hope for those who unfortunately have developed melanoma. If not caught early, there have been few therapeutic options. However, a new drug named Yervoy (see story page 6) has dramatically extended the lives of people with metastatic disease. We're optimistic that in the next few years Yervoy will be used in combination with other drugs to extend lives even further.

Research on skin cancer is one of the Stanford Cancer Institute's top priorities. We have assembled a multi-disciplinary research team with expertise ranging from basic cell biology to treatment and prevention. With growing awareness of how to prevent skin cancer, and new opportunities for therapeutic intervention, we are expecting dramatic progress against this deadly disease. ■

Beverly S. Mitchell, MD
Director

The Stanford Cancer Institute

The Stanford Cancer Institute provides support and coordination for the range of cancer-related activities occurring at Stanford University, Stanford Hospital and Clinics, and the Lucille Packard Children's Hospital. Our 300-plus faculty members belong to more than 30 academic departments, and represent the array of disciplines involved with comprehensive cancer research and treatment.

The Institute is a National Cancer Institute-designated 'Cancer Center,' with a scientific agenda combining laboratory research, clinical study and population science. The Institute also engages in patient care, community education, clinical trials, as well as support and training for the next generation of cancer physicians and researchers.

Simply put, all of our members and resources are focused on one goal: to reduce the occurrence and impact of cancer.

Stanford Cancer Institute News is a quarterly update for members, supporters and friends. On behalf of our members and staff, we thank you for your ongoing support and welcome your feedback and inquiries.

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Targeting Melanoma, *continued from page 1*

people — approximately 74 percent of all skin cancer fatalities — in the US in 2011.

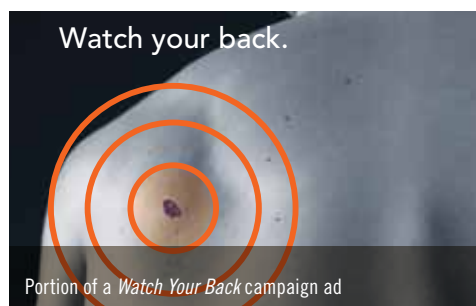
Melanoma forms in melanocytes, pigment-producing cells located in the deepest part of the epidermis (outer skin layer). If caught early, melanoma can almost always be successfully treated. If tumors progress, however, they can penetrate the skin layers, invade blood vessels and lymph channels, and spread to other tissues (i.e., metastasize). Once it spreads, melanoma tends to be aggressive, making treatment more difficult and greatly increasing the chances of death.

Groups at Greatest Risk

Melanoma incidence is rising at over 3 percent per year, and the group with the fastest growing incidence and mortality rates is men 65 years of age and older.

“We need to do a better job reaching middle-aged and older men,” Swetter said, “because they are dying more often from the disease.”

To do so, Swetter and colleagues at Stanford lead an effort to raise awareness among at-risk men. Swetter directs Stanford’s Pigmented Lesion and Melanoma Program, which operates a clinic dedicated to serving people with melanoma, and those at risk of developing it. Their experience is that high-risk individuals (those with sun-sensitive skin, atypical moles or a family history of skin cancer) are much more attuned to the importance of prevention and tracking measures.



Men with less obvious risks — a lifetime of occupational and recreational sun exposure — are more difficult to reach, so the Stanford group developed an educational campaign called *Watch Your Back*. The evidence-based campaign emphasizes the importance of clinical screening during routine medical visits, the role of spouses in skin examinations (and in helping ensure that men actually visit their doctor), and puts focus

on the back, the area of the body that accounts for nearly one-third of melanomas in men.

Another demographic group with a high, and increasing, rate of melanoma is young Caucasian women. Since 1980, melanoma incidence has more than doubled among white Californian girls and women, ages 15 to 39. To try to understand why, Swetter and researchers from the Cancer Prevention Institute of California (CPIC) and the University of California San Francisco compared ambient UV exposure, socioeconomic indicators and melanoma rates of young white women throughout the state.

The results showed significantly greater incidence in higher socioeconomic neighborhoods, suggesting that affluence and associated lifestyle behaviors — including indoor and outdoor tanning — have a bigger impact on melanoma risk than ambient UV exposure alone. In fact, girls and women living in the highest 20 percent of socioeconomic areas were six times more likely to be diagnosed with melanoma compared to those living in the lowest 20 percent.

“We were somewhat surprised because we thought ambient UV light would be the major predictor of melanoma, but instead we found it was neighborhood affluence,” said study co-author Christina Clarke-Dur, PhD, a senior research epidemiologist at CPIC, and a Cancer Institute member.



Christina
Clarke-Dur, PhD

Tanning Beds to Blame?

The study by Clarke-Dur, Swetter and colleagues is the latest in a growing body of scientific evidence illuminating the risks of indoor tanning. Epidemiologic studies around the world have confirmed that tanning bed use is directly linked to melanoma development. A 2010 US Food and Drug Administration (FDA) review of indoor tanning safety concluded that as much as 25 percent of melanoma cases in young women worldwide may be caused by tanning bed exposure.

Tanning beds emit UVA and UVB radiation at an intensity estimated to be fifteen times stronger than natural sunlight. The American Academy of Dermatology cautions that people who engage in indoor tanning increase their risk of developing melanoma by 75 percent.

Melanoma: What to Look For

Recognize the ABCDE’s. They can make the difference between detecting a thin, curable melanoma and a thick, fatal tumor.

A**symmetry** of a brown, tan or black lesion

B**order** irregularity

C**olor** variation (multiple hues of brown, black, white, red or blue)

D**iameter** greater than 6 mm

E**volution**; a lesion changes, or doesn't look like others

Some melanomas lack visible pigment, and appear as flesh-colored or pink lesions on the skin. Therefore, any lesion which is elevated, firm, or growing in size should be checked by a health professional.

“We tell patients that about half an hour at a tanning salon is equivalent to a day of baking at the beach,” said Swetter.

The US Department of Health and Human Services and FDA have added tanning beds to their lists of dangerous carcinogens. Several countries, including England and France, have banned tanning beds for minors, and Brazil has banned indoor UV tanning entirely.

California Bans Minors

Governor Jerry Brown recently signed legislation to restrict indoor UV tanning to consumers 18 years and older. The new law, which takes effect January 1, 2012, makes California the first state in the nation to ban minors from tanning booths. The legislation was sponsored by State Senator, and Stanford graduate, Ted Lieu of Torrance.

“Indoor tanning is especially harmful,” Lieu said, “and the damage is cumulative, so the more exposure one gets early in life, the worse the effects can be.”

Supporters of the ban hope to use the new law as a springboard for a public awareness campaign to educate girls and young women about the dangers of UV exposure, particularly indoor tanning. Several other states are considering prohibitions similar to California. ■



In Profile

Quynh-Thu Le, MD

New Chair Has Vision for Radiation Oncology

Cancer Institute Member Quynh-Thu Le, MD, has been named as the new chair of the Department of Radiation Oncology. She assumed the post on September 1, succeeding Richard Hoppe, MD, who chaired the department since 1994.

“This is an opportunity to fulfill the mission as outlined by the School of Medicine,” Le said, “and we also want to achieve our vision of making Stanford even more respected in the cancer world, and beyond.”

Le was chosen through a national candidate search, and received the strongest endorsement from the Search Committee, chaired by Beverly Mitchell, MD, Director of the Cancer Institute.

“Selecting clinical chairs who combine academic success with emotional intelligence, sensitivity and the ability to lead successfully is essential,” Dean Philip Pizzo, MD, wrote in his July 25 newsletter, adding, “Dr. Le possesses these attributes.”

Le now leads over 30 faculty, and many more staff members, in the department’s three divisions – radiation therapy, radiation and cancer biology, and radiation physics. Together they combine state-of-the-art cancer therapy with compassionate patient care, and work in close collaboration with pathologists, oncologists, surgeons and other cancer specialists.

“Our department offers a unique way to integrate the physical science with the biological science and translate it to patients,” she said.

Le’s vision for the department is at once practical and ambitious. She is determined to increase efficiency within the expanding department, both for the benefit of the staff and to improve the experiences of the patients they serve.

Le also intends to expand the department’s portfolio of treatment options to include other types of radiation, such as proton and carbon ion, which may offer reduced side effects. Each technology has potential advantages and limitations, and Le

embraces the challenge of determining which of the new treatments is best for which patients.

“We would like to pioneer that here are Stanford,” said Le. “I think part of Dean Pizzo’s expectation for me is to enhance our research and clinical programs, to initiate new programs and to increase the visibility of the department.”

Keeping a Focus on Research

In addition to her expanded administrative duties, Le continues to see patients each week and is committed to retaining her research lab.

“Maintaining a lab is a choice,” Le said. “I think having a research presence and staying current with progress in the lab will help me guide the future direction of the department.”

“Academic success with emotional intelligence, sensitivity and the ability to lead successfully is essential. Dr. Le possesses these attributes.”
— Dean Philip Pizzo, MD

A prolific researcher and author, Le has published over 100 articles in peer-reviewed journals, conducted numerous clinical trials, and developed an array of multidisciplinary collaborations to enhance the scope and impact of her research.

Le’s primary research focus is to advance the understanding and treatment of head and neck cancers. These tumors are often difficult to treat, due in part to their locations, and also because of inconsistent response to therapy. Le is searching for specific characteristics of the cancers that make them more susceptible to particular types of treatment.

“We want to identify biological markers that predict for treatment response,” explained Le, “then we can select the most appropriate treatment for each patient.”



Quynh-Thu Le, MD

Record of Accomplishment

Le did her undergraduate work at the California Institute of Technology, where she pursued a dual major in chemistry and biology. She earned her MD from UCSF in 1993, receiving both the Sadie E. Berkove Fellowship as the top graduate in her class, and the Janet M. Glasgow Memorial Award as the top-graduating woman. She did her residency in radiation oncology at UCSF, and became board certified in 1998.

Le joined the Stanford faculty that same year. She was appointed Director of Clinical Research in the department in 2005 and promoted to Professor in 2007. Along the way she assumed national leadership in the American Society of Clinical Oncology, the American Society of Therapeutic Radiation and Oncology, the American Radium Society, American Association for Cancer Research and American Board of Radiology, among others. She is a member of Stanford’s Bio-X program, and has received her department’s Henry Kaplan Memorial Prize for Resident Education on three separate occasions. ■

Cancer Research is Model for Investing Limited Resources

Philip A. Pizzo, MD

Professor of Pediatrics and Microbiology
and Immunology
Dean, School of Medicine
Stanford University

The following is an excerpt of an essay delivered to the 2011 class of the SCI's Comprehensive Cancer Research Training Program.

Forty years have passed since the passage of the National Cancer Act of 1971. While some have questioned the benefit of the investments in cancer research through the National Cancer Institute, it is undeniable that significant progress has been made in understanding cancer biology, human genetics, stem cell biology, immunology, and imaging, as well as targeted therapeutic approaches for a number of malignancies. More importantly, the opportunities for future discoveries and innovations that can change the face of cancer seem unparalleled and opportune for continued investment.

At the same time, our nation's investment in science, discovery and innovation is at risk from the conflation of separate but interrelated forces. The unifying factor is the downturn of the US economy and rising debt burden that could compromise continued investments in research.



Dean Philip A. Pizzo, MD

Furthering the challenge is the rising cost of healthcare that now consumes 17% of the US GDP and which is increasing at an unsustainable rate.

A candid assessment of the “state of health” of the American healthcare “system” and future investments in innovation and discovery do not depict a reassuring prognosis — which has significant implications for academic medical centers, including Stanford. Academic medical centers have four missions: education, research, patient care and community service. Three of these missions are “cost-centers”, and in many academic medical centers, revenues from

clinical care are used to subsidize the missions in education, research and community service. Given the likely widening gap in research funding, the continued costs for education and the probable increasing community needs that will increase with the aging population together with the withdrawal of state and federally funded benefit and entitlement programs, it seems inevitable that the stress on academic medical centers will worsen.

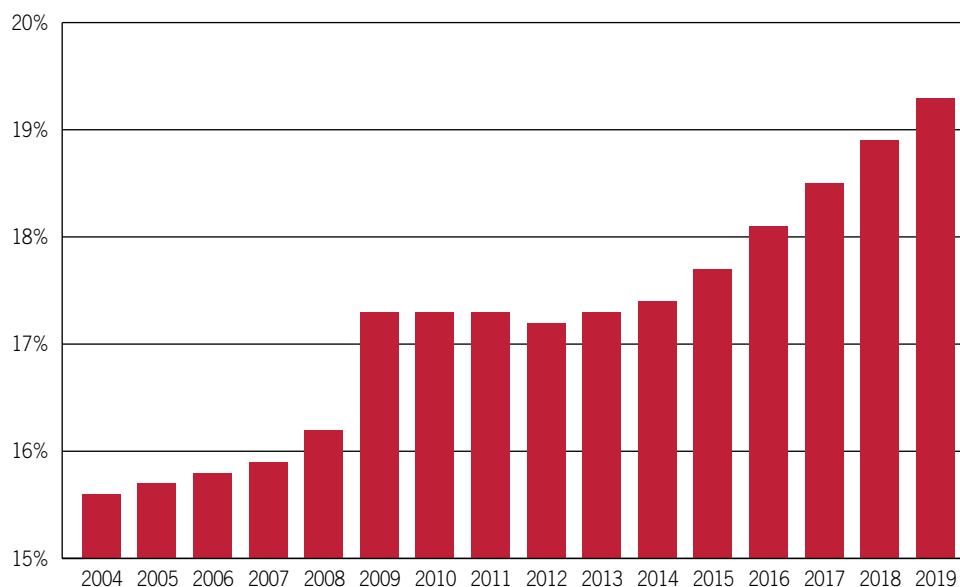
While it is possible to focus on the dire consequences, there is also an opportunity to use this “crisis” as an opportunity for change. Cancer treatment and prevention have been an exemplar for protocol based-care and clinical trials. This approach to evidence-based care needs to become the rule rather than the exception. Coupled with this should be a focus on novel ways to deliver cancer care, including an expansion of clinical protocols in more dispersed settings and by different constellations of providers.

There is an opportunity for Cancer Centers to emerge as leaders of innovation in treatment and prevention and to help redefine the boundaries of care. A focus on regulatory science as well as population management and science will need to be better coupled with innovations in bioscience and technology. And there is the opportunity for Cancer Centers to develop novel ways to conduct clinical research, include the majority of patients on clinical protocols and catalyze the interface between basic science, translational medicine and community partnerships. Cancer Centers should take leadership in developing patient-centered care and become proactive in addressing challenging issues like “end-of-life” and palliative care in more comprehensive ways.

Healthcare reform coupled with greater competition for research funding will make Cancer Centers more important in the lives of faculty and institutions. They will need to be an anchor for education and career development, a center for discovery and innovation, a mechanism for resource management through core services and facilitated interactions, and ultimately a robust connection between science, clinical medicine, industry and the community.

To read Dean Pizzo's entire essay, please go to cancer.stanford.edu/features/research_news/documents/32PizzoPhilip.pdf ■

Historical and Prospective View of US Healthcare Costs as Percentage of GDP



National Health Expenditure Data, US Dept of Health & Human Services



In Research

Important Recent Advances in Cancer Research

Decline in Cancer Mortality has Saved 898,000 Lives Since 1990

There has been a lively public debate about the impact of cancer research, but the American Cancer Society (ACS) recently reported a steady reduction in overall U.S. cancer death rates between 1990 and 2007. ACS estimates 898,000 fewer deaths than if the rates had not changed.

Cancer death rates declined by 22.2 percent for men and by 13.9 percent in women during the 17 years studied. Among men, the reduction in death rates for lung, prostate and colorectal cancers account for nearly 80 percent of the decrease in the overall cancer death rate. Among women, breast and colorectal cancer reductions combined for almost 60 percent of the decrease.

Nonetheless, cancers of the lung, prostate and colorectum in men, and lung, breast and colorectum in women continue to account for about half of all cancer deaths.

ACS annually estimates new cancer cases and deaths expected in the U.S. This and other cancer information can be found at www.cancer.org.

Starving Renal Cancer Cells

Stanford researchers have identified a compound that kills cancer cells by limiting their prime energy source: glucose. When tested in animal models of kidney cancer, the compound halved the amount of glucose imported by tumor cells, slowed tumor growth, and produced few side effects. Such a targeted treatment

could represent an improvement over current chemotherapy drugs that do not distinguish between cancer cells and other rapidly dividing cells, like blood and hair follicle cells.



Amato Giaccia, PhD

“This study demonstrates an approach for selectively inhibiting the ability of cancer cells to take up glucose, which is a pretty powerful way of killing those cells,” said senior author Amato Giaccia, PhD, professor and director of SCI’s radiation oncology program.

If successful in humans with kidney cancer, the compound — or others like it — will be tested on other types of cancer. The work appears in the journal *Science Translational Medicine*.

Olaparib Shows Promise in Ovarian Cancer

An experimental drug shown to be effective in treating ovarian cancer in patients with gene mutations BRCA1 or BRCA2 also appears to work in some patients without the mutations. BRCA1 and BRCA2 mutations are known to result in higher probabilities of developing breast or ovarian cancer, though 90-95 percent of ovarian cancers do not involve inherited mutations.

Olaparib is a compound that blocks the activity of a protein involved in DNA repair. It has been shown to cause tumor cell death in breast and ovarian cancer patients with a BRCA mutation by preventing the cells from repairing their DNA. The new study is the first to suggest this strategy may prove effective for patients not carrying BRCA mutations, according to lead researcher Karen Gelmon, MD, of Vancouver, Canada’s BC Cancer Agency.

A four-week regimen of Olaparib was given to 65 ovarian cancer patients, some having a BRCA mutation. The findings showed that 41 percent of patients with BRCA mutations, and 24 percent of those without, showed substantial shrinkage in tumor size. The study appeared in the journal *The Lancet Oncology*.

Lynch Syndrome Screen Found Cost-Effective for Colon Cancer Patients

Screening every new colon cancer patient for Lynch syndrome extends lives at a reasonable cost, according to a recent Stanford study. Researchers hope the results will encourage widespread adoption of genetic screening policies, said lead author and Cancer Institute member, Uri Ladabaum, MD, associate professor of gastroenterology and hepatology.



Uri Ladabaum, MD

Lynch syndrome is an inherited condition marked by mutations in a set of genes that normally inspect and repair the DNA of cells. Individuals with Lynch syndrome have a greatly increased risk of developing colon and other cancers in their lifetime. The researchers used computer simulations to compare the money spent and the years of lives gained if all new cases of colorectal cancer were tested for Lynch syndrome. They found that screening programs can reduce cancer deaths for no additional net health care costs.

The study was published in the July issue of *Annals of Internal Medicine*. The Stanford team collaborated with researchers at the University of California-San Francisco, Baylor University Medical Center in Dallas, and Memorial Sloan-Kettering Cancer Center in New York.

Advances in Two of the Most Intractable Cancers

Patients with advanced, previously untreated melanoma had better survival rates when given the drug ipilimumab in combination with chemotherapy, according to a presentation at the 2011 meeting of the American Society of Clinical Oncology.

Ipilimumab (commercial name ‘Yervoy’) targets a cell-surface molecule thought to inhibit immune response. Disabling this molecule appears to enhance the immune system’s response against

tumor cells. The FDA approved Yervoy in March 2011 for treatment of melanoma that has spread to other sites or cannot be surgically removed.

Advanced melanoma is often untreatable and the increased survival time from four months to 12 months caused by ipilimumab opens important new avenues for therapeutic research. Future research will include evaluating ipilimumab in combination with other promising therapies.

There is equally exciting news for another dangerous cancer. People with metastatic pancreatic cancer who received a chemotherapy combination known as FOLFIRINOX fared better than those receiving the standard treatment, according to a report published in the *New England Journal of Medicine*.

French researchers conducted a trial among 342 patients with metastatic pancreatic cancer. The rates of overall survival and progression-free survival of patients receiving FOLFIRINOX were nearly double those of patients receiving current standard chemotherapy. Side effects also increased for patients receiving FOLFIRINOX.

The researchers conclude that FOLFIRINOX is an option for the treatment of patients with metastatic pancreatic cancer and who are generally able to carry out activities of daily living.

Drug Shown to Reduce Breast Cancer Risk in Postmenopausal Women

The aromatase inhibiting compound exemestane reduces the risk of breast cancer in postmenopausal women, according to data presented at the 2011 meeting of the American Society of Clinical Oncology.

Aromatase inhibitors are drugs that block the production of estrogen, and are commonly used in the treatment of hormone receptor-positive breast cancer. To evaluate exemestane (commercial name 'Aromasin') for breast cancer prevention in high-risk women, researchers conducted a trial giving 4,560 postmenopausal women either exemestane or a placebo.

Cases of invasive breast cancer were 65 percent lower in the exemestane group than in those receiving placebo, leading researchers to suggest that exemestane may be effective for reducing the risk of breast cancer in postmenopausal women. Aromasin is not currently approved for this purpose.

Genetics May Predict Why Calcium Increases Risk for Prostate Cancer

A new study suggests that a high calcium intake increases the risk of prostate cancer among African-American men who are genetically more efficient at absorbing calcium.

Researchers from the Cancer Prevention Institute of California (CPIC), the University of Southern California and Wake Forest Baptist Medical Center compared the genetic makeup and calcium intake of 783 African-American men, 533 of whom were diagnosed with prostate cancer.

Subjects who reported the highest calcium intake were twice as likely as those with the lowest intake to have

prostate cancer. Men with a genotype associated with good calcium absorption were more likely to have advanced prostate cancer than poor calcium absorbers. The authors conclude that men who are high calcium absorbers should be careful about the use of calcium supplements.

"While currently there are no methods proven to effectively lower the risk of developing prostate cancer, our findings provide insight into factors contributing to the disease that may be modifiable for some men," said CPIC research scientist and study co-author Esther John, PhD.

The paper was published online in the *Journal of Bone and Mineral Research*.

A new study by Stanford researchers shows that mathematics can predict the efficacy of specific gene-targeting cancer treatments. Carefully tracking the rate of response of human lung tumors during the first weeks of treatment forecast which cancers experienced sustained regression.



Dean Felsher, MD PhD

The research highlights the promise of applying mathematical and computational concepts to the study of complex biological systems. Institute member, Dean Felsher, MD PhD, and his colleagues used a computational biology approach to characterize a phenomenon called oncogene addiction, in which a cancer is dependent on the activity of one cancer-causing gene. Tumors that are dependent on a single mutated protein, or oncogene, for their growth regress quickly when the activity of that protein is blocked.

"With simple measurements, we found we can determine when a cancer is addicted to a particular cancer gene and will respond to therapy targeting that gene," said Felsher, an associate professor of medicine and pathology.

The study was published in the journal *Science Translational Medicine*. ■



Esther John, MD



In Training

The Stanford Cancer Institute provides a variety of support and training opportunities for students and faculty. Two of the most popular offerings — the Comprehensive Cancer Research Training Program and the Cancer Biology PhD program — each recently held their annual conferences. In addition to specialized training, these sessions give young physicians and researchers valuable experience working on innovative projects, presenting their data, and forging relationships with peers and senior faculty.

Comprehensive Cancer Research Training Program (CCRTTP)

The fifth annual CCRTTP conference took place September 12 through 16 at the Quadrus Conference Center, Menlo Park, California. More than 100 graduate students, medical fellows, residents and research assistants participated in the week-long, full-immersion session. Open to participants

from Stanford and beyond, this year's trainees hailed from UCSE, Duke, British Columbia Cancer Research Centre, University of Washington, as well as four German Universities: Cologne, Freiburg, Dresden, and Wuerzburg.

CCRTTP is a unique chance for aspiring physicians and researchers to learn about the opportunities in cancer investigation, and to become familiar with the infrastructure for their experimental, translational or clinical science pursuits. Karl Blume, MD, emeritus professor of medicine, Amato Giaccia, PhD, professor of radiation oncology, and associate professor of medicine, Ginna Laport, MD, are the program directors.

Cancer Biology PhD (CBIO) Program

The famed Asilomar Conference Grounds in Pacific Grove, California was the site of the 34th annual CBIO conference, held September 9 through 11.

One of the nation's first interdisciplinary graduate programs, CBIO trains future generations of cancer researchers to translate basic scientific findings into diagnostics and treatments.

The annual conference provides opportunities for graduate students and postdoctoral fellows to present their research progress to the faculty and to their peers. This year's event included about 100 participants, for whom it offered an informal atmosphere for learning, discussion, reflection and relationship building. The conference also serves to acquaint new graduate students with the CBIO program, and inform them of research opportunities, resources and potential collaborations. Amato Giaccia, PhD, professor of radiation oncology, is the program director, and this year's faculty host was Alejandro Sweet-Cordero, MD, associate professor of pediatrics and cancer biology. ■



Students and faculty of the CCRTTP Class of 2011

Photo by Karen Tran

Legal Dispute over Graphic Cigarette Labels in US

SCI News previously reported how Stanford researchers Matthew Kohrman, PhD, and Lisa Henriksen, PhD, are studying the impact of graphic cigarette warning labels on Chinese smokers.

Earlier this year, the Food and Drug Administration (FDA) approved graphic warnings for all cigarette packs and advertisements in the United States. Several tobacco companies sued the FDA, and a federal judge recently granted a temporary injunction on the labeling mandate. No appeal or other action had been initiated at the time of this printing.

Henriksen, a senior research scientist and Cancer Institute member, studies the role of tobacco marketing on smoking rates, and offered her perspective:

What do you think of the tobacco companies' legal challenge?

Filing lawsuits is one of the tobacco industry's standard tactics to thwart significant marketing restrictions in every country.

Will graphic labels affect smoking rates in the US?

We have dreadfully innocuous warning labels and the new ones are a significant improvement. But warning labels are only one piece of comprehensive tobacco control which requires other marketing restrictions, tax increases, smoke-free laws and media campaigns to encourage quitting.

What else is needed to decrease smoking and its adverse health effects?

More significant reductions in smoking will come from policies that regulate the product inside the pack, not just its label. Banning menthol as a flavoring agent in cigarettes is essential. The federal ban on flavored cigarettes should also be extended to cover other tobacco products, such as chewing tobacco, snuff, and cigarillos. ■



In Conversation

Pamela Priest Naeve

For 35 years, the Cancer Prevention Institute of California (CPIC) has relied on Pamela

Priest Naeve to direct its multi-faceted community education effort. CPIC is dedicated to preventing cancer and to reducing its burden where it cannot yet be prevented. In partnership with the Stanford Cancer Institute, CPIC implements cancer research

and outreach programs to deliver a comprehensive approach for studying, tracking and preventing cancer.

Priest Naeve recently shared her perspectives on the past, present and future of cancer community education.

How did you get started with cancer education and CPIC?

I spent four years in Stanford's cardiac surgery department, then moved to manage the office of the head of medical oncology. I learned a lot about cancer issues, like the need for informed decision-making, and the importance that many patients place on being part of the decision team. I worked with 'clinical service reps,' the individuals who saw the patients more than anybody, even the doctors. That's when I realized it takes a constellation of people to treat a patient's cancer. It was a critical insight for me, and is why I built the program the way I have.

When CPIC, then called the Northern California Cancer Program, was started, I took the job as manager for the cancer control program. CPIC was a consortium, which enabled me to work with anybody, anywhere to provide the best information and services for patients.

What is CPIC's approach to community education?

CPIC's focus is helping individuals make informed decisions about their health and health care. This includes teaching patients how to advocate for themselves, talk with doctors, find high-quality resources, and so on. We also focus on promoting healthy behaviors for all individuals in order to reduce the risk of developing cancer. CPIC distributes information, organizes conferences

and seminars, and provides training for health care professionals.

Describe some of your conferences.

We offer an annual breast cancer conference in San Francisco, with speakers addressing treatment advances, as well as lifestyle, nutrition and social issues. We always have at least one patient and family member speak as well, because they've walked the walk and know the disease better than most of us.

We also sponsor an annual cancer survivorship conference, which covers post-treatment issues, like how to manage long-term side effects, psychosocial issues, acknowledging the fear of recurrence and re-engaging with life. Our Web site (www.cpic.org) has information on all our conferences and programs.

What are some of the common survivorship issues for patients?

There are many: nutrition, fatigue, anxiety and depression, employment, health insurance... and I could go on. Again, the variety of issues shows the importance of a "team approach" to cancer. Cancer survivorship is a relatively new area of study, and both CPIC and Stanford are committed to expanding our educational programs to help address the ongoing needs of cancer survivors.

What is an example of seemingly basic, but important, information for patients?

Here's a thing that drives me crazy: some cancer drugs cause gastrointestinal problems, so you should not eat certain foods while taking these drugs. But patients aren't always told this, so they have to find out the hard way.

Our booklet, *Information for Newly Diagnosed Patients*, addresses the basics that patients need: questions to ask the doctor, helpful resources, a place for important phone numbers, and so on. It's not rocket science, but it is practical and helpful.

Describe some of the ongoing projects with the Stanford Cancer Institute.

The Institute helps support the cancer survivorship conference, and a breast cancer event specifically for the African American community, called "Each One Reach One." The Institute also

supports many of our publications, as well as a Web site dedicated to ductal carcinoma in situ, the most common type of noninvasive breast cancer. (See 'CPIC Resources' for more information.)

What are the future challenges to community education programs?

Funding is first and foremost. With cuts to state and federal budgets, community programs are being squeezed or eliminated altogether. So, private supporters are more important than ever.

What should every patient know?

The best decisions are informed decisions. So, be informed, ask questions and make the best of what you've got today...and enjoy your life!

What is the most rewarding part of your job?

The opportunity to help make people's lives better. Whether on an individual basis or from a community perspective, you just go find a problem and try to fix it. That's what I love about my job. ■

CPIC Resources

The materials listed here, and many more, are available at the CPIC Web site: www.cpic.org

Or contact the Community Education department at **888.315.5988** or education@cpic.org.

Publications

A Patient Primer – a system to manage important treatment information and resources

Living with Cancer – observations and suggestions by patients and families

Web sites

Ductal Carcinoma in Situ
www.dcis.info

The Bay Area Breast Cancer Guide
www.bcrp.cpic.org

Drug Digest
www.drugdigest.org

SCI Supports Research

The Stanford Cancer Institute is pleased to announce the 2011 Developmental Cancer Research Awards (DCRA) recipients in Interactive Projects, Translational Research and Population Sciences Research.

The DCRA program stimulates the development of high-quality, multidisciplinary translational research with direct application to cancer diagnosis, treatment or care. Individual project titles have been summarized.

Interactive Projects

New ideas for multi-project grants

James M. Ford, MD

Associate Professor, Oncology

Understanding and Treating Gastric Cancer

Daria Mochly-Rosen, PhD

Professor, Chemical & Systems Biology

Anti-chemoresistance Drugs for Head and Neck Cancer

Population Science Research

Interdisciplinary population-based projects, specifically in cancer prevention, control and epidemiology

Allison Kurian, MD, MSc

Assistant Professor, Oncology, Health Research & Policy (Epidemiology)

Can New Genetic Tests Improve Breast Cancer Risk Assessment?

Ingrid Oakley-Girvan, PhD

Research Scientist II

David H. Rehkopf, ScD

Acting Assistant Professor, Research, CPIC

Telomeres as Predictors of Prostate Cancer Survival?

Manali Patel, MD PhD

Post-doctoral fellow, Hematology-Oncology

Social Factors and Lung Cancer Outcomes Among Hispanic Patients

Sharon Pitteri, PhD

Assistant Professor, Radiology

Breast Cancer Early Detection Using Plasma Samples

Wei Wang, PhD

Research Scientist II, CPIC

A Whole Genome Sequencing Study of Breast Cancer

Translational Research

Interdisciplinary clinical and translational cancer research projects

Laura Attardi, PhD

Associate Professor, Oncology

Evaluating a New Prognostic Indicator for Breast Cancer

Gregory Behbehani, MD PhD

Postdoctoral Fellow, Hematology and Oncology

Modeling Aspects of Myelodysplastic Syndrome

Heike Daldrup-Link, MD

Associate Professor, Radiology

New Imaging Techniques for Tumors

Basem Goueli, MD PhD

Third-year Fellow, Hematology and Oncology

One Protein's Role in Causing Melanoma

Aya Kamaya, MD

Assistant Professor, Radiology

Daniel Chang, MD

Assistant Professor, Radiation Oncology

Scanning the Efficacy of Chemoradiation on Colorectal Cancer

Susan Knox, MD PhD

Associate Professor, Radiation Oncology

Drug and Radiation Therapy for Advanced Melanoma

John Leppert, MD

Assistant Professor, Urology

Tests for Kidney Cancer Diagnosis and Treatment Response

Oxana Palesh, PhD, MPH

Assistant Professor, Psychiatry

Assessing Bone Marrow Transplant Recipients with Sleep Disturbances

Julien Sage, PhD

Associate Professor, Pediatrics / Cancer Biology

Mechanisms of Liver Cancer

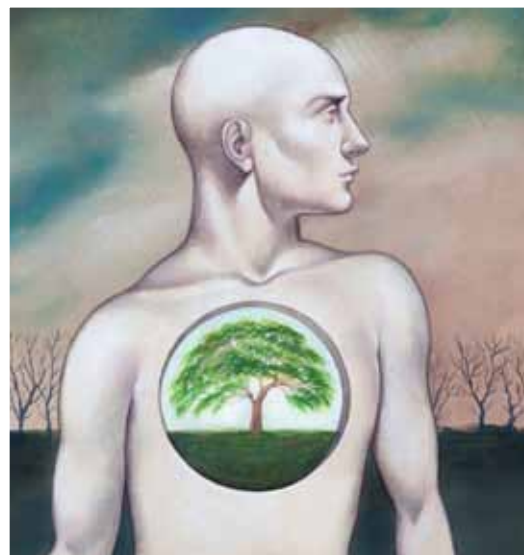
Daya Upadhyay, MD

Assistant Professor, Pulmonary and Critical Care Medicine

Noninvasive Approach for Lung Cancer Diagnosis ■

Stanford Medicine Magazine

Cancer Issue



Stanford Medicine magazine's Fall 2011 edition is a special cancer-themed issue.

Highlights include:

- **Cancer's new reality**
New treatments need updated tests and regulations.
- **How-to guide for cancer research**
Better medicine through databases?
- **Survivorship**
The cancer establishment has begun to see beyond the cure.
- **The unexpected benefit of comfort care**
Palliative care improves and extends cancer patients' lives.
- **Cancer treatment during pregnancy**
Saving the mom without hurting the baby.
- **Q&A with Siddhartha Mukherjee**
Pulitzer-winning author of *The Emperor of All Maladies*

Stanford Medicine magazine is available online at: <http://stanmed.stanford.edu>. ■

Uniting a Community for High Purposes

The Cancer Discovery Fund

Stanford Cancer Institute's Annual Fund has been re-named the "Cancer Discovery Fund" to more accurately reflect the innovative nature of the programs the Fund supports. What has not changed is the high-impact opportunities the Fund provides donors.

The Cancer Discovery Fund is unrestricted, giving the Institute the ability to support the most pressing needs and the greatest opportunities. Gifts to the Fund can immediately aid programs impacting patients, families, the local community and, of course, promising cancer research.

The generosity of donors makes possible advances like these

For example, the Fund provides critical support for the Institute's Developmental Cancer Research Awards (DCRA) program, which provides start-up funding for innovative, interdisciplinary research that has high potential to benefit cancer patients. DCRA's are essentially leveraged investments in talented researchers, enabling them to generate data required to receive much larger grants from the National Institutes of Health, other government funding agencies, and private foundations.

The Institute receives many more worthy DCRA applications than it has dollars to fund: 49 quality proposals in 2011. Generous supporters enabled 17 deserving investigators to see their research funded (see story page 10). Below are two examples of the innovative research supported by the DCRA program.

Lung Cancer Diagnosis May Be Just a Breath Away

As highlighted in the Spring 2011 issue of *SCI News*, assistant professor of pulmonary and critical care medicine, Daya Upadhyay, MD, is developing a simple, inexpensive and non-invasive breath test for lung cancer diagnosis. Upadhyay's research found



Daya Upadhyay, MD



Wei Wang, MD PhD

that lung tumor-specific microRNA (genetic fragments) can be isolated in condensation from exhaled breath and used to identify lung cancer. Visit the 'Publications' section at www.cancer.stanford.edu to find a detailed article about Dr. Upadhyay's work.

Uncovering Hidden Causes of Breast Cancer

Another DCRA-supported project seeks to understand how genetic causes of breast cancer may illuminate disease mechanisms. Wei Wang, MD PhD, consulting assistant professor of health research and policy, and her team are studying families at high risk of breast cancer in the hope that they will find as yet undiscovered genetic links.

"By identifying the unknown genetic variants, we expect to gain a better understanding of breast cancer's biological mechanisms," Wang says.

Newly identified genes, and interactions among genes, could provide targets for new therapeutic strategies, ultimately leading to improved outcomes and lower death rates from breast cancer.

Wang's research is ambitious, and the DCRA-funded pilot study will provide preliminary data for a subsequent large-scale study.

Thank You!

The generosity of Cancer Discovery Fund donors makes possible advances like these, and many others. The Institute and our members are most grateful. ■



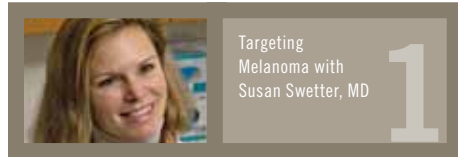
From a Variety of Donors for a Variety of Purposes

Your gifts to the Cancer Discovery Fund support critical programs and functions, including:

- Developmental Cancer Research Awards
- Recruiting and retaining the best faculty and staff
- Early-stage drug development
- The Stanford Women's Cancer Center

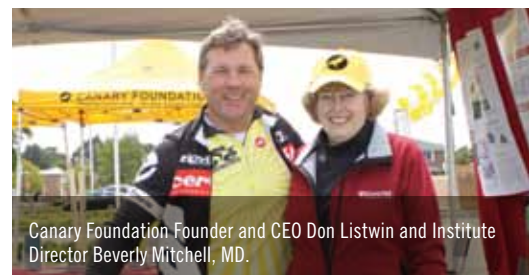
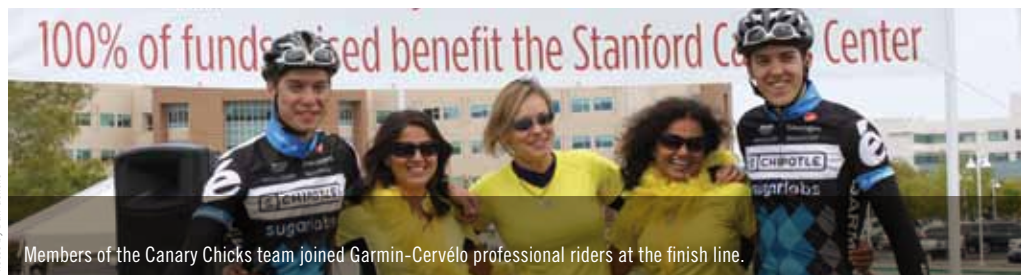
For more information or to make a gift to the Cancer Discovery Fund, please visit cancerdiscoveryfund.stanford.edu or contact Maria Burns, Director of Annual Giving, **650.234.0673** or via email, maria.burns@stanford.edu.

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News

Stanford Cancer Institute **News**
FALL 2011



The Canary Century Ride

On May 28, 344 bicyclists rode in the inaugural Canary Century ride and raised \$450,000 for the Stanford Cancer Institute's research and supportive care programs.

Palo Alto's Canary Foundation produced the event, and sponsors included international cycling company Cervélo, Bicycling Magazine,

Accuray, Infinera, Pacific Eye Specialists and Pruneridge Golf Club.

"We are so grateful that the Canary Century Ride has engaged our friends and community to help accelerate efforts at the Stanford Cancer Institute," said Don Listwin, founder and CEO of Canary Foundation.

Canary Foundation is dedicated to helping deliver early-detection tests for solid tumor cancers. Funds raised will support both early detection research and other innovative clinical cancer programs.

For more about Canary Foundation and the Race, visit www.canaryfoundation.org. ■