Freidenrich Translational Research Center Opens
Facility Shortens the Span from Medical Discovery to Delivery

On Wednesday, October 17 the Stanford School of Medicine celebrated the official opening of the Jill and John Freidenrich Center for Translational Research (FCTR), a state-of-the-art facility built to accelerate the development of medical research discoveries into new diagnostic and treatment options for patients.

One of the premier clinical trial centers in the nation, the FCTR is the physical and intellectual nexus for innovative and interdisciplinary studies of new drugs and other therapies with human participants.

“The Freidenrich Center will enable Stanford to develop the next generation of therapies for cancer and other debilitating diseases.”
— SCI Director, Beverly Mitchell, MD

The center consolidates Stanford’s many clinical trial specialists to enhance efficiency and promote synergy among investigators, research personnel, care providers and the patients they study and treat.

“The Jill and John Freidenrich Center will usher in a new era of innovation in medicine,” said Stanford President John Hennessy, PhD. “By bringing together clinical trial researchers from across the university, it will help us address one of medicine’s great challenges—how to swiftly and safely bring laboratory breakthroughs to the bedside of patients.”

Invited guests to the ribbon-cutting ceremony heard remarks from President

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This issue of the SCI News provides several examples of the unique span of activities that occur at National Cancer Institute-designated cancer centers. The article featuring the work of Garry Nolan, PhD, (page 6) describes technological innovation aimed at identifying the basic characteristics of cancer cells, how cells within individual tumors differ, and how this heterogeneity evolved. Stanford is one of the world’s premier institutions for the basic research essential for tomorrow’s cancer therapies.

At the opposite end of the spectrum, our interview with Dale O’Brien, MD, (page 8) describes Stanford’s work to improve access to quality cancer care within underserved communities. Our Community Partnership Program studies financial, behavioral and institutional barriers to care, and identifies ways around them. Similarly, the article on colon cancer screening (page 3) depicts how Uri Ladabaum, MD, MS, is integrating data from clinical studies with economic models to deliver improved and cost-effective care. Given the enormous concerns about health care costs, this type of analysis is critical for extending cancer screening strategies to at-risk populations.

There is no better example of the connectivity between the above types of research than the work being done in the newly opened Freidenrich Center for Translational Research (page 1). This is where therapeutic ideas developed in the laboratory are tested for their potential to benefit patients. The Center also conducts trials examining more efficient and lower-cost ways to deliver proven therapies to more people.

The Freidenrich Center is the latest, and perhaps the best, example of integrative capabilities that create synergies across the multidisciplinary areas of cancer research occurring at Stanford. It enables the Cancer Institute to add value above and beyond the many individual projects being conducted by our member scientists and physicians. To borrow a phrase from Dr. O’Brien, the Center creates “a multiplier effect.”

Beverly S. Mitchell, MD  
Director

This and previous editions of SCI News can be viewed online at: cancer.stanford.edu/news by clicking “Newsletter” in the left column.

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In Profile

Uri Ladabaum, MD, MS
Stanford Gastroenterologist on Colon Cancer Screening

It has been a confusing year to talk about cancer screening. Respected medical advisory bodies have questioned the efficacy and benefits of screening tests for both prostate and ovarian cancer.

Uri Ladabaum, MD, MS, acting chief of Stanford’s division of gastroenterology, counsels us not to be confused when it comes to colon cancer screening. Cancer of the colon and rectum is the second leading cause of cancer deaths in the U.S., and screening saves lives.

“The beauty about screening for colon cancer is that we know that it makes a real difference,” Ladabaum said.

There are several screening tests, and different views on when screening should begin, but individuals reduce their risk by being screened regularly after age 50. A person who gets a clean result during colonoscopy at age 50 may not need another colonoscopy for 10 years. Depending on your family history and other risk factors, your doctor may suggest a younger age.

Ladabaum argues that the term “cancer screening” undervalues the benefits. Current tests also prevent cancer by identifying growths, called polyps, years before they become cancerous. Most polyps can be removed during an outpatient endoscopic procedure.

Pick a Test, Any Test

There are four main screens for colon cancer: tests for blood in the stool, sigmoidoscopies that examine the lower part of the colon, colonoscopies that inspect the entire colon, and CT scans (sometimes called a “virtual colonoscopy”).

Colonoscopy is the most comprehensive test, but experts debate whether it should be the preferred screening test for all. There is very strong evidence from controlled studies that tests for blood in the stool and sigmoidoscopy can decrease deaths from colorectal cancer compared to not screening. The evidence for colonoscopy is less direct because there have been no head-to-head comparisons against not screening. Recently, Ladabaum was the senior investigator on a study that reviewed data collected from more than 2 million patients over the past 20 years, and found that a drop in colon cancer incidence in the upper reaches of the colon correlated with Medicare's extension of colonoscopy coverage in 2001.

Colonoscopy’s efficacy in detecting polyps in the upper reaches of the colon is still debated, and it can be challenging for physicians to detect so-called “flat lesions” which grow along side of the colon wall and can be difficult to see. Research suggests that physician experience can somewhat mitigate these issues, and Ladabaum recommends having the procedure performed by an experienced specialist.

Still, some experts argue that the data on sigmoidoscopy for screening is almost as good as colonoscopy, and it has the benefits of being somewhat less invasive and less expensive. This is relevant because many people refuse to undergo colonoscopy. For the uninsured it may be the higher cost, but many insured patients also balk at the potential discomfort of the preparation, which requires the colon be completely evacuated through fasting and a powerful laxative.

Ladabaum is convinced that patient reluctance to be screened is the proverbial elephant in the room, noting that many people even avoid the simple stool sampling tests, even though they are proven to significantly reduce cancer risk. He also cautions us not to be confused or put off by the range of screening options. Any of the tests is far better than nothing.

“Even a 100 percent-effective test is useless if nobody takes it,” Ladabaum said. “When patients are made aware of the potential benefits, they tend to be happy about getting screened.”

Risk Factors and Trends

There are some factors that may lead a physician to recommend a more aggressive screening strategy. Family history, smoking, Type 2 diabetes and being African American are all risk factors. Seeking to further improve and refine the application of the current tests, Ladabaum recently earned one of five inaugural Stanford Hospital & Clinics Innovation Fund Awards for his project “Colorectal Cancer Screening Tailored to Risk.”

In the U.S., incidence of colon cancer is increasing for people in their 40’s. The number of cases is still small, but it does appear to be a trend. Anyone with rectal bleeding, chronic abdominal pain, anemia, unexplained weight loss or profound fatigue should see a physician and discuss whether the symptoms suggest colon cancer.

There is some indication that eating a lifelong low fiber diet, maintaining appropriate body weight, and not smoking help reduce risk. However, the evidence is not overwhelming, and screening remains the single most effective prevention and early-detection strategy for most Americans.

“From the standpoint of public health, and from a personal risk-reducing perspective,” said Ladabaum, “the most important thing is to follow the screening approach that you and your physician agree on.”

Colon screening may be unpleasant, but it can save your life.
Freidenrich Center Opens, continued from page 1

Hennessy, Philip Pizzo, MD, dean of the School of Medicine, as well as Jill and John Freidenrich. A reception was held and guests were invited to tour the building.

**Designed with Care in Mind**

The three-story 30,000-square-foot facility was designed from the ground up to optimize teamwork and to create a pleasant environment for patients. The first floor is devoted largely to the patient welcome and care areas, including 16 bays with infusion chairs, four hospital beds, three pediatric study rooms, a sample-collection lab and two phlebotomy rooms. These integrated resources represent a substantial increase in capacity over existing hospital facilities. There are also specialized rooms for informed-consent discussions, remote observation, sleep studies and exercise physiology testing. The first floor also contains the Clinical and Translational Research Unit, which allows the research teams to be close to where the outpatient research is actually performed.

The second and third floors of the building house the Cancer Clinical Trials Office (CCTO), part of the Stanford Cancer Institute that supports and helps coordinate the hundreds of cancer-related trials going on at the University at any one time.

“The Jill and John Freidenrich Center for Translational Research will enable Stanford to develop the next generation of therapies for cancer and other debilitating diseases,” said SCI Director, Beverly Mitchell, MD. “It is testimony to Jill and John’s commitment to improve the lives of patients through research and caring.”

Jill and John Freidenrich are among the most compassionate and caring individuals I have ever known.”
— Philip Pizzo, MD

The CCTO provides regulatory, administrative, research and educational services to SCI investigators conducting clinical trials. It also facilitates translational research and interdisciplinary collaborations among SCI members as well as other investigators and institutions. These programs serve to increase awareness of and accrual to clinical trials and to improve the quality of conducting clinical trials in compliance with regulatory, documentation and oversight requirements.

The upper floors also contain the Stanford Center for Clinical and Translational Education and Research (Spectrum), an independent research center providing many of the same support and coordination services for non-cancer trials. Having SCI and Spectrum together allows the integration of some of the physical infrastructure for both groups, which will bring greater efficiency and economy of scale.

“It is great to have the Cancer Clinical Trials Office and the majority of the Cancer Institute clinical research staff under one roof,” said Miriam Bischoff, SCI's executive administrative director of clinical research. “Previously, staff were in separate locations all over campus. Now that we are together, collaboration has increased.”

Staff associated with SCI and Spectrum, including study coordinators and facilitators, research nurses, biostatisticians, dietitians, lab technicians, and budget and regulatory specialists, had been spread...
throughout the campus and in nearby cities. The fragmentation created problems ranging from difficulties maintaining effective clinical research teams to diminished contact between investigators and their study subjects. It also impeded investigators’ awareness of and access to the array of clinical research support resources and services available through the School of Medicine.

**Legacy of Support**
Funded by longtime Stanford supporters Jill and John Freidenrich, the concept for the center was inspired by Jill’s own experience facing breast cancer.

“We are so pleased that the Center For Translational Research at Stanford has become a reality, allowing scientific discoveries to be moved into clinical treatment in a much more efficient way,” said John Freidenrich.

John Freidenrich, who received both his undergraduate and law degrees from Stanford, is a former chair of the university’s board of trustees and is a longstanding member of the board of Stanford Hospital & Clinics, as well as the former chair of the board at Packard Children’s Hospital.

Jill Freidenrich, who also received her undergraduate degree from Stanford, became an influential advocate for women after surviving breast cancer. She is the co-founder of Breast Cancer Connections, a non-profit organization that provides support and information to women and families faced with breast cancer. She is an active member on the “Under One Umbrella” committee, which raises money for Stanford Women’s Cancer Center, and she serves on the Stanford Cancer Council, a community advisory group supporting the SCI.

“Jill and John Freidenrich are among the most compassionate and caring individuals I have ever known,” said Philip Pizzo, MD, dean of the School of Medicine. “With that spirit and devotion they supported the building of the Freidenrich Center for Translational Research, creating a nexus as well as a bridge between Stanford’s research and clinical care community that will benefit patients with cancer and many other serious medical disorders, impacting both adults and children.”

The FCTR is strategically located within walking distance of Stanford Hospital & Clinics and Lucile Packard Children’s Hospital, and is close to many medical research centers on the Stanford campus.  

Kris Newby, communications manager for Spectrum, contributed to this story.

Supporting Cancer Studies

The Cancer Clinical Trials Office (CCTO) provides a number of valuable services to Cancer Institute investigators conducting clinical trials. Its experienced staff helps promote interdisciplinary collaborations, centralize data collection and reporting of clinical cancer research, and support many aspects of so-called “translational research” — what it takes to move discoveries from test tubes to patients.

The CCTO also helps coordinate outreach efforts in the community to increase clinical trials awareness and accrual of participants. In 2012 to date, 2,796 participants have been enrolled in 393 cancer-related clinical research studies at Stanford.

Information on cancer clinical trials can be found on the CCTO web site (http://med.stanford.edu/clinicaltrials/cancer-search.do) and phone assistance line 650.498.7061.
New Technology Brings Cancer Into Sharper Relief
Mapping Cancer

Cancer Institute member Garry Nolan, PhD, a professor of microbiology and immunology, was attending a scientific conference when he was approached by a researcher he had never met before: Scott Tanner, PhD, of the University of Toronto. Tanner seemed almost unable to control his excitement as he began describing a new technology he had developed, and how it could benefit Nolan's work in high-throughput characterization of individual cells. Skeptical (even somewhat taken aback), Nolan fired off a series of detailed questions he expected would quickly end the conversation. But Tanner came back with all the right answers, and Nolan began to envision the possibility of a powerful new way to decipher disease processes at the cellular level.

“"You only have a couple of these kinds of instances in your scientific career," said Nolan. “"Something just clicks, and you realize, 'if this is right, it is big!'”

Nolan returned from the conference, and immediately dispatched two young researchers from his lab to visit Tanner and learn all they could about his machine.

Seeking Diversity
It’s long been understood that there are many different forms of cancer. Recent research has shown that there are multiple sub-types of breast, colon and other site-specific cancers. Even individual tumors are composed of a variety of different cell types. Cancer sub-types are characterized by their cellular makeup and the specific genetic changes, or mutations, which have altered the cells’ DNA.

It is an enormous undertaking to identify and catalogue the cell types and myriad combinations of mutations, but it is this specific molecular data that allows us to develop drugs exclusively targeting cancer cells, not healthy ones.

Nolan is expert at studying cell functions through a process called flow cytometry, which uses colored chemical “flags” to mark individual cells types. Over the last thirty years flow cytometry has greatly advanced the understanding of cancer biology, but it has limitations. Only a dozen or so different colored flags can be used at any one time, or else the amount of non-essential information (also called “noise”) being gathered in the process obscures the very characteristics that are trying to be measured.

“"It is easier to glean some meaning from a picture than from row after row of numbers.”
— Garry Nolan, PhD

“"It’s like the more simultaneous conversations you listen to, the harder it is to discern any one conversation,” Nolan explained.

Researchers are therefore limited in the number of individual cell characteristics they can assess in any one experiment using flow cytometry, which slows the pace of research and causes frustration that vital information is being missed.

Tanner and his colleagues at the University of Toronto developed a new process utilizing a different kind of chemical flag (inert isotopes rather than colored light) that allows them to simultaneously measure forty or more specific cell characteristics, rather than just twelve. Called “mass cytometry,” it enables highly detailed profiling of individual cells, with far less of the “noise” associated with flow cytometry. These advantages create opportunities to better understand the development and inner-workings of individual cells, as well as interactions among cells.

Nolan recognized that this technology could be valuable in cancer research. The ability to ask forty or more “questions” about any group of healthy or malignant cells would enable more accurate assessment of the diversity within cancer tumors, ultimately leading to better treatments.

Cancer Takes Shape
Mass cytometry’s vastly more detailed analysis also generates mind-numbing amounts of data. Nolan developed a novel strategy for both managing and making sense of all that information: he turned it into pictures. By modifying a computer program designed by Sylvia Plevritis, PhD, associate professor of radiology and a Cancer Institute member, Nolan and his colleagues could translate their raw numerical data into a visual format to make it easier to intuitively understand.

“We are defining the structure of cancer as a three-dimensional shape,” said Nolan. “It is easier to glean some meaning from a picture than from row after row of numbers.”
The program plots the cell data as dots on a solid background, creating a “map” of the measured characteristics. Each map may initially appear random, but after viewing several related maps—individual cases of ovarian cancer, for instance—the impression of patterns is unmistakable. Clusters of dots show up in similar places on some maps, while others share different common locations. These repeated configurations may indicate cancer subtypes and potential targets for drug therapy.

When the patterns are understood it is then possible to plot a newly diagnosed patient’s tumor characteristics and compare them with all maps of that form of cancer, including known sub-types, to provide more precise diagnosis and treatment information to both the patient and doctor.

Nolan’s lab has also retrospectively compared patients’ maps with the outcomes of their cancer. Their analysis identified specific subpopulations of cells (seen as clusters of dots) that are predictive of certain outcomes, including recurrence of cancer. Enabling more accurate prognosis is critically important for optimizing treatment and patients’ quality of life.

“If I told you that you have a 65 percent chance of survival versus an 85 percent chance, numerically it’s just an increase, but mentally it’s huge,” said Nolan. “It may make a difference how you choose to live your life.”

This issue is anything but hypothetical for Nolan, who has been diagnosed with cancer seven times. He lost a kidney to cancer, and has had six cases of skin cancer. One of his three melanomas was initially misdiagnosed as metastatic, and he was given a very poor prognosis.

Ever skeptical, Nolan sought another analysis from some of his Stanford colleagues. They found—and confirmed—that his cancer had in fact not spread, and in so doing, changed his five-year survival odds from approximately 5 percent to 95 percent. Nolan appreciates that most cancer patients can’t walk their tissue samples across campus for a world-class second opinion, and he believes his work will lead to improved diagnostic testing.

**Rise of the Machines**

Nolan readily admits he needed some convincing before he embraced Tanner’s mass cytometry technology, and he’s equally blunt about the impact it has had on his research.

“It became one of the best collaborations of my life,” Nolan said.

In the beginning, Nolan had to ship all his cells and materials to Tanner’s lab in Toronto for analysis, which was productive, but inefficient. So he cobbled together funds from any source he could find to acquire a mass cytometry machine for his Stanford lab. Shortly after that he bought another, and he now serves as the faculty advisor for SCI’s Flow Cytometry Program.

Both of his machines are now in constant demand because in addition to cancer, mass cytometry is valuable in many applications of immunology, including organ and tissue transplantation, HIV/AIDS research and stem cell-based therapies. **Mark Davis, PhD**, professor of microbiology and immunology, and faculty advisor of SCI’s Human Immune Monitoring Center, also has two mass cytometers available for researchers. Stanford has four of the 21 machines in the world, and the demand keeps growing.

Nolan is currently applying for grants and philanthropic support to procure more machines; but he also has his eye on the future. He anticipates the development of next-generation technology combining mass cytometry with genomic analysis. Such a machine—along with massive computing power—will enable them to simultaneously assess thousands of characteristics per cell.

“Scientists are inherently greedy for information,” said Nolan. “We always want more data.”
In Conversation
Dale O’Brien, MD, MPH

The Stanford Cancer Institute’s Community Partnership Program (CPP) was created to understand and address disparities in cancer outcomes, and to promote minority participation in cancer clinical trials. The CPP relies on local engagement, cancer information dissemination and community-driven research to improve cancer prevention and care within underserved communities.

One of CPP’s efforts is focused on the rich agricultural lands of the Salinas Valley to study and reduce the serious disparities within the immigrant and migrant worker populations there. CPP partners with local healthcare providers to help deliver Stanford’s resources and expertise to people in need. Dale O’Brien, MD, MPH, is a Pacific Grove-based physician and a leading organizer of cancer outreach and support programs in the Salinas Valley. A career primary care doctor with an interest in health policy, O’Brien began gathering cancer information for one local family and ended up exploring the cancer care needs of a large segment of the Valley’s population. Sadly, it seemed that the more he looked the less he found. Now collaborating with the Stanford Cancer Institute through the CPP, O’Brien sees real reasons for hope.

SCI News sat down with Dr. O’Brien to hear his experiences and views on cancer disparities in his community.

Q: How did you come to create an organization advocating for cancer patients?
In 2000 I was the acting public health officer for Shasta County. A gentleman asked me to help find research and treatment information for his brother in Pacific Grove who was suffering with pancreatic cancer. I assumed information would be readily accessible on the Internet, but there was surprisingly little. Mostly it was just the same basic information repeated on different websites. There was some sophisticated discussion among medical professionals, but there was very little information that was useful for making patients and families better partners in their own care.

That motivated us to create a resource called Pancreatica (www.pancreatica.org), which functions as a patient-friendly arbiter between highly technical medical information and the general information that is publicly available. Through this effort I became part of the group of family and friends that had rallied around the patient. It was a difficult situation with his cancer, and ultimately he passed, but our group was inspired to create a non-profit organization called Cancer Patients Alliance (CPA) in 2001. Much of what we do is related to pancreatic cancer, but as we became more involved locally we were alarmed by stories coming from the Salinas Valley.

Q: What kind of stories?
We kept hearing about terribly limited access to cancer care, particularly for Latinos and migrant workers. It was hard to believe, but I found the situation was actually worse than described. Ultimately, we formed an ad-hoc group of stakeholders called the Salinas Valley Alliance for Cancer Care. The membership now includes CPA, the county’s two main hospitals (Natividad Medical Center and Salinas Valley Memorial Hospital), a network of clinics called Clinica de Salud del Valle de Salinas, advisors from the Monterey County Health Department, representatives from the American Cancer Society, the Central Coast Center for Independent Living and the Stanford Cancer Institute.

Q: What are some of the barriers to access?
We have the usual suspects: poverty, lack of insurance, difficulty accessing resources in a very complicated system. When you add language barriers and cultural differences, the chance of errors increases, including for basics like filling prescriptions and taking medicines correctly.

The main employers in Monterey County are hospitality and agriculture, both of which are seasonal and tend to have spotty insurance coverage. Some workers have policies that say if they are off work for a couple of weeks or a month, the policy no longer applies. It’s great insurance, unless you get sick!

Q: Are Latinos at higher risk for certain cancers?
Yes, compared to their non-Hispanic white counterparts, Latinos appear to be at higher risk for cervical, stomach and liver cancer. There is also literature out of Mexico, and we have data from Monterey County, that Latina woman are being diagnosed with breast cancer younger than their white, non-Latina counterparts. And although the incidence rate is lower, Latinas are often diagnosed with more aggressive or later-stage cancer. Stanford is involved with a study looking for systemic or biologic reasons why this might be true.

Irrespective of ethnicity, though, being medically underserved greatly increases cancer risk. For example, the majority of women who develop cervical cancer have never had a pelvic exam. So just having one pelvic exam puts you in a lower-risk category. It’s shocking in this day and age, but those are the type of issues we are trying to address.
Q: What has motivated you to take on this work?
In addition to my professional commitment as a physician, it has been personally intolerable to live here in Pacific Grove, near Pebble Beach and Carmel, and know that just minutes away there are people who cannot even get thirty-year-old chemotherapy drugs for their cancer.

Also, my wife had lost her battle with breast cancer shortly before I got involved with this effort, so I was keenly aware of how difficult it is to navigate the system. We had high-quality care, but it was impossible not to notice the little mistakes that took place—and some big mistakes, like the wrong prescriptions being administered! To then realize that there were people in our area receiving no care at all for their cancer was just hard for me to bear.

Q: What has surprised you?
The lack of medical resources in the Salinas Valley area really surprised me. And it continues to amaze me that there is such a scarcity of resources at almost every level. On the other hand, I have been greatly impressed by the core of good-hearted, socially responsible people who recognize the problems and are working hard to address them.

I remember the first nurse I spoke with at Salinas Valley Memorial Hospital. After telling her our ideas to extend cancer care, she said, “I am so glad you brought this up, because it is such a worry to us. We know it’s a problem, but we’re maxed out.”

Her response has been the norm among the health and community professionals in the Valley. They are concerned and dedicated, but they simply don’t have the resources they need. Having the organizing force of the Stanford Cancer Institute has given hope to a lot of people.

Q: How did the relationship with Stanford come about?
Initially, we were talking with (SCI partner) the Cancer Prevention Institute of California (CPIC) about support for a serious needs assessment study to identify the true magnitude of the problems here.

CPIC introduced us to Dr. Beverly Mitchell (SCI Director), who was very helpful and connected us with Dr. Kim Rhoads (CPP Director and SCI member). Both are extremely interested in the problems of cancer incidence and care in this region, and we are grateful to be working with Dr. Rhoads, Dr. Mitchell and the Stanford Cancer Institute.

Q: Has partnering with Stanford made a difference in your work?
When Stanford came on board it had a catalytic effect. Stanford had a relationship with Salinas Valley Memorial Hospital in conducting clinical trials, so we immediately sought Stanford’s help to increase outreach to Latinos and the underserved. Sure enough, their trial participation has increased.

We are planning to begin telemedicine conferences with Stanford cancer experts to increase the quality of the local tumor board rounds at Salinas Valley Memorial Hospital. In all, there are five or six things that have already resulted, and each of them has a multiplier effect in the community.

And finally, we will soon have the results of our needs assessment, which we will share with the community health department. Stanford’s reputation and the competency of its employees have made a big difference in getting this accomplished.

Q: What is the purpose of the needs assessment?
The thorough needs assessment is important because providers, stakeholders and the general community all should understand the nature and scope of the problem of access to cancer treatment. It will also give them a process for providing input as we move forward. Any reprioritization of resources will rely on a well-documented and thoughtful study, so we are taking care to understand the data, as well as the issues from both the patients’ and stakeholders’ perspectives. It should give us a clear sense of the challenges, as well as some potential improvements.

Q: How do you feel about the future of cancer care in the Salinas Valley?
I am optimistic. I think the county hospital will eventually offer more medical treatment for cancer, and that we will be able to strengthen the safety-net clinics to create a much more cohesive nexus between prevention and care. I hope over the next few years to make progress in bringing the resources to a more acceptable level, where we no longer feel like something terrible is happening.

Q: What can people do to help your efforts?
We can always use volunteers! I think support at any level for Stanford’s community outreach programs is tremendously important. People should recognize that what is being done through these programs is significant and worthy of interest and support.

We also need greater involvement from the agriculture community in the Salinas Valley. It is going to take both resources and good will to get things to an appropriate level.

Cancer is now the number one cause of death in the U.S. Latino population. I know we can find people to work together to reduce the glaring disparity in the treatment of such an important disease.
Excerpt from Fall 2012 Edition of Stanford Medicine
“Against the Odds”

The Fall 2012 edition of Stanford Medicine magazine includes a fascinating story of Manali Patel, MD, and her highly personal struggle to reduce the costs of cancer care while improving the quality of life for poor-prognosis cancer patients. Patel is part of a small team of Stanford doctors and scientists at the Clinical Excellence Research Center (CERC) who are trying to lower healthcare costs through practical, data-driven solutions. Here is an excerpt from “Against the Odds,” written by Kris Newby:

Manali Patel, MD, had dark circles under her eyes after a rough week battling tumors at the Stanford Cancer Institute. Patel, 33, dozy and 99 pounds soaking wet, looked more like a college freshman than an oncology fellow six years out of medical school. Lately, she had seen a lot of bad endings. Several patients who wanted to die at home said their last goodbyes from a hospital bed, tethered to machines with tubes and wires. Another patient was referred to the hospital without knowing why. It was Patel’s job to deliver the grim news: He had incurable lung cancer and only a few months to live.

Then, as she hung up her white coat for the day, she received the worst call of her life – her mother was about to be rushed off to chemotherapy.

Less than a third of oncologists have end-of-life discussions with terminal cancer patients. As a result, cancer patients are left out of the decisions that determine how and where they spend their last days. Recent studies show that when cancer patients understand the big picture — treatment side effects, survival odds and pain-relief options — they live longer and enjoy a better quality of life.

“Going through this with my mother made me a better doctor. And it made me realize the urgency to a nagging problem that is easy to ignore while working 80-hour weeks and managing the treatments of 100 or so cancer patients a month: Few oncologists have the time to talk to cancer patients anymore.

“My mother said she didn’t want chemotherapy because she didn’t want her hair to fall out,” says Patel. “Back in India, her family had a tradition of never cutting hair. None of her American children had realized that this was so important to her.”

Instead of chemotherapy, Patel’s mother was given six weeks of daily radiation, followed by a five-year course of a non-chemo drug that doesn’t cause hair loss.

As she finished her oncology training, she decided to take action on what she had learned. So she hit “pause” on that $380,000 median oncologist’s salary, buying a house and starting a family. Instead, she joined the Clinical Excellence Research Center at the Stanford School of Medicine.

The entire article is available at the Stanford Medicine magazine website: http://stanmed.stanford.edu/2012fall/. The current edition also includes a story on the controversy surrounding prostate cancer screening, as well as a tribute to the tenure of outgoing School of Medicine dean, Philip Pizzo, MD.
Development
Bridging the Gap Between the Petri Dish and the Patient

Translational research is the crucial link between laboratory discoveries and improved human health. It encompasses a series of research, testing and refinement steps required to create any new medical therapy. Without translational research to verify the safety and efficacy of a treatment, even the most groundbreaking scientific finding might remain in the pages of a medical journal and never benefit actual patients.

The laboratory of Chuong Hoang, MD, assistant professor of cardiothoracic surgery, is moving ever closer to clinical applications to treat lung cancer tumors, particularly non-small cell lung cancer and mesothelioma. Dr. Hoang’s team studies the DNA of healthy and diseased tissues to identify “gene signatures” that may offer insights about cancer’s cause and progression. Gene signatures are small subsets of genes that may be altered abnormally as part of the cancer process. Identifying a signature that is common to a type of cancer might offer a way to diagnose it, define its characteristics and observe its reaction to treatment.

Hoang’s lab looks for other types of cancer signatures as well. They’ve found that non-small cell lung cancer tumors can be identified by the presence or quantity of specific molecules. With this knowledge they hope to develop simple ways to test for these molecules that may then be targeted for early detection and treatment.

In the field of mesothelioma, they are studying sequences of chemical reactions within cells, called “pathways.” Analysis of pathways unique to mesothelioma could reveal targets for new treatments.

“We are seeing new connections between molecules and their pathways that help us develop more hypotheses about the disease process in thoracic cancers,” says Dr. Hoang. “I am most grateful that the Jill and John Freidenrich Center for Translational Research has been expediting interactions among my team of investigators and other research staff, facilitating the discovery of these connections. The support of the Freidenrich Center means that when our new interventions are ready for use in clinical trials, we will be able to move rapidly and, I hope, get new, better treatments out to the public much sooner than would have been otherwise possible.”

Translational research is at the heart of the Stanford Cancer Institute’s mission. SCI’s dedicated scientists and physicians rely on generous community support to help speed their discoveries from the test tube to the clinic. Every gift to the Cancer Discovery Fund helps ensure that we can continue to provide the very best cancer research and treatment to our local community and beyond.
Former Patient Celebrates Pegram Induction

On August 20 School of Medicine dean, Philip Pizzo, MD, presided over a celebration of the appointment of SCI member Mark Pegram, MD, as the inaugural holder of the Susy Yuan-Huey Hung Professorship. Attendees saluted Jill and John Freidenrich and honored the memory and generosity of Susy Yuan-Huey Hung who collectively funded the professorship bearing Ms. Hung’s name.

Among Pegram’s special guests was Ginger Empey, a former patient who met Pegram in 1995 as a participant in the first clinical trial of the breast cancer drug Herceptin. Empey was battling breast cancer that had spread to her liver, and credits Herceptin, and Pegram, with saving her life.

“I wasn’t supposed to last through the year,” said Empey. “But 17 years later I am still here.”

Following her recovery, Empey became an outspoken advocate for Herceptin and the importance of patients taking part in clinical trials. She was not lost for words when reflecting on her former doctor.

“He's just a genuinely warm and wonderful man,” she said of Pegram. “He has real heart.”

Reunited: Mark Pegram, MD, and Ginger Empey.