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About the cover:
Pro Football Hall of Fame Center Jim Otto is the volunteer chair of a $35 million capital initiative to expand UC Davis Cancer Center and endow eight cancer research chairs. *(See story on page 2.)*

UC DAVIS CANCER CENTER

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S Y N T H E S I S

VOLUME 9 • NUMBER 1

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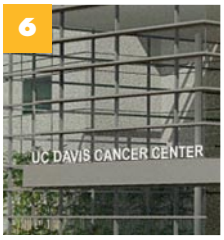
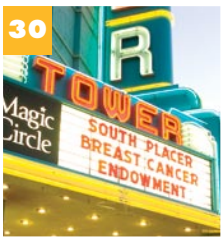




Jim & Sally Otto

CENTER STAGE

Jim Otto, chair of the UC Davis Cancer Center's Capital and Endowment Initiative, is blocking for a new team

No sport requires more teamwork than football, and in a game in which sacrifice is fundamental, there is no better teammate than Jim Otto.

These days, the legendary Oakland Raiders center doesn't block so that star quarterbacks like Daryle Lamonica or Ken Stabler can complete passes in front of 60,000 cheering fans. He doesn't punch holes in the lines of 275-pound defenders so that running backs like Clem Daniels or Marv Hubbard can grind out a few more yards in the team's march downfield.

Now Otto is at the center of a drive of a different type. Following treatment for prostate cancer at UC Davis Cancer Center, the Auburn resident agreed to chair the center's $35 million Capital and Endowment Initiative.

"I would just love to see more people being saved and being cured from cancer," Otto said. "That's why I'm doing this. You don't want anyone else to have to go through the agony that comes along with a cancer diagnosis and cancer treatment. Especially kids. I've visited the children in the pediatric ward, and, well, that eats your heart out. Something has to be done."

"Jim has joined this fight because he loves life."

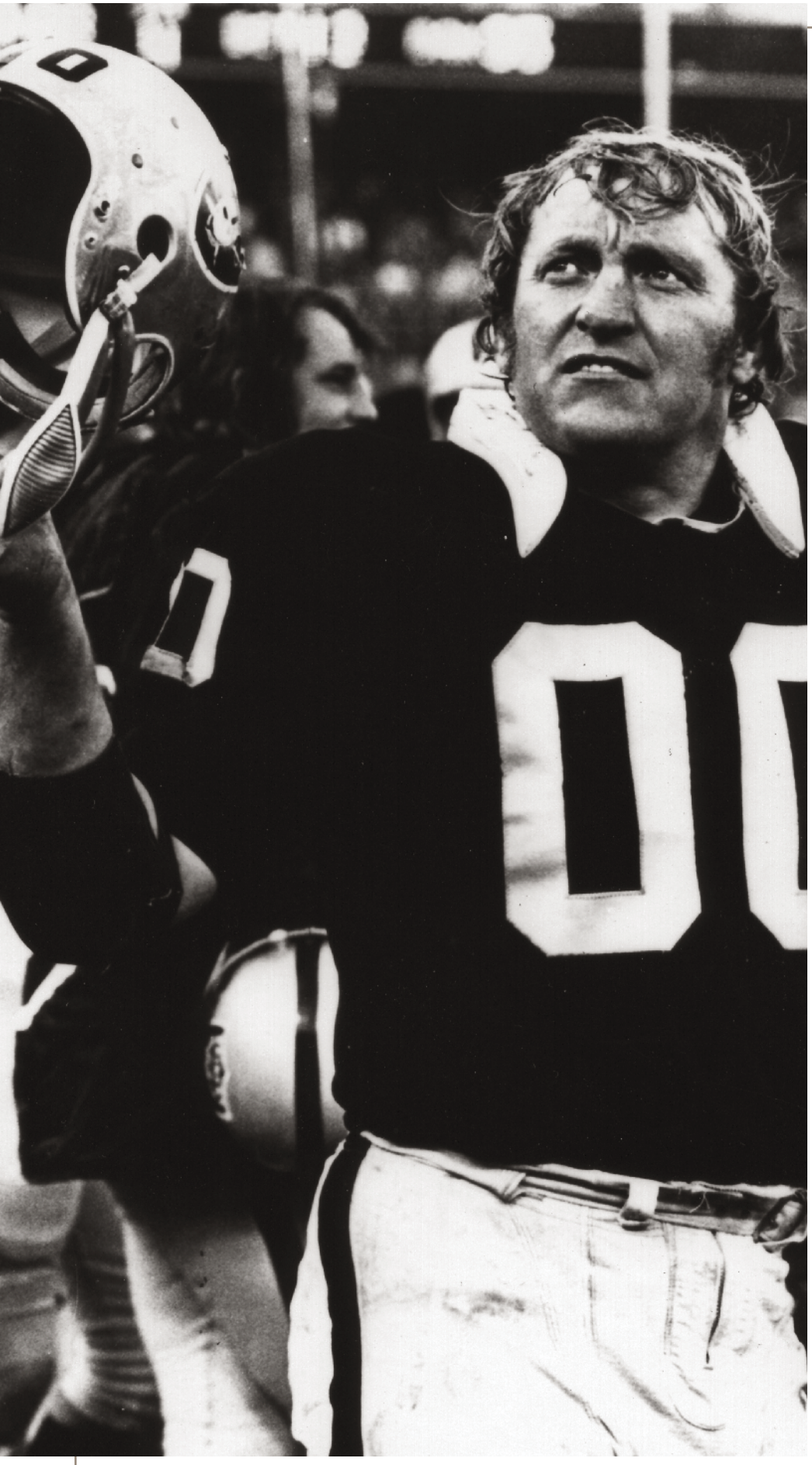
A personal vendetta

Double-O has declared a "personal vendetta" against cancer. And the disease has a formidable new enemy.

In his playing days, Otto liked to hit. Hard. Back when he wore 00 for the Oakland Raiders, he built a reputation for toughness that took him to the Pro Football Hall of Fame. During his 15 years with the Oakland franchise, he started in 210 consecutive regular-season games, a record that stands to this day.

A football team cannot function, let alone win, without the center – the man who snaps the ball and prevents the hulking defensive linemen from smothering the quarterback.

In a 1990 column, Jim Murray, the late *Los Angeles Times* sportswriter, wrote in praise of the center generally, and Otto in particular: "You can almost always tell a center. He's the one who's got this little cut on the bridge of his nose from getting



Widely regarded as the best center ever to play the game, Jim Otto was inducted into the Pro Football Hall of Fame in 1980. He and his wife, Sally, now live in Auburn.

his helmet slammed down on it by a charging nose tackle."

And he quoted Otto: "You have to be a special kind of person … You have to kind of like pain."

Against the Green Bay Packers in Super Bowl II in 1968, Otto persevered despite a case of double pneumonia, a dislocated knee, broken fingers and a broken jaw. He was named All-Pro after playing a full season with every ligament torn in one knee. He was the starting center, and the team needed him.

"We have a champion in charge of our initiative," said Ralph deVere White, director of the UC Davis Cancer and associate dean for cancer programs at UC Davis. "We're fortunate and enormously grateful that Jim is on our team."

Expecting to win

Otto came of age in an era when teams stuck together. He was the Raiders' only starting center from 1960 until 1974, the team's glory years, when, in the words of *Sacramento Bee* sportswriter Ailene Voisin, "the Black Hole was a perilous pit, when the impassioned, often unruly fans resembled a cult following, when the Raiders always expected to win."

Loyalty was a virtue. It is a testament to Otto that more than 30 years after his retirement, his teammates are still there for him.

When Otto and his wife of 43 years, Sally, host their annual "Take a Swing at Cancer" celebrity golf tournament to benefit UC Davis Cancer Center, some 30 of his fabled teammates show up. The event, held at the Auburn Valley Country Club, raises about $150,000 in a weekend. Otto says off handedly that he has to place maybe 32 phone calls to get 30 ex-Raiders to come. Ben Davidson, still sporting his handlebar mustache, has shown up. So have Lincoln Kennedy, Fred Biletnikoff, Willie Brown, Daryle Lamonica, Otis Sistrunk and many others.

Cancer is life-related

Otto himself no longer golfs. He has undergone 52 major surgeries. He's had 12 artificial knees and four artificial shoulders. His spine is supported by steel rods.

But none of those health threats shook the Hall of Famer like prostate cancer.

"His injuries and surgeries have all been football-related. Cancer is different. It's life-related," said Dave Newhouse, a veteran *Oakland Tribune* sportswriter who collaborated with Otto on his 2000 autobiography, "Jim Otto: Pain of Glory." "This is about life. Jim has joined this fight because he loves life."

Double-O is back in the game, this time blocking for the 9,000 people, young and old, who come to UC Davis Cancer Center each year for cancer treatment.

"With Jim picking up the gauntlet for UC Davis Cancer Center, the capital drive is assured victory," said Raymond Chester, a former Raider teammate and close Otto friend. "When Jim Otto commits himself to something, he gives 110 percent. He absolutely walks his talk. He won't stop until he wins." UCD

UC Davis Cancer Center Capital and Endowment Initiative Steering Committee

Jim Otto, Chairman
Ralph deVere White, M.D.
Robert E. Chason
Burt Douglass
Barbara Fingerut
Carol Garcia
James E. Goodnight, M.D., Ph.D.
Gary Little
Susan Mathews
William McGowan
Fred Meyers, M.D.
Trong Nguyen
Aldo Pineschi
Robyn Raphael
Sandy Smoley
Jeanine Stiles
Virgil Traynor, D.V.M.

On the day he completed prostate cancer treatment, Jim Otto arrived with jerseys and sweatshirts for his UC Davis Cancer Center team.

UC Davis Cancer Center will nearly double to 109,000 square feet. Top left: The new complex viewed from 45th Street, with the existing Cancer Center on the right and the three-story addition on the left. Top right: A bridge and courtyard will connect the buildings. Center: Inside the new lobby. Bottom: The new complex as viewed from the north.

UC Davis Cancer Center seeks community support to expand patient-care space and endow research

Capital & Endowment Initiative LAUNCHED

UC Davis Cancer Center has announced a $35-million Capital and Endowment Initiative, the first in its history, to expand patient-care facilities and fund the university's first chairs in cancer research.

"Sooner or later, cancer affects almost all of us – and when it does, you want a winning team on your side," said Jim Otto, chair of the initiative's steering committee. Otto, a longtime center for the Oakland Raiders, was treated for prostate cancer at UC Davis in 2002.

"The money we are raising will allow UC Davis Cancer Center to expand so that it can take care of the growing numbers of patients who come here each year," Otto said. "It will also create endowments that will give UC Davis Cancer Center the clout it needs to sign and keep the best scientists in cancer research, so that the next advances happen right here."

"The outlook has never been more promising."

Halfway to the goal line

The launch of the initiative's public phase comes five years after UC Davis Cancer Center began gathering a nucleus of support from members of the steering committee and other generous contributors. So far, more than $16 million has been pledged, including $1.3 million from steering committee members.

The many commitments to the initiative include:

- $5 million from the Oakland-based Wayne and Gladys Valley Foundation.
- $1 million from Susie Mathews, a Sacramento businesswoman, in honor of her late husband, Robert, who died of prostate cancer in 1987.
- $100,000 from Burt Douglass, a grateful patient.
- $50,000 from the Keaton Raphael Memorial, to name the indoor play area in memory of Keaton, a 5-year-old Roseville boy who died of neuroblastoma eight years ago.

Meeting demand

Capital initiative will help fund major expansion

Outpatient visits at UC Davis Cancer Center have grown by 50 percent over the past five years. Growth is projected to continue to increase by at least 6 percent a year through 2009.

To meet this demand, the UC Davis Cancer Center Capital and Endowment Initiative seeks to raise $25 million toward a $35-million, three-story addition to the existing Cancer Center. Construction, expected to take two years, will begin as soon as fundraising is completed. The remaining $10 million cost will be covered by UC Davis Health System reserves. This initiative also seeks to raise funds for endowed chairs.

The expansion will make room for the pediatric cancer program, now located in other buildings on the medical center campus. The project will also expand space for the adult clinic, adult infusion center, pharmacy, clinical laboratory, and resource center.

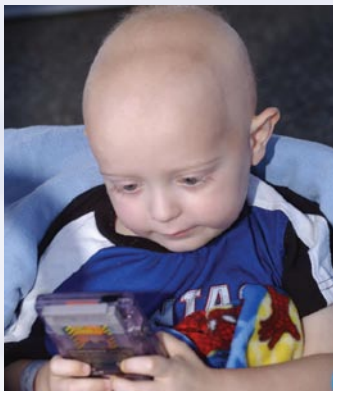
"There is an urgent need to complete this project because the existing Cancer Center cannot support the increased numbers of patients who seek care here," said Jeanine Stiles, associate director for administration at the Cancer Center.

The 46,000-square-foot addition will go up along the north side of the existing 63,000-square-foot Cancer Center. The two structures will be connected by a bridge above a common courtyard. The expansion project will also remodel about 9,000 square feet of the existing Cancer Center.

Among the project's features:

- A new **Pediatric Hematology and Oncology Clinic** with six exam rooms, one consult room, reception and waiting areas, and indoor and outdoor play spaces
- A new **Pediatric Infusion Clinic** with 11 infusion stations and two isolation rooms
- An expanded **Adult Hematology and Oncology Clinic** with 18 exam and procedure rooms and two consult rooms
- An expanded **Adult Infusion Clinic** with 26 infusion stations, two private infusion rooms, two isolation rooms, and a more spacious patient waiting area
- A 1,350-square-foot **Infusion Pharmacy**, 1,995-square-foot **Clinical Laboratory** and 1,810-square-foot **Outpatient Pharmacy**
- Expanded **administrative and shared common areas**

The existing Cancer Center was completed in 1991 and originally contained 56,000 square feet. In May 2005 the health system completed a $10-million project that added 7,000 square feet to the radiation oncology clinic on the ground floor of the Cancer Center (see story on page 27).



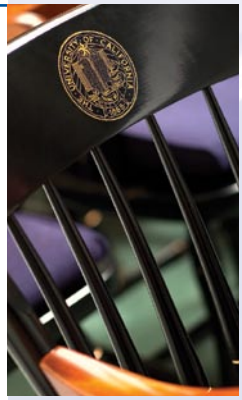
The expansion will make room for the 400 pediatric cancer patients treated at UC Davis Medical Center each year. The pediatric cancer program is now housed in other buildings on the medical campus.

- $15,000 from John and Mary Arnaudo of Ripon to name a consultation room in honor of their 9-year-old-daughter, Francesca, who recently completed treatment for her second form of cancer.

UC Davis Cancer Center diagnosed more than 2,000 new cases of cancer and cared for more than 9,000 children and adults with cancer last year. Patients come to the region's only National Cancer Institute-designated center from throughout the Central Valley, inland Northern California, southern Oregon and western Nevada.

In addition, UC Davis Cancer Center unites 180 scientists at work on more than 300 projects aimed at finding new treatments, diagnostic methods and prevention strategies for adult and pediatric cancers. Members of the UC Davis Cancer Research Program come from more than a dozen schools, departments and divisions on three campuses – the UC Davis main campus in Davis, the UC Davis Medical Center campus in Sacramento and the Lawrence Livermore National Laboratory in Livermore.

"This Capital and Endowment Initiative takes place at a critical time, when developments both at UC Davis Cancer Center and in the broader scientific community have set the stage for rapid progress against cancer," said Ralph deVere White, director of the Cancer Center and assistant dean for cancer programs at UC Davis. "The outlook has never been more promising."



Seats of science

Endowed chairs allow universities to reward and retain the best and brightest

Endowed chairs, one of the highest honors in academia, allow universities to retain and recruit the best minds in each generation. The UC Davis Cancer Center's Capital and Endowment Initiative is turning to the community to help endow eight chairs, the first at UC Davis that will focus on cancer research.

Endowments are sought to support top scientists in the following areas of cancer research. Endowments range from $1.5 to $3 million.

- Basic Science Endowed Chair
- Clinical Research Endowed Chair
- Prostate Cancer Endowed Chair
- Breast Cancer Endowed Chair
- Lung Cancer Endowed Chair
- Pediatric Cancer Endowed Chair
- Cancer Genetics Endowment
- Cancer Immunology Endowment

Pledges to date

Commitments have been made to fund two of the chairs:

- The Auburn Community Cancer Endowment Fund, a grassroots group based in Auburn, has raised $1.3 million toward the Basic Science Endowed Chair. In addition to the more than $300,000 raised through the Jim Otto golf tournaments, Jim Otto and his wife, Sally, already generous supporters of the Cancer Center, have also pledged $75,000 to support the endowment. The chair will be named after the whole community.
- The South Placer Breast Cancer Endowment, taking Auburn's lead, has announced plans to fund the Breast Cancer Chair by 2010 (see story, page 34).

Research endowments are invested to fund a designated research area in perpetuity. Chair holders draw from the interest generated by the endowment to hire research assistants, pay for travel to scientific meetings or cover other research needs.

For information about contributing to an endowed chair, please contact Stephanie Bray at (916) 734-9675 or Stephanie.bray@ucdmc.ucdavis.edu.

Hsing-Jien Kung

Hsing-Jien Kung and his colleagues discovered a signaling pathway needed by advanced prostate cancer cells — will a new drug block that path?

Building an ARSENAL

Soon, about 76 volunteers, men with advanced prostate cancer, will have the opportunity to try an investigational drug known as AZD0530. The drug is a targeted agent designed to block a molecule known as src, pronounced "sark." If the drug slows or halts the volunteers' disease, it may become the first effective therapy for hormone-resistant prostate cancer – an advanced form of the illness that doesn't respond to currently available treatments.

Men will have Hsing-Jien Kung and his team to thank.

First to clone src

Together with Don Fujita of the University of Calgary, Kung was the first scientist to clone the human src gene. At UC Davis, Kung and collaborator Chris Evans were the first to show in cell lines and laboratory animals that inhibiting src can thwart hormone resistance in prostate cancer. When the drug maker Astra Zeneca developed AZD0530, the National Cancer Institute selected UC Davis to lead the initial clinical trial of the drug in prostate cancer patients.

UC Davis Cancer Center will lead the first clinical trial of the drug in prostate cancer patients.

Bench to bedside

The drug's development is a model of "bench-to-bedside" research, science focused on making discoveries that lead to new treatments for patients. Since joining UC Davis in 1998 as deputy director of the UC Davis Cancer Center and director of its basic science program, Kung has built the cancer research program into an efficient engine for delivering such cancer treatment advances.

Besides AZD0530, UC Davis investigators have also been instrumental in developing novel drugs for leukemia, lymphoma, breast, brain and ovarian cancers. Several of these agents have reached early clinical trials – the final stages of a long and careful cancer research process in which promising approaches to cancer prevention, diagnosis and treatment are first tested in patients.

"No one drug will be a cure-all. Cancer is too complicated for that," Kung said. "But our hope is to develop an arsenal of targeted therapies doctors

In Kung's lab, scientists work to develop an arsenal of targeted therapies for prostate and other cancers.

can select from, tailored to an individual patient's specific tumor. The goal is to make cancer a treatable, chronic illness – and we're getting closer to that goal every day."

Hormone resistance

Prostate cancer cells start out dependent for their survival on male hormones, or androgens. Even in advanced cases where surgery and radiation are no longer an option, hormonal therapy that suppresses a patient's androgen production can control the disease, often for many years.

But given enough time, the malignant cells learn to live without androgen – and patients and their doctors run out of treatment options.

"Androgen-independence is the problem in prostate cancer," said Kung, a professor of biological chemistry. "That's where the mortality and the trouble begin."

In the jargon of biochemists, prostate cancers find new molecular "pathways" for survival when they are deprived of androgen. Kung has spent the past decade identifying and mapping the pathways used by tyrosine kinases, a family of some 90 proteins that serve as a cell's accelerators. In cancer, one or more accelerators gets stuck in the "on" position.

Kung has been aided in his search by a rapid display method his lab developed, a tool that allows scientists to quickly identify all of the tyrosine kinases in a particular tumor. With it, Kung and his team were able to identify key tyrosine kinases involved in prostate cancer, and to isolate several new ones – among them src's partner, etk, which is also favored by androgen-independent prostate cancer cells.

The src-inhibitor AZD0530 stems from that work.

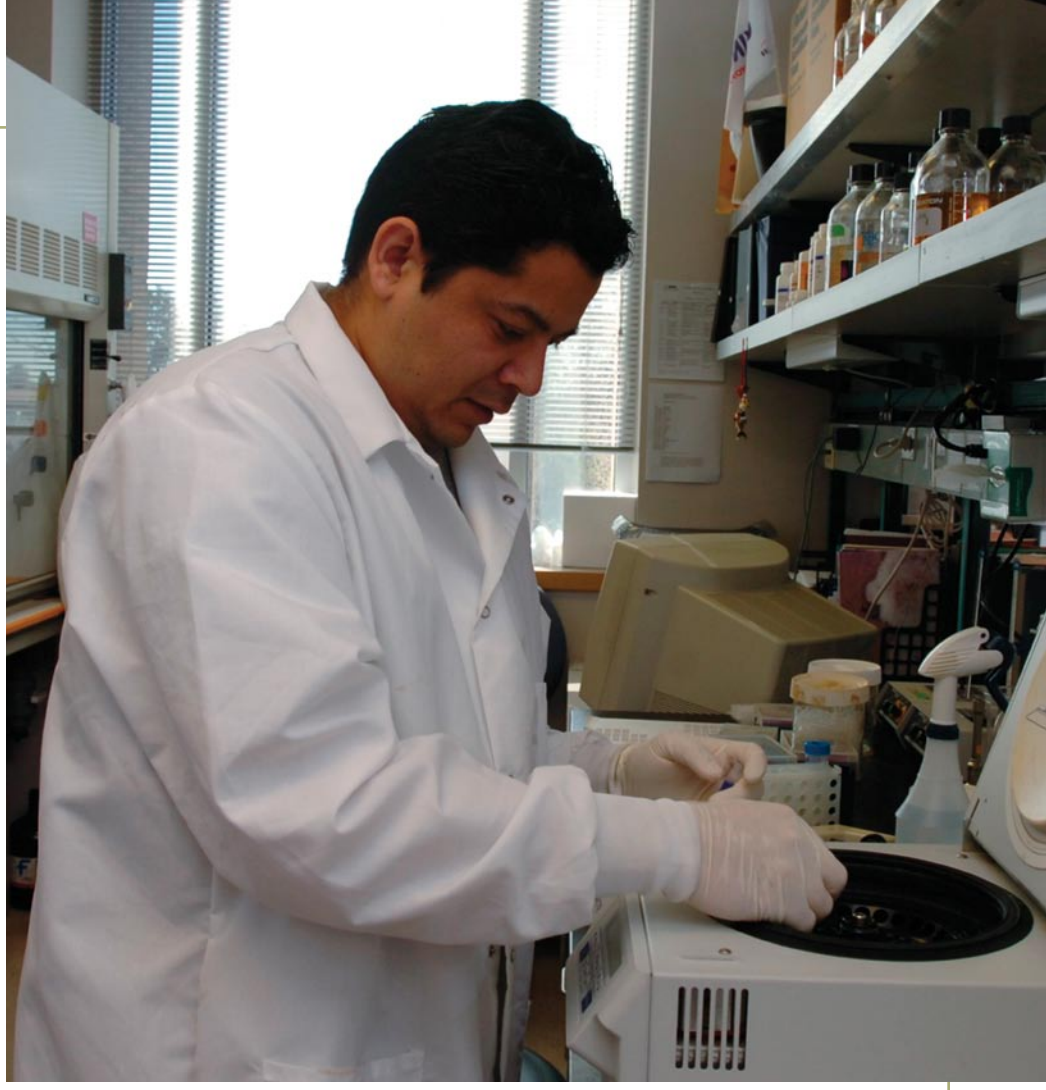
Inspired research

Kung's inspired, elegant research has earned him a reputation as one of the most brilliant scientists at work on cancer. From his post-doctorate years in the lab of J. Michel Bishop and Harold E. Varmus, who shared the 1989 Nobel Prize in Medicine for their discovery of oncogenes, Kung has progressively zeroed in on prostate cancer.

Kung's lab today, on the second floor of Research III, down the road from the UC Davis Cancer Center, hums with the work of his own post-doctoral researchers. In addition, Kung coordinates the cancer investigations of scientists on three campuses – the UC Davis main campus in Davis, the UC Davis Medical Center campus in Sacramento and the Lawrence Livermore National Laboratory in Livermore.

$64 million budget

On his watch, the cancer center's research budget has exceeded $64.4 million, the research program has grown to 180 scientists and the Cancer



Anthony Martinez, a research associate in Kung's lab, is part of a team at work on a molecularly targeted agent designed to thwart androgen resistance in prostate cancer by cutting off the etk pathway. Unlike traditional chemotherapy drugs, molecularly targeted agents usually have few side effects.

Center has become the nation's 61st National Cancer Institute-designated cancer center.

"Hsing-Jien Kung's work has elevated prostate cancer to a level of elegance that didn't exist before he became involved in it," said Ralph deVere White, professor of urology, director of the UC Davis Cancer Center and associate dean for cancer programs.

"But he is more than any one thing. His brilliance is his depth and breadth and the quality of his scientific interactions."

Cautious optimism

The AZD0530 clinical trial will begin after the NCI has completed its review of the study design. The trial will be led by Evans, who chairs the Department of Urology, and Primo N. Lara, Jr., an associate professor of hematology and oncology.

Kung cautions against excessive optimism. He says it's unlikely that blocking a single tyrosine kinase will be sufficient to control prostate cancer. More likely, doctors will need an arsenal of kinase inhibitors that can be used in combination or in succession. Kung and Kit Lam, professor and chief of hematology and oncology, are at work now on an inhibitor for etk.

But Kung envisions a day in the not-too-distant future when tiny fluorescence-tagged kinase markers, injected into a patient, will light up on imaging studies and reveal a tumor's specific kinase activation profile. If a certain kinase has elevated activity, a specific inhibitor will be given. There would be no biopsy, no surgery, no radiation and, because the drug is so highly targeted, very few side effects.

Just imagine. UCD

To learn more about clincial trials at UC Davis Cancer Center, visit www.ucdaviscancerclinicaltrials.org or call (530) 734-3089.

Carol and Dennis Sill

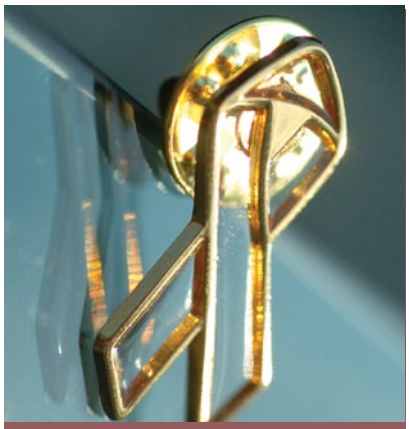
FIGHT CLUB

Invisible no more

When Carol Sill learned she had lung cancer in November 2004, she and her husband, Dennis, searched the Web for a support group near their Sacramento home. They called the American Cancer Society. They checked with the American Lung Association. Nothing.

"If I had breast cancer, I'd be able to choose from literally dozens of support groups and help lines right in our area. But there was nothing for lung cancer," Sill said.

Now there is. Determined to reverse the stigma she believes has kept lung cancer patients from stepping forward and seeking the help they need, Sill went to work. She founded a support group that meets at UC Davis Cancer Center under the leadership of Cancer Center social worker Carolyn Guadagnolo. Sill also forged ties with the Gail P. Ramos Lung Cancer Foundation in Fairfield, to help that group expand its fundraising efforts for lung cancer research in Sacramento. During National Lung Cancer Awareness Month in November, she told her story to the *Sacramento Bee* and the regional ABC and NBC affiliates.



"'Did you smoke?' It's the first question everyone asks when they learn I have lung cancer."

"Invisible like us"

Lung cancer is the No. 1 cancer killer in the United States, but it lags far behind breast and prostate cancer in terms of public attention. At one recent meeting of the support group Sill established, a woman talked about ribbons. Breast cancer has a pink ribbon; prostate cancer's is blue. The lung cancer ribbon is clear, she had discovered. "Invisible. Like us," she told the group.

That's changing. ABC anchorman Peter Jenning's death from lung cancer last August put the disease in the headlines. That same month Dana Reeve, widow of actor Christopher Reeve, confirmed her lung cancer diagnosis, helping to raise awareness that lung cancer is increasingly a disease of younger women who have never smoked. She died of the disease March 6.

"Twenty years ago, the typical lung cancer patient was an older man who had a smoking history," said David Gandara, director of the Thoracic Oncology Program at UC Davis Cancer Center. "But lung cancer rates for men are down, while they are climbing in women. And in my clinic,

Our Team

UC Davis Thoracic Oncology Program

Among the largest and most comprehensive of its kind, the Thoracic Oncology Program at UC Davis Cancer Center provides a wide array of clinical and research services for patients with lung cancer and other thoracic malignancies.

David Gandara with radiation oncologist Zelanna Goldberg

The program includes nationally prominent clinicians and researchers from multiple disciplines who meet weekly to develop individualized treatment plans for each patient. The team includes medical oncologists, thoracic surgeons, pulmonologists, radiation oncologists, nuclear medicine specialists and radiologists. Every patient's clinical history and medical record, including PET scans, CT scans and other imaging studies, are reviewed by this team before treatment recommendations are made. The team is rounded out by nurses with advanced training in thoracic oncology, dietitians, social workers and clinical research associates. In addition, UC Davis Cancer Center offers clinical trials for almost every situation and stage of lung cancer. The therapies evaluated in these trials often become the recognized standards of care nationally and internationally.

The Thoracic Oncology Program is headed by David R. Gandara, a professor of hematology and oncology and associate director for clinical research at UC Davis Cancer Center. Gandara is co-chair of the National Cancer Institute's Investigational Drug Steering Committee, which is charged with recommending reforms in the way cancer clinical trials are conducted in the United States. He also chairs the Southwest Oncology Group's Lung Committee, overseeing thoracic cancer-related clinical trials at 283 institutions throughout the United States and Canada. He is a co-founder of the California Cancer Consortium, which coordinates early phase clinical trials at four institutions in California and Pennsylvania.

For more information about the Thoracic Oncology Program at UC Davis Cancer Center, please call (916) 734-8500 or visit our Web site, www.ucdmc.ucdavis.edu/cancer.

more than one-third of our lung cancer patients are never-smokers – individuals who have smoked fewer than 100 cigarettes in their lifetime."

Improving treatment

Treatments are also changing. Last year, a Southwest Oncology Group study led by Gandara demonstrated the best long-term survival rates yet reported in patients with locally advanced, non-small cell lung cancer. Another study, co-authored by Gandara, showed that administering chemotherapy after surgery can boost five-year survival for patients with early stage, completely resected non-small cell lung cancer tumors to more than 60 percent. Both studies made national headlines.

Newer drugs are targeting tumors in more specific ways. Half a dozen of these molecularly targeted agents are being evaluated at UC Davis Cancer Center right now. UC Davis researchers are also looking for clues that will let doctors better determine which patients will respond to which targeted agents, and are studying new methods of preventing lung cancer recurrence.

Tahoe to Turlock

In its first three months, Sacramento's first lung cancer support group has grown to 60 members. Meetings are held on Wednesdays to coincide with the Cancer Center's multidisciplinary lung clinic and Thoracic Tumor Board. Patients from as far away as Palo Alto, Tahoe and Turlock attend, often because no lung cancer support group is available closer to home.

In the pages ahead, five members of the support group talk about the stigma attached to lung cancer, the need for more research funding, the importance of support, and their hopes for the future. UCD

FIGHT CLUB

MIMI ARFIN

"Did you smoke?" It's the first question everyone asks when they learn I have lung cancer. I think non-smokers ask because they hope I'll say yes, so they can feel safe. But none of us is "safe."

I was about to celebrate my 30th anniversary of being treated for and cured of Hodgkin's disease in April 2005, when I was diagnosed with lung cancer. I was shocked. I've never smoked. I eat well. I work out. I'm 49 years old, an attorney, and the mother of two young daughters.

After that initial shock, my husband, Bob, and I went to work researching our options. I chose to enroll in a clinical trial at UC Davis of a new molecularly targeted agent, Erbitux, in combination with standard chemotherapy.

Partial remission

Bob and I drive from the Bay Area to Sacramento every few weeks for treatments. My last PET/CT scan, in January, showed my cancer is in partial remission. There are no new tumors and those that showed up on the scan were stable or receding. Our hope is to stay close to the cutting edge of research so that we can continue to take advantage of new treatments like Erbitux as they are developed.

These advances might occur more rapidly without the stigma attached to lung cancer. Because people regard lung cancer as a disease of smokers, and because smoking is a modifiable behavior, it engenders less sympathy than breast or prostate cancer. The stigma is unfair to lung cancer patients like me who have never smoked, but it's also unfair to patients who were smokers. Modifiable behaviors can contribute to heart attacks, but people who have heart attacks aren't blamed for their heart disease. Perhaps if more people realized nonsmokers also get this illness, there would be more support for research to find a cure. UCD

"If more people realized nonsmokers get this illness, perhaps there would be more support for research," says Mimi Arfin, shown with her daughters.

FIGHT CLUB

ANGIE LEE-OW

Nothing could have prepared me for the diagnosis of lung cancer last May. I had worked for almost 30 years as a pharmacist, most of them at UC Davis Medical Center. But everything I knew about diseases and pharmacology went out the window when the tables turned and I became the patient.

My diagnosis was baffling. I had never smoked and although my father was a heavy smoker, I had not been exposed to secondhand smoke for more than 35 years.

For two weeks following my diagnosis, I couldn't find anyone to talk with who was a lung cancer survivor, who could help me sort through my shock and fear of what was in store. But God sent an angel in the form of Carol Sill, a six-month Stage IV lung cancer survivor, who was willing to call me, comfort me and help me make a decision about participating in a clinical trial at UC Davis.

I'll always be grateful to her for making that call. Today, I have had a good response to chemotherapy and cetuximab, a non-FDA approved therapy for lung cancer, and continue to participate in the study.

Legacy, our UC Davis-based lung cancer support group, has encouraged me and given me hope and a sense of caring that only other survivors can offer. At our meetings, I have learned that twice as many women die from lung cancer than from breast cancer. I have learned that less than $2,000 per lung cancer death is spent on lung cancer research versus $18,000 per breast cancer death.

"I am prepared to live each day with hope, joy and thanksgiving," Angie Lee-Ow says.

Stronger than cancer

Through Legacy, we want to be available to talk to any newly diagnosed lung cancer patient who needs that special call of reassurance and hope. We want to be the forum for the many survivors needing understanding and support as they battle this deadly disease.

With the love and support of my husband, the encouragement and care I've received at UC Davis Cancer Center, the friends we have made in Legacy, the love of a close family, friends and most importantly to us, the many prayers on my behalf, I am prepared to be stronger than cancer, to fight a good fight and live each day with hope, joy and thanksgiving. UCD

MAXINE

My name is Maxine. I am a four-year lung cancer survivor. My doctor once told me I was a member of a very select group – lung cancer survivors. Most of us don't live very long past our diagnosis, especially those of us who have some of the more serious lung cancers. Mine was non-small cell bronchioalveolar carcinoma, one of the nastier ones, with a very high recurrence rate.

The very good thing about my cancer is that it was Stage IB, rather early on in the process. It was discovered during a routine chest X-ray and physical checkup for work, and had remained localized, so that the surgeon was able to remove the upper half of my left lung, where the 2-centimeter mass was located. The mass had not spread beyond the lung wall. No lymph nodes, thankfully, were involved.

Anxiety and gratitude

The consulting oncologist told me that radiation and chemotherapy following surgery are not required for Stage I cancers, so the surgery and long recovery period I was to face were the extent of my treatment, except for the follow-up visits every three months.

I generally get quite anxious as CT scan time approaches. Waiting those few days between taking the scan and getting the results, the bane of the cancer survivor, can seem like an eternity.

My sons were my care providers during and after surgery. If I haven't thanked them before for their tender, loving care, I am doing it now. Many of my dearest friends from as far south as Glendale called me or sent me gifts and cards. I healed. I resumed exercising.

And now I am a retired environmental scientist and busier-than-ever world traveler, college student, mother of five, grandmother of seven, avid theater-goer, art lover, and most importantly, a lung cancer survivor. UCD

A four-year survivor, Maxine relishes travel, theater, art and grandchildren.

FIGHT CLUB

JACQUE PAINTER

I was diagnosed with Stage III A non-small cell lung cancer in April 2004. I had my last treatment on Nov. 1, 2004. I am back to work full-time and doing more than I did prior to my diagnosis. I am currently working on improving my overall health and rebuilding my endurance and lung capacity. My goal is to walk the California International Marathon.

This has been a strange journey for me. The fear and uncertainty that come from receiving a diagnosis of cancer are indescribable. However, from the first time I found out I had cancer, a whole new world opened.

Life in technicolor

I realized an all-new relationship with my family. We have always been close and I knew they loved me, but I was in for a shock when they exposed the extent of their commitment to me. They kept me grounded and focused during those times when I just wanted to crawl off and cower and cry.

I found out friends and co-workers can and will do more for you than you ever think possible. I have a mirror filled with note coards, e-mails and letters with words of love and encouragement. I still read and use them to make each day count.

A very wonderful revelation was the army of doctors, nurses, technicians, radiologists, pharmacists, clerks and others who help you. I met the most caring, concerned, intelligent, interesting people. I still wonder at the number of people it actually took to fight my disease.

"My goal is to walk the California Marathon," says two-year lung cancer survivor Jacque Painter.

I once heard life described as tinted with color prior and Technicolor after a life-altering event. For me this is true. I have found friends and comrades in arms in my support group. I have experienced a new enjoyment of life, and, like a lot of people who have a life-threatening illness, a renewed focus on what is important. I no longer put things off. I am no longer afraid to try new things. I take trips, visit the gardens and call that friend. I am doing volunteer work, which is what I always wanted to do, but just couldn't seem to find time for.

So for all the vicious and terrifying things cancer brings, for me it also brought some very wonderful changes in my life – and for that I am very thankful. UCD

FIGHT CLUB

CAROL SILL

Many years ago a large cargo train derailed and landed in our business parking lot. The contents of that train were spread all over and I wondered if it would ever be cleaned up and we could reopen our business.

In November 2004, my husband Dennis and I became part of another derailment. When we heard the words, "You have lung cancer," it seemed as though a train had crashed in the middle of our house. The contents of this derailment contained love, laughter, hopes for the future, planned trips to be taken, Christmas presents ready to be wrapped and a turkey ready to be cooked and enjoyed.

In the train derailment, crews, cranes and front-end loaders were brought in to clean up the mess. With the lung cancer derailment, there was no emotional crew to come sit with us. Our search for help from others like us led only to breast cancer, ovarian, colorectal, prostate and other cancer support groups.

I had lung cancer. I was terrified. I felt so alone. I didn't know what would happen and I didn't want to hear any more about breast cancer survival; I wanted to hear about lung cancer survival.

I felt hope

Determined that no other person should have to face this alone, Dennis and I began to lay the groundwork for Sacramento's first lung cancer support group.

When she was diagnosed, Carol Sill couldn't find a lung cancer support group. So she started one.

That first meeting was a blessing; my attitude changed and I felt hope. There were only seven people. But it was wonderful. I knew this group would be very helpful to our community. Our group, now named Legacy: Sacramento's Lung Cancer Support Group, is growing. It is open and free to all lung cancer patients, their families and caregivers, regardless of where they are being treated.

We will be there to assist you and your family through the weeks of total emotional derailment. You will be provided a list of lung cancer patients you can call and talk with confidentially. You will know you are not alone. We will be there for you. UCD

For information about cancer support groups available in the greater Sacramento region, please visit the Cancer Resource Center on the first floor of the UC Davis Cancer Center or call (916) 734-5935. Information is also available online in the "Patients & Visitors" area of our Web site at http://www.ucdmc.ucdavis.edu/cancer.

Linda Navarro

Breaking with tradition, women from six tribes start a dialogue — and make a DVD — about breast cancer

Mothers' WISDOM

Of the 217 American Indian languages still spoken today, few, if any, have a word for cancer.

There are words, though, for friendship and for motherhood, for health and for hope. It is from those concepts that the Mothers' Wisdom Breast Health Program draws its strength.

Guided by an advisory council of 11 women from six tribes, Mothers' Wisdom is a program of the UC Davis Cancer Center's Outreach Research and Education Program. Its goal: to address the unmet breast cancer prevention needs of American Indian women.

Although American Indian women are less likely than women of other ethnic and racial groups to develop breast cancer, they are the least likely to survive longer than five years after diagnosis. They are the least likely to have their breast cancer diagnosed at the earliest, most curable stage, and the least likely to have had a recent mammogram. Yet only a handful of programs and materials have been developed to reduce these disparities.

"It is something most native people don't talk about."

Marlene von Friederichs-Fitzwater, an assistant adjunct professor of hematology and oncology at the Cancer Center and director of the outreach program, set out to change that. The Susan G. Komen Breast Cancer Foundation awarded her a $25,000 grant to get started.

Six tribes sign on

The work started about two years ago. Linda Navarro, a respected figure in Sacramento's American Indian community, agreed to help. Of Cahuilla-Shasta descent, Navarro worked for the California Rural Indian Health Board for 26 years before joining the Sacramento-based Turtle Health Plan, soon to be the nation's first American Indian-owned, Indian-managed HMO. Representatives of the Ione, Miwok, Paiute, Comanche and Lakota tribes also signed on.

Navarro had seen a variety of outreach efforts come and go. Many were too clinical or weren't user-friendly; others failed to appeal to the diversity of tribal cultures.

"Some people think all Indians are the same people,"

The Mothers' Wisdom logo depicts the passing of knowledge from one generation of women to another.

Navarro said. "There was not an American Indian advisory committee working on breast health, and that's really, really important. I knew the kind of impact this could have."

For her part, von Friederichs-Fitzwater interviewed tribal health educators and leaders across the country and attended health-related conferences and tribal gatherings. Her research taught her that American Indian women tend to focus on their children's health over their own, are rarely depicted in media stories about breast cancer, and shun use of the word "cancer."

"There's a concern or belief that saying it will bring it forth or make it real," von Friederichs-Fitzwater said.

Traditional values

The Mothers' Wisdom program faces these and other challenges directly.

First, in its method: A DVD will provide consistent, culturally sensitive information to women, regardless of their literacy.

Second, through its message: The DVD will incorporate traditional values, beliefs and philosophy with Western medical information.

"I think it's so important," said Billie Blue Elliston, a member of the Ione Band of Miwok Indians and an ovarian cancer survivor. "I don't think a lot of information gets out to the tribes. I think they'll be interested when they realize Native Americans are involved."

Elliston lives in Galt. She joined the advisory council at the urging of another member, Phyllis Cleveland, an oncology nurse of Miwok heritage.

Call to action

The DVD will include a call to action. It encourages women to be role models for their daughters and granddaughters. It targets poor nutrition and obesity, highlighting the availability of traditional, locally grown foods at farmers' markets and cooperatives. It includes a section on exercising without elaborate equipment.

Other segments still to be filmed: how to do breast self-exams (the Mothers' Wisdom council has decided to use the term "breast massage") and why regular mammograms are important. Helen Chew, assistant professor of hematology and oncology and director of the UC Davis Cancer Center's Breast Cancer Program, will add information on breast structure and function, breast cancer diagnosis and cancer treatment options.

Storytelling

Herbal and other traditional medicine lore will be integrated. The council plans to film a traditional blessing. American Indian cancer survivors will share their stories. All of the information will be conveyed through storytelling, consistent with American Indian culture, and backed by original music created and performed by members of the council.

Elliston said she has never heard American Indian women having an open discussion about breast health. She hopes

Mothers' Wisdom Advisory Council, clockwise from back row left: Linda Navarro (Cahuilla-Shasta heritage), Marlene von Friederichs-Fitzwater, Deyetta Pickens-Gist (Miwok-Maidu), Barbara Hart (Pawnee), Tanya Erck (Comanche) and Kellie Stevens (Paiute). Not pictured: Joleen Rodriguez (Miwok) and Billie Blue Elliston and Phyllis Cleveland (Ione Bank of Miwok)

the DVD, and future Mothers' Wisdom materials, will spark these discussions.

"It is something most native people don't talk about," she said. "But it is something everyone needs to know about."

The advisory council plans were to screen the DVD for at least 50 American Indian women by the end of March and, after revisions, to show it to 150 more women from at least eight tribes.

Not long ago, at meeting of the Mothers' Wisdom advisory council, the lights dimmed and the women watched a rough cut of the DVD for the first time.

Sometimes they nodded or laughed. In the end, they approved.

The program opens with Navarro standing before an image of Mt. Shasta and blue sky.

Her voice is calm, deliberate, warm.

She welcomes viewers.

Her face will be their face; she is one of them – a sister, daughter, mother, grandmother. UCD

Tomotherapy represents a new generation in image-guided radiation treatment

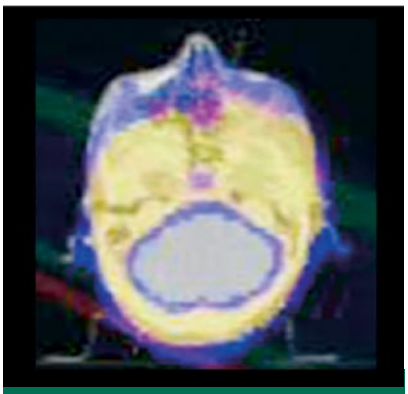
On TARGET

Radiation oncology has witnessed rapid progress in recent decades, as technological advances have made it possible for physicians to deliver increasingly targeted and powerful doses of radiation to treat cancers.

But one challenge remained – knowing precisely where the tumor stops and healthy tissue starts during radiation treatment. On Dec. 3, a crane carefully dropped a 9,000-pound solution to this problem through the roof of the UC Davis Cancer Center's Radiation Oncology Clinic. The $3 million tomotherapy unit represents a new generation in radiation therapy technology.

Only unit in Northern California

Since first reaching the market in 2002, seven tomotherapy systems have been acquired on the West Coast: one in Bellingham, Wash., and five in Southern California. UC Davis has the only tomotherapy unit between Los Angeles and Seattle. Only 43 of the machines are in use worldwide. UC Davis Cancer Center hopes to begin offering tomotherapy to patients this spring.



"We are able to offer the patients more choices to fight their disease."

"We can now offer our patients more treatment options than any other cancer center in our region," said Srinivasan Vijayakumar, professor and chair of radiation oncology at UC Davis.

Reduced margin of error

Traditionally, a radiation oncologist obtains sophisticated CT images of a tumor days or weeks before radiation therapy starts. These images are used to guide development of a detailed treatment plan. But by the day of treatment, the cancer may have grown or changed shape, or the patient's weight may have changed, causing a shift in tumor position. Some linear accelerators are equipped with an X-ray, but one-dimensional X-rays can't provide the same level of detail as a three-dimensional CT study.

"This uncertainty about the tumor's exact position has

The Radiation Oncology Clinic expansion, completed last year, added 7,000 square feet to the south side of UC Davis Cancer Center, making room for new faculty and technology.

always meant calculating a 'margin of error' and treating a zone around the tumor that is likely to include some healthy tissue. To avoid applying excessive radiation doses to this surrounding tissue, radiation oncologists have had to use lower-than-desired doses to treat the tumor," Vijayakumar said.

Higher doses

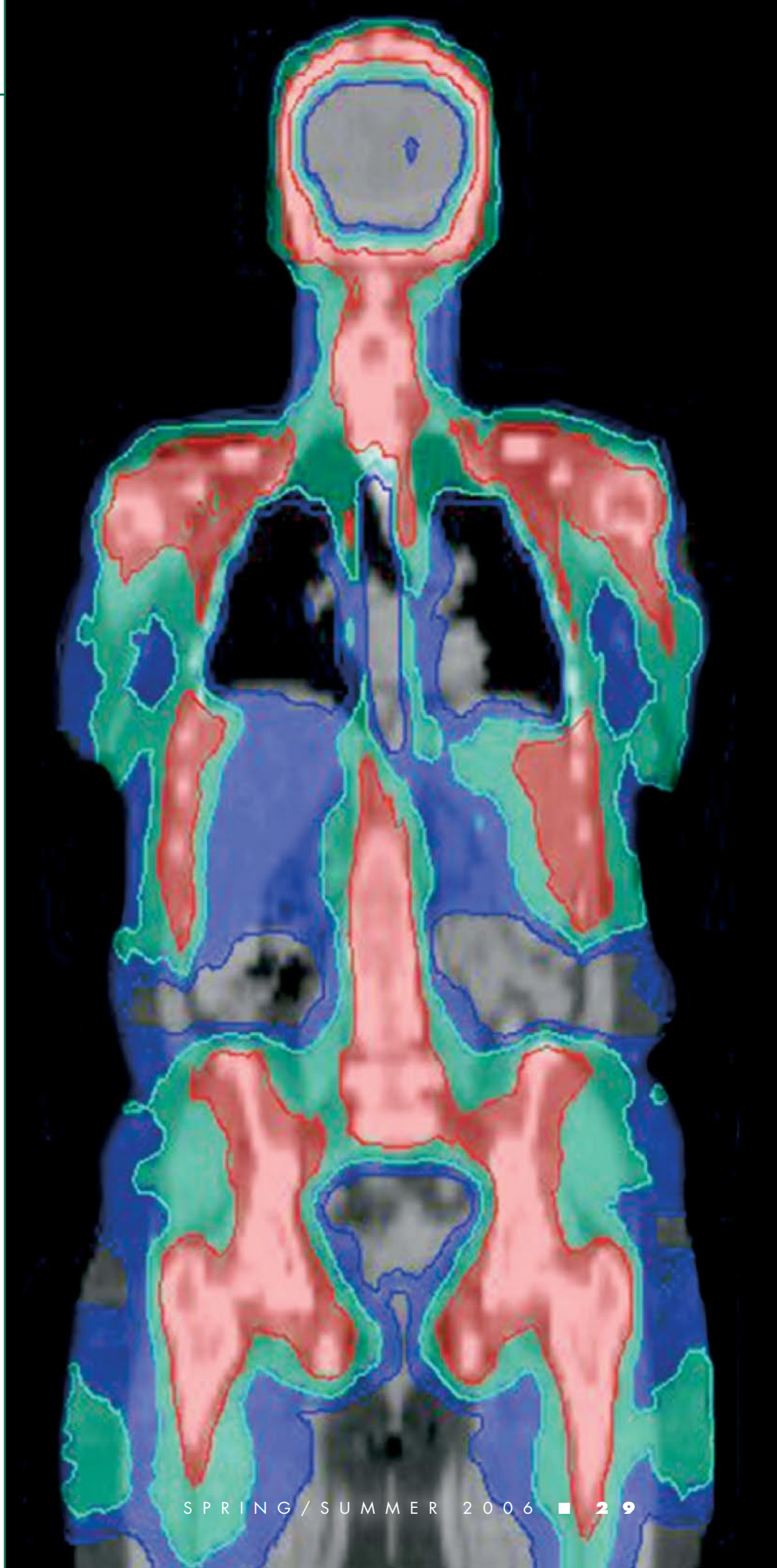
Tomotherapy solves this problem by marrying a high-resolution CT scanner to a sophisticated linear accelerator, allowing doctors to visualize a tumor and apply radiation at the same time, with pinpoint accuracy. This enhanced precision enables doctors to use tighter margins and higher, more effective radiation doses.

In addition, tomotherapy employs a linear accelerator that rotates in a 360-degree spiral around the patient, delivering radiation to the tumor from all directions. Traditional linear accelerators deliver radiation beams from just a handful of angles. Tomotherapy systems are marketed by TomoTherapy, Inc., in Madison, Wis.

$6 million expansion

The new technology is part of an ambitious, three-year expansion of the Radiation Oncology Clinic and Department of Radiation Oncology spearheaded by Vijayakumar, who joined UC Davis from the University of Chicago in 2002. The expansion includes the recruitment of five new radiation oncology faculty physicians and physicists, along with the completion last year of a $6.1 million, 7,000-square-foot addition to the Radiation Oncology Clinic, located at 4501 X Street on the UC Davis Medical Center campus.

In addition to the tomotherapy system, UC Davis Cancer Center last summer acquired another system, a $1.9 million Elekta Synergy that combines an advanced linear accelerator with three-



Tomotherapy allows doctors to visualize a tumor and apply radiation at the same time.

dimensional X-ray technology. The linear accelerator in the Synergy system doesn't rotate around the patient. But unlike tomotherapy, the Synergy machine can tailor radiation energy levels to a tumor's location and shape.

Cranial radiosurgery

UC Davis Cancer Center also offers patients two technologies for cranial radiosurgery: a Leksell gamma knife and a BrainLab micro multileaf collimator. The BrainLAB system can treat larger, irregular lesions, while the gamma knife can treat smaller tumors. UC Davis is the only institution in the Sacramento region and one of a small number in the country to offer both cranial radiosurgery options.

"No single technology is best for every patient," Vijayakumar said. "But by having more of the latest tools at our disposal, we are able to offer patients more choices to fight their disease." UCD

Women of South Placer County pledge $1.5 million for breast cancer research

They Think PINK

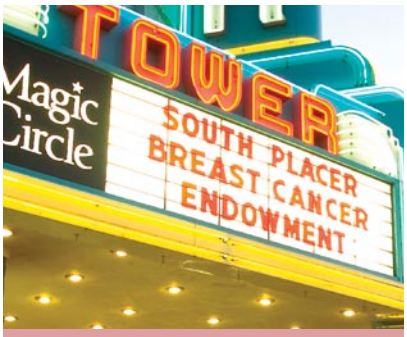
As a breast cancer survivor, Carol Garcia says she feels grateful for each new day – and determined to do everything in her power to protect her two daughters from the disease.

With eight other prominent South Placer County-area residents whose lives have been touched by cancer, Garcia established the South Placer Breast Cancer Endowment. The fledgling group has vowed to raise $1.5 million for an endowed chair in breast cancer research at UC Davis Cancer Center by 2010.

Backyard breakthroughs

"We want UC Davis to make the next breakthrough in breast cancer research," said Garcia, a senior vice president at Granite Community Bank in Roseville, Calif. "We are so lucky to have a National Cancer Institute-designated research center right here, and it's a privilege to support it."

Just six months old, the South Placer Breast Cancer Endowment has about 30 members, a professional logo, attractive Web site (www.wethinkpink.org) and a growing schedule of fundraisers.



"We want the next breakthrough in breast cancer research to happen here."

One of the first was held in October in partnership with Brighton Collectibles in the Galleria at Roseville. The store donated a portion of its sales of Breast Cancer Awareness Month charm bracelets to the endowment. Crush 29, a restaurant scheduled to open in Roseville in 2006, has pledged a portion of its grand opening proceeds to the cause as well.

Also planned are a spring Authors' Lunch and October Pink & White Ball, both to be held at the Granite Bay Golf Club in Granite Bay.

Influential allies

Julia Burrows, deputy city manager of Roseville, serves as the fledgling organization's secretary. A UC Davis graduate, Burrows said she was inspired to join in part because of the care her late mother received at UC Davis Cancer Center.

"The research that scientists are doing at UC Davis will help

Their name in lights: Virgil Traynor, front row, and Carol Garcia, in white sweater at his side, surrounded by fellow members of the South Placer Breast Cancer Endowment.

all cancer patients," said Burrows, whose mother was diagnosed with peritoneal cancer.

Breast cancer research couldn't ask for more influential allies. In addition to Garcia and Burrows, the South Placer Breast Cancer Endowment includes the mayors of Roseville, a Rocklin city councilwoman, the CEO of the Roseville Chamber of Commerce, and the president of Sierra College. There are high-ranking banking executives, marketing-media executives and commercial land developers. The membership list also includes a radio personality, several consultants and a veterinarian.

Founding father

The veterinarian, Virgil Traynor, deserves special mention.

Traynor spearheaded the formation of the Auburn Community Cancer Endowment in April 2001. Since then, the grassroots Auburn group has raised more than $1.38 million toward its goal to endow a $1.5

"If Auburn and South Placer can do it, think what Sacramento or the larger communities could do."

million chair in basic cancer research.

"All it takes is a just cause and a committed community," Traynor said.

Garcia first got involved as a volunteer in charge of planning the Auburn endowment's $1 million celebration dinner. She came away from that evening convinced that South Placer County, home to the towns of Roseville, Rocklin, Lincoln and Granite Bay, could also fund a research endowment.

Extending the challenge

Garcia and Traynor hope other cities and communities will also decide to make their mark on cancer research.

"If Auburn and South Placer can do it, think what Sacramento or the larger communities could do," Traynor said.

Endowed chairs, one of the highest honors in academia, allow universities to retain or recruit the best minds in each generation. UC Davis now has more than 75 endowed chairs, typically named after the individual, family, foundation or company that funds the endowment. Current UC Davis endowed professorships include the Rumsey Endowed Chair in Pediatric Endocrinology, the Robert E. and Eva Mae Stowell Chair in Pathology and the Lawrence J. Ellison Chair in Musculoskeletal Molecular Biology.

First chairs

UC Davis Cancer Center hopes to establish the university's first endowed chairs in cancer research. In addition to chairs in basic science and breast cancer research, chairs are also planned for clinical research, prostate cancer, lung cancer, pediatric cancer, cancer genetics and cancer immunology. (see story, page 9)

Grateful to give back

Garcia was diagnosed with breast cancer on Dec. 27, 1998. She was 39, the mother of two teenage daughters, worked full-time in banking, served on the City of Roseville Grants Commission, the Child Abuse Prevention Council of Placer County, the Rotary Club of Roseville, and was about to be installed as president of the Roseville Chamber of Commerce.

Over the next nine months, she had five surgeries, beginning with a lumpectomy and ending with a bilateral mastectomy and reconstruction.

"Eight years later, a day doesn't go by that I'm not reminded of the cancer that I experienced, and that I don't wonder why I was spared and others were not," she said. "A day doesn't pass that I'm not grateful for my health, and grateful for the opportunity to give back." UCD

Cycle of inspiration: Helping survivors "live strong"

Diagnosed with uterine cancer at age 35, Sacramento architect Pam Whitehead found inspiration in Lance Armstrong's book, "It's Not About the Bike." Now Whitehead is sharing that inspiration with other cancer survivors. With $5,000 in start-up funds from the Lance Armstrong Foundation, Whitehead organized a fitness and strength-training program for cancer survivors.

Called Living Strong, Living Well, the program is designed to help men and women recover their strength and vitality after cancer treatment. The 16-week program is offered in partnership with UC Davis Cancer Center and 650 FIT, a Sacramento fitness and exercise center.

"Not everyone can win the Tour de France after a cancer diagnosis," said Julie Brown, a health educator at UC Davis Cancer Center who oversees the program. "But a guided exercise program can help most cancer survivors become stronger, fitter and more energetic – and able to live life more fully."

Whitehead received the $5,000 to launch the program as winner of the 2004 Lance Armstrong Foundation's Lori A.Tilton Peloton Triumph Award. Prize winners must use the money to support a local, nonprofit program benefiting cancer survivors. Whitehead hopes to raise additional funds so that the program can continue to be offered at no cost to participants. For information or to make a donation, please call (916) 734-5786.

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Robotic prostatectomy

The UC Davis Department of Urology, which first offered robotic prostatectomy in 2004, now has three specialists trained to perform the minimally invasive prostate cancer operation.

Robotic-assisted laparoscopic prostatectomy is performed via several small abdominal incisions, each about the size of a dime. Miniature robotic arms and a robotic laparoscope – essentially a tiny telescope – are introduced through the incisions. The surgeon operates the tools from a nearby console.

Because the procedure involves smaller incisions, patients may be able to return to their normal activities more quickly than with standard prostatectomy.

However, the procedure is not appropriate for all prostate cancer patients and men who are interested in robotic surgery should discuss the pros and cons with their urologists. Men should also choose a center with extensive experience in the new technology.

Breast CT more comfortable than mammography

Breast CT is much more comfortable for women than mammography – and may be better at detecting breast abnormalities.

UC Davis researchers reported these preliminary results from an ongoing Phase II

CALENDAR OF EVENTS

March 7
"Eating Hints for Cancer Patients"
Learn at Lunch Series
UC Davis Cancer Center auditorium, noon to 1 p.m.
For more information: (916) 734-5786

March 11
What Vietnamese Americans Need to Know About Cancer
Hosted by the Asian American Network for Cancer Awareness, Research and Training
UC Davis Cancer Center auditorium, 9 a.m. to 2 p.m.
For more information: (916) 734-5786

March 17
St. Baldrick's Day -- Roseville
Supports pediatric cancer research
Roseville Sports Center, 1545 Pleasant Grove Blvd., Roseville, 5 to 9 p.m.
For more information: info@childcancer.org or (916) 784-6786

March 18
St. Baldrick's Day – Sacramento
Supports pediatric cancer research
UC Davis Cancer Center auditorium, noon to 3 p.m.
For more information: info@childcancer.org or (916) 784-6786

March 30
"An Insider's Look at UC Davis Cancer Center"
Luncheon and tour of research laboratories
Courtyard by Marriott Sacramento-Midtown, 4422 Y St., 11:30 a.m. to 2 p.m.
For more information: (916) 734-9675

April 1-2
Relay for Life
Supports cancer research
Toomey Field, Russell Blvd. and A St., UC Davis
For more information:

April 4
"Chemo-Brain: Chemotherapy-Related Memory and Thinking Changes"
Learn at Lunch series
UC Davis Cancer Center auditorium, noon to 1 p.m.
For more information: (916) 734-5786

April 30
Ridin' for Survivin'
Supports pediatric cancer research
Rocklin Harley-Davidson, 4425 Granite Dr., Rocklin, 9 a.m.
Folsom Harley-Davidson, 115 Woodmere Rd., Folsom, 11 a.m. to 3:30 p.m.
For more information: (916) 626-9211

trial of the new technology at the 2005 annual meeting of the Radiological Society of North America in Chicago in December. The trial will enroll about 190 patients in all.

Unlike mammography, which takes two X-ray views of each breast, breast CT yields about 300 images per breast. In addition, breast CT requires no breast compression. The breast CT was developed at UC Davis with funding from the California Breast Cancer Research Program, the National Cancer Institute and the National Institute for Biomedical Imaging and Bioengineering.

Cancer centers honor Diane Feinstein

In recognition of her dedication to advancing cancer research and supporting programs that ease the burden of cancer on patients, caregivers and communities, Sen. Dianne Feinstein is the 2005 recipient of the American Association of Cancer Institutes Public Service Award.

Ralph deVere White, assistant dean for cancer programs at UC Davis and director of the UC Davis Cancer Center, presented the award to the California senator at the AACI's annual meeting in Arlington, Va., in October.

The AACI consists of 85 of the leading cancer research centers in the United States; its membership roster includes National Cancer Institute-designated centers and academic-based cancer research programs that receive NCI support. UC Davis Cancer Center is one of 10 California cancer centers elected to the organization.

News in Brief

Sac State, UC Davis team up for cancer prevention

Leaders from California State University, Sacramento and UC Davis Cancer Center signed an agreement in November to create a "Partnership to Reduce Cancer Health Disparities Through Education, Research and Training." Under the agreement, the institutions will collaborate on initiatives to strengthen cancer education and outreach in the Sacramento region and increase cancer awareness in diverse populations.

Projects under consideration include joint grant applications, graduate student research opportunities, scholarships for minority students, and training opportunities with federal agencies.

Reassurance for pregnant women with thyroid cancer

Pregnancy has no significant impact on thyroid cancer, and treatment for thyroid cancer has no significant impact on pregnancy outcomes, according to research by Shagupta Yasmeen, an assistant professor of obstetrics and gynecology at UC Davis.

"Thyroid cancer discovered during or after pregnancy does

CALENDAR OF EVENTS

May 2
"Getting Relief from Cancer Pain"
Learn at Lunch series
UC Davis Cancer Center auditorium, noon to 1 p.m.
For more information: (916) 734-5786

May 6-7
Coolest 24-Hour Race Against Cancer
Supports cancer research at UC Davis Cancer Center
Olmstead Loop (behind the Fire Station in Cool, Calif.)
For more information: www.thecoolestmtb.com

June 3
National Cancer Survivors Day
UC Davis Cancer Center, time to be announced
For more information: (916) 734-5786

June 6
"Advance Medical Directives: What I Want My Loved Ones to Know"
Learn at Lunch series
UC Davis Cancer Center auditorium, noon to 1 p.m.
For more information: (916) 734-5786

July 11
"Spirituality and Cancer: Mind/Body/Soul Connection"
Learn at Lunch series
UC Davis Cancer Center auditorium, noon to 1 p.m.
For more information: (916) 734-5786

August 25
"Chipping Away at Childhood Cancer" Memorial Golf Tournament
Supports UC Davis Cancer Center pediatric cancer research
The Ridge Golf Course, 2020 Golf Course Rd., Auburn, 8 a.m. shotgun
For more information: info@childcancer.org or (916) 784-6786

August 26
Celebration Gala
Black-tie fundraiser for UC Davis Cancer Center
Hyatt Regency Sacramento, 1209 L St.
For more information: (916) 734-9110

November 1 – December 8
Beacon of Hope Adopt-a-Family Program
To adopt a family facing childhood cancer over the holidays, please contact the Keaton Rafael Memorial at info@childcancer.org or (916) 784-6786

For more information about these and other programs, visit www.ucdmc.ucdavis.edu/cancer/calendar_events or call (916) 734-5786.

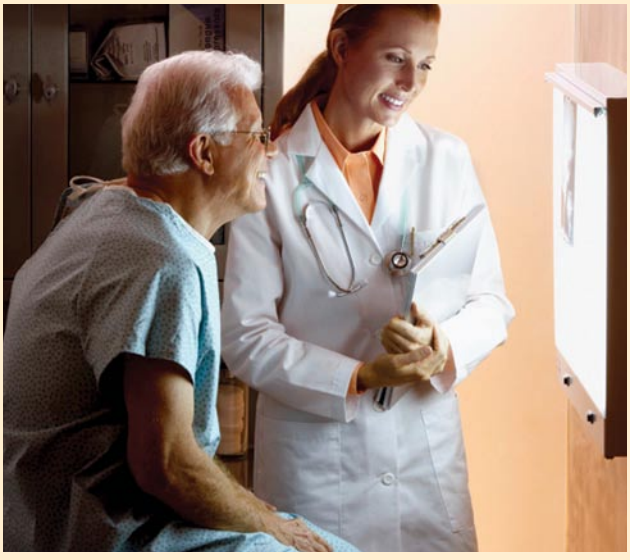
not appear to have a significant impact on the prognosis of the disease, and thyroidectomy (surgery to remove the thyroid) during pregnancy was not associated with adverse maternal or neonatal outcomes," Yasmeen and her co-authors reported in the *International Journal of Gynecology & Obstetrics* in October.

The researchers arrived at the good news by scouring the California Cancer Registry for all thyroid cancers occurring during pregnancy between 1991 and 1999, and comparing maternal and perinatal outcomes in these cases with those of an age-matched group of non pregnant women with thyroid cancer.

Palliative care guidelines for patients with prostate, bladder and kidney cancer

A team of UC Davis urologic oncologists has published new guidelines to help physicians improve the quality of life for patients with urogenital cancers. The guidelines appear in the October issue of the Journal of Urology. Christopher P. Evans, chair of the Department of Urology, is the senior author.

The guidelines include strategies for managing bone pain, pelvic pain, bladder and ureteral obstruction, spinal cord compression and other complications that can occur in patients with prostate, bladder and kidney cancer.



Science students help dedicate Oak Park Research Building

Sacramento High School science students joined university officials in January to dedicate the Oak Park Research Building, the newest research facility serving the UC Davis Health System.

The $20 million, 40,000-square-foot glass, brick and stucco building is headquarters for the National Science Foundation-funded UC Davis Center for Biophotonics Science and Technology, where scientists are harnessing light to better detect and treat cancer and other diseases. The building also houses the laboratories of Kit Lam, professor and chief of hematology and oncology at UC Davis Cancer Center, and Andrew Vaughan, a radiobiologist in the UC Davis Department of Radiation Oncology.

"The discoveries and technologies developed in this state-of-the-art facility will revolutionize biology and medicine," said keynote speaker Nathaniel G. Pitts, director of integrative activities for the National Science Foundation.

High school students from throughout the Sacramento region will learn about cutting-edge science through the biophotonics center's education program, which seeks to foster a new generation of science leaders.