

Stanford Cancer Center News

A National Cancer Institute-designated Cancer Center

A publication for patients and friends of the Stanford Cancer Center



CENTER NEWS

Colon Cancer-free Zone Campaign Launched

Efforts include the NCCC and the American Cancer Society

In April 2009, with the American Cancer Society, Stanford launched the “Colon Cancer-free Zone” initiative, led by Yann A. Meunier, MD, Health Promotion Manager at the Stanford Health Improvement Program.

Colorectal cancer kills approximately 56,000 Americans per year, making it the second most lethal cancer after lung cancer. But it is preventable.

The CCFZ is a program aiming at reducing colon cancer deaths by raising awareness of the fact that it is a disease that can be avoided by early and proper screening.

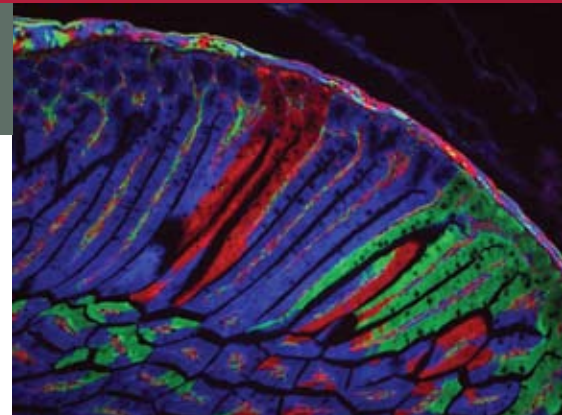
The challenge to become a “Colon Cancer-free Zone” means that the Stanford community recognizes the seriousness of the disease and vows to encourage everyone to become aware of the risks for colon cancer, talk with their doctors about the disease and, when appropriate, take the screening tests.

Working with the Northern California Cancer Center and the American Cancer Society to provide education on the prevention of colon cancer will greatly add to the array of resources

available to employees and their families, as well as patients.

For example, the Northern California Cancer Center (www.nccc.org) is conducting a first-of-its-kind study of interventions to improve colorectal cancer screening rates among Bay Area Vietnamese Americans, a community known to have lower rates of screening for this cancer compared to the general population. NCCC scientist Bang Nguyen, DrPH, is leading the study of screening interventions that involves developing and distributing educational materials to Vietnamese Americans and health providers in Alameda and Santa Clara counties.

The interventions consist of culturally sensitive and informative screening booklets, DVDs, patient counseling materials and health provider newsletters; providing continuing medical education seminars; and producing newspaper, radio and television advertisements. These materials have run in Vietnamese-targeted media in Alameda and Santa Clara counties, with estimates of 115,039 and 26,806 Vietnamese people, respectively. ▽



COLORECTAL SCREENING

Men and women over 50 years old and of “average risk” should undergo screening for colorectal cancer. Preferred tests include:

- A flexible sigmoidoscopy and digital rectal exam every five years AND an annual analysis of a stool sample (either fecal occult blood test [FOBT] or fecal immunochemical test [FIT]).

OR

- A total colon exam (colonoscopy) every 10 years.

People with a higher than average risk should begin colorectal cancer screening at a younger age, undergo screening more frequently and have a colonoscopy in preference to sigmoidoscopy for complete evaluation of the colon.

For more information on colorectal and other cancers, visit the Health Library at the Stanford Cancer Center on Monday through Friday, 9 am to 5 pm, at 875 Blake Wilbur Dr., rm. CC108, (650) 736-1713, or <http://cancer.stanfordhospital.com/forPatients/amenities/healthLibrary/default>. ▽

(Pictured above) Four kinds of embryonic stem cells, each of which carried a gene for a different fluorescent protein, were inserted into an early mouse embryo. The mature mouse's intestine was examined to determine if various tissues had a common stem cell precursor.

‘Prevention’ has become the mantra of health care administrators and providers.



DEAR FRIENDS,

This issue of the Stanford Cancer Center News contains stories about many of the individuals who are contributing to our ongoing efforts to prevent, diagnose and treat cancer. It is remarkable to see the range of activities: From prevention research through gene discovery to the carrying out of cancer clinical trials, the Stanford Cancer Center is participating in all phases of cancer research and care.

I wanted to take this opportunity to highlight our ongoing collaborations with the Northern California Cancer Center (NCCC), located in Fremont,

The bottom line is that cancer, consisting of many diseases of very different types and causes, is a much harder nut to crack than is cardiovascular disease.

Calif. Four years ago, we took the opportunity to become more closely affiliated with scientists at the NCCC who are approaching cancer by identifying predisposing factors, whether environmental or genetic, with the goal of primary prevention.

As we know from multiple sources, “prevention” has become the mantra of the next generation of health care administrators and providers. We must keep the population healthy, thereby reducing the costs of health care. It has worked so well for cardiovascular disease that it must also be broadly applicable to cancer.

The unfortunate truth is that the factors predisposing to cancer are many, interrelated and interactive—and elusive. The association with aging is clear. Also, certain types of genetic predispositions are associated with increasingly well-defined risks. But each of these underlying factors is also dependent on many other environmental and genetic insults. The bottom line is that cancer, consisting of many diseases of very different types and causes, is a much harder nut to crack than is cardiovascular disease.

Our association with the NCCC brings us closer to being able to tackle this complex problem. The existence of a cancer registry that tracks cancer incidence and mortality in the Bay Area is an enormous resource that enables researchers to ask questions about trends: Are there ethnic differences in breast cancer risk? Why do

non-smokers develop lung cancer? Are there genes that modify the other genes that put one at risk for cancer, and what are they?

The ability of clinical investigators, along with basic and population scientists at Stanford, to work with investigators at the NCCC has opened up enormous opportunities for the two institutions to make collaborative discoveries that will someday, we hope, allow us to do for cancers what cardiovascular researchers have done for heart attacks: Prevent them from happening. □

SINCERELY,

Beverly S. Mitchell, MD
Director



Ronald Levy Receives King Faisal Prize in Medicine



The development of a drug that has revolutionized the treatment of many types of cancer has earned its inventor, Ronald Levy, MD, the 2009 King Faisal International Prize in Medicine.

More than 30 years ago, Levy, now chief of the oncology division at the Stanford University School of Medicine and Associate Director of the Stanford Cancer Center, embarked on a research agenda that harnessed the power of the body's own immune system to fight cancer. Levy developed the concept that a drug made from a naturally produced blood protein called an antibody could be a cancer-fighting machine.

Levy, who holds the Robert K. and Helen K. Summy Professorship at Stanford, was honored for this seminal discovery by Saudi Arabian royalty, who presented Levy with his most prestigious international award to date.

Rituxan®, the drug that resulted from Levy's work, was the first commercial antibody to treat cancer. To date, over 1 million people have been treated with Rituxan.

When combined with other drugs and radiotherapy, Rituxan is successful at reducing tumor size in most patients who are treated. Originally developed for the treatment of lymphoma, a cancer of the immune system, monoclonal antibodies are now part of the standard

treatment for a wide range of cancers, including cancer of the breast, colon and lungs.

"Monoclonal antibodies have transformed the way cancer is treated," said Levy, who directs the translational research programs at the SCC.

Levy's efforts have focused on treating lymphoma. Forming the backbone of the immune system are lymphocytes—white blood cells that sound the alarm in response to foreign invaders. When a pathogen enters the body, B cells produce antibodies, proteins that circulate throughout the bloodstream and mark pathogens for destruction. In lymphoma, these B cells multiply uncontrollably, eventually crowding out healthy cells.

Rituxan targets a protein, called CD20, found on the surface of normal B cells and present in many lymphoma tumors. The prevalence of CD20 makes the drug relatively economical: It is not necessary to concoct a custom-made antibody for each patient. Although Rituxan targets normal B lymphocytes in addition to the tumor cells, it causes fewer side effects than conventional cancer treatments. Surprisingly, the drug results in no permanent damage to the immune system.

JOURNEY TO RIYADH
Levy joins the rank of 19 Americans

who have received King Faisal International Prizes in Medicine since they were first awarded in 1982. The King Faisal Foundation, a philanthropic organization founded in 1976 by the eight sons of the late King Faisal bin Abdulaziz Al Saud, awards approximately five prizes each year to those who make notable contributions in the fields of Islamic studies and service, Arabic language and literature, science and medicine.

Levy traveled to Riyadh to receive a certificate written in Arabic calligraphy describing his work, a commemorative 24-carat, 200-gram gold medallion and \$200,000. In his speech, he emphasized that cancer is a universal problem and the solution crosses boundaries of cultural, national, ethnic and religious identity.

"The problem of cancer has not been solved. That will require a lot more hard work involving international collaborations," said Levy.

Although Levy has received numerous honors and awards, from being a member of the National Academy of Sciences to receiving the Medal of Honor from the American Cancer Society, he recognized the uniqueness of the Faisal Prize. "It transcends science and medicine. It has a cross-cultural aspect, and it offers a special opportunity to make an impact beyond science." ▽

(Pictured pg 2) Stanford Cancer Center. (Pictured above) On accepting the King Faisal Prize, Dr. Levy (right) emphasized that conquering cancer crosses cultural, national, ethnic and religious identity boundaries.

Assessing Ethnic Differences in Breast Cancer

By Ruth Schechter



Women who inherit mutations in the BRCA1 or BRCA2 cancer susceptibility genes have an increased risk for developing breast or ovarian cancer and may benefit from genetic testing. The question is, who should be tested? And how do researchers develop the most accurate assessment for who is at risk?

Allison Kurian, MD, MSc, an assistant professor of medicine-oncology and of health research and policy and Stanford Cancer Center researcher, is studying computer models to identify women who may have a BRCA mutation based on a variety of risk factors, including family history and demographics. Her work has pointed to a marked discrepancy in the accuracy of existing models between Caucasians and Asians.

Working with cancer genetics clinics in Hong Kong, Hawaii, Vancouver and San Francisco, Kurian studied computer models used to predict the presence of BRCA1 or BRCA2 mutations in 200 Caucasian women and 200 Asian women. The patients had been tested for BRCA mutations, and the researchers then compared the test results to the models' predictions. (The group's findings were published in 2008.)

"Though the predictions were quite accurate for Caucasian women, the models under-predicted BRCA mutation in Asians by almost half," said Kurian, who received a

2008 Stanford Cancer Center Developmental Research Award to extend this study.

"This is important because Asian women may not receive the care they need when these models are used to select patients for genetic testing. It also suggests potential differences in the cancer risk associated with a BRCA mutation between these two racial groups," she said.

The BRCA1 and BRCA2 gene mutation test is offered only to women who have a significant likelihood of carrying a mutation, based on their personal or family history. Mutations occur in about one in 200 to 400 people in the United States and are responsible for approximately 5 to 10 percent of breast cancers and about 10 to 15 percent of ovarian cancers.

Women identified at risk by the models are referred for genetic testing and receive counseling on early detection and prevention strategies. The gap in identifying Asian women with a gene mutation affects a significant proportion of the world's population and points to a pervasive issue of genetic variability across different racial and ethnic groups.

PILOT STUDY UNDER WAY

Kurian is now leading a pilot study to compare 50 Asian women in Hong Kong and 50 Caucasian women in the United States with a BRCA gene mutation. Researchers will look at family

history of cancer, age of first menstruation, pregnancy, contraceptive use, alcohol and tobacco intake and where the woman was born and raised, along with clinical data, such as breast density and the molecular subtype of cancer. The study will also investigate five other genes that may be influencing or modifying the cancer risk.

Kurian's co-investigators in Hong Kong are developing a database that will be compatible with the existing database used by the Breast Cancer Family Registry at the Northern California Cancer Center. At the Stanford Cancer Center, she is working with a team made up of oncologists, geneticists, epidemiologists, breast surgeons and radiologists.

"This is an opportunity to determine and understand important differences in clinical patterns," said Kurian, who also received a career development award from the Robert Wood Johnson Foundation to build a model that will help women reduce their breast cancer risk. "Initially we hope to create a snapshot of factors that may influence cancer risk between these two populations. Our future goal will be to understand who is most likely to get cancer—and why—so that we can translate our data to target the patients who will benefit from specific interventions." ♡



(Pictured above) Allison Kurian, MD, MSc, is studying computer models to identify women with BRCA mutations. (Pictured right) Stanford surgeon Denise L. Johnson, MD, is an activist for equality in breast cancer care.



Honoring a Commitment to Women With Cancer

PHILANTHROPY MATTERS

Sanford (“Sandy”) Roy Weimer, MD ’68, met his late wife Janet Friedman Weimer, MA ’67, just before he arrived at Stanford School of Medicine. Within a year of their wedding, Jan joined him at the school. Sandy became a psychiatrist, and Jan practiced as a speech pathologist and audiologist for a time.

A CAREER IN CUISINE

It was graduating from the famed cooking school Le Cordon Bleu Paris that launched Jan’s true calling as a leading food industry author and consultant. Sandy says Jan was “the world’s most encyclopedic mind on food.” A prolific food writer, she was *Bon Appétit* magazine’s executive food editor in the 1980s. Among other roles, she was also

She kept her illness largely confidential, so it would not interfere with her career or burden her friends, and kept working despite side effects from chemotherapy.

a featured guest on cooking shows, such as that of Wolfgang Puck and Martin Yan. Jan’s design book, *Kitchen Redos, Revamps, Remodels, And Replacements: Without Murder, Madness, Suicide, or Divorce*, is considered definitive, and she wrote or co-authored four other books on food and cooking.

PRIVATE ILLNESS, PUBLIC LEGACY

Jan died in 2007 after being treated for breast cancer for 15 years. She kept her illness largely confidential, so it would not interfere with her career or burden her friends, and kept working despite side effects from chemotherapy.

Before she passed away, Jan discussed with Sandy her desire to help other women suffering from cancer. Sandy decided to honor Jan’s memory by making a bequest of their shared estate to endow a fund dedicated to breast cancer research at Stanford. He says, “It is a good way to make a commitment and leave a legacy. It encourages people to think about the future.”

FRIENDSHIP LIGHTS THE PATH

The couple’s long friendship with Sandy’s classmate Ronald Levy, MD ’68, provided Sandy with the ideal partner for exploring options to accomplish his goal. Ron Levy, MD, the Robert K. and Helen K. Summy Professor in the School of Medicine, is chief of Stanford School of Medicine’s division of oncology and a member of the Stanford Cancer Center senior leadership. Together, the physicians conceived of a fund that will, at first, support successive junior faculty members conducting breast cancer research and that will, potentially, support a professorship, named for Jan, in breast cancer. Sandy pledged

an initial \$1 million to the Jan Weimer Faculty Support Fund and is working to enlist gifts from others.

The first recipient of support from the fund is Allison W. Kurian, MD, MSc, assistant professor of medicine-oncology and of health research and policy at the medical school and a researcher at the Stanford Cancer Center. Her work focuses on identifying groups at high risk for breast and ovarian cancer and on developing techniques for early cancer detection and risk reduction.

AN APPETITE FOR CULTURE

Jan was a devoted volunteer for the arts, including helping the chamber music ensemble Camerata Pacifica expand their audience. As a patron of the Camerata, Sandy decided that partnering with the ensemble would be a wonderful way to bring together potential donors in support of the Jan Weimer Fund (<http://www.janweimerfund.org/>) while introducing new listeners to the group. In 2008, they held three events, and they are planning more in 2009, including the second Annual Jan Weimer Memorial Concert at the Los Angeles Music Center.

A CODA

Sandy reports that you could always tell Jan’s writing by “a sense of her chortling” that came through. He is now pleased to regard the fund as “a perpetual reminder of that zany, brilliant, dedicated lady.” ♡

(Pictured above) Sanford (“Sandy”) Roy Weimer, MD, and Janet Friedman Weimer in Paris, their favorite city.

Just 20 years ago, the lack of an immunological response against cancer was thought to be inherent, permanent and irreversible.

Harnessing the Immune System to Fight Cancer

By James Chen

The immune system regularly produces an army of antibodies to protect the body from infections. Under normal circumstances, this unique defense mechanism is more natural and effective than any drug. However, the immune system does not generally fight off cancer. In fact, most tumors grow and spread even in the presence of a seemingly normal immune system.

Because cancer cells are very similar to normal body cells in that they have almost identical constituents, the immune system has difficulty identifying and mounting an attack against cancerous tumors. Just 20 years ago, the lack of an immunological response against cancer was thought to be inherent, permanent and irreversible.

But Professor Edgar Engleman and other researchers at the Stanford Cancer Center have demonstrated that this is not the case. Rather, Dr. Engleman says, the immune system just needs some help to identify cancer cells.

Stanford scientists pioneered the approach of manually triggering the immune system to respond to cancer

in the early 1990s by preparing cancer components in a manner that resulted in their recognition as “foreign” by the immune systems of patients.

Effectively, their research focuses on developing vaccines to treat, rather than prevent, cancer. The idea is, if the immune system can be coaxed into attacking tumors, then potentially all of this system’s weapons, such as killer white blood cells as well as antibodies, could be targeted at the cancer.

MOBILIZING ‘SENTRY’ CELLS

Dr. Engleman, who is director of the Cancer Immunology and Immunotherapy Research Program at the Stanford Cancer Center (cancer.stanford.edu/research/immunology/index.html), and of the Stanford Blood Center, developed the concept of vaccinating cancer patients with tumor substances called antigens coupled with their own dendritic cells. The dendritic cells have the unique ability to introduce such tumor antigens to the immune systems in a manner that results in the recognition and elimination of cancer cells. In the

experiments with mice, dendritic cell vaccines developed in the Engleman lab have been shown to reduce tumor size in advanced colorectal cancer and in malignant melanoma.

The dendritic cell acts like a sentry. It is a rare type of white blood cell that captures and processes foreign substances. Once a dendritic cell is activated by an antigen, causing an immune response, it travels through the lymphatic vessels and presents the antigen to T cells, another type of white blood cell. The immune system then mounts an attack against the particular foreign substance associated with the antigen. Dr. Engleman describes the process as “using the whole array of immune weapons instead of a single drug molecule.”



NEW VACCINE INCREASES SURVIVAL

A dendritic cell cancer vaccine based on research originating in the lab of Stanford scientist Edgar Engleman, MD, has been found to extend survival in patients with an advanced form of prostate cancer, according to a study presented in April at the American Urological Association's 2009 annual meeting.

Engleman is professor of pathology and of medicine at the Stanford University School of Medicine and director of the Stanford Blood Center and the Cancer Immunology and Immunotherapy Research Program at the Stanford Cancer Center.

If approved by the Food and Drug Administration, the vaccine would represent an important proof of principle of Engleman's research—that individualized immune therapies are effective in the treatment of certain cancers.

In a randomized, double-blind, placebo-controlled study of 512 men with advanced, androgen-independent prostate cancer, the vaccine, called Provenge® (sipuleucel-T), prolonged average survival by over four months—nearly twice as long as a standard chemotherapy regimen used in these patients—and increased three-year survival by 38 percent. Moreover, the vaccine produced none of the unpleasant side effects associated with other prostate cancer treatments.

Provenge targets the prostatic acid phosphatase antigen, which is present in approximately 95 percent of all prostate cancers.

“From a scientific perspective, this news is very exciting and very significant,” Engleman said. “As a physician, it would be great to offer such a promising new treatment to cancer patients.”

Prostate cancer is the most common non-skin cancer in the United States and the third most common worldwide. More than 1 million men in the US have prostate cancer, with an estimated 186,000 new cases and about 29,000 deaths annually. ▢



MOUNTING A RESPONSE

As developed in the Engleman laboratory, dendritic cell vaccination is a patient-specific treatment. The patient undergoes a relatively painless procedure, not unlike a blood donation, to extract his white blood cells. From the extraction, dendritic cells are separated, purified and loaded with cancer antigens. When the antigen-packed dendritic cells are injected back in the patient's body, they migrate to the lymph nodes, where they induce an immune response by activating T cells. The immune system thereby begins attacking the cancer.

The concept is simple, but immunological cancer therapy still needs to be refined. For example, not all dendritic cells have the same function, but they all look identical. Some cells activate immune responses; others actually suppress immune responses. The goal is to separate them and use only the activating dendritic cells. (See Research Update, at right).

BROADENING APPLICATIONS

Blood and marrow transplants are useful in the treatment of leukemias and lymphomas, but are not used for solid tumors such as lung, breast and prostate cancer because they are not effective. The reasons for this lack of benefit are not completely understood.

In collaboration with Sam Strober, MD, professor of medicine-rheumatology/immunology, and his colleagues at the Stanford Cancer Center, Dr. Engleman's research group is investigating the use of tumor vaccines in conjunction with blood and marrow transplants. Initial experiments in mice with widely disseminated tumors showed complete recoveries after they received the two-pronged treatment. It appears that irradiating the tumor-bearing mice prior to transplanting them with hematopoietic (blood cell-forming) cells and T cells from mice that had been vaccinated against the tumor accomplishes what vaccination or transplantation alone cannot.

Thus, cancer vaccines, especially those that target or use dendritic cells, hold promise. Although it is too early to make specific guarantees, such vaccines have the potential to become a relatively effective and harmless way of treating many different types of cancers. Dr. Engleman believes that with the help of dendritic cells we may soon be able to precisely harness the untapped potential of our immune systems to fight cancer. ▢

Editor's note: James Chen is a sophomore participating in the Community Writing Project sponsored by the Program in Writing and Rhetoric. He is a student in Dr. Patti Hanlon-Baker's class, Equal Treatment: The Rhetoric of Public Health.



Sally L. Glaser, PhD, named CEO of the Northern California Cancer Center

POPULATION-BASED RESEARCH

Sally L. Glaser, PhD, has been promoted to Chief Executive Officer of the Northern California Cancer Center (NCCC), the only center in the country conducting research dedicated solely to cancer prevention. Dr. Glaser, a research scientist, will continue to direct NCCC's Greater Bay Area Cancer Registry, which collects cancer data for its nine-county catchment area to better understand patterns of cancer occurrence, treatment and survival.

for two of California's ten cancer-reporting regions and aids NCCC in determining the size of the problem of cancer occurrences and death.

The organization also conducts a wide variety of research studies, using data from the registry and other sources to determine the causes of cancer and factors related to survival after cancer. NCCC's distinctive outreach and community education programs actively bring cancer pre-

and health practice interventions in order to maximize the health of individuals and families.

"Cancer surveillance is like an early warning system for the many diseases we call 'cancer,'" said Dr. Glaser.

"It tells us what's happening in the Greater Bay Area and in the state—not just in individual clinics. And while not all cancer can yet be prevented, there is much more we can do to strengthen California's response."

Addressing areas in which NCCC will play a leading role, Dr. Glaser cited ongoing research into the emerging causes of cancers, community outreach, education efforts and programs that promote screenings for early detection when most cancers can easily be treated. The organization is committed to conducting new research studies that point to interventions that can stop cancer before it starts, and continues its leadership in state outreach programs for low-income women. ▢

Cancer surveillance is like an early warning system for the many diseases we call 'cancer.'

Previously, Dr. Glaser served as Director of Surveillance Research at NCCC. She received an AB from Harvard University and an MS and PhD in epidemiology from the University of California, Berkeley.

"NCCC is positioned to be a critical partner in America's revitalized effort to eradicate cancer," said Dr. Glaser, "I'm excited to lead our professional team of researchers and numerous other staff members at the forefront of that mission at NCCC."

NCCC is a nationally recognized leader in researching the causes of cancer and improving cancer detection and prevention. The organization's programs, while multifaceted, all address the inter-related aspects of cancer prevention. Programs include the cancer registry, which tracks all cases

vention services to underserved and low-income communities and improve the quality of life for individuals living with cancer.

NCCC's programs are also integral to the organization's partnership with Stanford University and contribute to the Stanford Cancer Center's National Cancer Institute Cancer Center designation.

The research that comes out of NCCC builds upon established knowledge bases worldwide and contributes to the deepening understanding of how cancer affects the entire population rather than only the individual patient. The organization also examines what can be done to stop the spread of the disease. NCCC works closely with regional, state and national health departments concerned with policy



(Pictured above) Sally L. Glaser, PhD, CEO, Northern California Cancer Center. (Pictured above) Northern California Cancer Center.

Refining Chemotherapy for AML Patients

By Ruth Schechter



Acute myelogenous leukemia (AML) is a fast-growing cancer of the blood and bone marrow in which damaged blood-forming stem cells cannot mature into functional cells. Leukemic cells replace normal bone marrow, resulting in bone marrow failure with a drop in red blood cells and platelets, and elevated, normal or decreased white blood cells. About 13,000 new cases occur in the United States each year, predominantly in older adults.

For most patients, the standard first phase of AML treatment is induction chemotherapy to bring the disease into remission. While chemotherapy appears to be successful in 70 to 80 percent of adults under age 60, only about 50 percent of adults over age 60 show a positive response, and many older patients simply cannot tolerate the high doses of chemotherapy needed to destroy the cancer. For older patients with certain cytogenetic abnormalities, complete response rates are in the 20 to 30 percent range, and most patients relapse within months.

Bruno Medeiros, MD, an assistant professor of medicine-hematology and a researcher at the Stanford Cancer Center, wants to change those statistics. He is leading several clinical trials that are looking at chemotherapeutic combinations that he hopes will identify a better recipe to control AML.

“Patients who relapse or who do not achieve complete remission with induction chemotherapy have an extremely poor prognosis,” he said. “Patients who are not candidates for aggressive induction therapy and are managed by supportive care alone have a median survival of only a few months.”

THE STUDIES

One study involves high-risk patients over age 60 unable to undergo standard chemotherapy to determine whether a drug normally used to treat brain cancer can be used to treat their AML. The drug, temozolomide, is a type of antineoplastic agent that interferes with the

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‘Because AML usually shows up late in life, there is a real need for treatments older patients can tolerate.’

growth of cancer cells. Several preclinical studies have shown that the drug can curtail leukemia cell growth and was well tolerated by patients. Because responses to temozolomide appear to be dependent on the expression of AGAT in malignant cells, Medeiros designed a study to stratify patients according to AGAT promoter methylation.

Previous studies showed that people with low levels of the protein had a good response to temozolomide therapy, while those with high levels of the protein had a poor response.

Medeiros also tracked response to dosage and found that—depending on the patient’s genetic expression—protracted, relatively low doses of temozolomide over a period of two weeks caused a marked deactivation of the protein. The next step will be to expand the number of patient participants to determine tolerance of protracted doses of temozolomide.

Another trial is tracking AML patient response to a combination of two drugs that appear to modify the genetic expression of leukemia cells. Azacitidine is incorporated into a cell’s DNA, inhibiting the ability of its regulation proteins to bind to the genetic material, a process known as DNA methylation—a common alteration in AML. Lenalidomide, a type of thalidomide, is an immunomodulator.

Medeiros hopes to determine how well patients respond to the combined regimen, establish the best frequency and dosage and track short-term patient survival after treatment. The combination may help elderly AML patients respond to treatment and reduce mortality rates in this high-risk group.

“Because AML usually shows up late in life, there is a real need for treatments older patients can tolerate,” he says. “But to design better treatments, we need to also develop a better understanding of the mechanics of the disease. That’s a crucial aspect of improving patient care.” ◻

(Pictured above) Bruno Medeiros, MD, with Natalie Huen, a 12-year survivor of Hodgkin lymphoma.



Helping to Aid Cancer Education While Sending a Shared Message

An interview with the Northern California Cancer Center Community Education Director, Pam Priest Naeve

The Northern California Cancer Center (NCCC) conducts population-based research, working with scientists, academic institutions and community agencies across the United States. With its research partner, the Stanford Cancer Center, the NCCC is dedicated to improving the quality of life of those living with cancer. Currently, the NCCC is creating a comprehensive cancer research and community outreach program in Northern California.

Q: How do you approach different cultures and ethnic groups to best educate them about cancer treatment and prevention?

A: Working with any community requires tremendous time and commitment. In addition to good intentions, we have to go slowly because it takes time to develop trust and respect for and from those with whom we want to work. We look for community spokespersons—patients, families, church groups, civic groups and agencies that already serve the community. We work together, identifying issues, desired outcomes and strategies for addressing problems, and delivering

information and resources that are appropriate to the community/culture.

Q: So, you don't directly contact patients, but, rather, use community liaisons?

A: We have no way to identify individual patients unless they've previously contacted us for information or some type of assistance. Although NCCC operates the Greater Bay Area Cancer Registry for the nine Bay Area counties, the data are totally confidential and individual information is not available to us. We talk with community agencies, hospitals and individuals that address cancer issues to determine if we might be of help, and if so, how we can work together, thus maximizing resources for a common goal.

Right now, for example, one of the “communities” we are working with is the Latino community. There are very few bilingual, bicultural medical oncologists in the Bay Area, so the challenge of delivering clinical information can be formidable.

Some years ago Carmen Ortiz, PhD, a bilingual, bicultural breast cancer survivor and cancer support group leader (now executive director, Circulo

de Vida, San Francisco), recognized the need for a training manual for creating Spanish language cancer support groups. Working with her and several others, we wrote a training manual that addresses how to develop and facilitate a support group, embraces cultural observances, supports the needs of the patients and, at the same time, lays out the responsibilities of the sponsoring agency to provide administrative support and infrastructure to ensure stability of the group.

The goals and objectives of cancer support groups are similar within different populations, but the processes and observances may differ based on community, culture and ethnicity. The guidelines that have been outlined for Latinos are useful anywhere in the country.

Q: What are some of the cultural differences you see?

A: America is an incredible country, with a rich diversity of cultures, languages and cuisines. This richness also makes for great health care challenges. There are more than 50 languages spoken in the Bay Area. According to the 2000 US Census, 60.5 percent of California residents speak only English; 39.5 percent of California households speak a language other than English at home. One third of Californians are Latino; 25 percent of California residents are foreign-born. A 2008 marketing survey showed that approximately 20 percent of all US households lack an

(Pictured above) Pam Priest Naeve, director of community education (left), and Pamela A. Ratliff, MPA, manager, community education program, NCCC.

Cultural richness also makes for great health care challenges.



CULTURAL AWARENESS

internet connection and have never used email.

Finances and medical insurance are issues for almost everyone, but there are additional concerns in certain cultures. In the Latino population, for example, families discuss medical decisions together. This process may extend the decision-making time and the treatment initiation date, thus frustrating health care providers.

Another issue that needs to be considered is how difficult or complicated it may be to get someone to and from the doctor's office. Then there are needs for translation services and day care. And there are issues of nutrition—some

also work with several designers who have identified graphics that relate to all Spanish cultures, so we only need one set of designs. Together we develop print materials and educational programs that include bilingual, bicultural speakers. And, we invite patients and families, include music (important to Latino culture) and provide practical information to help them understand cancer issues.

We offer these programs in San Jose, Fremont and Oakland. We've moved away from the more clinical approach about specific cancers to work with health educators, social workers, patients and families who learn to

includes suggestions and observations of families and patients who have lived with cancer. It's available in English and Spanish editions, and it's very popular.

We also have a strong and growing relationship with the Bay Area African American community, and it has been developing for many years. The African American community has a complex relationship with the American medical system, going back many years. We honor that and have partnered with other agencies that are well known and well respected in the community. And, much like the Sobrevivir Collaborative, we all work together—each agency doing something specific.

Cancer affects populations differently—cancer incidence and survival rates differ. Thus, we target audiences individually.

foods don't interact with certain medications and can play havoc with the stomach. If a patient is from a culture that uses lots of healing herbs, she may not realize that the herbs and medications may interact and may change the potency of the cancer treatment.

NCCC has been very fortunate to be working with Beatriz Bravo, LCSW, at the Stanford Cancer Center and with a community collaborative called Sobrevivir that involves about 15 Bay Area agencies (including Stanford). We

advocate for themselves and others in a system that doesn't speak their native language. We educate them on working with doctors—how to ask questions, particularly about medications, and exercise their patient rights during cancer treatment and deal with disability insurance issues.

Cancer affects populations differently—cancer incidence and survival rates differ. Thus, we target audiences individually. NCCC has produced a small booklet called "Living with Cancer." It

Q: What is the universal message that you try to send to all groups?

A: That patient advocacy and informed decisions are very important to cancer care, survivorship and quality of life. Cancer affects everyone—the patient, the parent, the child, the spouse, the neighbor, the friend. Life does go on after a cancer diagnosis. It just goes on differently. ▽

Editor's note: This interview was conducted by Heather Alcorn, a Stanford student participating in the Community Writing Project sponsored by the Program in Writing and Rhetoric. She wrote this article for Dr. Patti Hanlon-Baker's class, Equal Treatment: The Rhetoric of Public Health.

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AWARDS

Howard Chang Receives Two Prestigious Awards for Research

Howard Chang, MD, PhD, was named the inaugural recipient of the Vilchek Prize for Creative Promise. The \$25,000 award, created to honor foreign-born individuals 38 years old or younger in the fields of biomedical science and the arts, was presented in ceremonies in New York in early April but was announced in February.

Chang is also one of three Stanford University researchers to be appointed to six-year terms as the inaugural class of Howard Hughes Medical Institute Early Career Scientists. These

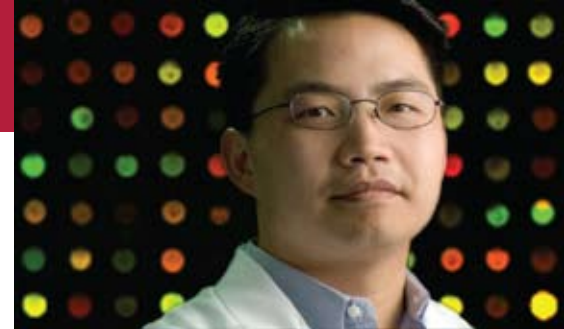
appointments cap a keenly competitive selection process, at the end of which 50 young investigators at the pinnacle of their productivity were chosen from among more than 200 institutions nationwide.

Chang is associate professor of dermatology at the Stanford University School of Medicine, principal investigator in the Program in Epithelial Biology and a researcher in the Stanford Cancer Center. His laboratory probes the basis of site-specific differences in human skin, resulting in novel insights

into modes of gene control that extend from cancer treatment to aging.

The Chang group has discovered critical information about cell regulation. More specifically, cells record their positional identity in human tissues, and the “perturbation” of such spatial programs plays a major role in cancer progression, especially in metastasis, or cancer spread.

The Howard Hughes award will support the Chang laboratory’s research on the function of long, non-coding RNAs. ▽



(Pictured above) Howard Chang, MD, PhD, associate professor of dermatology.