

Skin Cancer: A Hidden Epidemic

Skin cancer is the most frequently diagnosed form of cancer in the United States. There are the three common types of skin cancers: basal cell carcinoma, squamous cell carcinoma, and melanoma. Basal cell carcinoma occurs most often but rarely spreads to other parts of the body, while malignant melanoma is the deadliest and more likely to spread to other organs. The National Cancer Institute reports that each year more than 68,000 Americans are diagnosed with melanoma. Additionally, more than two million people are treated each year for basal cell or squamous cell skin cancer, with 20 percent being squamous cell cancers. Non-melanoma skin cancers, including basal cell and squamous cell carcinomas, are very common in Hawai'i, with over 5,000 cases diagnosed each year.

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Dear Friends,

It is my pleasure to provide an update on some significant events occurring at the University of Hawai'i Cancer Center.



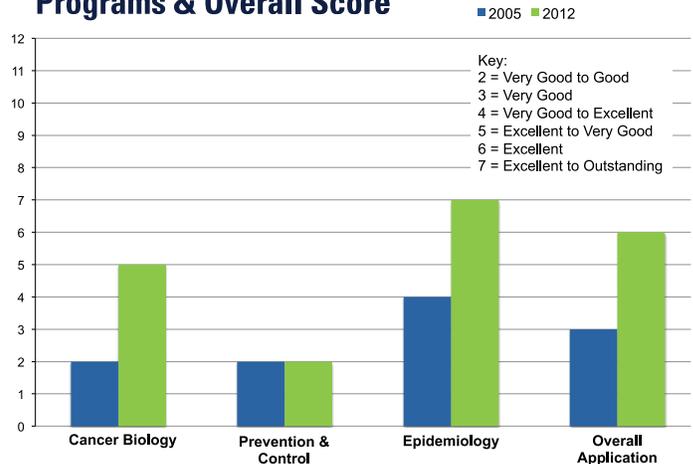
In the fall of 2011, the Cancer Center applied for renewal of our core operational grant, the P30, with the National Cancer Institute (NCI). The P30 is vitally important to preserve our Center's infrastructure and maintain the resources and the prestige necessary to keep our research programs competitive with the other 65 NCI-designated cancer centers.

In February 2012, the Cancer Center hosted a team of reviewers from the NCI for a site visit held in conjunction with our P30 submission. The visit provided the NCI with an opportunity to learn more about the overwhelming support and confidence in the Center's continued growth by the University of Hawai'i, the Hawai'i State Legislature, the Hawai'i Cancer Consortium, healthcare associations, hospitals, and other community partners. The site visit also allowed the Cancer Center to demonstrate the substantial progress it has made in implementing the essential changes that were required by the NCI.

I am glad to report that we received an overall final rating of Excellent, and we have been recommended for a full five years of NCI P30 funding. However, the most important achievement is that the NCI renewed our P30 grant, and our exceptionally prestigious NCI Cancer Center designation is retained. We need this NCI designation to continue to grow, to attract and retain the top cancer researchers and physicians, to have access to multiple NCI resources, and ultimately to give Hawai'i a first-rate Cancer Center.

The table below shows the significant improvement in the scores that the Center received this February (in green) as compared to our scores in 2005 (in blue). Congratulations are due for this remarkable achievement, and I want to thank everyone for your help and support.

Programs & Overall Score



Another important item is the progress on our new Cancer Center facility in Kaka'ako. The construction is ahead of schedule with completion anticipated by September 2012. We will move into the new facility during the months of October-January. We are building more than just research labs—we are building a community where researchers, students, and staff work together cooperatively. Today's research requires experts to share knowledge and resources in a collaborative environment. With the new Center, we will have an opportunity to facilitate these interactions in our new environment. Jeff Nakamura, the building architect, designed large open spaces to foster interactions and collaborations among faculty, students, and staff. In addition, Jeff took great care to design the building and its interior to reflect the wonderful culture of Hawai'i.

Thanks to all of you who have rallied behind the Cancer Center's mission and helped us so much.

Michele Carbone, MD, PhD
 Director

NEW FACES *at the* CANCER CENTER

Dr. Herbert Yu Provides Fresh Leadership to Cancer Epidemiology Program

Herbert Yu, MD, PhD, joined the UH Cancer Center in January as the director of the Cancer Epidemiology Program and associate director for Cancer



Control and Population Sciences. He brings to the Center nearly 30 years of cancer research experience. Yu's research interest in host-environment interactions leading to cancer will complement the program's longstanding research focus on genetics, lifestyles, behaviors, ethnic diversity, and other cancer risk factors.

Before joining the Cancer Center, Yu was a professor with the Department of Epidemiology and Public Health at Yale University School of Public Health and School of Medicine. His research focuses on gene-environment interactions in carcinogenesis, molecular changes in tumor progression, and epigenetic alterations in relation to cancer risk and patient survival.

He received his medical degree from Shanghai Medical University in China and went on to receive his master of science degree in epidemiology and doctorate in clinical biochemistry from the University of Toronto.

David Mori Appointed Director of Development for UH Cancer Center

The UH Foundation recently announced the appointment of David Mori as the new director of development for the UH Cancer Center. Mori



will be responsible for the identification, cultivation, and stewardship of individuals, corporations, and foundations for major gifts to the Center. He will also provide leadership on campaigns and special projects for major gifts that will support the Center's research efforts.

Mori comes to the Center with extensive corporate and non-profit experience in the Japanese and Canadian markets. He served as co-founder, CEO, and director of Piku Media Company, Ltd., the first group-buying business in Japan. He was also co-founder, CEO, and director of the English OK Company, Ltd., Japan's first service-English training company and Japan's premier service business online directory, EOK.jp. In the non-profit sector, Mori was president and director of the Entrepreneur Association of Tokyo NPO since May 2003 which he founded to promote and support entrepreneurship in Japan.

Francis Blanco Joins Center as New Director of Facilities

The completion of the new Cancer Center facility is expected in late September.



The hiring of Francis Blanco as the Center's director of facilities is timely. He will oversee the move of personnel and research activities into the new building. In his position, Blanco is responsible for management of the support services necessary to operate and maintain the Cancer Center. He will oversee building facilities maintenance, parking, custodial services, laboratory support, and safety compliance.

Blanco was most recently the director of campus operations at the UH John A. Burns School of Medicine. He has also served as the director of project planning/facilities, and facilities director with the medical school.

Blanco received a degree in Business Administration from the University of Hawai'i. He was previously a Presidential appointee of the Clinton administration to the U.S. Department of Agriculture in Hilo.

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Cutaneous squamous cell carcinoma (SCC) arises from the skin cells that form the epidermis, the outermost layer of the skin. SCCs are mainly caused by chronic, cumulative exposure to UV radiation over the course of a lifetime.

Anyone can get skin cancer including individuals with dark skin, however, those at highest risk are fair-skinned people with light or red hair and blue, green, or gray eyes. In addition to exposure to UV radiation from the sun or tanning beds, other risk factors for SCC include chronic skin inflammation (ulcers) and skin trauma (burns), anti-rejection drugs used in organ transplantation, and some viruses (certain types of human papillomavirus). SCCs occur two times more frequently in men than women, rarely occur before age 50, and are most often seen in individuals in their 70s. When diagnosed early, this cancer is treatable by surgery, but left undiagnosed and untreated, it can spread to other organs.

Patricia Lorenzo, PhD, an associate professor at the UH Cancer Center, is studying cellular events that go awry during SCC development. She received a five-year \$1.4 million grant to explore the role of a protein called RasGRP1 that regulates the Ras pathway. The Ras pathway is a sequence of biochemical reactions that cause cancer to form or develop, and to which SCC appears to have an affinity or "addiction." In healthy skin cells, Ras plays an important role in cell reproduction. In SCC, Ras is over activated, driving reproduction signals out of proportion and contributing to tumor development. Although previous attempts to control Ras have been made through therapeutic interventions, Ras has proven to be a poor target for drugs. Lorenzo said further study of the RasGRP1 pathway in skin would be critical not only to understand its role in SCC, but also to validate further investigations of this protein as a molecular target to develop effective treatments and chemopreventive strategies.

TRANSLATING LABORATORY DISCOVERIES TO THE PATIENT CARE SETTING

The Clinical and Translational Research Services Shared Resource of the UH Cancer Center provides central management and oversight of all clinical trials activities including those conducted by its Hawai'i Cancer Consortium hospital partners. The CTRS shared resource offers a range of management and quality control functions that are essential for delivering clinical trials research in Hawai'i's community, where there is no centralized practice setting. It includes a central location for all cancer protocols, a centralized database of protocol-specific data, an updated list of currently active studies for the use of investigators, and status reports of studies. It also functions as a coordinating office for activating and monitoring studies for Hawai'i's decentralized cancer clinical trial providers.

The primary scientific goal of the Clinical and Translational Research Program is to translate discoveries of the Center's research so they can use them in the patient setting. By so doing, it will generate innovative, high-impact clinical/translational research. This research will substantially reduce the burden of cancer for the people of Hawai'i and elsewhere using opportunities afforded by: (1) Hawai'i's multi-ethnic populations with unequal cancer risks and (2) medicinal properties of Hawai'i's flora and fauna.

The Consortium is comprised of the UH Cancer Center, The Queen's Medical Center, Hawai'i Pacific Health, UH John A. Burns School of Medicine, and Kuakini Health System. These organizations agreed to share medical expertise, resources, technology, and a financial investment in this joint effort to fuel innovative research and deliver world-class cancer care in Hawai'i. Each consortium partner makes an annual financial pledge based on its size and capacity. These resources are then directed to the areas of greatest need such as recruitment of expert physicians and scientists, technology to support consortium activities, and sponsorship of promising and novel cancer research projects.



NEW SMARTPHONE APPLICATION A PROMISING RESOURCE

The UH Cancer Center's own, Carol Boushey, director of the Nutrition Support Shared Resource, is leading a team from Purdue University to develop a smartphone application that analyzes nutritional information about food items captured within the snap of a picture.

The application is called the Technology Assisted Dietary Assessment system, or TADA. Users snap before and after pictures of their food plate. The application sends the image to a server to determine the food's identity and portion size for nutrient analysis. The information is sent back to the user to confirm or adjust the labels of the food identified. It provides information on the amounts of calories, protein, fat, and carbohydrates in the picture, making it easier for individuals to improve their diets and health.

"Our first goal in developing this system is to provide researchers an enhanced method of measuring diet. Part of the confusion surrounding the link between diet and disease, including cancer, is a result of the inability to accurately assess usual dietary intake. We are optimistic that our tool will, when fully functional, provide this feature. This application has great potential to support ongoing work at the UH Cancer Center that explores the role of diet in cancer," Boushey said.

Boushey joined the Epidemiology Program in May of 2011. Development of the smartphone application was her brainchild while at Purdue.

UH Cancer Center Receives \$50,000 from the Ladies Auxiliary to the Veterans of Foreign Wars

In February the Ladies Auxiliary to the Veterans of Foreign Wars (VFW) presented a \$50,000 gift to the University of Hawai'i Cancer Center. The monetary gift was presented by Ladies Auxiliary VFW President Gwen Rankin to Cancer Center faculty members Jeffrey Berenberg, MD, and Erin Bantum, PhD. The award will benefit cancer research for members of the military and veteran communities.



Jeffrey Berenberg, MD and Erin Bantum, PhD, receive a \$50,000 gift from Gwen Rankin, Ladies Auxiliary VFW President.

“We are grateful for the generous gift from the Ladies Auxiliary to the Veterans of Foreign Wars,” said Berenberg. “The money will go a long way in promoting cancer research for the valued members of our military and veteran communities.”

“This is great news for the Cancer Center,” added Bantum. “I applaud the Ladies Auxiliary to the Veteran’s of Foreign Wars for their continued support of cancer research.”

Since 1947, the Ladies Auxiliary to the Veterans of Foreign Wars has raised over \$100 million for the Cancer Aid and Research Fund that supports over 100 separate research centers. Established in 1914, the members of the Ladies Auxiliary VFW have committed to serving veterans and their families, promoting pride in America, teaching young people about the cost of freedom, and serving the military community.

For more information about gifts to the UH Cancer Center, please call 808-356-5757 or visit www.uhcancercenter.org.

Young Scientists Shine at 101st Annual Meeting of the American Association for Cancer Research

Several young investigators from the UH Cancer Center joined over 15,000 other scientists from around the world at the 2012 Annual Meeting of the American Association for Cancer Research (AACR) in Chicago on March 31-April 4. The AACR is the world’s first and largest professional organization dedicated to future advancement in cancer research and its mission to cure cancer. The organization plays an integral role in providing expertise and collaboration amongst researchers. This year’s theme was “Accelerating Science: Concept to Clinical.”

Zeyana Rivera, PhD, and Lauren Fonseca were among 44 researchers to receive the Minority Scholar in Cancer Research Award. Dr. Rivera’s abstract titled, “CSPG4 as a target of antibody-based immunotherapy for malignant mesothelioma,” received overwhelming interest and attention during her poster session. Fonseca, a graduate assistant in the lab of Patricia Lorenzo, PhD, was selected to receive her award based on her abstract titled, “RasGRp1 induces autophagy in primary epidermal keratinocytes



Zeyana Rivera



Lani Park

resembling fail-safe mechanisms triggered by oncogenic Ras.”

Iona Cheng, PhD, assistant professor in the UH Cancer Center’s Cancer Epidemiology Program presented a poster titled, “Pleiotropic effects on lung cancer of genetic susceptibility variants identified for other malignancies: The Population Architecture using Genomics and Epidemiology Study.”

Lani Park, PhD, post-doctoral candidate in the lab of Herbert Yu, PhD, gave a presentation at a mini symposium titled, “Effect of cancer susceptibility variants on risk of multiple primary cancers: results from the Multiethnic Cohort and PAGE studies.” She also received an AACR-Bristol-Myers Squibb Oncology Scholar-in-Training Award for this work.

Sandro Jube, PhD, post-doctoral candidate in the lab of Michele Carbone, PhD, presented a poster titled, “High mobility group box 1 secretion supports tumor progression of human malignant mesothelioma.”

I Love the Skin I'm In Campaign Targets Youth

This year's skin cancer awareness campaign theme was "*I Love the Skin I'm In*." It was the first year the Cancer Center targeted a younger audience, specifically 13 through 25 year olds, in hopes to instill behavioral changes for safe skin practices.

The campaign featured a t-shirt design contest in partnership with Xcel, a Hawaiian company that focuses on manufacturing UV (sun-protective) apparel. The contest encouraged Hawai'i's youth to design a t-shirt to motivate their peers to fight against skin cancer. The winning design is printed on an Xcel sun-protective shirt and being sold in Xcel stores this summer.

In celebration of skin cancer awareness month, Xcel announced the contest winner at the *I Love the Skin I'm In* campaign kick-off event on May 12 at the Kapi'olani Park bandstand in Honolulu. The event featured live entertainment, food, free skin cancer screenings, and cancer education materials.



L to R: Mia Anduha, finalist from Mililani High School; Regina Prudenciano, Grand Prize winner from Maui High School; and Ryan Mart Bartolome, finalist from Maui High School.

The campaign is part of a partnership between Xcel and the UH Cancer Center in the fight against skin cancer. In 2008, Xcel began donating a portion of sales from the Ventx sun-protection line to the UH Cancer Center's Skin Cancer Prevention Fund. The fund supports the development of community-based skin cancer education programs and is managed by the Friends of the UH Cancer Center. To date, Xcel has awarded more than \$32,000 to the Cancer Center.

DR. MURPHY HONORED FOR STELLAR CONTRIBUTIONS TO SPECIALTY IN NUTRIENT DATABASES

Suzanne Murphy, PhD, UH professor emeritus, was awarded the 2012 Outstanding Lifetime Achievement in the Area of Nutrient Databases at the 36th National Nutrient Databank Conference (NNDC) in Houston, Texas. The Conference is held annually to foster communication among nutrient database generators and users. The use of food composition data is essential to understanding the impact of nutritional factors and exposures on why people get disease and how disease can be prevented or treated. Food composition data are critical for understanding what and how much people eat. The conference participants are the scientists that create and maintain these nutrient lists.



Murphy, who has a PhD in Nutrition and is a Registered Dietician (RD), has served on numerous NNDC committees since 1994. She joined the Cancer Center in 1999 and served as the director of the Center's Nutrition Support Shared Resource until her retirement in 2011. She continues her work at the Center as a professor emeritus.

This prestigious NNDC award is not bestowed every year. At the conference Murphy also served as the keynote speaker presenting, "Aligning Food Composition Tables with Current Dietary Guidance for Consumers." Past award recipients include the UH Cancer Center's Jean Hankin, PhD.

REACHING OUT TO KAUA'I

The UH Cancer Center brought "New Frontiers; Unraveling Cancer in Hawai'i" to Kaua'i Community College. Over 90 people attended. A panel comprised of UH Cancer Center experts and Katarina Leckova, MD, hematologist/oncologist with Kaua'i Medical Clinic, addressed cancer epidemiology, treatment, and quality of life. Mililani "Mels" Tejada shared her cancer survivor story as a clinical trials participant and provided song and ukulele music during lunch. Maryanne Kusaka, former Kaua'i mayor, moderated a lively panel discussion. This was the second in a series of neighbor island educational events hosted by the Center with support from the Friends of the UH Cancer Center.



MAKING THE MOST OF A SECOND CHANCE



Karin Villaneuva calls her son Nicolas a ‘miracle baby.’ At three months of age, doctors found a lump in his liver that was diagnosed as hepatoblastoma, a rare form of liver cancer that occurs in children from birth to age three. He was given a slim chance of making it through surgery, but Nicolas beat the odds and survived.

Hoping to prevent their son’s cancer from recurring, Nicolas’ parents accepted the recommendation of his pediatric oncologist and enrolled him in a clinical trial conducted by the University of Hawai‘i Cancer Center. Over the next year, he received progressive and cutting-edge treatment that involved nine courses of chemotherapy prescribed by the study.

For many years after Nicolas’ diagnosis, Karin blamed herself for her son’s cancer, believing that she had done something wrong during her pregnancy. However, supported by her strong Catholic faith, she came to believe that God had a plan for Nicolas and gave him a gift—a second chance at life. With that belief in mind, his parents raised Nicolas to understand the importance of giving back to others. “During my childhood I basically grew up in the hospital, but this allowed me the opportunity to spend time with and help other patients who weren’t as fortunate as me. It also helped me understand how lucky I really was.”

While growing up, Nicolas continually amazed his parents as he thrived and embraced life with excitement

and enthusiasm in everything he did. Although small in stature and unassuming in nature, he made friends readily, excelled in academics, and was fearless in exploring new experiences. That included everything from sports to art and music as well as what was most dear to him—volunteering and performing community service.

What makes Nicolas’ parents most proud is his pursuit of a medical career. As a child, he asked his mom if he could become both a doctor and a chef since Nicolas enjoyed cooking with his mother. But his strong desire to help others influenced his decision to pursue a career in medicine. Today, Nicolas is closer than ever to achieving his dream of giving back to others. He is a fourth-year medical student at the UH John A. Burns School of Medicine with the hopes of becoming an oncologist. He has already collaborated with Dr. Bruce Shiramizu, a pediatric oncologist, to research childhood leukemia. “My doctor told me that if it weren’t for basic cancer research, I wouldn’t have received the treatment I got as a child,” says Nicolas. “As a medical student, I’m learning just how important research is to understanding diseases so we can help develop new treatments.”

The clinical trial that Nicolas’ doctors and parents enrolled him in as a child gave him a chance to live and learn. Now he has the chance to give others that same opportunity. The message his mother Karin would like to impart to other parents of children with cancer is to “never give up.”



UNIVERSITY OF HAWAI'I
CANCER CENTER

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A Cancer Center Designated by the National Cancer Institute

Innovations is a community publication of the University of Hawai'i Cancer Center, produced quarterly with support from the Friends of the UH Cancer Center. If you have comments or suggestions, please call 808-586-3010 or visit www.uhcancercenter.org.

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Quest Event Sheds Light on Research Impact in Cancer Survival

The second annual Quest for a Cure: Progress in Cancer Research event was held June 2nd at the Hawai'i Prince Hotel. The University of Hawai'i Cancer Center's goal was to educate and excite the audience about the ongoing research at the Cancer Center. The discoveries the scientists contribute to the collective body of global knowledge on cancer help improve the lives of the people of Hawai'i. Keahi Tucker, news anchor for Hawai'i News Now, served as emcee and moderator of an expert panel consisting of UH Cancer Center's David Ward, PhD, director of Basic Science and Translational Research; Suzanne Murphy, PhD, professor emeritus, Cancer Epidemiology Program; James Turkson, PhD, Professor, Cancer Biology Program; and Erin Bantum, PhD, assistant professor, Cancer Prevention and Control Program. Rounding out the panel were Melvin Palalay, MD, hematologist-oncologist with OnCare Hawai'i and Cathrine Blanch, cancer survivor and clinical trial participant.

CALENDAR

July 27
4th Annual Translational Symposium
This symposium will present cutting-edge research on tobacco control and obesity interventions for cancer prevention treatment. This event will also strive to present new ideas and strategies used in the design and development of novel interventions. The keynote speaker will be Waun Ki Hong, MD. He heads the Division of Cancer Medicine at the University of Texas, MD Anderson Cancer Center. This event is open to the public with an entry fee of \$40. CME credits are available for medical professionals. For more information or to obtain a symposium brochure:
Call: Jean Arakaki at 808-691-4406
Email: cme@queens.org

September 7-9
West Hawai'i Cancer Symposium
This is an annual cancer symposium offering education for healthcare professionals. It highlights different cancer sites each year.

September 8-9
Four Seasons Hualālai Taste of Hawai'i Dinner and Run for Hope
Proceeds from both events, as well as tennis and golf tournaments, are donated to the Friends of the UH Cancer Center to help further cancer research in Hawai'i.

October 8-10
Pacific Global Health Conference
This conference will bring together academics, policymakers, and practitioners from Hawai'i and the Pacific to share research, discuss current issues, develop strategies for the future, and increase avenues of communication.