

Miss Greek 2011

Fueling world-class research

Imagine a future where cancer and related diseases are eliminated as causes of human suffering and death. Achieving that future is the mission of Fred Hutchinson Cancer Research Center, an undertaking made possible by generous supporters like you.

Miss Greek fuels the progress our investigators make toward this goal each day, whether it's identifying new risk factors for disease, improving detection strategies and treatments, or improving survivorship for cancer patients. Hosted by the Gamma Mu chapter of Delta Tau Delta Fraternity on the University of Washington campus, the Miss Greek Pageant celebrated its 25th anniversary in 2011. This remarkable event has raised more than \$1.4 million to further the Hutchinson Center's lifesaving research.

We are proud to highlight some of our accomplishments for you, and we are grateful to you for helping make them possible through your contributions.

New findings for women's health

Dr. Andrea LaCroix and her colleagues have completed a landmark Women's Health Initiative follow-up study that promises to help women and their doctors make more informed decisions about hormone therapy in the future. The researchers studied postmenopausal women with prior hysterectomy who took either estrogen-only or a placebo for about six years and found that some health effects linked with estrogen, including an increased risk of stroke, appear



DR. HANS-PETER KIEM

to fade when women quit taking estrogen pills. The team also found that risk of heart attack varied by age while the risk of breast cancer was reduced, regardless of age, among the study participants who used estrogen.

Safer therapy for brain cancer patients

Dr. Hans-Peter Kiem and colleagues have developed an approach that could make chemotherapy safer and more effective for brain cancer patients. The team introduced a chemotherapy-resistant gene into cells that give rise to the bone marrow and blood, which are particularly vulnerable to the toxic effects of chemotherapy, and then gave those modified cells to patients with glioblastoma, a terminal form of brain cancer. The results to date are encouraging: The first patient is still alive and without evidence of disease progression almost two years after diagnosis. By shielding patients from side effects that normally limit the amount of anti-cancer drugs that can be administered, this novel approach could enable doctors to more effectively use existing treatments and potentially improve survival for brain cancer patients.

Dietary fats and prostate cancer risk

In the largest study ever to examine the association of dietary fats and prostate cancer risk, Dr. Ted Brasky and colleagues found that men with the highest omega-3 levels have two-and-a-half-times the risk of developing aggressive, high-grade prostate cancer compared to men with the lowest omega-3 levels. Conversely, high levels of trans-fatty acids, which have been linked to inflammation and heart disease, were associated with a lower risk of high-grade prostate cancer. The results surprised the researchers, who expected to find just the opposite based on the observed link between chronic inflammation and several cancers. Their groundbreaking work sheds valuable new light on the complex relationship between nutrition and disease risk.

Colon cancer prevention

The most comprehensive report on colon cancer risk ever published concludes that red and processed meat increase risk of the disease and high-fiber foods offer protection. Dr. Anne McTiernan served on the nine-member expert panel that estimated that about 45 percent of colon cancer cases — more than 64,000 in the U.S. each year — could be prevented if we all ate more fiber-rich plant foods and less meat, drank less alcohol, exercised more and stayed lean.

Discovery enhances treatment

Dr. Chu Chen and colleagues have identified a set of four genes that signals when oral cancer has spread to lymph nodes in the neck. Doctors currently use tumor size as an indicator of potential cancer spread, or metastasis, but the method is imperfect and can lead to unnecessary surgeries to remove lymph nodes. Dr. Chen's discovery that the four-gene signature outperforms tumor size as a predictor of metastasis among patients with no clinical signs of disease spread could give doctors a more accurate tool, reducing the number of false positives and sparing patients unnecessary surgeries.

Improving survivorship

Many patients who undergo bone marrow or blood stem cell transplants experience declines in mental and fine motor skills, or "chemobrain," due to the toll of their disease and its treatment. Dr. Karen



DR. ANNE MCTIERNAN

Syrjala recently found that while most patients can expect a return to normal motor and memory function within five years, some deficits in fine motor skills and verbal memory may persist. The findings will help improve care by giving both patients and their health care providers a clearer understanding of what to expect over the course of long-term survivorship.

Insights gained through fundamental research

Cell biologist Dr. Valeri Vasioukhin and colleagues have discovered a new drug target for squamous cell carcinoma, the second most common form of skin cancer. Researchers found that a protein called alphacatenin acts as a tumor suppressor by regulating a second protein known as Yap1, which, if activated, can cause cancer. The discovery adds to scientists' understanding of how cells control their growth and opens the door to new therapies for squamous cell carcinoma that specifically target Yap1.

Thank you

The Hutchinson Center thanks Delta Tau Delta, the University of Washington Greek community and you for partnering with our world-class researchers.

>> Save the date

Miss Greek Pageant

Sunday, April 22, 2012

www.fhcr.org/missgreek