



University of Colorado Cancer Center

Translating Science into Life

While CancerCure members are continuing to fund the Endowed Chair for Cancer Prevention and Control through their annual gifts, the Endowed Chair principal fund is earning interest that is available to support current research at CU Cancer Center. Last year Dr. Tim Byers, Associate Director of Clinical and Community Cancer Prevention and Control, presented CancerCure with four proposals for the use of these distributed earnings. CancerCure decided to support two of these projects, their progress is summarized below. With seed money from CancerCure, these researchers will hopefully be able to leverage early results into larger grant funding from the National Cancer Institute (NCI), multiplying the impact of this initial support. *These are early examples of how your support of the Endowed Chair in Prevention and Control will fund world-class research at the University of Colorado Cancer Center for years to come.*

Peter Kabos, MD (CU School of Medicine)



The funding from CancerCure has given us an opportunity to pursue a high risk, high reward project. We set out to identify pieces of the genetic code freely floating in patients' blood samples, called cell free DNA. The idea was to see if we can define early markers of breast cancer by a simple blood test and ultimately avoid yearly mammograms in women. We are happy to report that we can identify small fragments of DNA in each of the samples we have tested so far, whether from normal controls, early stage breast cancer or patients with metastatic disease. More importantly, we can also identify changes in the genomic code from this information. This personalized data can be very useful for detection of new cancers or can be used to follow patients with known cancers who are receiving treatment. In addition, we can achieve good enough resolution to identify parts of the genetic code that are being actively used. We are now analyzing this information, putting it into algorithms that will help us tell a normal condition from cancer.

At this time, we are gearing up to expand the number of normal and cancer samples for analysis. This will give us the opportunity to make calls with higher confidence. We are planning to use this data and submit an NIH application in the next 6 months.

Rebecca Sedjo, PhD (Colorado School of Public Health)

The Exercise and Nutrition to Enhance Recovery and Good Health for You (ENERGY) trial is the largest weight loss trial completed to date among breast cancer survivors. After 6 months, there was a 6% and 1% weight loss in the intervention and control groups, respectively. Using blood samples from a subset of patients in this trial, biomarkers were assayed and we found significant differences in changes between the intervention and control groups in biomarkers of hormonal control/growth pathways (FSTL3, SHBG) and energy metabolism (leptin, insulin, c-peptide) indicating that weight loss at six months affects several biomarkers that potentially impact cancer control.



“With your continued support, we are advancing research to not only treat and eradicate cancers, but also prevent them from occurring and diagnose them while most treatable. You make this possible with your gifts to CancerCure and the Endowed Chair for Cancer Prevention and Control.”
- Dr. Dan Theodorescu, Director, University of Colorado Cancer Center