Susan G. Komen
Research Grants – Fiscal Year 2014

This research grant was approved by Komen's national board of directors for FY2014 Research Programs funding. This grant will be funded upon the execution of grant agreements between Komen and the grantee institutions.

Translating biology into therapeutic advances

Investigator(s): Lisa Carey, M.D.
Lead Organization: University of North Carolina at Chapel Hill
Grant Mechanism: KS **Grant ID:** SAC110006

Public Abstract:
Cellular traits which aren't present in normal breast tissue from non-cancer patients (Troester et al, Clinical Cancer Rees, 2009). Support from this grant will allow us to expand upon previous research by comparing breast tumor tissue with nearby non-tumor breast tissue. Comparing the different types of tissue will help determine if breast cancer metastasized (spread to other parts of the body from the initial breast tumor) as a reaction to the tumor's presence or if the breast tissue exhibited independent traits that contributed to metastasis. With previous Komen support we were able to formally organize an organ and tissue donation program for stage IV patients with breast cancer and want to continue this important project. This study allows patients to donate tissue through a rapid autopsy where tissue is taken within a short time frame after death and examined by scientists for differences in genes and mutations. Scientists will perform a series of tests on the donated tissue that will inform us about the order in which the genes were arranged and what the arrangement might mean for treatment of the patient's cancer. Analyzing the tissue in this way will contribute to greater understanding of the changes occurring between tumors in the same cancer and what drugs might work best to target those changes. It is predicted that having a wealth of information on tissue changes before and after treatment and changes in different areas of disease will help us develop better targeted drugs and therapies. We have recently looked at the subset of triple negative breast cancer tumors and aim to look at the subset of HER2 positive breast cancer tumors.