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.

PARP inhibition after pre-operative chemotherapy

Investigator(s): Kathy Miller, M.D.
Lead Organization: Indiana University
Grant Mechanism: KS **Grant ID:** SAC100007

Public Abstract:
Triple negative breast cancer (TNBC) is a particularly aggressive form of breast cancer that doesn't benefit from our current 'targeted' therapies including anti-estrogen agents or trastuzumab. For patients with TNBC, chemotherapy is the mainstay of therapy. Unfortunately when our current best chemotherapy is ineffective, patients face an extraordinarily high risk of recurrence. In fact, three out of five women who receive chemotherapy before surgery (called neoadjuvant therapy) and still have extensive disease remaining at the time of surgery (in essence the therapy didn't work) will recur within 2 years. This population represents an unmet medical need and a real opportunity to explore the potential impact of novel therapies. Recent laboratory and early clinical studies have provided critical leads, suggesting that some TNBC tumors are uniquely sensitive to chemotherapy agents not commonly used for breast cancer and to inhibition of an enzyme called PARP. While studies of PARP inhibitors in patients with established metastatic disease are ongoing, we have initiated a trial of chemotherapy alone or with a PARP inhibitor in this high risk population. Our primary goal is simple – to prevent recurrence in the first place. The clinical trial began in 2010, and completed the planned enrollment (~135) in the spring of 2013. As important as it is to determine if this novel therapy works, we also want to learn how it works and for which patient. This project supports extensive testing of tumor and blood samples from women enrolled in this trial. This trial is a crucial first step in improving the outcome of women with TNBC. Data from this trial informs the design and supports a definitive trial of the concept