



**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.

**Profiling of Metastatic Triple Negative Breast Cancer**

**Investigator(s):** Kimberly Blackwell, M.D.

**Lead Organization:** Duke University

**Grant Mechanism:** KS

**Grant ID:** SAC100001

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**Public Abstract:**

The treatment of triple negative breast cancer is extremely challenging. This type of breast cancer is known to have a higher risk of incidence in African-American women and is more likely to recur quickly than other types of breast cancer. Discovery mutations that occur in the DNA of these tumors could help identify new ways of treating the disease and/or reasons why the cancer develops in the first place. This project will compare mutations that occur in triple negative cancer in the breast versus the tumor that returns. In previous work, we have been able to identify tumor mutations that occur in the original tumor only, the metastatic tumor only, and in both tumors. By doing so, we have been able to identify gene mutations that correspond to patients that have longer responses to chemotherapy for their metastatic triple negative breast cancer. This project will look further at this marker by sequencing the gene in an additional 100 triple negative breast cancer samples and then compare the presence of the mutation to response to taxane based therapy. In addition, this project will take the same samples and look at the RNA in the tumors for further differences between primary and recurrent tumors. Both of the aims of the project have the potential to identify markers that could predict response to therapy and novel targets for therapy. Both of these findings could have high importance to women facing triple negative breast cancer.