

Bankhead-Coley Cancer Research Program

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*2011 Program
New Investigator Research
(3-year project)*

Project Title: Enhancing the Ability to Predict Lymphedema Development Following Axillary Surgery for Breast Cancer and its Effects on Patient Survivorship

Project Summary: Issues affecting breast cancer survivorship are of increasing importance as the number of women living years after breast cancer treatment grows. Following surgery for breast cancer, women worry about their risk of developing lymphedema (LE), an unpredictable, chronic arm swelling that can have a significant and debilitating impact on their lives. Indeed, many women experience considerable anxiety due to our current inability to accurately predict or modify their risk of LE. This anxiety negatively impacts their health and overall quality of life (QOL). Thus, our aims in this proposal are to (1) identify baseline tissue characteristics potentially predisposing women to LE, (2) identify markers and genetic risk factors that might be altered to prevent LE, and (3) prospectively document the time course to LE development and associated changes in QOL. This prospectively designed study includes analysis of collected biospecimens and QOL metrics at baseline and over 5 years follow up. The long term goal rests on the development of predictive tools that can help accurately predict LE, guide postoperative surveillance protocols, and more accurately pinpoint high-risk patients who might benefit from aggressive risk reduction strategies. Clinical application of these findings will help to improve research and treatment of LE after breast cancer through better risk stratification of patients for future clinical trial development related to the prevention and treatment of LE.