

Increasing Breast Cancer Chemoprevention in the Primary Care Setting

Breast cancer is the most common malignancy among women in the U.S. and the primary prevention of this disease is a major public health issue. Breast cancer chemoprevention with antiestrogens, such as tamoxifen, raloxifene, and exemestane, is underutilized, despite several randomized controlled trials demonstrating a 50-65% decrease in breast cancer incidence among high-risk women. Many women may be unaware of their high-risk status due to our inability to adequately screen them in the primary care setting. Other reasons for low uptake include inadequate time for counseling, insufficient knowledge about risk-reducing strategies, and concerns about side effects. Women from racial/ethnic minorities are less likely to seek preventive measures, contributing to poorer clinical outcomes in these populations compared to non-Hispanic whites. We hypothesize that combining a patient-centered decision aid with a physician-centered decision support tool integrated into clinic workflow will improve accuracy of breast cancer risk perception, facilitate referrals for specialized risk counseling, and increase chemoprevention uptake.

In our breast clinic, the chemoprevention uptake rate among high-risk women is 37%, compared to less than 5% reported for other high-risk populations. Our goal is to expand our success in the breast clinic by offering specialized risk counseling to a broader population of racially/ethnically diverse women screened in the primary care setting. We will use a novel breast cancer risk navigation (BNAV) tool, which incorporates the Gail breast cancer risk model into the electronic health record. To address patient-related barriers to chemoprevention, our research group developed an initial prototype of a decision aid, RealRisks, that allows participants to experience risk through an activity. We propose to conduct the following aims: 1a) To apply a user-centered design to evaluate and refine RealRisks for breast cancer chemoprevention; 1b) To evaluate the effects of RealRisks on accuracy of breast cancer risk perception among 50 high-risk women identified at our breast clinic and high-risk registries; 2a) To design and evaluate BNAV for primary care providers to facilitate the identification of high-risk women eligible for chemoprevention; 2b) To compare referral rates to the breast clinic among 50 high-risk women screened in primary care clinics randomized to BNAV vs. no BNAV; 3) To conduct a randomized controlled trial with a 2x2 factorial design of RealRisks and BNAV, either alone or in combination, compared to usual care in 400 high-risk women identified in the primary care setting. The primary endpoint is chemoprevention uptake at 6 months. Secondarily, we will assess accuracy of risk perception, referral rates to the breast clinic, and various patient- and physician-reported outcomes.

This proposal seeks to overcome important barriers to chemoprevention uptake in the primary care setting. Given the proven efficacy of antiestrogens for primary prevention in high-risk populations, higher uptake of breast cancer chemoprevention may significantly reduce the public health burden of this disease.