

Longitudinal risk management for patients with increased risk for breast cancer

Introduction: This study aims to characterize longitudinal care management and evaluate the relationship between various patient factors and the likelihood of choosing risk-reducing behaviors in women with increased risk of developing breast cancer.

Methods: A retrospective study was conducted to evaluate all adult female patients who had at least one clinic visit with a surgical provider for discussion of breast cancer risk assessment between 1/2017-7/2020 at an academic center. Patients with prior history of breast cancer were excluded. Patient details and strategies pursued at clinic visits were recorded. A time-to-event analysis was performed, and hazard ratios were determined to characterize associations between patient characteristics and time to pursuing risk-reducing care management.

Results: There were 283 participants with at least one follow-up visit and 48 (17.0%) ultimately changed their initial strategy to either chemoprevention or prophylactic mastectomy. Patients with gene mutations were 6 times more likely to engage in risk-reducing management compared to those without (hazard ratio (HR) 5.99, $p < .001$). Those with histories of high-risk proliferative changes (HR 7.62, $p < .001$) and hysterectomy (HR 2.99, $p = .019$) were also more likely to engage in risk-reducing management. Age, race, and increased predicted risk of developing breast cancer (estimated by various calculators) were not associated with increased likelihood of engaging in risk-reducing strategies.

Conclusions: Known gene mutations, history of high-risk proliferative changes, and prior hysterectomy were factors associated with women who were more likely to engage in risk-reducing strategies. These findings, when paired with patient reported outcome measures, may help guide shared decision-making.