Casting a Wider Net for Male Breast Cancer Patients

**RECENT DATA REVEAL THE NEED TO TEST BEYOND BRCA1/2**

New research from Ambry Genetics published in Breast Cancer Research and Treatment¹, in collaboration with Mayo Clinic, Huntsman Cancer Institute, and UCI (University of California- Irvine), aims to better describe the genes contributing to inherited risk for male breast cancer (MBC).

**WHY THIS MATTERS TO YOU**

In the largest reported study of men with breast cancer undergoing multigene panel testing, we offer new insights into genes associated with an increased risk of MBC beyond BRCA1 and BRCA2.

**BACKGROUND**

Current guidelines recommend genetic testing for BRCA1 and BRCA2 in anyone with a personal or family history of MBC². However, genetic predisposition to MBC, particularly beyond BRCA1/2 is still not well understood.³ This research aims to further our understanding and explore the utility of multigene panel testing (MGPT) for these patients.

In this study, >700 MBC patients underwent MGPT at Ambry Genetics including at least 16 breast cancer susceptibility genes: ATM, BARD1, BRCA1, BRCA2, BRIP1, CDH1, CHEK2, MRE11A, NBN, NF1, PALB2, PTEN, RAD50, RAD51C, RAD51D, and TP53.

**POINTS FOR YOUR PRACTICE**

- In addition to BRCA1 and BRCA2 this study suggests PALB2 and CHEK2 as a MBC susceptibility gene. Notably, men with CHEK2 c.1100delC mutations may consider earlier surveillance and/or a higher suspicion for MBC at a younger age.

- Men carrying mutations had similar average ages of diagnosis and personal/family histories compared to men without mutations, which supports current NCCN® guidelines recommending genetic testing for patients with MBC at any age, regardless of other personal or family history of cancer.

- Identification of germline mutations in MBC patients allows for testing at-risk family members and subsequently adjusting their medical management.

- Men with breast cancer should consider MGPT, such as BreastNext, that includes at least BRCA1, BRCA2, CHEK2 and PALB2.
SIGNIFICANT FINDINGS

- 18.1% of men with no prior BRCA1/2 testing were found to have a breast cancer gene mutation

- BRCA2 and CHEK2 mutations were most common

- Odds ratios (OR), or the likelihood of developing male breast cancer, were found to be increased for several genes including BRCA2, CHEK2, and PALB2

- CHEK2 c.1100delC carriers had a significantly lower age of MBC diagnosis

Learn more about our research [here](#).

REFERENCES

