# Few women at high-risk for hereditary breast and ovarian cancer receive genetic counseling

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Mutations in the BRCA1 and BRCA2 genes account for nearly 25 percent of hereditary breast cancers and most hereditary ovarian cancers, yet a study by cancer prevention and control researchers at Virginia Commonwealth University Massey Cancer Center suggests an alarmingly small amount of women who qualify for BRCA genetic counseling actually receive the services. Additionally, they found that a significant proportion of women with a family history of breast and ovarian cancer underestimate their own risk.

The study, published in the April edition of the *Journal of Community Genetics*, collected data from 486 women over the course of two years. Of these women, 22 met the criteria to be referred for BRCA counseling. However, only one of the women reported receiving genetic counseling and only one reported prior genetic testing. And while perceived risk of developing breast and ovarian cancer was higher among high-risk women, 27 percent of high-risk women felt their risk was "low," and 32 percent felt their risk was "lower than average." Despite having a diverse population, the researchers did not find any significant differences associated with factors such as age, race, family size or the patient's knowledge of genetic testing.

"Despite recommendations from the United States Preventive Services Task Force that primary care physicians screen for hereditary cancer risk, it seems that too few women who meet the eligibility criteria are actually following through with BRCA counseling services," says the study's lead investigator John Quillin, Ph.D., M.P.H., member of the Cancer Prevention and Control research program and genetic counselor in the Familial Cancer Clinic at Virginia Commonwealth University Massey Cancer Center and assistant professor in the Department of Human and Molecular Genetics in the VCU School of Medicine. "Unfortunately, this means that a significant number of women who are at high-risk for developing breast and ovarian cancer may not be taking advantage of preventive measures that could ultimately save their lives."

The researchers analyzed data from a pilot study called Kin Fact (Keeping Information about Family Cancer Tune-up) that was conducted at the VCU Women's Health Clinic. Kin Fact works by having a clinical research associate intervene during a woman's annual gynecology appointment to discuss the patient's genetic cancer risks. Participants were asked to complete a self-administered survey that asked questions about their knowledge of genetic counseling and their perceived cancer risk. After completing the survey, the study's recruiters obtained information about the patient's hereditary cancer risks by noting all breast and ovarian cancers among first-and second-degree relatives. The researchers' goals were to assess the amount of women eligible for BRCA counseling in a primary care setting, explore associations between high-risk status and characteristics such as age, race and genetic literacy, and determine whether high-risk patients received genetic counseling and/or testing.

"We need to examine whether patients are fully aware of their family history, and if there are ways to optimize family history collection in clinical settings," says Quillin. "This will help determine if educational interventions are needed for providers, patients or both."

**More information:**
www.ncbi.nlm.nih.gov/pmc/articles/PMC3955454/

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