

Breast cancer risk may be increased in women who have first-degree relatives with a history of prostate cancer

March 9 2015

Having a family history of prostate cancer among first-degree relatives may increase a woman's risk of developing breast cancer. That is the conclusion of a new study published early online in *Cancer*, a peer-reviewed journal of the American Cancer Society. The study's results indicate that clinicians should take a complete family history of all cancers—even those in family members of the opposite sex—to help assess a patient's risk of developing cancer.

Evidence suggests that the risk of developing breast and [prostate cancer](#) is increased among individuals with a [family history](#) of the same disease, particularly among first-degree relatives. However, less is known about the relationship between breast and prostate cancer within families.

To investigate, Jennifer L. Beebe-Dimmer, PhD, MPH, of the Barbara Ann Karmanos Cancer Institute and Wayne State University School of Medicine in Detroit, studied 78,171 women who enrolled in the Women's Health Initiative Observational Study between 1993 and 1998 and were free of [breast cancer](#) at the start of the study. During follow-up, which ended in 2009, a total of 3506 breast cancer cases were diagnosed. The researchers found that a family history of prostate cancer in first-degree relatives (fathers, brothers, and sons) was linked with a 14 percent increase in [breast cancer risk](#) for women, after adjusting for various patient factors. In separate analyses examining the joint impact of both cancers, a family history of both breast and prostate cancer was

linked with a 78 percent increase in breast [cancer risk](#). Risks associated with a family history of both breast and prostate cancer were higher among African American women than white women.

"The increase in breast cancer risk associated with having a positive family history of prostate cancer is modest; however, women with a family history of both breast and prostate cancer among first-degree relatives have an almost 2-fold increase in risk of breast cancer," said Dr. Beebe-Dimmer.

Dr. Beebe-Dimmer noted that patients and physicians may not consider certain cancer diagnoses among family members, especially those in members of the opposite sex, in their assessments of cancer risk. "These findings are important in that they can be used to support an approach by clinicians to collect a complete family history of all cancers—particularly among first degree relatives—in order to assess patient risk for developing cancer," she said. "Families with clustering of different tumors may be particularly important to study in order to discover new genetic mutations to explain this clustering."

More information: "Familial clustering of breast and prostate cancer and risk of postmenopausal breast cancer in the Women's Health Initiative (WHI) study." Jennifer L. Beebe-Dimmer, Cecilia Yee, Michele L. Cote, Nancie Petrucelli, Nynikka Palmer, Cathryn Bock, Dorothy Lane, Ilir Agalliu, Marcia L. Stefanick, and Michael S. Simon. *Cancer*; Published Online: March 9, 2015. [DOI: 10.1002/cncr.29075](https://doi.org/10.1002/cncr.29075)

Provided by Wiley

Citation: Breast cancer risk may be increased in women who have first-degree relatives with a history of prostate cancer (2015, March 9) retrieved 30 April 2024 from

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