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Breast cancer common among women with family history but without BRCA1 or BRCA2

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New data presented at the American Association for Cancer Research's Seventh Annual International Frontiers in Cancer Prevention Research meeting outlines new data, which assesses breast cancer risk among women with a strong family history of breast cancer, but without a BRCA1 or BRCA2 mutation. This may facilitate earlier detection and prevention among high-risk women.

The study, conducted at the University of Toronto, showed that women with a significant family history of breast cancer remain at increased risk for developing the disease, despite having negative BRCA1 and BRCA2 gene mutations. These mutations typically signal a need for preventive treatment. The excess risk was about four-fold higher than that of average women.

"In clinical practice we often see families with a significant history of breast cancer and negative BRCA1 and BRCA2 tests, and it is often difficult to counsel them about their risk without this information," said Steven Narod, M.D., the study's senior author. "It is clear that genes are involved, but it is hard to be more specific."

Narod, who holds the Canada Research Chair in breast cancer at the University of Toronto and Women's College Research Institute, said this new data would help physicians counsel their patients. "Now when we see families such as this, we will be able to offer better advice about their actual risk. It is clear to me that the risk is high enough that we need to discuss options such as breast MRI for screening and

chemoprevention with tamoxifen or raloxifene." said Narod.

Narod and his team of researchers followed 1,492 women from 365 families with negative BRCA1 and BRCA2 genetic mutations for a minimum of five years. These women had a family history of either two or more cases of breast cancer among close relatives under the age of 50 or three cases among close relatives at any age.

Breast cancer rates among these women were compared with control rates found in local breast cancer registries, and researchers noted a 4.3-fold increase.

The highest relative risk was among women under the age of 40, where the increased risk was nearly 15 times higher. Absolute risk was highest among women age 50 to 70 at one percent per year compared with 0.4 percent per year among women between the ages of 30 and 50. This translates into about 30 to 40 percent over their lifetime.

"For all these women, based on what we've identified, tamoxifen would be a good option, as well as breast screening MRI," said Narod. "Our hope is to be able to prevent or pick up on breast cancer early enough to stop patients from dying. We will see what patients decide to do with this advice." In the future, we will follow women like this closely to evaluate the best methods of prevention.

Source: American Association for Cancer Research