

Delaying childbirth may reduce the risk of an aggressive form of breast cancer in younger women, study suggests

12 December 2012

(Medical Xpress)—Younger women who wait at least 15 years after their first menstrual period to give birth to their first child may reduce their risk of an aggressive form of breast cancer by up to 60 percent, according to a Fred Hutchinson Cancer Research Center study. The findings, by Christopher I. Li, M.D., Ph.D., a member of the Public Health Sciences Division at Fred Hutch, are published online in *Breast Cancer Research and Treatment*.

"We found that the interval between menarche and age at first live birth is inversely associated with the risk of triple-negative breast cancer," Li said. While relatively uncommon, triple-negative breast cancer is a particularly aggressive subtype of the disease that does not depend on hormones such as estrogen to grow and spread. This type of cancer, which accounts for only 10 percent to 20 percent of all breast cancers, does not express the genes for estrogen receptor (ER), [progesterone receptor](#) (PR) or HER2/neu and therefore does not respond to hormone-blocking drugs such as Tamoxifen.

The study by Li and colleagues in the Public Health Sciences and Human Biology divisions at Fred Hutch is the first to look at how the interval between first menstrual period and age at first birth is related to the risk of this particular type of breast cancer. It is also the first study to look at the relationship between reproductive factors and [breast cancer risk](#) among premenopausal women, who have a higher risk of triple-negative and HER2-overexpressing breast cancer than postmenopausal women.

The study also confirmed several previous studies that have suggested that breast-feeding confers a protective effect against triple-negative disease. "Breast-feeding is emerging as a potentially strong protective factor against one of the most

aggressive forms of breast cancer," Li said.

The mechanism by which breast-feeding and delaying childbirth reduces the risk of this form of breast cancer is unclear, Li said.

Previous research has shown, however, that the risk of the most common subtype of breast cancer, ER positive, is decreased among women who've had a full-term pregnancy and have breast-fed. The reason for this, researchers believe, is that the hormones of pregnancy induce certain changes in the cellular structure of the breast that seem to make the tissue less susceptible to this type of cancer.

The study has particular implications for African-American women, who experience disproportionately high rates of triple-negative disease. While the reason for this remains largely unknown, on a population level reproductive characteristics are known to vary by race, and compared to non-Hispanic white women, African-American women are more likely to start having children at a younger age and are less likely to breast-feed, Li said.

"Our observations that delayed childbearing and breast-feeding are protective against triple-negative breast cancer suggest that variations in reproductive histories by race may to some extent explain the higher rates of triple-negative disease in African-American women," Li said.

The study involved more than 1,960 Seattle-area women between the ages of 20 and 44, 1,021 with a history of breast cancer and 941 without. Reproductive histories among women without a history of breast cancer were compared to those of [women](#) with ER-positive (781), triple-negative (180) and HER2-overexpressing (60) breast cancer.

"This is an observational study and also one of the first to focus on premenopausal [breast cancer](#) and so our results require confirmation and thus should be interpreted with some caution," Li said.

More information: "Reproductive factors and risk of estrogen receptor positive, triple-negative, and HER2-neu overexpressing breast cancer among women 20-44 years of age,"

[www.springerlink.com/openurl.a ... cle&id=doi:10.1007/s10549-012-2365-1](http://www.springerlink.com/openurl.a...cle&id=doi:10.1007/s10549-012-2365-1)

Provided by Fred Hutchinson Cancer Research Center

APA citation: Delaying childbirth may reduce the risk of an aggressive form of breast cancer in younger women, study suggests (2012, December 12) retrieved 15 July 2022 from <https://medicalxpress.com/news/2012-12-childbirth-aggressive-breast-cancer-younger.html>

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