

# Premenopausal Women With Breast Cancer Do Not Need to Wait to Conceive CME/CE

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December 11, 2006 — Premenopausal women diagnosed with breast cancer may try to conceive instead of waiting for 2 years after diagnosis, as previously recommended, according to the results of a population-based study reported in the December 8 Online First issue of the *BMJ*.

"There are no published data to suggest that postponing conception will alter the outcome of the cancer or pregnancy," write Angela Ives, MD, of the University of Western Australia in Crawley, and colleagues. "The two year wait is suggested as a guide and is based on anecdotal evidence. The delay is primarily to deter women who may develop early recurrence and to allow the completion of adjuvant therapies."

Using the Western Australian data linkage system, the investigators identified women who survived breast cancer and subsequently conceived in 1982-2003, and they determined the pregnancy rate (proportion), management, and outcomes of the breast cancer and first subsequent pregnancy. Younger women were defined as those who were diagnosed as having breast cancer before 45 years of age. Diagnoses were validated by medical chart review, and supplementary data were obtained from hospital and clinician records.

Sixty-two women (54%) with a diagnosis of breast cancer who subsequently conceived did so less than 2 years after diagnosis. Of these 62 women, 29 had an abortion, 27 had a live birth, and 6 miscarried. Proportional hazards regression showed that subsequent pregnancy was associated with improved overall survival (hazard ratio [HR], 0.59; 95% confidence interval [CI], 0.37 - 0.95).

When the regression model was stratified by time from diagnosis, subsequent pregnancy was associated with improved overall survival in women who waited at least 24 months to conceive (HR, 0.48; 95% CI, 0.27 - 0.83). There was a nonsignificant protective effect for women who waited at least 6 months to become pregnant.

"Our study does not support the current medical advice given to premenopausal women with a diagnosis of breast cancer to wait two years before attempting to conceive," the authors write. "This recommendation may be valid for women who are receiving treatment or have systemic disease at

diagnosis, but for women with localised disease early conception, six months after completing their treatment, is unlikely to reduce survival."

The Raine Medical Research Foundation, Friends of Breast Cancer Research, Susan G. Komen Breast Cancer Foundation, and National Breast Cancer Foundation funded this study. The authors have disclosed no relevant financial relationships.

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## **Learning Objectives for This Educational Activity**

Upon completion of this activity, participants will be able to:

- Describe breast cancer prognosis and survival in women who conceive after breast cancer diagnosis.
- Describe the impact of pregnancy on women with breast cancer.

## **Clinical Context**

Women of childbearing age diagnosed as having breast cancer may want to conceive a child after treatment, and currently, they are often advised to wait at least 2 years after treatment before conceiving. However, according to the current authors, there are no published data suggesting that postponing conception will alter either the outcome of the cancer or the pregnancy, and some reports suggest that pregnancy may favorably alter the prognosis, an effect called the "healthy mother" effect, which may occur because of self-selection among women with better prognosis.

This is a population-based retrospective study covering 11 years, describing the prognosis of women who conceive after breast cancer diagnosis and treatment to examine impact on survival.

## **Study Highlights**

- The Western Australian data linkage system linking 15 million health records, which includes hospital morbidity, birth and death registries, mental health services, cancer registry and midwives' notifications. This was used to identify women who conceived after a diagnosis of breast cancer.
- Potential cases were first identified after hospital discharge with an *International Classification of Diseases (ICD)* code for breast cancer (invasive or *in situ*) for women aged 15 to 44 years.
- In the second stage, this cohort was used to identify *ICD* diagnostic or procedure codes for pregnancy and pregnancy outcome (such as abortion, miscarriage, ectopic pregnancy, stillbirth, or live birth).
- A single experienced researcher reviewed records for relevant data, including tumor characteristics and pregnancy management and outcomes.
- Cases of sterilization and breast cancer diagnosed outside Western Australia were excluded.
- 2539 women with pathologically confirmed breast cancer were identified, of whom 123 (5%) had at least 1 pregnancy.
- Median age at cancer diagnosis was 31 years and at first subsequent pregnancy was 35 years.
- 77% of women had invasive ductal carcinoma with tumor size from 1 to 90 mm, and 47% of tumors were less than 20 mm.
- 64% of women had unaffected lymph nodes, and stage I (325) and II (53%), ie, good prognosis, were the most common.
- Most women had breast-conserving surgery and were likely to have radiotherapy.
- 41% of women had adjuvant chemotherapy, and 6% had hormone therapy.

- 56% had at least 1 pregnancy before the breast cancer diagnosis.
- 175 pregnancies were confirmed in the 123 women, and 37% had more than 1 pregnancy.
- 54% of women had a live birth.
- Median time from diagnosis of breast cancer to first subsequent pregnancy was 23 months.
- There were no stillbirths or ectopic pregnancies.
- 2 births occurred before 36 weeks. There was 1 set of twins and a singleton birth by Cesarean delivery.
- 50% of women conceived within 2 years of their diagnosis, and abortion was more common within 2 years of diagnosis ( $P = .012$ ).
- Proportionally more abortions occurred in the first 6 months after breast cancer diagnosis and while the woman was undergoing active treatment (50% vs 45%).
- 85% of women who had a pregnancy after cancer were alive with a median follow-up of 128 months.
- All deaths were from breast-cancer-related causes.
- Recurrence occurred in 39% of women with a median time without recurrence of 42 months.
- The overall 5-year survival in women who conceived after breast cancer diagnosis was 92%, and 10-year survival was 86%. The authors noted that this was better than reported in other cohorts.
- 5- and 10-year survival rates from the first subsequent pregnancy were 87% and 85%.
- Subsequent pregnancy improved overall survival (HR, 0.59;  $P = .03$ ).
- Subsequent pregnancy improved survival overall in women who waited 24 months to become pregnant (HR, 0.48;  $P = .009$ ).
- Pregnancy had no significant effect for all women who waited at least 6 months to become pregnant.

## **Pearls for Practice**

- Conceiving at least 6 months after a diagnosis of breast cancer is associated with similar or improved survival compared with not conceiving after breast cancer diagnosis.
- Pregnancy is unlikely to compromise survival in women with breast cancer with good prognosis, and conception at less than 6 months after diagnosis is associated with a higher abortion rate.

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## Target Audience

This article is intended for primary care clinicians, oncologists, breast surgeons, and other specialists who care for women with breast cancer.

## Goal

The goal of this activity is to provide medical news to primary care clinicians and other healthcare professionals in order to enhance patient care.

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