

It's POSITIVE: The News About Pregnancy After Breast Cancer

A cancer diagnosis is life-altering for most people, but young adults with breast cancer often face other unique challenges, including the desire to have a future biological child. In fact, approximately 50% of young breast cancer patients report fertility concerns. Shared decision making between a patient and doctor should, therefore, balance fertility preservation with undergoing the best cancer therapy possible to reduce the risks of breast cancer.

For those with early-stage, hormone-receptor-positive breast cancer, the timing of pregnancy after treatment can be particularly tricky. For many years, patients and doctors have been concerned about pregnancy-related hormones leading to breast cancer recurrence. Studies have shown that this is not the case.

However, endocrine (hormone) therapies – such as tamoxifen, aromatase inhibitors, and ovarian suppression medications – which are often prescribed for 5-10 years after treatment to prevent recurrence, can make pregnancy impossible or dangerous. Delaying childbearing for 5-10 years to complete endocrine therapy can make it more difficult to conceive because fertility naturally decreases over time.

For this reason, researchers at Dana-Farber Brigham and other institutions studied the safety of temporarily interrupting endocrine therapy to attempt pregnancy. The POSITIVE (Pregnancy Outcome and Safety of Interrupting Therapy for Women With Endocrine-Responsive Breast Cancer) trial is the first **prospective study** to monitor this. Ann Partridge, MD, MPH, director of Young and Strong, co-led this global study, which was

Prospective study:

A study where researchers follow and observe a group of subjects over a period of time to gather information and record outcomes.

sponsored by the International Breast Cancer Study Group (IBCSG).

From December 2014 to December 2019, more than 500 premenopausal women age 42 or younger who desired to become pregnant enrolled in the POSITIVE trial. The participants had previously completed

between 18 and 30 months of endocrine therapy and opted to pause endocrine therapy for approximately two years to try to become pregnant. After years of data collection

and analysis, we are excited to finally share the study's preliminary pregnancy and safety outcomes.

The study showed that many women were able to conceive and deliver healthy babies. Of those who attempted to become pregnant:

- 74% had at least one pregnancy
- 70% of those who became pregnant did so within 2 years
- 86% of pregnancies resulted in live births*
- 2% of babies had birth defects**
- 8.9% of study participants had a breast cancer recurrence***

Fortunately, early results have demonstrated that a temporary interruption of endocrine therapy to attempt pregnancy is safe from a disease recurrence perspective. However, it is important to note that further follow-up data is needed to confirm long-term safety. It

is also strongly recommended that study participants resume endocrine therapy after pursuing pregnancy, to further decrease recurrence risk.

These preliminary results from the POSITIVE trial demonstrate exciting advances in knowledge for young adults with breast cancer who may hope to have future children. Pursuing pregnancy amidst endocrine therapy is a deeply personal decision and it is encouraging that young adults may be able to optimize breast cancer care and risk reduction while also meeting their family planning goals.

If you are interested in learning more about the possibility of temporarily stopping hormone therapy to attempt pregnancy, speak with your doctor to weigh the benefits and risks for you as an individual before doing so.

Average POSITIVE Participant Profile:

- Median age was **37 years**
- Primarily diagnosed with **stage I or stage II** breast cancer
- 75% had **no prior births**
- More than half had **previously received chemotherapy**
- **Tamoxifen** was the most prescribed endocrine therapy

