

# Novel approach helps prevent early menopause in breast cancer patients, study finds

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Early menopause can be prevented and fertility may be preserved in young women with early stage breast cancer, according to a study published today in *The New England Journal of Medicine*.

A major international clinical trial has found that the risk of sudden onset of menopause can be significantly reduced by adding a drug called [goserelin](#) to the [chemotherapy](#) regimen. Women who took goserelin and wanted to have children also were more likely to get pregnant and deliver a healthy baby.

"Some of the most distressing side effects of chemotherapy in young [women](#) with breast cancer are early and sudden onset of menopause and infertility," said Kathy Albain, MD, senior author, medical oncologist and Director of Loyola University Chicago Cardinal Bernardin Cancer Center's Breast Cancer Clinical Research Program. "These findings provide hope for young women with breast cancer who would like to prevent early menopause or still have children."

The overall purpose of goserelin is to temporarily put the ovaries "at rest" during chemotherapy. "We found that, in addition to reducing the risk of sudden, early menopause, and all of the symptoms that go along with menopause, goserelin was very safe and may even improve survival," Dr. Albain said. "These findings are changing how we manage [young women](#) with breast cancer."

The Phase 3 multicenter trial included premenopausal women younger than 50 who had certain types of early-stage breast cancer (estrogen and progesterone-receptor negative). For this study, 257 patients were randomly assigned to receive standard chemotherapy or chemotherapy plus goserelin.

After two years, 22 percent of women receiving standard chemotherapy had stopped menstruating or had elevated levels of a hormone known as FSH, an indication of reduced estrogen production and egg supply. By comparison, only 8 percent of the women receiving goserelin had stopped menstruating or had elevated FSH. The pregnancy rate was nearly twice as high in the goserelin group (21 percent vs. 11 percent).

After four years, 78 percent of those receiving standard chemotherapy showed no signs or symptoms of cancer compared with 89 percent of patients who received goserelin. Overall survival at four years was 82 percent in the standard chemotherapy group and 92 percent in the goserelin group.

"Premenopausal women beginning chemotherapy for early breast cancer should consider this new option to prevent premature ovarian failure," Dr. Albain and colleagues concluded.

Goserelin (trade name, Zoladex) is similar to a natural hormone made by the body. It is FDA-approved for the treatment of prostate cancer, certain benign gynecological disorders and certain breast cancers.

Goserelin is administered by injection. In the clinical trial, women assigned to the goserelin group received one shot once every four weeks during the course of their [chemotherapy regimen](#). Side effects of goserelin were uncommon and mostly included more symptoms related to reducing the activity of the ovaries during chemotherapy.

About 25 percent of breast cancers occur in women younger than 50. Breast cancer chemotherapy can trigger [early menopause](#) in women in their 20s, 30s and 40s. After completing chemotherapy, some women resume menstruating and are able to have children should they choose to do so. But for many women following chemotherapy, menopause is permanent.

Chemotherapy-induced menopause tends to come on suddenly, and consequently, symptoms are much more intense. These symptoms include irregular periods and then cessation of periods completely, vaginal dryness, hot flashes, night sweats, sleep problems, mood changes, weight gain, thinning hair, dry skin and loss of breast fullness.

"Early [menopause](#) in younger [breast cancer](#) patients can be very debilitating," Dr. Albain said.

**More information:** The clinical trial is named "Prevention of Early Menopause Study (POEMS) S0230."

Provided by Loyola University Health System

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