

## SUPPRESSING OVARIAN FUNCTION IN YOUNGER WOMEN WITH HORMONE-SENSITIVE EARLY BREAST CANCER

### What this study is about

This study is for premenopausal women with hormone-sensitive early breast cancer. This is also called hormone or oestrogen receptor positive breast cancer. It asked whether ovarian function suppression (or OFS), which stops the ovaries from producing oestrogen, may improve cancer outcomes. The researchers used a technique called meta-analysis. They combined data from about 15,000 women in 23 clinical trials comparing OFS to no OFS. They wanted to find out if OFS reduces the risk of breast cancer returning or causing death.

### Why this study was done

OFS is one of the oldest treatments for breast cancer. Methods of OFS include surgery or radiation to the ovaries, which are permanent, and drug treatments that temporarily switch off ovarian function. Early studies suggested OFS might reduce the risk of breast cancer returning. However, most women in these studies only received surgery, and sometimes radiotherapy, for their breast cancer before OFS. Currently, women may also be offered chemotherapy or hormonal therapy, such as tamoxifen. Chemotherapy can cause some women to become postmenopausal. More recent studies tested adding OFS to these standard treatments.

### Study results

#### For women who were pre-menopausal and had hormone sensitive early breast cancer:

- OFS **only** reduces the risk of the cancer returning if, after all other treatments, women are confirmed to be still premenopausal before starting OFS.

#### For women who were confirmed as premenopausal before OFS (including after any chemotherapy):

- Previous research shows tamoxifen alone reduces the risk of cancer returning by up to a half;
- **Adding OFS to tamoxifen** further reduces the risk of the cancer returning by about one fifth;
- This effect remains the same whether women have chemotherapy or not;
- Benefits appear to be greater in women aged <45 than those aged 45-54;
- **In women aged under 45**, the risk of dying from breast cancer is reduced by about a quarter.

### What these results mean

OFS is a treatment that stops the ovaries from producing oestrogen. Some premenopausal women who have hormone sensitive early breast cancer may benefit from OFS. Benefits were only seen in women who either didn't receive chemotherapy or remained premenopausal after any chemotherapy. In these women OFS significantly reduced the chances of cancer coming back and the risk of dying from breast cancer over the next 15 years. OFS was beneficial in these women whether or not they received chemotherapy or tamoxifen.

These results can help women and their doctors discuss treatment options. Decisions for an individual should be based on their risk of recurrence and tolerance of side effects.

**Where are the results published?** Early Breast Cancer Trialists' Collaborative Group (EBCTCG). "Effect of ovarian ablation or suppression on breast cancer recurrence and survival: patient-level meta-analysis of 15,000 women in 23 randomised trials". *Lancet* 2026 (2 May): **407**: 1699-1711.

This work was supported by:



## How the study worked

Researchers collected data on **15,000 women** from **23 randomised trials** to do this study. The trials were run between 1948 and 2014. Women were **randomly split** into two groups. One group received ovarian function suppression and the other group did not. Beyond this, in each trial, **the other treatments received by the women remained the same**.

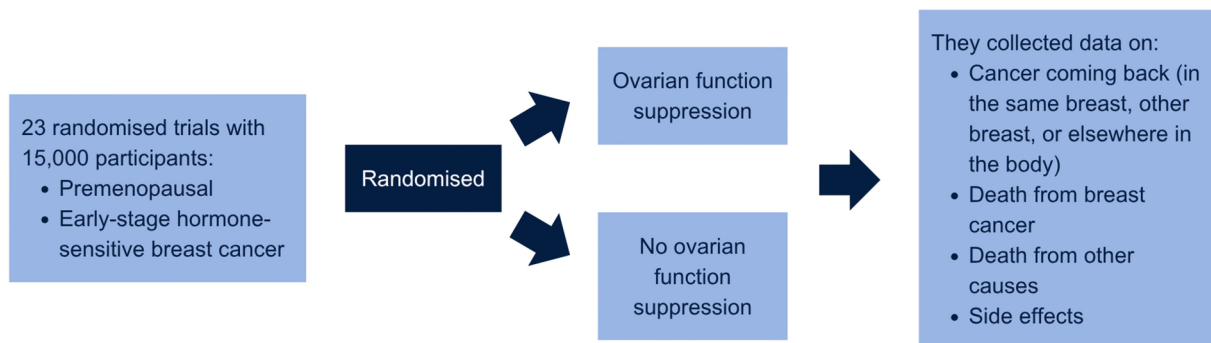
The researchers analysed data from all premenopausal women with hormone-sensitive breast cancer in these trials. For every woman in these studies, they collected information about:

**Recurrence**

**Death**

**Side-effects over time.**

Statistical methods ensured reliable results and compared how well OFS worked in different groups of women.



'These findings are an important step in helping younger women with hormone-sensitive breast cancer better understand their treatment options. But they also highlight how important it is for research to capture the lived experience of patients.'

Treatments like ovarian function suppression can profoundly impact women's quality of life, fertility, and long-term health and wellbeing.

Future trials should ensure that patient voices and experiences are reflected so women can fully understand what different treatment options may mean for them.'

**Sophie Conway, Head of Policy and Engagement, CoppaFeel!**

## Thank you

This work would not have been possible without the support of:

- The clinicians and trialists who worked on the trials;
- NHS Digital and its predecessors for providing follow-up data for 1 trial;
- **The 15,000 women who consented to enter the 23 trials.**

## About this summary

This public summary is produced in conjunction with breast cancer patients by the Secretariat of the Early Breast Cancer Trialists' Collaborative Group, Oxford Population Health, University of Oxford, Oxford, UK OX3 7LF.

For more details, please see the EBCTCG webpage: <https://www.ctsu.ox.ac.uk/research/the-early-breast-cancer-trialists-collaborative-group-ebctcg>

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