

Increased breast cancer risk after chemotherapy: Findings from an international study

Summarized by Corinne Matti, Philippa Jörger and Nicolas Waespe

What was the aim of the study?

This international study, with contributions from Switzerland, looked at whether people who received certain chemotherapies (known as anthracyclines, like doxorubicin) during childhood are at higher risk of developing breast cancer later in life. The goal was to determine if these women need specialized breast cancer screenings.

Why is this important?

The findings from this study help identify which women should start breast cancer screenings at an earlier age. Early screening can lead to quicker detection and more effective treatment of breast cancer.

What exactly did the study examine?

The study looked at nearly 18,000 medical records of childhood cancer survivors from Europe and the U.S. Researchers wanted to find out how many women developed breast cancer later in life and which factors influenced this.

What did the study find out and what does it mean?

Around 4% of the women developed breast cancer after surviving childhood cancer. The risk was higher for those who had been treated with doxorubicin, especially at high doses. The

risk was even greater for those who also received radiation therapy to the chest.

Prof Dr Leontien Kremer, research group leader at the Princess Máxima Center for pediatric oncology, who led the study, says: 'We work hard to make treatment for children with cancer more effective, and to improve the quality of life during and after treatment. In our research we saw that the majority of survivors fortunately do not get breast cancer at a young age. But a number of patient groups have a higher risk of developing breast cancer.'

'Women who received chest radiotherapy as a child are screened for breast cancer from the age of 25, because it was already known that they are at an increased risk. Based on these new results, we aim to expand international guidelines for breast cancer screening, so that women who received a high dose of doxorubicin are also screened early.'

Further information: www.swiss-ccss.ch

Reference: Wang Y, Ronckers CM, van Leeuwen FE, et al. Subsequent female breast cancer risk associated with anthracycline chemotherapy for childhood cancer. *Nat Med.* 2023. 29, 2268–2277. DOI: 10.1038/s41591-023-02514-1.

You can find the full article in English: [Link](#)

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