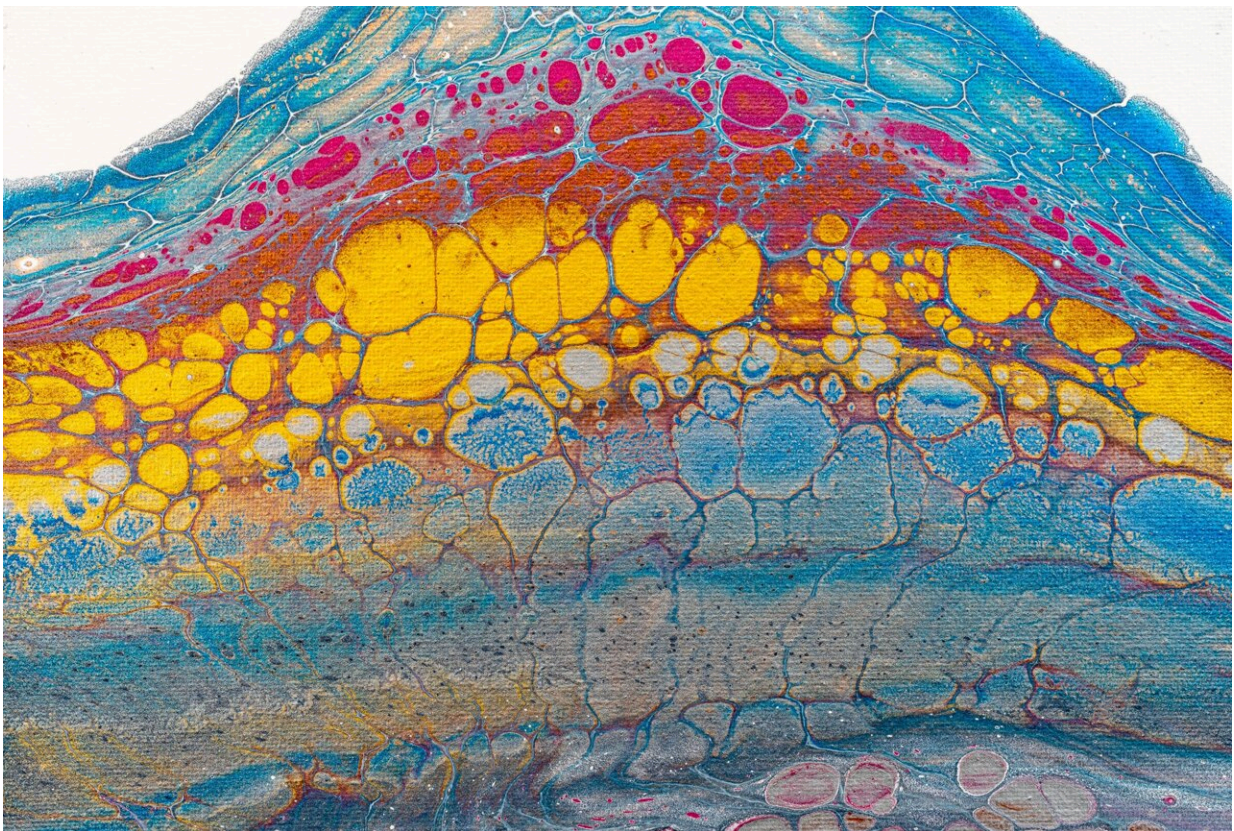


# Study finds lower relapse risk in triple-negative breast cancer with high immune cell levels

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Women with triple-negative breast cancer, and high levels of immune cells in the tumors, have a lower relapse risk after surgery, even without chemotherapy, according to a recent study [published](#) in *JAMA*.

Triple-negative breast cancer accounts for about 15% of all breast cancer diagnoses worldwide. Compared to other breast cancers, those affected are younger and more often of African American, Hispanic, and Indian descent. In Sweden, about a thousand cases are diagnosed each year.

This type of cancer involves the absence of three so-called receptors, which reduces treatment options. Triple-negative breast cancer is also faster growing and more likely to spread, and relapses occur more often than for other breast cancers after treatment.

The current study involves 12 research teams from three continents. Barbro Linderholm, Associate Professor of Oncology at the University of Gothenburg and Senior Physician at Sahlgrenska University Hospital, is responsible for the Swedish part.

## Differences in survival rates

The study includes data from a total of 1,966 participants worldwide with early-stage triple-negative breast cancer. This means that the tumors were small and had not spread. The patients had been treated with various combinations of surgery and radiation but not with chemotherapy.

The results show that the level of immune cells, tumor-infiltrating lymphocytes that can recognize and destroy [cancer cells](#), was a strong prognostic biomarker, even when cytostatics were not part of the treatment.

Five years after surgery, 95% of study participants, whose tumor tissue samples from the breast tumor showed high levels of immune cells, were alive. The survival rate in the group with low immune cell levels was 82%.

Currently, the level of immune cells in tissue samples is not routinely measured or reported in triple-negative or other breast cancers, and the highly demanding cytostatics is usually part of standard treatment.

## **Very good prognosis**

"According to the current health care program, the absolute majority of patients with [triple-negative breast cancer](#) receive cytostatics, in combination with surgery and radiation, even for small tumors, but our results show a very good prognosis for this group even without cytostatics, in those who naturally have elevated levels of immune cells in the tumors," says Linderholm.

The authors of the study call for further research and [clinical studies](#) to investigate whether patients with a favorable prognosis, i.e. high levels of tumor-infiltrating lymphocytes in tumor [tissue samples](#), could avoid intensive [treatment](#) with cytostatics.

The method to evaluate the proportion of immune cells is fast and cheap as it can be done in a regular pathology laboratory, and it is not necessary to send samples off for analysis.

"The findings from the study are not sufficient for introduction into clinical practice, but this will now be investigated in an international prospective study where we will compare the prognosis of patients with high levels of immune cells in the breast tumor with or without cytostatics," concludes Linderholm.

**More information:** Roberto A. Leon-Ferre et al, Tumor-Infiltrating Lymphocytes in Triple-Negative Breast Cancer, *JAMA* (2024). [DOI: 10.1001/jama.2024.3056](https://doi.org/10.1001/jama.2024.3056)

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