No increased risk of recurrence in breast cancer after reconstruction with abdominal tissue

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After surgery for breast cancer women who have undergone breast reconstruction using abdominal tissue do not have a higher risk of recurrence than women who do not undergo breast reconstruction. This has been shown by researchers at Karolinska Institutet in a study published in the *British Journal of Surgery.*

In Sweden today, more than 90,000 women are living with a diagnosis of breast cancer, and each year almost 2,000 women die from the disease. More than 90 per cent undergo surgery for their breast cancer.

Reconstruction can be performed if the entire breast is removed, using either an implant or tissue from the woman's own body. Today, many women want to reconstruct their breast using tissue from themselves. This tissue can be taken from the abdomen and transplanted to the site of the breast that has been removed. This particular and common method is called DIEP flap reconstruction, which stands for deep inferior epigastric artery perforator flap reconstruction.

**Physical trauma**

"Discussions have been ongoing for some time as to whether this type of reconstruction is safe or whether it could contribute to a higher risk of recurrence. Previous studies had given conflicting results", says Hannah Adam, Ph.D. Candidate at the Department of Molecular Medicine and
Surgery at Karolinska Institutet, and the first author of a new study that examines the risk of recurrence.

The operation, which takes several hours, is a physical trauma that could theoretically result in an impaired immune system and reactivation of dormant micrometastases.

The current study included 254 patients who all underwent surgery using the DIEP flap method at Karolinska University Hospital Solna 1999-2013. Each patient was matched with up to three patients in a control group including 729 patients, all of whom had removed a breast without any secondary reconstructive surgery.

**No increased risk**

The results revealed that slightly less than 20 per cent of the women in the DIEP group versus 24 per cent in the control group had recurrence of breast cancer at follow-up after seven or six years. The five-year survival rate after surgery was 92 per cent and slightly less than 90 per cent respectively.

"Our study demonstrates that there is no increased risk of recurrence for women who undergo this type of reconstruction. Moreover, the survival rate was higher for the DIEP group than the control group", says Hannah Adam.
