

Is breast conserving therapy or mastectomy better for early breast cancer?

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Mammograms showing a normal breast (left) and a breast with cancer (right).
Credit: Public Domain

Young women with early breast cancer face a difficult choice about whether to opt for a mastectomy or breast conserving therapy (BCT). This is because there is little evidence as to whether the greater risk of a return of the disease at the site of the original tumour after BCT is linked to a greater risk of the cancer spreading to other parts of the body, leading to higher death rates.

Now, new research presented at the ESTRO 35 conference today (Saturday) has shown [women](#) aged younger than 45 years, who had early stage [breast cancer](#) that had not spread to the [lymph nodes](#) and who opted for BCT with radiation therapy, had a 13% higher risk of developing a local recurrence of their disease over a 20-year period than women who had a mastectomy and no radiation therapy. Furthermore, local recurrence doubled the risk of the cancer spreading elsewhere in the body (metastasis) and the risk of death was approximately two-thirds higher for BCT patients compared to mastectomy patients.

By contrast, among women aged over 45 there was no link between local recurrence and the risk of metastasis, and there was no difference in the proportion of these women who died after BCT or mastectomy.

Researchers from Aarhus University Hospital (Aarhus, Denmark) followed 1076 Danish women for 20 years. The women had been diagnosed between 1989 and 1998 and were classified as low risk because they had tumours smaller than 5cms in diameter and the cancer had not started to spread to the lymph nodes. A total of 364 women received BCT and 712 had a mastectomy. None of the women received systemic therapies, such as chemotherapy, as they were classified as low risk and, at that time, systemic therapy was considered to have no beneficial effect.

After 20 years, the proportion of local recurrences was 18% after BCT (66 women) and 6.7% after mastectomy (55 women). Among the women who had a mastectomy, most local recurrences occurred in the first five years in the older women, and in the first ten years for the younger women. BCT patients of all ages had a local recurrence of their disease throughout the 20-year period.

Dr Tinne Laurberg (MD) said: "We found that among patients older than 45 years, receiving BCT, local recurrence was not associated with distant

metastasis and the 20-year mortality was not different between BCT and mastectomy. These findings are in line with long-term data reported from several randomised trials, confirming that it is safe to offer older, lymph-node negative patients breast conserving therapy and adjuvant [radiation therapy](#).

"In contrast, among the patients younger than 45 years, local recurrence was associated with distant metastasis, and young patients treated with BCT had an increased risk of death during the 20 years, either from their disease or from other causes, compared to those who underwent mastectomy.

"When future treatment guidelines of young lymph-node-negative patients are refined, the possibility of the negative impact of BCT on survival in these younger women should be taken into account."

Dr Laurberg said that her study was unusual not just for its large size but also because of the high proportion of [young women](#) included in it.

"Data concerning the long-term effect of BCT versus mastectomy among young patients is very limited. In six randomised controlled trials comparing mastectomy and BCT all studies had a low proportion of young breast cancer patients included (between 12-23%), making it hard to draw any conclusion for this sub-group. Few cohort studies, restricted to young breast cancer patients, have been published, but these are limited by the inclusion of a mixture of different cancer stages, by the variety of adjuvant systemic treatments used, and by an average follow-up time of less than ten years in almost all of the studies. In contrast to former studies, our study of young breast cancer patients was unbiased, all patients were lymph-node negative, they received only BCT or [mastectomy](#) and we had complete 20-year data on local recurrence and overall survival."

President of ESTRO, Professor Philip Poortmans, who was not involved

in the research, commented: "After the recent presentation of data that strongly support the use of BCT for all patients with early stage breast cancer, this study points us to the importance of obtaining and maintaining an optimal local tumour control because local recurrences appear to be a source for development of subsequent distant metastases. We have to view this from the right perspective though, as we have witnessed a remarkable decrease in the rate of local recurrences after BCT, even for young [patients](#). On the other hand, these results might also be a warning signal about the possible risks associated with the recent trend towards the use of less aggressive breast cancer treatments, particularly those aimed at the area of the primary tumour."

More information: Abstract no: OC-0052, "Long-term age dependent failure pattern after BCT vs. mastectomy in low-risk breast cancer patients", Proffered papers session, Clinical 1: Breast, 10.45-11.45 hrs CEST on Saturday 30 April, Auditorium.

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