

Fewer breast cancer patients need radical surgery if they are pre-treated with targeted drugs

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Extensive surgery involving mastectomy and removal of several lymph nodes can be safely avoided for more women with some types of breast cancer, if they receive targeted drugs before surgery, according to research presented at the 11th European Breast Cancer Conference.

The study focused on women with HER2 positive [breast cancer](#), an aggressive form of the disease, who were given a targeted drug treatment to shrink their tumours before they had surgery.

Previous research has shown that women who have less extensive surgery suffer fewer long-term side-effects and enjoy better quality of life. The researchers say their work shows that even women with aggressive tumours can be safely treated with breast-conserving surgery, if the [cancer](#) responds to targeted treatment.

The research was led by Professor Isabel Rubio, Co-chair of the 11th European Breast Cancer Conference and former head of the breast surgical oncology unit at the breast cancer centre at Vall d'Hebron University Hospital in Barcelona, Spain, where she carried out the work.

She said: "In this study we have looked at women with HER2 positive breast cancer. This is an aggressive form of the disease but it is also one where a new class of drugs has successfully been developed. These drugs recognise and target HER2 receptors on the surface of cancer cells.

"We wanted to see whether the known benefits of these targeted drugs could be extended to spare women from the undesirable effects of radical surgery."

Surgery plays a vital role in treating breast cancer and it can involve removing only the area where the cancer is growing, or it can involve removing the whole breast as well as nearby lymph nodes, where the cancer may have spread. More extensive surgery is associated with more side effects such as pain and swelling that can last for many years.

The researchers studied a group of 160 women with HER2 positive breast cancer treated at Vall d'Hebron University Hospital between October 2007 and December 2016. Of these 129 (81%) were candidates for mastectomy based on the size of the tumour and other clinical characteristics.

All the patients were given a drug treatment before surgery including standard chemotherapy and at least one anti-HER2 drug such as trastuzumab (Herceptin).

As a result, 61 women (47.2%) who might otherwise have been offered mastectomy, were instead treated with less extensive surgery. This meant that overall 92 out of 160 women (57.5%) were treated with breast conserving surgery.

The treatment also resulted in 71% of women having no signs of cancer in their lymph nodes, meaning they could have less extensive surgery on their lymph nodes.

Professor Rubio explained: "This study shows us that treating HER2 positive breast cancer with a targeted [drug](#) before surgery can mean fewer [women](#) need to undergo mastectomy and removal of several [lymph nodes](#). It also shows us that we can use biopsies to see which

cancers are responding best to anti-HER2 treatments and therefore which patients can be safely treated with breast conserving surgery.

"Breast cancer treatments have advanced tremendously in recent years. What this means is that surgery should evolve too so that it is tailored to the individual patient and takes account of the effects of their particular [treatment](#)."

Professor Robert Mansel is chair of the 11th European Breast Cancer Conference and Emeritus Professor of Surgery at Cardiff University School of Medicine, UK, and was not involved in the research. He said: "Survival rates for breast cancer are improving and research continues to look for ways to build on that success. At the same time we need to understand the needs of individual patients and the differences between individual tumours.

"This research provides more information on which patients are likely to benefit from radical surgery and which could be safely treated with [breast conserving surgery](#), bringing potential benefits in patients' of quality of life."

Provided by ECCO-the European CanCer Organisation

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