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Immunity-boosting breast cancer drug could save thousands, finds UK research

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Thousands of lives could be saved with a "promising" immunotherapy drug that can cut the risk of an aggressive form of breast cancer returning by more than a third, according to "exciting" results from a long-term global study.



Keytruda, also known as pembrolizumab, uses the patient's own immune system to fight cancer. The drug works by helping the immune system recognise and attack cancer cells, and is already used to treat lung cancer, skin cancer, bladder cancer and Hodgkin lymphoma. It is administered in a solution via a drip into the patient's bloodstream, with the number of sessions depending on the type of cancer.

Now UK researchers have found that if given in combination with chemotherapy before surgery, and then again on its own after surgery, it can stop the disease coming back in women with triple-negative breast cancer, an aggressive type of the disease. The findings were published in the New England Journal of Medicine.

In the Keynote-522 trial, women with early triple-negative breast cancer, where the disease had not yet spread beyond the breast and lymph nodes (stages two and three), were treated with Keytruda in addition to standard chemotherapy prior to surgery, followed by Keytruda after surgery. After a follow-up period of more than three years, experts led by Queen Mary University of London and Barts Health NHS trust found the risk of disease recurrence was 37% lower in patients treated with the drug combination than in those treated with chemotherapy alone.

"We had previously demonstrated that the addition of immunotherapy to pre-operative chemotherapy increases the treatment response in patients with triple-negative breast cancer at the time of surgery," said study lead Prof Peter Schmid, of Queen Mary and St Bartholomew's hospital. "We now have long-term results demonstrating that the combination therapy significantly reduces recurrences by approximately 37%, including reduction of secondary breast cancer by 39%.

"This means that the cure rate for these cancers is significantly increased. The estimates are that, just in the US where this treatment was recently approved by the Food and Drug Administration, this new treatment may save as many as 10,000 lives per year."

A total of 1,174 patients across 21 countries with previously untreated stage two or three triple-negative breast cancer were recruited for the trial, which was funded by the pharmaceutical company Merck Sharp & Dohme.

The current standard of care for patients with early-stage triple-negative breast cancer is chemotherapy, which is typically used to shrink the tumour before surgery. More than 8,000 women in the UK are diagnosed with this form of breast cancer every year.

"The risk of triple-negative breast cancer returning and spreading to other parts of the body in the first few years after treatment is higher than it is for other breast cancers," said Dr Kotryna Temcinaite, of the charity Breast Cancer Now.

"This promising new treatment could prevent more lives being lost to this devastating disease."