Immunotherapy for Early Breast Cancer Improves Responses Without Worsening Quality Of Life

Study offers assurance that the benefits of the combination can be achieved without diminishing patients' quality of life.

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Adding checkpoint inhibitor to chemotherapy improves responses without negatively impacting quality of life in patients with early-stage breast cancer

Adding an immune checkpoint inhibitor to the standard chemotherapy regimen for patients with early-stage breast cancer places no greater burden on patients' ability to perform day-to-day activities than chemotherapy alone, new research by Dana-Farber/Brigham and Women's Cancer Center investigators shows.

The report, coupled with earlier findings that combining checkpoint inhibitors with chemotherapy can increase response rates in patients with early-stage triple-negative breast cancer, offer assurance that the benefits of the combination can be achieved without diminishing patients' quality of life, the study authors say. The study, to be presented at today's virtual session of the San Antonio Breast Cancer Symposium, by Elizabeth Mittendorf, MD, PhD, Director of the Breast Immuno-Oncology program at the Dana-Farber/Brigham and Women's Cancer Center, is the first to use patients' own feedback to gauge the impact of the combination therapy on daily functioning for patients with early-stage breast cancer.

The analysis is based on data from the IMpassion031 study, a Phase III trial of the safety and effectiveness of the checkpoint inhibitor atezolizumab in tandem with standard chemotherapy prior to surgery in 333 people with previously untreated triple-negative breast cancer. Atezolizumab works by blocking the PD-L1 protein on tumor cells, leaving the cells open to an immune system attack.

Triple-negative breast cancer, which accounts for about 13% of breast cancer cases, is so named because it tests negative for estrogen and progesterone receptors and for the HER2 protein. Triple-negative cancers tend to grow faster than other forms of breast cancer and often carry a worse prognosis. Trials of immunotherapy agents in the disease seek to increase the treatment options available to patients.

Patients participating in the IMpassion031 trial were randomly assigned to receive either atezolizumab and the chemotherapy agents nab-paclitaxel, adriamycin, and cyclophosphamide, or the same chemotherapy agents plus a placebo, prior to undergoing breast cancer surgery. Their response to treatment was assessed at the time of the surgery.

Researchers reported earlier this year that the combination therapy increased the likelihood that patients with early-stage triple-negative breast cancer would have a complete response – a reduction in their cancer to undetectable levels.

This new study explored whether that improvement was accompanied by a decline in patients' performance of daily tasks. Trial participants were asked to rate their ability to carry out everyday activities such as going to work and preparing meals in the months following treatment. While participants reported increased difficulty in these areas – as a result of treatment side effects such as nausea, diarrhea, and fatigue – there were no differences between patients who received the combination therapy and those who received chemotherapy alone. As the side effects diminished over time, patients in both groups rebounded equally well.

"Treatment for early-stage breast cancer aims to be curative," says Dr. Mittendorf. "In such cases we want to be sure that improvements in outcomes are balanced against effects on patients' quality of life. Our findings suggest that the combination of checkpoint inhibitors and chemotherapy meets that test."

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