

## Obese patients with HER2-positive breast cancer may have worse outcomes

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Obese patients with early-stage HER2-positive breast cancer may have worse outcomes than patients who are normal weight or overweight, Mayo Clinic researchers found in a study presented today at the [2011 CTRC-AACR San Antonio Breast Cancer Symposium](#). HER2-positive breast cancer gets its name from a protein called human epidermal growth factor receptor 2 that promotes cancer cell growth.

"Not only did obese women have poorer outcomes given several different therapies tested to treat HER2-positive breast cancer, but we know that [obese patients](#) in our study had larger tumors and were more likely to have had cancer detected in their lymph nodes, compared to patients who were not obese," says the study's lead author, Jennifer Crozier, M.D., a medical resident.

"While other studies have looked at the effect of body weight on treatment outcome for estrogen receptor-positive breast cancer, no one has examined this variable in the HER2-positive subtype, which accounts for about one-third of all breast cancers," says Dr. Crozier.

Researchers used data from the North Central Cancer Treatment Group N9831 study for their analysis. This phase III [randomized clinical trial](#) tested three different options for treatment of early stage HER2-positive breast cancer: chemotherapy alone (Arm A); chemotherapy followed by Herceptin for a year (Arm B); and chemotherapy plus Herceptin, followed by Herceptin for a year (Arm C).

In a review of data from 3,017 patients, researchers found that, considering all three treatment arms together, obese patients -- those with a [body mass index](#) (BMI) of 30 or more -- had worse outcomes than patients with a BMI less than 30, although these trends were not statistically significant.

Researchers then calculated disease-free survival for each study arm for normal weight, overweight and obese patients, and found that patients fared best in Arm C. In this arm, the difference between BMI and outcome was not statistically significant, Dr. Crozier says. Herceptin was powerful enough to provide an equal benefit in patients with vastly varying body weights, she says.

"We are continually searching for approaches that will help our patients have the best outcome possible after their diagnosis of [breast cancer](#), and this study suggests that excess body weight may make a difference," says senior investigator Edith Perez, M.D., director of Mayo Clinic's breast program in Florida.

Provided by Mayo Clinic

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