Presurgery Treatment Combo More Effective for Women with Triple-Negative Breast Cancer

PROVIDENCE – Adding the chemotherapy drug carboplatin and/or the antibody therapy bevacizumab to standard presurgery chemotherapy increased the number of women with triple-negative breast cancer who had no residual cancer detected at surgery, according to results of a randomized, phase II clinical trial presented at the 2013 San Antonio Breast Cancer Symposium, held December 10–14, 2013.

An increasing number of patients with triple-negative breast cancer are receiving chemotherapy before surgery, a treatment approach called neoadjuvant chemotherapy. In about one-third of these patients, no identifiable cancer cells are found in breast tissue and lymph nodes removed at surgery performed after the neoadjuvant chemotherapy. These patients are said to have had a pathologic complete response and have a much lower risk of cancer recurrence compared with patients whose cancers do not respond well to the neoadjuvant chemotherapy.

“Our study was designed to find out if adding either carboplatin or bevacizumab to standard preoperative chemotherapy would increase the percentage of patients in whom cancer is eliminated before surgery,” said WILLIAM M. SIKOV, MD, FACP, associate professor of medicine at the Alpert Medical School. “We are excited to report that adding either therapy significantly increased the percentage of patients in whom cancer was eliminated from the breast, and that adding both was even more effective.

“While our results show increases in pathologic complete response rates with both carboplatin and bevacizumab, we do not yet know how large an impact, if any, these differences will have on cancer recurrences or deaths. Although the study is not large enough to detect significant differences in these endpoints, we plan to follow patients for 10 years after their surgery to see if patient outcomes suggest long-term benefits from the investigational treatments.”

Sikov and colleagues treated 443 patients with operable, stage 2 or 3 triple-negative breast cancer in the randomized, phase II clinical trial. The study was conducted by the Cancer and Leukemia Group B, which is now part of the Alliance for Clinical Trials in Oncology, and is called CALGB/Alliance 40603. Patients were randomly assigned to standard neoadjuvant chemotherapy, standard neoadjuvant chemotherapy plus carboplatin, standard neoadjuvant chemotherapy plus bevacizumab, or standard neoadjuvant chemotherapy plus carboplatin and bevacizumab. Surgery was performed from four to eight weeks after the completion of neoadjuvant treatment.

The researchers found that among the 108 patients who were randomly assigned to standard neoadjuvant chemotherapy alone, at surgery, cancer had been eliminated from the breast in 42 percent of these patients and from both the breast and lymph nodes in 39 percent. These proportions increased to 50 percent and 43 percent, respectively, for the 110 patients who were randomly assigned to standard neoadjuvant chemotherapy plus bevacizumab; 53 percent and 49 percent, respectively, for the 113 patients who were randomly assigned to standard neoadjuvant chemotherapy plus carboplatin; and 67 percent and 60 percent, respectively, for the 112 patients who were randomly assigned to standard neoadjuvant chemotherapy plus carboplatin and bevacizumab.

The increases in the pathologic complete response rates in the breast and in the breast and lymph nodes observed among patients randomly assigned to standard neoadjuvant chemotherapy plus carboplatin were statistically significant. Among patients randomly assigned to standard neoadjuvant chemotherapy plus bevacizumab, only the increase in the pathologic complete response rate in the breast met the study’s criteria for significance.

“Patients who were treated with carboplatin had more problems with low blood counts and were more likely to miss doses of chemotherapy or to have their chemotherapy treatments delayed or the doses of the chemotherapy drugs reduced compared with patients who did not receive carboplatin,” said Dr. Sikov. “In addition, about 10 percent of patients who were treated with bevacizumab developed high blood pressure and more of these patients had problems with blood clots, bleeding, and infections.”

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