Breast-conserving therapy may be a treatment option for some patients with multiple breast lesions

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Patients with multiple tumors in the same breast who underwent a lumpectomy followed by radiation therapy had local recurrence rates

comparable to those historically observed in patients with a single tumor, according to results from the ACOSOG Z11102 (Alliance) prospective phase II clinical trial, which were presented at the San Antonio Breast Cancer Symposium, held December 6-10, 2022.

"Most patients who present with two or three sites of cancer in one breast are recommended to undergo a mastectomy, as historical studies showed high local recurrence rates in patients who underwent breast-conserving therapy consisting of lumpectomy and radiation therapy," explained Judy C. Boughey, MD, the W.H. Odell Professor of Individualized Medicine and Chair of the Division of Breast and Melanoma Surgical Oncology at the Mayo Clinic.

"Advances in imaging techniques have led to greater detection of additional breast tumors, leading to more patients undergoing mastectomy who otherwise may have preferred breast-conserving therapy," she added.

"To date, there have been no prospective clinical trials evaluating local recurrence after breast-conserving therapy for patients with multiple ipsilateral breast lesions. The main purpose of this trial was to evaluate whether lumpectomy followed by radiation therapy was an appropriate management for patients who had more than one tumor in a single breast."

The trial enrolled women over the age of 40 who had two or three sites of breast cancer in the same breast that were separated by normal breast tissue. All patients had undergone mammogram and/or ultrasound, and most had undergone breast MRI as well.

Fourteen of the enrolled patients converted to mastectomy due to persistent positive margins, which precluded breast-conserving therapy. The remaining patients were treated with lumpectomy and subsequent

whole breast radiation therapy with radiation boosts to all lumpectomy sites. The primary endpoint was local recurrence at five years after the completion of radiation.

Among the 204 evaluable patients, six patients developed local recurrence after a median follow-up of 66.4 months, for a five-year local recurrence rate of 3.1 percent. This rate was similar to the local recurrence rates seen in prior studies for patients with a single breast tumor who underwent breast-conserving therapy, Boughey noted.

The rate of local recurrence was greater among the 15 patients who did not undergo a pre-surgical breast MRI compared with the 189 patients who underwent this imaging (22.6 percent vs. 1.7 percent). Boughey noted that this may have been due to greater detection of disease sites prior to surgery in patients who underwent breast MRI, potentially allowing for more thorough resection. The risk of local recurrence was not associated with patient age, number of breast lesions, tumor biology, or pathologic staging categories.

No patients developed regional recurrence; however, four patients developed distant recurrence, six patients developed breast cancer in the opposite breast, three patients developed new non-breast primary tumors, and eight patients died (including one death related to breast cancer).

"This study provides important information for clinicians to discuss with patients who have two or three foci of breast cancer in one breast, as it may allow more patients to consider breast-conserving therapy as an option," said Boughey. "Lumpectomy with radiation therapy is often preferred to mastectomy as it is a smaller operation with quicker recovery, resulting in better patient satisfaction and cosmetic outcomes."

She added that the results from the trial also suggest that patients who are diagnosed with two or more malignant lesions in the breast and are considering breast-conserving therapy may benefit from breast MRI.

A limitation of the study was its single-arm design. "While a randomized trial design would have provided stronger data, we felt that accrual to such a design would be problematic as many patients and surgeons would not be willing to randomize," noted Boughey.

More information: Conference: www.sabcs.org/

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